Former Jonas Automotive Site

ORANGE COUNTY, NEW YORK

Site Management Plan

NYSDEC Site Number: B00136-3

Prepared for:
City of Newburgh
83 Broadway
Newburgh, New York 12550

Prepared by:
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973-334-0003

Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date
1	03/26/2015	Appended Final Environmental Easement	03/31/2015

AUGUST, 2013

CERTIFICATIONS

I Howard D. Feiler, P.E., certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that this Site Management Plan (SMP) was implemented and that all construction activities were completed in substantial conformance with the DER-approved Final Remedial Design Report (FRDR).

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Howard D. Feiler of First Environment, Inc., 91 Fulton Street, Boonton, New Jersey, am certifying as Owner's Designated Site Representative for the site.

081666-1	8.15.13	
NYS Professional Engineer No.	Date	Signature

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1.0 Introduction and Description of Remedial Program

1.1 Introduction

This document is required as an element of the remedial program at the Former Jonas Automotive Site (hereinafter referred to as the "Site") under the New York State (NYS) Environmental Restoration Program (ERP) administered by New York State Department of Environmental Conservation (NYSDEC). The Site was remediated in accordance with State Assistance Contract (SAC) No.C303487, Site No. B00136, which was executed on September 5, 2007.

1.1.1 General

The City of Newburgh entered into a SAC with the NYSDEC to remediate a 1.45-acre property located in Orange County, Newburgh, New York. This SAC required the Remedial Party, the City of Newburgh, to investigate and remediate contaminated media at the Site. A figure depicting the site location and boundaries of this 1.45-acre site is provided in Figure 1. The boundaries of the Site are more fully described in the metes and bounds site description that is part of the Environmental Easement.

After completion of the remedial work described in the Remedial Action Work Plan, some contamination was left in the subsurface at this Site, which is hereafter referred to as "remaining contamination." This Site Management Plan (SMP) was prepared to manage remaining contamination at the Site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by First Environment, Inc. (First Environment), on behalf of the City of Newburgh, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and the guidelines provided by NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Environmental Easement for the Site.

1.1.2 Purpose

The Site contains contamination left after completion of the remedial action. Engineering Controls have been incorporated into the Site remedy to control exposure to remaining

contamination during the use of the Site to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Orange County Clerk, will require compliance with this SMP and all ECs and ICs placed on the Site. The ICs place restrictions on site use and mandate operation, maintenance, monitoring, and reporting measures for all ECs and ICs. This SMP specifies the methods necessary ensure compliance with all ECs and ICs required by the Environmental Easement for contamination that remains at the site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the Site after completion of the Remedial Action, including (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; (3) operation and maintenance of all treatment, collection, containment, or recovery systems; (4) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports; and (5) defining criteria for termination of treatment system operations.

To address these needs, this SMP includes two plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; and (2), a Monitoring Plan for implementation of Site Monitoring.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the environmental easement, which is grounds for revocation of the Certificate of Completion (COC);
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the SAC (Index No. C303487; Site No. B0013) for the Site, and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the Environmental Easement for the site, the NYSDEC will provide a notice of

any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 Site Background

Poughkeepsie Iron Fabricators operated on the Site from 1963 until the early 1990s. The Site was then operated by Poughkeepsie Trim and Steel until 1993. Jonas Automotive Rebuilders operated the facility from August 1993 through March 1999. Jonas used the facility for the dismantling of automobile motors for salvaging. Engines were unloaded onto a concrete pad in the overhead crane area and dismantling of the motors occurred within the building on a large conveyor. A trough along the conveyor collected engine fluids which drained to a 275-gallon collection tank. A 1,000-gallon tank was located in the overhead crane area to collect fluid runoff from the concrete pad. In March 1999, the City of Newburgh acquired the property through property tax foreclosure.

The City of Newburgh completed a site investigation/remedial alternatives report (SI/RAR) to determine the nature and extent of any contamination by hazardous substances at this environmental restoration site.

As described in the SI report, numerous soil and groundwater samples were collected to characterize the nature and extent of contamination. As summarized in Table 1, the main categories of contaminants that exceed their standards, criteria, and guidance (SCGs) are volatile organic compounds (VOCs); and semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs) and inorganic constituents (metals). The primary metals of concern are lead and mercury. The only VOC of concern for groundwater is tetrachloroethene (PCE), as summarized in Table 2.

1.2.1 Site Location and Description

The Site is located in the Newburgh County of Orange, New York and is identified as Block 1 and Lot 59.1 on the Orange County Tax Map. The Site is approximately 1.45 acres in size and is bound by residential areas to the north, residential areas and vegetation to the south, low lying ground to the east, and Wisner Avenue to the west (see Figure 1). The boundaries of the Site are more fully described in Appendix B – Metes and Bounds.

1.2.2 Site History

The Jonas Automotive site is located at 86 Wisner Avenue in the City of Newburgh, Orange County, New York (see Figure 1). It is situated on approximately 1.45 acres and contains an

automobile salvage building and a smaller garage building. The remainder of the property is unpaved and covered with fill consisting of gravel and cinders, with vegetation in less traveled areas. An overhead crane extends out the east end of the foundry building to encompass a covered area containing a concrete pad. An abandoned railroad spur is located east of the building. The area around the Site is mixed residential and commercial/light industrial in nature.

1.2.3 Geologic Conditions

Six shallow monitoring wells were installed on site to characterize subsurface geology and groundwater conditions. Based on observations during the monitoring well installation activities, the Site is underlain by approximately 2.5 to 7.0 feet of fill consisting of varying amounts of sand, silt, and gravel with occasional brick fragments and cinders. Underlying the fill is a silt layer near the southwest end of the Site, and sand, gravel and cobbles at other parts of the Site. Bedrock was not encountered during any intrusive activities. As such, groundwater occurs under unconsolidated conditions at depths ranging from approximately 6.0 to14.0 feet below ground surface (bgs), depending on topography and seasonal variations.

Based on the results of hydraulic-conductivity testing and measured hydraulic gradients, local groundwater in the overburden flows to the southeast across the Site at an average velocity of 8.9×10^{-4} ft/day.

A groundwater flow is shown in Figure 2.

1.3 Summary of Remedial Investigation Findings

A Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the site. The results of the RI are described in detail in the following report:

- Site Investigation/Remedial Alternatives Report (February 2003).

The purpose of the SI conducted by the City of Newburgh was to define the nature and extent of any contamination resulting from previous activities at the Site. The SI was conducted between September 1999 and February 2002**.** The field activities and findings of the investigation are described in more detail in the SI report. A summary of the activities completed include:

- research of historical information and site usage;
- excavation of a test pit to locate the underground drainage/leach field;
- collection of approximately 46 surface and subsurface soil samples;

- installation of six soil borings and six monitoring wells for analysis of soils and groundwater, as well as physical properties of soil and hydrogeologic conditions;
- sampling of six monitoring wells; and
- a survey of public and private water supply wells in the area near the Site.

To determine whether the soil and groundwater exhibited contamination at levels of concern, data from the investigation were compared to the following SCGs:

- Groundwater, drinking water, and surface water SCGs are based on New York State Department of Environmental Conservation (NYSDEC) “Ambient Water Quality Standards and Guidance Values” and Part 5 of the New York State Sanitary Code.
- Soil SCGs are based on the NYSDEC “Technical and Administrative Guidance Memorandum (TAGM) 4046; Determination of Soil Cleanup Objectives and Cleanup Levels."

Generally, the SI determined that the main categories of contaminants that exceeded their SCGs are VOCs, SVOCs, and inorganic constituents (metals) and required remediation.

The only VOC of concern with respect to groundwater is PCE. Contaminants of concern with respect to soil consist of several carcinogenic polycyclic aromatic hydrocarbons (PAHs) and lead and mercury.

A summary of the site conditions during the SI phase, which was performed from September 1999 through February 2002, is provided below.

1.3.1 Surface Soil

Surface soil samples were collected at various locations outside of the building area and analyzed for SVOCs, polychlorinated biphenyls (PCBs), and metals. Several SVOCs and metals were detected above the cleanup criteria. PCBs were detected at various locations but were detected at concentrations below the cleanup objectives.

Lead was detected at several locations above SCGs as shown in Table 1. The drum storage area contains the highest concentrations of lead at the Site with detections ranging from 441 ppm to 6,600 ppm. Lead was also detected above the cleanup objective in the low-lying ground area on the east side of the property. Concentrations ranged from 435 ppm to 1,120 ppm. Lead concentration over the remainder of the Site were minimal, with the exception of one

concentration of 1,000 ppm in sample SS-6 which was collected adjacent to the northern portion of the building.

Mercury was detected slightly above the cleanup objective at several locations. However, sample SS-1, which was collected in the parking area to the south of the building, exhibited a mercury concentration of 48 ppm. Based on the lower concentrations of mercury detected, SS-1 was considered a hot spot with limited aerial extent.

Carcinogenic PAHs were detected in most of the surface soil samples. Results for total carcinogenic PAHs ranged from non-detect to 21 ppm. Benzo(a)pyrene was the most frequently detected carcinogenic PAH with concentrations ranging from non-detect to 3.5 ppm. Concentrations were highest in the overhead crane area and low-lying ground area with several samples exhibiting benzo(a)pyrene concentrations above the cleanup objective of 0.061 ppm.

1.3.2 Subsurface Soil

Subsurface soil samples were collected to determine the vertical extent of contamination and whether or not it extended any appreciable distance beyond the sidewalls and base of the gasoline tank excavation. Subsurface samples were analyzed for VOCs. Additional analyses were activated for SVOCs, PCBs, or metals if the corresponding surface soil sample contained those compounds significantly above cleanup criteria.

No VOCs exceeded the cleanup objective with the exception of one sample, S-3, in the drum storage area where xylenes were detected at 1.4 ppm, which is only marginally above the cleanup objective of 1.2 ppm. Concentrations of lead in this area were below the cleanup objective of 500 ppm at depths ranging from 1.0 to 2.5 feet bgs, which indicates a decreasing contaminant gradient with respect to depth.

Concentrations of carcinogenic PAHs, including benzo(a)pyrene, in the overhead crane area range from non-detect to 0.25 ppm and also appear to decrease with depth.

1.3.3 Groundwater

Six shallow, overburden monitoring wells were installed on site. During subsequent groundwater monitoring events, which were conducted in August 2001 and September 2002, all monitoring wells were sampled and analyzed for VOCs, SVOCs, and metals. Results of the groundwater monitoring events revealed concentrations of SVOC below their respective groundwater standards in all monitoring wells. VOCs were detected in all wells but at relatively

low levels. The primary VOC detected was PCE with detections ranging from non-detect in MW-3 to 9.7 ppb in MW-4, which is only slightly above the TOGS AWQS of 5 ppb (see Figure 4). Results of the SI determined that dissolved-phase PCE impact was localized since PCE concentrations were not detected in MW-6, which is located in a hydraulically downgradient direction from MW-4. Methyl tert-butyl ether (MTBE) was detected in several wells but only above the standard of 5 ppb in MW-3. MTBE was detected in MW-3 at 2.9 ppb during the first round of sampling and at 1,200 ppb during the second round. To verify the inconsistent MTBE concentrations, MW-3 was re-sampled in December 2002 and exhibited a MTBE concentration of 29 ppb. Therefore, the single, elevated concentration of MTBE is considered an anomaly. Analytical results from the most recent groundwater sampling event, which was conducted in September 2011, revealed no detectable concentrations of MTBE in MW-3.

1.3.4 Site-Related Soil Vapor Intrusion

VOC concentrations were monitored during the cleaning of the interior trench. Total concentrations of VOCs were monitored continuously using a MiniRAE 2000 photoionization detector (PID) unit. The PID was calibrated daily with ambient zero air and a span gas of 100 ppm of isobutylene standard. An action level of 5 ppm was determined and activities were stopped if the total VOC concentrations in the work area reached or exceeded the action level at any point in time.

If the ambient total VOC concentration in the work area exceeded 5 ppm above background but less than 25 ppm, the CAMP required work activities to be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. Work activities could be resumed provided that the total VOC concentration decreased to below 5 ppm over background.

If the ambient total VOC concentration exceeded 25 ppm within the work area, activities were required to be shut down.

If required, VOC suppression measures to be implemented included covering the source areas with plastic sheeting, soil, or water and applying odor suppression foam to the source areas.

1.3.5 Particulate Monitoring

Particulate concentrations were monitored continuously and logged using two Thermo PDR-1000 particulate units. The units were capable of measuring the concentration of particulate matter to less than 10 microns in diameter (PM-10) with the results averaged over 15 minutes. The instruments audible alarm was used to signal exceedances of the action level. The alarm

level for the instruments was set at the initial action level of 100 micrograms per cubic meter (ug/m3) for a 15-minute average, assuming a background concentration of 0 ug/m3. In addition, fugitive dust migration was also visually monitored during all work activities.

If the downwind PM-10 level was 100 mcg/m3 greater than background (upwind perimeter) for the 15-minute period, or if airborne dust was observed leaving the work area, the CAMP required dust suppression techniques to be employed. Work could continue with dust suppression techniques in use provided that downwind PM-10 levels did not exceed 150 mcg/m3 above the upwind level and no visible dust migrated from the work area.

If the downwind PM-10 level was detected greater than 150 µg/m3 above the upwind level, the CAMP required the stoppage of work, evaluation of activities, and application of suppression measures. Work activities could be resumed provided that dust suppression measures and other controls were successful in reducing the downwind PM-10 concentration to within 150 ug/m3 of the upwind level and in preventing visible dust migration.

Particulate suppression measures were to include misting the particulate source with water, use of particulate suppression materials, and wetting the work area prior to initiating the activities. Particulate suppressions measures in the form of power washing were enacted during the removal of petroleum materials from the former conveyor trough.

1.3.6 Underground and Aboveground Storage Tanks

During the SI, Interim Remedial Measures (IRMs) related to the excavation and disposal of underground storage tanks (USTs) and aboveground storage tanks (ASTs) included the following:

- Two 275-gallon ASTs were removed from within the building. One tank, located at the end of the trough, contained approximately 200 gallons of a petroleum product/water mixture. The other tank contained approximately 150 gallons of petroleum product/water mixture.
- A 1,000-gallon waste oil AST, which was located adjacent to the concrete pad area to the east of the building, was removed from the Site. . Approximately 700 gallons of waste oil was pumped from the tank, containerized, and disposed of off site.
- A 1,000-gallon UST and related piping were excavated and disposed of off site. Prior to removing the tank, approximately 1.5 inches of gasoline was pumped from the tank, containerized, and disposed of off site.

1.4 Summary of Remedial Actions

The Site was remediated in accordance with the remedy selected by the NYSDEC and described in the Record of Decision (ROD) dated April 2003. The remedial actions were discussed in the ROD, which specified the excavation and off-site disposal of lead and mercury contaminated soils, removal and off-site disposal of petroleum-contaminated debris, stormwater management, and a site-wide cover.

The following additional IRMs were performed during the SI:

- Approximately 123 tons of petroleum-contaminated soil was disposed of off site on December 6, 1999. Jonas had previously stockpiled soil in response to a petroleum spill in the overhead crane area.
- Drums and containers were characterized and removed from the Site on November 9, 2000 for disposal as hazardous and non-hazardous waste, as appropriate. Fourteen of the drums were identified in the drum storage area and contained petroleum wastes. Numerous drums and containers containing various industrial products were also found inside the building.
- Removal of USTs and ASTS, as mentioned above.
- One sump, identified on the west end of the conveyor, was pumped out on June 21, 2001.
- A catch basin, which collected oil runoff from the concrete pad area and a dry well were cleaned on June 22, 2001. All contents were drummed and disposed of off site.

Summary of remedial actions conducted in October and November 2011:

1. Mercury and lead impacted soils were excavated from two predetermined areas outlined in the ROD and RDR. Figure 5 illustrates each of the excavation areas and the approximate excavation depths. Upon completion, all excavated areas were backfilled to grade with clean quarry process stone.
2. Construction and maintenance of a soil cover system consisting of poly sheeting (i.e., demarcation barrier) to prevent human exposure to remaining contaminated soil/fill remaining at the Site.
3. Placement of cover materials (asphalt, gravel, 12-inch soil underlain by a demarcation barrier).
4. Removal and off-site disposal of petroleum contaminated debris inside the building.
5. Development of a soil management plan that addressed residual contaminated soil that may be excavated in the future.
6. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the Site.
7. Development and implementation of a Site Management Plan for long-term management of remaining contamination as required by the Environmental Easement,

which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance, and (4) reporting.

The contractor, Enterprise Network Resolutions (ENR), adhered to the soils/materials management requirements as outlined in the August 2010 RDR, Section 3.1, during the excavation activities. Remedial activities were completed at the Site in October and November 2011.

1.4.1 Removal of Contaminated Materials from the Site

ENR transported a total of 312.9 tons of contaminated soil off site for proper disposal at Malanka Landfill Facility. In addition, used tires and oily debris were removed from the Site.

Waste classification samples were collected by ENR from each excavation area and analyzed for full Toxicity Characteristic Leaching Procedure (TCLP) analysis, which includes the following: metals, pH, Total Compound List (TCL) for VOC, Total Analyte List (TAL)/TCL+30, and Total Petroleum Hydrocarbons (TPH). One composite sample was collected and analyzed from the Lead Excavation Area. Three composite samples were collected and analyzed from various locations of the Mercury Excavation Area.

A list of the soil cleanup objectives (SCOs) for the primary contaminants of concern (COCs) and applicable land use for this Site is provided in Table 3.

1.4.2 Site-Related Treatment Systems

No long-term treatment systems were installed as part of the site remedy.

1.4.3 Remaining Contamination

Contaminated materials remaining on site consists primarily of surface and subsurface soils impacted by SVOCs, metals, and dissolved-phase VOC impact in groundwater. Impacted soils are addressed by the site-wide cover, as outlined in the ROD. The specific areas of remaining contamination, including all lead, arsenic, and mercury post-excavation results for each excavation area, are depicted on Figure 6.

No active utility lines or subsurface infrastructure are present at the Site, with the exception of an out-of-service oil/water separator located at the southern end of the Site and an associated drain line which runs east towards the sewer system. Neither utility lines nor subsurface infrastructure had any effect on the remedial activities.

Due to the presence of SVOC and metals contamination in soil, the installation of a sufficient site cap/cover was selected as the appropriate remedial alternative. All post-excavation sample results were compared to Unrestricted Use and Commercial Use Soil Cleanup Objectives (UUSO, CUSCO). Post-excavation results revealed all concentrations of arsenic and lead below relative CUSCO, and in some cases, the UUSCO. The mercury post-excavation samples revealed samples, PE-4 at a concentration of 1.01 ppm, and PE-6 with a concentration of 0.357 ppm, which do not exceed the CUSCO of 2.8 ppm for mercury. In some cases, the UUSCO of 0.18 ppm was exceeded for the following samples (mercury concentration): PE-1 (0.182 ppm), PE-7 (0.123 ppm), and PE-10 (0.269).

Since contaminated soil, and potentially contaminated groundwater/soil vapor, remains beneath the Site after completion of the Remedial Action, Institutional and Engineering Controls are required to protect human health and the environment.

Tables 4 and 5 and Figure 6 summarize the results of all soil samples remaining at the Site after completion of Remedial Action that exceed the Track 1 (commercial use) SCOs.

2.0 Engineering and Institutional Control Plan

2.1 Introduction

2.1.1 General

Since remaining contaminated soil and groundwater exists beneath the Site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the Site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC.

2.1.2 Purpose

This plan provides:

- a description of all EC/ICs on the site;
- the basic implementation and intended role of each EC/IC;
- a description of the key components of the ICs set forth in the Environmental Easement;
- a description of the features to be evaluated during each required inspection and periodic review;
- a description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Excavation Work Plan for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the Site; and
- any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the site remedy, as determined by the NYSDEC.

2.2 Engineering Controls

2.2.1 Engineering Control Systems

2.2.1.1 Soil Cap

Exposure to remaining contamination in soil/fill at the Site is prevented by a soil cover system placed over the Site. This cover system is comprised of construction matting across the entire site, covered by three-quarter inches of quarry process gravel and is depicted on Figure 7. The Excavation Work Plan that appears in Appendix A outlines the procedures required to be implemented in the event the cover system is breached, penetrated, or temporarily removed and any underlying remaining contamination is disturbed. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 4 of this SMP.

No operation of any treatment systems will occur at the Site. However, the Site is subject to future development that may impact the integrity of the Site cover and cause contact with impacted soils. To address this, a Soils Management Plan will be developed as part of the SMP to address any residual contaminated soils that may be excavated from the Site during development. The SMP will require soil characterization and disposal or reuse in accordance with NYSDEC regulations, as applicable.

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

2.2.2.1 Composite Cover System

The composite cover system is a permanent control and the quality and integrity of this system will be inspected at defined regular intervals in perpetuity.

2.3 Institutional Controls

A series of ICs is required by the ROD to (1) implement, maintain, and monitor EC systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and (3) limit the use and development of the Site to restricted commercial uses only. Adherence to these ICs on the Site is required by the Environmental Easement and will be implemented under this SMP. These ICs are:

- compliance with the Environmental Easement and this SMP by the Grantor and the Grantor's successors and assigns;
- all ECs must be operated and maintained as specified in this SMP;
- all ECs on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP;
- groundwater, soil, and other environmental or public health monitoring must be performed as defined in this SMP; and
- data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in this SMP.

ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

The Site has a series of ICs in the form of site restrictions. The Environmental Easement requires adherence to these ICs. Site restrictions that apply to the Controlled Property are:

- The property may only be used for commercial use provided that the long-term ECs and ICs included in this SMP are employed.
- The property may not be used for a higher level of use, such as unrestricted commercial or residential use, without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC.
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP.
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- Vegetable gardens and farming on the property are prohibited.
- The Site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; 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. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow, and will be made by an expert that the NYSDEC finds acceptable.

2.3.1 Excavation Work Plan

The Site has been remediated for restricted commercial use. Any future intrusive work that will penetrate the soil cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system, will be performed in compliance with the Excavation Work Plan (EWP) that is attached as Appendix A to this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the Site. A sample HASP is attached as Appendix C to this SMP that is in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable federal, state, and local regulations. Based on future changes to state and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be updated and re-submitted with the notification provided in Section A-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP, and CAMP and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (see Section 5).

The Site owner and associated parties preparing the remedial documents submitted to the state, and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of runoff from open excavations into remaining contamination, and structures that may be affected by excavations (such as building foundations and bridge footings). The Site owner will ensure that site development activities will not interfere with, or otherwise impair or compromise, the engineering controls described in this SMP.

2.4 Inspections and Notifications

2.4.1 Inspections

Inspections of all remedial components installed at the Site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive site-wide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- whether ECs continue to perform as designed;
- if these controls continue to be protective of human health and the environment;
- compliance with requirements of this SMP and the Environmental Easement;
- achievement of remedial performance criteria;
- sampling and analysis of appropriate media during monitoring events;
- if Site records are complete and up-to-date; and
- changes, or needed changes, to the remedial or monitoring system.

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the Site will be conducted within five days of the event to verify the effectiveness of the EC/ICs implemented at the Site by a qualified environmental professional as determined by NYSDEC.

2.4.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- Sixty-day advance notice of any proposed changes in site use that are required under the terms of the State Assistance Contract (SAC), 6NYCRR Part 375, and/or Environmental Conservation Law.
- Seven-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundation structures that reduces or has the potential to reduce the effectiveness of other ECs and likewise any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake, that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, with written confirmation within seven days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the environmental easement specifications and Site Management Plan (SMP), and all approved work plans and reports.
- Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing.

2.5 Contingency Plan

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

2.5.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to Dan Lattanzi of First Environment. These emergency contact lists must be maintained in an easily accessible location at the site.

Table 6: Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

Table 7: Other Contact Numbers

Dan Lattanzi	973-334-0003
William Bennett	518-401-9662
Craig Marti	845-569-7447

*Note: Contact numbers subject to change and should be updated as necessary

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 86 Wisner Avenue, Newburgh, Orange County New York

Nearest Hospital Name: St. Luke's Hospital

Hospital Location: 70 Dubois Street, Newburgh, NY

Hospital Telephone: (845) 561-4400

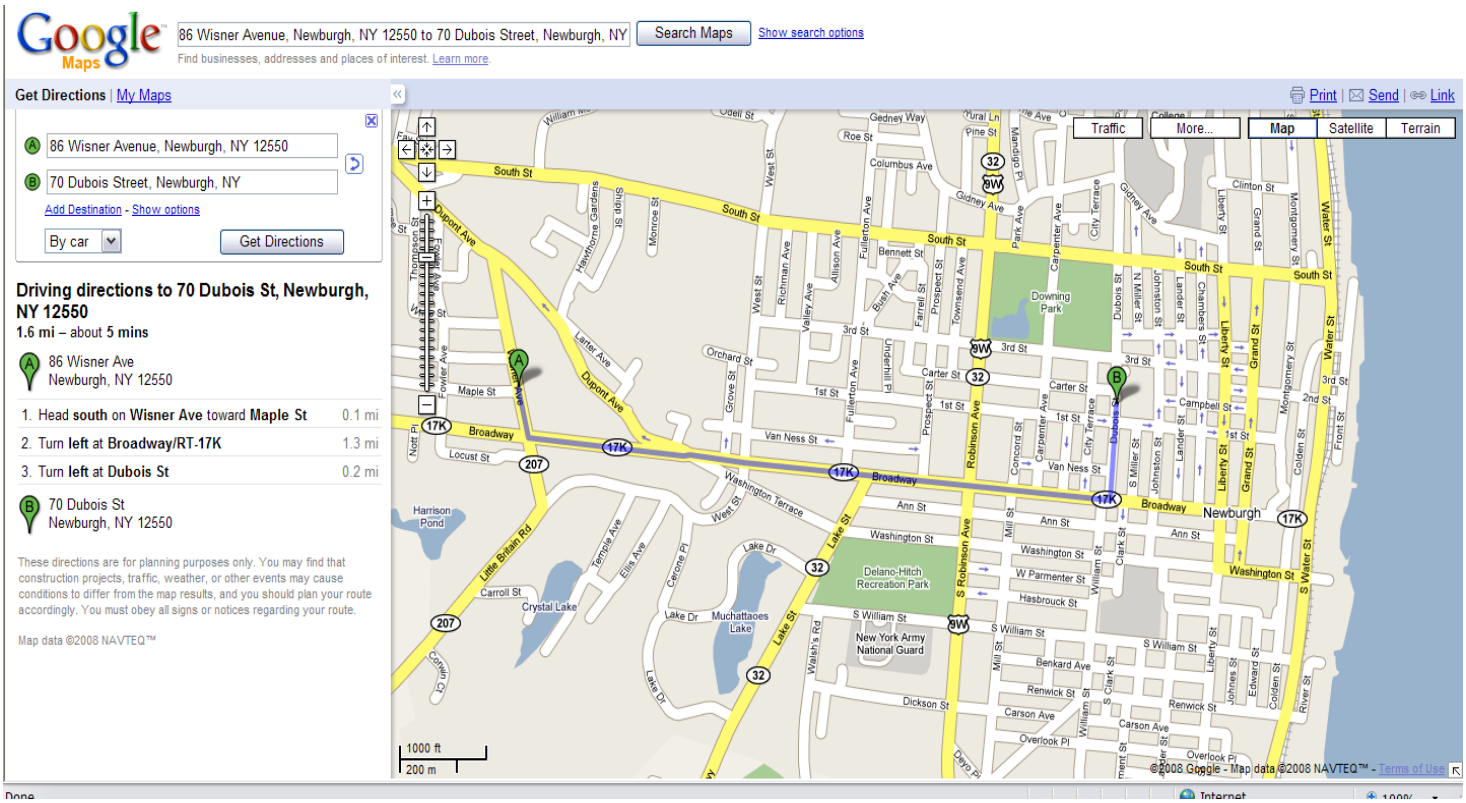
Directions to the Hospital:

1. Head South on Wisner Avenue toward Maple Street
2. Turn left at Broadway/RT-17K
3. Turn left at Dubois Street

Total Distance: 1.6 miles

Total Estimated Time: About 5 minutes

Map Showing Route from the Site to the Hospital:



2.5.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table 6). The list will also be posted prominently at the Site and made readily available to all personnel at all times.

3.0 Site Monitoring Plan

3.1 Introduction

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the Site, the soil cover system, and all affected site media identified below. Monitoring of other ECs is described in Chapter 4, Operation, Monitoring and Maintenance Plan. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- assessing compliance with applicable NYSDEC standards, criteria, and guidance, particularly ambient groundwater standards and Part 375 SCOs for soil;
- assessing achievement of the remedial performance criteria;
- evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- sampling locations, protocol, and frequency;
- information on all designed monitoring systems (e.g., well logs);
- analytical sampling program requirements;
- reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements;
- inspection and maintenance requirements for monitoring wells;
- monitoring well decommissioning procedures; and
- annual inspection and periodic certification.

Annual and As-needed monitoring of the performance of the remedy and overall reduction in contamination on site will be conducted for the first five years. The frequency thereafter will be determined by NYSDEC. Trends in contaminant levels in air, soil, and/or groundwater in the affected areas will be evaluated to determine if the remedy continues to be

effective in achieving remedial goals. Monitoring programs are summarized in Table 8 and outlined in detail in Sections 3.2 and 3.3 below.

Table 8: Monitoring/Inspection Schedule

Monitoring Program	Frequency*	Matrix	Analysis
Effectiveness	Annual/As Needed	Soil	Not Applicable
Performance	To complete decommissioning of wells	Groundwater	VOCs
Trend	As needed	Groundwater	VOCs

*The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

3.2 Soil Cover System Monitoring

The following inspections will take place as part of the monitoring process:

- Annually - The integrity of the site cover will be inspected to insure contact with subsurface soils is prevented.
- As Needed - After any severe condition occurs, such as major erosion or flooding, the Site will be inspected.

3.3 Media Monitoring Program

3.3.1 Groundwater Monitoring

The monitoring wells shall remain in place and not be disturbed without NYSDEC approval. Groundwater monitoring activities (i.e., sampling) are not required as long as the monitoring wells remain undisturbed. The future owner of the Site has the option of proposing a sampling program to decommission the monitoring wells. To confirm the absence of contaminants in groundwater, the program must include at least one round of groundwater sampling of all wells for VOCs. Requirements for monitoring well sampling are provided below in Table 9.

The monitoring well network has been installed to monitor both upgradient and downgradient groundwater conditions at the site. The on-site monitoring well network has been designed based on the following criteria:

- A figure showing the monitoring well array is provided as Figure 8. Monitoring wells were installed to a depth of 15.0 feet bgs within the shallow, overburden aquifer. Each well was constructed of 10.0 feet of .010 slotted PVC screen and 5.0 feet of PVC riser.
- Local groundwater in the overburden flows to the southeast of the Site at an average velocity of 8.9 x 10^{-4} ft/day.
- Baseline groundwater quality conditions are depicted on Figure 9.

Table 9: Analytical Parameters for Monitoring Wells

Well ID	Analytical Parameters
MW-1	EPA Method 8260-VOCs
MW-2	EPA Method 8260-VOCs
MW-3	EPA Method 8260-VOCs
MW-4	EPA Method 8260-VOCs
MW-5	EPA Method 8260-VOCs
MW-6	EPA Method 8260-VOCs

Monitoring well construction logs are included in Appendix D.

The sampling frequency may be modified with the approval NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC.

Deliverables for the groundwater monitoring program are specified below.

3.3.1.1 Sampling Protocol

All monitoring well sampling activities will be recorded in a field book and a groundwater-sampling log is presented in Appendix E. Other observations (e.g., well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network.

3.3.1.2 Groundwater Level Measurements

Groundwater levels will be measured during sampling events. Synoptic (instantaneous) groundwater level measurements will be collected from all accessible wells. Groundwater level

measurements will be made using a Slope Indicator electronic water level meter or equivalent. The water level meter will be field decontaminated using phosphate-free detergent and distilled or deionized water prior to use between measurements at each well location. Measurements to the depth-of-water will be made to the nearest 0.01-foot relative to the northernmost point at the top of the casing elevation. This measurement will be converted to a groundwater elevation based upon the surveyed casing elevation.

If non-aqueous phase liquids are observed, then thickness measurements will be made using an oil/water interface probe, indicator paste, or other appropriate methods.

3.3.1.3 Purging

Monitoring wells shall be sampled in accordance with the NYSDEC "Low-flow (Minimal Drawdown) Groundwater Sampling Procedures" (Puls and Barcelona, EPA/540/S-95/504; April 1996). Groundwater will be extracted at a rate that is equal to or less than one liter per minute. Water level will be checked periodically during purging to monitor drawdown and to guide flow rate adjustment. The flow rate will be adjusted to achieve a minimal drawdown that does not exceed 0.1 meters (four inches).

The water quality indicator parameters that will be monitored will include pH, conductivity, dissolved oxygen (DO), and turbidity. Measurements will be taken every three to five minutes until water quality has stabilized. Stabilization is achieved when three successive readings are within ± 0.1 for pH, ± 3 percent for conductivity, and ± 10 percent for turbidity and DO.

3.3.1.4 Sampling

Sampling will involve disconnecting the intake hose from the flow-through cell and then using that hose to discharge the sample directly into containers provided by the laboratory.

Following sample collection, the sample containers will be securely closed, residue will be wiped from the sides of the containers, the containers will be properly labeled, and the containers will be immediately placed in a cooler. Samples will be kept chilled at a temperature of 4°C and shipped on the day of sample collection under a chain-of-custody to the analytical laboratory. All samples will be analyzed for VOCs by a NYSDOH certified Environmental Laboratory Approval Program (ELAP) and Contract Laboratory Program (CLP) laboratory. In addition, data

upon which decisions impacting human health are based will be documented by Category B deliverables

This information is presented in the QAPP in Appendix F.

3.3.2 Monitoring Well Repairs, Replacement and Decommissioning

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced (as per the Monitoring Plan) if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The Site owner is responsible for notifying the NYSDEC prior to any repair or decommissioning of monitoring wells and the repair or decommissioning and replacement process will be documented in the subsequent periodic report. Well decommissioning without replacement will be done only with the prior approval of NYSDEC and will be solely based on the results of the sampling program. Well abandonment will be performed in accordance with NYSDEC's "Consumer Policy 43: Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC.

3.4 Site-Wide Inspection

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs or monitoring devices. A blank Site Inspection Form displaying the objectives of the inspection(s) is provided in Appendix G. During these inspections, an inspection form will be completed that will compile sufficient information to assess the following:

- compliance with all ICs, including site usage;
- an evaluation of the condition and continued effectiveness of ECs;
- general site conditions at the time of the inspection;
- the site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection;

- compliance with permits and schedules included in the Operation and Maintenance Plan; and
- confirmation that site records are up-to-date.

3.5 Monitoring Quality Assurance/Quality Control

All sampling and analyses will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the Site (Appendix F). Main Components of the QAPP include:

- QA/QC Objectives for Data Measurement.
- Sampling Program:
    - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
    - Sample holding times will be in accordance with the NYSDEC ASP requirements.
    - Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.
- Sample Tracking and Custody.
- Calibration Procedures:
    - All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.
    - The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.
- Analytical Procedures.
- Preparation of a Data Usability Summary Report (DUSR), which will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation, and chain-of-custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.
- Internal QC and Checks.
- QA Performance and System Audits.
- Preventative Maintenance Procedures and Schedules.
- Corrective Action Measures.

3.6 Monitoring Reporting Requirements

Forms and any other information generated during regular monitoring events and inspections will be kept on file on site. All forms, and other relevant reporting formats used

during the monitoring/inspection events, will be (1) subject to approval by NYSDEC, and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP.

All monitoring results will be reported to NYSDEC on a periodic basis in the Periodic Review Report. A letter will also be prepared [if required by NYSDEC], subsequent to each sampling event. The letter will include, at a minimum:

- date of event;
- personnel conducting sampling;
- description of the activities performed;
- type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc);
- copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- sampling results in comparison to appropriate standards/criteria;
- a figure illustrating sample type and sampling locations;
- copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- any observations, conclusions, or recommendations; and
- a determination as to whether groundwater conditions have changed since the last reporting event.

Data will be reported in hard copy or digital format as determined by NYSDEC. A summary of the monitoring program deliverables are summarized in Table 10 below.

Table 10: Schedule of Monitoring/Inspection Reports

Task	Reporting Frequency*
Groundwater Monitoring Report	As needed

*The frequency of events will be conducted as specified until otherwise approved by NYSDEC

4.0 Operation and Maintenance Plan

4.1 Introduction

The site remedy does not rely on any mechanical systems, such as sub-slab depressurization systems or air sparge/ soil vapor extraction systems, to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

5.0 Inspections, Reporting, and Certifications

5.1 Site Inspections

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedule provided in Section 3 Monitoring Plan of this SMP. At a minimum, a site-wide inspection will be conducted annually.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate form for their respective system which are contained in Appendix E. Additionally, a general site-wide inspection form will be completed during the site-wide inspection (see Appendix G). These forms are subject to NYSDEC revision. As part of the inspection and monitoring well sampling, the Site inspector will record the conditions of the monitoring wells to ensure they remain undamaged, and will report if the environmental easement restrictions are being upheld according to set guidelines and regulations.

All applicable inspection forms and other records, including all media sampling data and system maintenance reports, generated for the Site during the reporting period will be provided in electronic format in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- the Monitoring Plan is being implemented;
- the Site remedy continues to be protective of public health and the environment and is performing as designed in the Remedial Action Work Plan (RAWP) and Construction Completion Report (CCR).

5.2 Certification of Engineering and Institutional Controls

After the last inspection of the reporting period, a qualified environmental professional, or Professional Engineer licensed to practice in New York State, will prepare the following certification,

For each institutional or engineering control identified for the Site, I certify that all of the following statements are true:

- The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction.
- The institutional control and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by the Department.
- Nothing has occurred that would impair the ability of the control to protect the public health and environment.
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control.
- Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control.
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document.
- Use of the Site is compliant with the environmental easement.
- All monitoring wells currently on site remain undamaged, and the groundwater restriction included from the environmental easement are being upheld.
- The engineering control systems are performing as designed and are effective.
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices.
- The information presented in this report is accurate and complete.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner or Owner's Designated Site Representative] I have been authorized and designated by all site owners to sign this certification for the site.
- The signed certification will be included in the Periodic Review Report described below.
- No new information has come to my attention, including groundwater monitoring data from wells located at the site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of off-site contamination are no longer valid.

Every five years the following certification will be added:

- The assumptions made in the qualitative exposure assessment remain valid.

The signed certification will be included in the Periodic Review Report described below.

5.3 Periodic Review Report

A Periodic Review Report will be submitted to the Department periodically, beginning 18 months after the Certificate of Completion or equivalent document (e.g., Satisfactory Completion Letter, No Further Action Letter, etc.) is issued. After the initial periodic review, the Department will determine the future frequency of periodic reviews (either 3 years or 5 years). In the event that the Site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the Site described in Appendix B (Metes and Bounds). The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of each certification period. Media sampling results will also incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site.
- Results of the required annual site inspections and severe condition inspections, if applicable.
- All applicable inspection forms and other records generated for the Site during the reporting period in electronic format.
- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions.
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format.
- A site evaluation, which includes the following:
    - the compliance of the remedy with the requirements of the site-specific RAWP, ROD or Decision Document;
    - the operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
    - any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
    - recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
    - the overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted, in hard-copy format, to the NYSDEC Central Office and Regional Office in which the Site is located, and in electronic format to NYSDEC Central Office, Regional Office, and the NYSDOH Bureau of Environmental Exposure Investigation.

5.4 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

APPENDIX A – Excavation Work Plan

A-1 Notification

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the Site owner, or their representative, will notify the Department. Currently, this notification will be made to:

William Bennett, Environmental Engineer I
Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Remediation
625 Broadway
Albany, NY 12233-7014
Phone: (518) 402-9662

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control.
- A summary of environmental conditions anticipated in the work areas including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling.
- A schedule for the work, detailing the start and completion of all intrusive work.
- A summary of the applicable components of this EWP.
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120.
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in Appendix C of this document.
- Identification of disposal facilities for potential waste streams.
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

A-2 Soil Screening Methods

Visual, olfactory ,and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work

performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

A-3 Stockpile Methods

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters, and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC.

A-4 Materials Excavation and Load Out

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the Site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate federal, state, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on site. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the activities performed under this section are complete.

Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the Site are clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed, as needed, to maintain a clean condition with respect to site-derived materials.

A-5 Materials Transport Off Site

All transport of materials will be performed by licensed haulers in accordance with appropriate local, state, and federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks will be washed prior to leaving the Site. Truck wash waters will be collected and disposed of off site in an appropriate manner.

Truck transport routes are as follows: All trucks must enter and exit through the main entrance located off Wisener Avenue on the western side of the property. All trucks loaded with site materials will exit the vicinity of the Site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; (f) overall safety in transport; and (g) community input [where necessary].

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

A-6 Materials Disposal Off Site

All soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be transported and disposed of in accordance with all local, state (including 6NYCRR Part 360), and federal regulations. If disposal of soil/fill from this Site is proposed for unregulated off-site disposal (i.e., clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this Site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e., hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

A-7 Materials Reuse On Site

No materials shall be reused on site.

A-8 Fluids Management

All liquids to be removed from the Site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported, and disposed of in accordance with applicable local, state, and federal regulations. Dewatering, purge, and development fluids will not be recharged back to the land surface or subsurface of the Site but will be managed off site.

Discharge of water generated during large-scale construction activities to surface waters (i.e., a local pond, stream or river) will be performed under a SPDES permit.

A-9 Cover System Restoration

After the completion of soil removal and any other invasive activities, the cover system will be restored in a manner that complies with the Record of Decision. The demarcation layer, consisting of orange snow fencing material or equivalent material, will be replaced to provide a visual reference to the top of the 'Remaining Contamination Zone,' the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from the crushed stone which currently exists prior to the excavation, this will constitute a modification of the cover element of the remedy and the upper surface of the 'Remaining Contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

A-10 Backfill From Off-Site Sources

All materials proposed for import onto the Site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the Site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in Table

3. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Solid waste will not be imported onto the Site.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

A-11 Stormwater Pollution Prevention

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

A-12 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment, and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides, and PCBs) unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the periodic reports prepared pursuant to Section 5 of the SMP.

A-13 Community Air Monitoring Plan

In order to identify the specific upgradient and downgradient sampling locations, meteorological data will be collected three times daily from a Davis Remote weather station, or equivalent, for barometric pressure, temperature, humidity, rainfall, and wind speed and direction. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations. Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

A-14 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis will include keeping a record of odor complaints, minimizing the time that odor-emitting soils or other media are stockpiled and maximize the distance of the storage area from off-site properties. If nuisance odors are identified at the Site boundary, or if odor complaints are received, 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. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

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

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

A-15 Dust Control Plan

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas, including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

A-16 Other Nuisances

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

TABLES

TABLE 1
Remedial Investigation Soil Contamination Summary
Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

Sample Location	TAGM 4046 Recommended Soil Cleanup Objectives	S-1	S-2	S-3	S-3	S-4	S-5	S-6	S-6	S-7	S-7	S-8	S-8	S-9
Sample Date		06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01
Sample Depth (feet)		0'-0.5'	0'-0.5'	0'-0.5'	6.5'-7.0'	0'-0.5'	0'-0.5'	0'-0.5'	1.5'-2.0'	0'-0.5'	1.5'-2.0'	0'-0.5'	1.5'-2.0'	0'-0.5'
Study Area		1	1	1	1	1	1	2	2	2	2	2	2	2
PARAMETER (units)														
VOCs - (µg/Kg)														
Benzene	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzne	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	300	NA	NA	NA	ND	NA	NA	NA	2.6 J	NA	ND	NA	ND	NA
Ethylbenzene	5,500	NA	NA	NA	810	NA	NA	NA	ND	NA	ND	NA	ND	NA
Methylene Chloride	100	NA	NA	NA	ND	NA	NA	NA	5 J	NA	4.8 J	NA	4.4 J	NA
Naphthalene	1,300		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1,400	NA	NA	NA	ND	NA	NA	NA	ND	NA	15	NA	12	NA
Toluene	1,500	NA	NA	NA	ND	NA	NA	NA	ND	NA	ND	NA	ND	NA
Total Xylenes	1,200	NA	NA	NA	**1400**	NA	NA	NA	ND	NA	ND	NA	ND	NA
VOCs TIC		NA	NA	NA	8430 J	NA	NA	NA	10 J	NA	ND	NA	5.7 J	NA
SVOCs - (ug/Kg)														
2-Methylnapththalene	36,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND
Acenaphthalene	41,000	ND	ND	ND	ND	ND	ND	78 J	58 J	ND	NA	ND	NA	170 J
Acenaphthylene	50,000	ND	57 J	ND	ND	ND	ND	150 J	63 J	ND	NA	ND	NA	94 J
Anthracene	50,000	ND	75 J	ND	1,400 J	ND	ND	430 J	74 J	ND	NA	ND	NA	380
Benzo(a)anthracene	224	72 J	160 J	ND	ND	ND	ND	**1,400**	200 J	76 J	NA	ND	NA	**490**
Benzo(a)pyrene	61	57 J	**260 J**	ND	ND	ND	ND	**1,200**	**250 J**	**84 J**	NA	ND	NA	**510**
Benzo(b)fluoranthene	1,100	160 J	250 J	ND	ND	37 J	ND	**1,200**	210 J	89 J	NA	ND	NA	380
Benzo(g,h,I)perylene	50,000	280 J	370 J	ND	ND	51 J	ND	440 J	140 J	63 J	NA	ND	NA	320 J
Benzo(k)fluoranthene	1,100	140 J	320 J	ND	ND	ND	ND	**1,200**	280 J	82 J	NA	ND	NA	550
Bis(2-Ethylhexyl)phthalate	50,000	770	520	300 J	ND	370	610	46 J	ND	180 J	NA	110 J	NA	580
Butylbenzylphthalate	50,000	ND	110 J	ND	ND	39 J	ND	ND	ND	ND	NA	ND	NA	ND
Chrysene	400	100 J	180 J	ND	ND	ND	46 J	**1,500**	270 J	95 J	NA	ND	NA	**590**
Dibenzo(a,h)anthracene	14	**101 J**	ND	ND	ND	ND	ND	**61 J**	ND	ND	NA	ND	NA	ND
Diethylphthalate	7,100	102 J	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND
Di-n-butylphthalate	8,100	103 J	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND
Di-n-octylphthalate	50,000	104 J	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND
Fluoranthene	50,000	105 J	160 J	ND	930 J	ND	49 J	2,800	550	150 J	NA	ND	NA	1,100
Fluorene	50,000	106 J	53 J	ND	6,200	ND	ND	140 J	58 J	ND	NA	ND	NA	200 J
Indeno(1,2,3-cd)pyrene	3,200	107 J	120 J	ND	ND	ND	ND	380 J	130 J	ND	NA	ND	NA	310 J
Napthalene	13,000	108 J	220 J	ND	**29,000**	39 J	38 J	ND	46 J	ND	NA	ND	NA	140 J
Phenanthrene	50,000	109 J	250 J	ND	11,000	ND	38 J	1,700	530 J	74 J	NA	ND	NA	1,600
Pyrene	50,000	260 J	660	41 J	1100 J	50 J	84 J	2,300	400	140 J	NA	ND	NA	2,300
SVOCs TIC		**2870 J**	**3902 J**	**20460 J**	**133710 J**	**2136 J**	**3567 J**	**3124 J**	**2142**	**1570 J**	**NA**	**535 J**	**NA**	**1317 J**
PCBs - (ug/Kg)	1,000 Total PCBs													
AROCLOR 1016		ND	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	ND
AROCLOR 1221		ND	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	ND
AROCLOR 1232		ND	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	ND
AROCLOR 1242		ND	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	ND
AROCLOR 1248		ND	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	ND
AROCLOR 1254		48	43	ND	NA	18	19	ND	NA	78	NA	ND	NA	ND
AROCLOR 1260		ND	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	ND

TABLE 1
Remedial Investigation Soil Contamination Summary
Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

Sample Location	TAGM 4046 Recommended Soil Cleanup Objectives	S-1	S-2	S-3	S-3	S-4	S-5	S-6	S-6	S-7	S-7	S-8	S-8	S-9
Sample Date		06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01
Sample Depth (feet)		0'-0.5'	0'-0.5'	0'-0.5'	6.5'-7.0'	0'-0.5'	0'-0.5'	0'-0.5'	1.5'-2.0'	0'-0.5'	1.5'-2.0'	0'-0.5'	1.5'-2.0'	0'-0.5'
Study Area		1	1	1	1	1	1	2	2	2	2	2	2	2
PARAMETER (units)														
METALS - (mg/Kg)	RSCO (Eastern USA Background)													
Antimony	SB (Not Available)	3 B	3.6 B	3.9 B	NA	5.5 B	3.8 B	4.8 B	NA	2.2 B	NA	1.4 B	NA	2.1 B
Arsenic	7.5 or SB (3 to 12)	6.3	6.3	5.9	NA	5.2	7.1	**26**	NA	7.3	NA	6.9	NA	9
Barium	300 or SB (15 to 600)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.16(HEAST) or SB(0 to 1.75)	0.20 B	0.19 B	0.15 B	NA	0.14 B	0.2	0.50 B	NA	0.50 B	NA	0.48 B	NA	0.52 B
Cadmium	1 or SB (0.1 to 1)	**1.5**	**1.4**	0.64	NA	0.52 B	**1.8**	**6.1**	NA	0.50 B	NA	0.46 B	NA	0.37 B
Chromium	10 or SB(1.5 to 40)	**49.7**	**104**	**93.1**	NA	**394**	**100**	**54.5**	NA	**46.5**	NA	21.3	NA	22.9
Copper	25 or SB(1 to 50)	**77.9**	**85.5**	**71.1**	NA	**52.5**	**113**	**217**	NA	44.5	NA	43.4	NA	**56.8**
Lead	SB(200 to 500)	**834**	**2400**	**6,600**	NA	**6,330**	**1,250**	441	NA	**584**	NA	79.7	NA	105
Mercury	0.1 (0.001 to 0.2)	**0.21**	0.04	0.02	NA	0.06	0.05	**0.32**	NA	**0.47**	NA	**0.4**	NA	0.16
Nickel	13 or SB (0.5 to 25)	**27.3**	**32.8**	**32.1**	NA	**26.1**	**40.2**	**53**	NA	20.5	NA	24.1	NA	23.7
Selenium	SB (0.1 to 3.9)	ND	ND	ND	NA	ND	ND	0.53 B	NA	ND	NA	ND	NA	ND
Silver	SB (Not Available)	3.5	24.4	3.7	NA	2.8	6.3	4.5	NA	1.2	NA	1.1	NA	1.2
Thallium	SB (Not Available)	ND	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	ND
Zinc	20 or SB (9 to 50)	**364**	**697**	**406**	NA	**399**	**460**	**2,070**	NA	**223**	NA	**99.2**	NA	**132**
TCLP Lead (mg / L)	5 (RCRA)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
B = Compound detected in Lab blank
SB = Soil cleanup objective is the site background level
TIC = Tentatively Identified Compound
NA = Not analyzed
J = The concentration was detected at a value below the MDL
E = Sample Dilution required, original analysis beyond instrument calibration range
Shaded values = Analyte detected in excess of groundwater standard or guideline

TABLE 1
Remedial Investigation Soil Contamination Summary
Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

Sample Location	TAGM 4046 Recommended Soil Cleanup Objectives	S-9	S-10	S-10	S-11	S-11	S-12	S-12	S-13	S-13	S-14	S-14	S-15	S-15
Sample Date		06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01
Sample Depth (feet)		1.5'-2.0'	0'-0.5'	1.5'-2.0'	0'-0.5'	1.5'-2.0'	0'-0.5'	1.0'-1.5'	0'-0.5'	1.0'-1.5'	0'-0.5'	1.0'-1.5'	0'-0.5'	1.5'-2.0'
Study Area		2	2	2	2	2	3	3	3	3	3	3	3	3
PARAMETER (units)														
VOCs - (µg/Kg)														
Benzene	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzne	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	300	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
Ethylbenzene	5,500	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
Methylene Chloride	100	3.4 J	NA	3.5 J	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
Naphthalene	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1,400	8.6	NA	4.8 J	NA	ND	NA	ND	NA	ND	NA	3.9	NA	7.6
Toluene	1,500	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
Total Xylenes	1,200	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
VOCs TIC		1100 J	NA	7.8 J	NA	ND	NA	ND	NA	22 J	NA	7.8 J	NA	ND
SVOCs - (ug/Kg)														
2-Methylnapththalene	36,400	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	ND	NA
Acenaphthalene	41,000	ND	ND	NA	ND	430	ND	NA	94 J	NA	260 J	NA	ND	NA
Acenaphthylene	50,000	ND	ND	NA	ND	52 J	54 J	NA	1,400	NA	160 J	NA	ND	NA
Anthracene	50,000	ND	ND	NA	ND	720	ND	NA	1,200	NA	660	NA	ND	NA
Benzo(a)anthracene	224	ND	ND	NA	53 J	**830**	120 J	NA	**3,800**	NA	**1,300**	NA	ND	NA
Benzo(a)pyrene	61	ND	ND	NA	**93 J**	**860**	**130 J**	NA	**3,500**	NA	**1,200**	NA	ND	NA
Benzo(b)fluoranthene	1,100	ND	ND	NA	110 J	520	120 J	NA	**5,200 D**	NA	**1,300**	NA	ND	NA
Benzo(g,h,I)perylene	50,000	ND	ND	NA	ND	500	68 J	NA	1,200	NA	360 J	NA	ND	NA
Benzo(k)fluoranthene	1,100	ND	ND	NA	95 J	1000	210 J	NA	**3,800**	NA	**1,200**	NA	ND	NA
Bis(2-Ethylhexyl)phthalate	50,000	ND	230 J	NA	190 J	ND	140 J	NA	540	NA	190 J	NA	57 J	NA
Butylbenzylphthalate	50,000	ND	ND	NA	ND	ND	100 J	NA	83 J	NA	53 J	NA	ND	NA
Chrysene	400	ND	ND	NA	74 J	**880**	150 J	NA	**3,700**	NA	**1,500**	NA	ND	NA
Dibenzo(a,h)anthracene	14	ND	ND	NA	ND	**54 J**	ND	NA	**220 J**	NA	**51 J**	NA	ND	NA
Diethylphthalate	7,100	ND	53 J	NA	ND	ND	ND	NA	ND	NA	54 J	NA	ND	NA
Di-n-butylphthalate	8,100	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	ND	NA
Di-n-octylphthalate	50,000	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	ND	NA
Fluoranthene	50,000	ND	ND	NA	91 J	1700	280 J	NA	10000 D	NA	3,000	NA	ND	NA
Fluorene	50,000	ND	ND	NA	ND	430	ND	NA	520 J	NA	300 J	NA	ND	NA
Indeno(1,2,3-cd)pyrene	3,200	ND	ND	NA	150 J	410	ND	NA	770	NA	220 J	NA	ND	NA
Napthalene	13,000	ND	ND	NA	ND	190 J	ND	NA	97 J	NA	81 J	NA	ND	NA
Phenanthrene	50,000	ND	ND	NA	57 J	1900	140 J	NA	390	NA	2,600	NA	ND	NA
Pyrene	50,000	ND	47 J	NA	290 J	1400	240 J	NA	8400 D	NA	2,700	NA	ND	NA
SVOCs TIC		**3526**	**6420 J**	**NA**	**603 J**	**3586**	**13730 J**	**NA**	**18470 J**	**NA**	**10952 J**	**NA**	**2907 J**	**NA**
PCBs - (ug/Kg)	1,000 Total PCBs													
AROCLOR 1016		NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
AROCLOR 1221		NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
AROCLOR 1232		NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
AROCLOR 1242		NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
AROCLOR 1248		NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
AROCLOR 1254		NA	ND	NA	28	NA	ND	NA	ND	NA	ND	NA	ND	NA
AROCLOR 1260		NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA

TABLE 1
Remedial Investigation Soil Contamination Summary
Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

Sample Location	TAGM 4046 Recommended Soil Cleanup Objectives	S-9	S-10	S-10	S-11	S-11	S-12	S-12	S-13	S-13	S-14	S-14	S-15	S-15
Sample Date		06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01
Sample Depth (feet)		1.5'-2.0'	0'-0.5'	1.5'-2.0'	0'-0.5'	1.5'-2.0'	0'-0.5'	1.0'-1.5'	0'-0.5'	1.0'-1.5'	0'-0.5'	1.0'-1.5'	0'-0.5'	1.5'-2.0'
Study Area		2	2	2	2	2	3	3	3	3	3	3	3	3
PARAMETER (units)														
METALS - (mg/Kg)	RSCO (Eastern USA Background)													
Antimony	SB (Not Available)	NA	1.3 B	NA	1.4 B	NA	4.5 B	NA	6.7 B	NA	1.7 B	NA	1.6 B	NA
Arsenic	7.5 or SB (3 to 12)	NA	8.6	NA	5.9	NA	**12.3**	NA	**104**	NA	**14.5**	NA	8.7	NA
Barium	300 or SB (15 to 600)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.16(HEAST) or SB(0 to 1.75)	NA	0.34 B	NA	0.48 B	NA	0.4 B	NA	0.67 B	NA	0.44 B	NA	0.49 B	NA
Cadmium	1 or SB (0.1 to 1)	NA	0.81	NA	0.39 B	NA	**2**	NA	**3.4**	NA	0.49 B	NA	0.27 B	NA
Chromium	10 or SB(1.5 to 40)	NA	18.5	NA	33	NA	**66.9**	NA	**105**	NA	21.1	NA	17.5	NA
Copper	25 or SB(1 to 50)	NA	42.5	NA	29.1	NA	**143**	NA	**171**	NA	33.4	NA	**54.2**	NA
Lead	SB(200 to 500)	NA	46.8	NA	169	NA	435	NA	**1,120**	NA	265	NA	39.6	NA
Mercury	0.1 (0.001 to 0.2)	NA	0.02	NA	0.13	NA	**0.32**	NA	**6.2**	NA	0.19	NA	ND	NA
Nickel	13 or SB (0.5 to 25)	NA	20.4	NA	**26.4**	NA	**41.1**	NA	**50.6**	NA	20.2	NA	21.4	NA
Selenium	SB (0.1 to 3.9)	NA	ND	NA	ND	NA	0.98	NA	ND	NA	ND	NA	ND	NA
Silver	SB (Not Available)	NA	ND	NA	1.2	NA	10.2	NA	8	NA	5.5	NA	0.95 B	NA
Thallium	SB (Not Available)	NA	ND	NA	ND	NA	ND	NA	0.76 B	NA	0.58 B	NA	ND	NA
Zinc	20 or SB (9 to 50)	NA	**105**	NA	**126**	NA	**320**	NA	**600**	NA	**140**	NA	**83.3**	NA
TCLP Lead (mg / L)	5 (RCRA)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
B = Compound detected in Lab blank
SB = Soil cleanup objective is the site background level
TIC = Tentatively Identified Compound
NA = Not analyzed
J = The concentration was detected at a value below the MDL
E = Sample Dilution required, original analysis beyond instrument calibration range
Shaded values = Analyte detected in excess of groundwater standard or guideline

TABLE 1
Remedial Investigation Soil Contamination Summary
Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

Sample Location	TAGM 4046 Recommended Soil Cleanup Objectives	S-16	S-16	S-16	S-17	S-17	S-18 (DW)	S-19	S-19	S-19	S-20	S-20	S-21	S-22 (CB)
Sample Date		06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/20/01
Sample Depth (feet)		0'-0.5'	1.5'-2.0'	7.0'-7.5'	0'-0.5'	1.5'-2.0'	(Sediment)	0'-0.5'	1.5'-2.0'	7.0'-7.5'	0'-0.5'	1.5'-2.0'	2.5'-3.0'	(Sediment)
Study Area		4	4	4	4	4	4	5	5	5	5	5	5	5
PARAMETER (units)														
VOCs - (µg/Kg)														
Benzene	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**170**
Bromodichloromethane	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzne	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	300	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	ND	ND
Ethylbenzene	5,500	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	23	ND	560
Methylene Chloride	100	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	ND	ND	**180 B**
Naphthalene	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1,400	NA	ND	ND	NA	ND	NA	NA	6.3	ND	NA	10	87	50 J
Toluene	1,500	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	6.2	ND	**1,500**
Total Xylenes	1,200	NA	ND	ND	NA	ND	NA	NA	ND	ND	NA	164	ND	**3,900**
VOCs TIC		NA	ND	ND	NA	ND	NA	NA	26.7 J	16 J	NA	1300 J	38 J	28,200 J
SVOCs - (ug/Kg)														
2-Methylnapththalene	36,400	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND	2,600
Acenaphthalene	41,000	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND
Acenaphthylene	50,000	ND	NA	ND	ND	NA	ND	81 J	NA	ND	150 J	NA	ND	ND
Anthracene	50,000	ND	NA	ND	ND	NA	ND	ND	NA	ND	150 J	NA	47 J	910
Benzo(a)anthracene	224	ND	NA	ND	ND	NA	110 J	ND	NA	ND	ND	NA	84 J	ND
Benzo(a)pyrene	61	ND	NA	ND	ND	NA	**130 J**	**110 J**	NA	ND	**320 J**	NA	**88 J**	ND
Benzo(b)fluoranthene	1,100	ND	NA	ND	ND	NA	100 J	120 J	NA	ND	190 J	NA	79 J	ND
Benzo(g,h,I)perylene	50,000	ND	NA	ND	ND	NA	ND	ND	NA	ND	250 J	NA	64 J	99 J
Benzo(k)fluoranthene	1,100	ND	NA	ND	ND	NA	180 J	190 J	NA	ND	340 J	NA	110 J	ND
Bis(2-Ethylhexyl)phthalate	50,000	ND	NA	ND	ND	NA	990	1,400	NA	260 J	2,600	NA	ND	4,400 D
Butylbenzylphthalate	50,000	ND	NA	ND	ND	NA	510 J	ND	NA	ND	ND	NA	ND	4,200
Chrysene	400	ND	NA	ND	ND	NA	140 J	ND	NA	ND	**610**	NA	99 J	ND
Dibenzo(a,h)anthracene	14	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND
Diethylphthalate	7,100	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND
Di-n-butylphthalate	8,100	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND	160 J
Di-n-octylphthalate	50,000	ND	NA	ND	ND	NA	91 J	ND	NA	ND	ND	NA	ND	ND
Fluoranthene	50,000	ND	NA	ND	44 J	NA	220 J	ND	NA	ND	ND	NA	200 J	ND
Fluorene	50,000	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND	500 J
Indeno(1,2,3-cd)pyrene	3,200	ND	NA	ND	ND	NA	ND	100 J	NA	ND	340 J	NA	ND	ND
Napthalene	13,000	ND	NA	ND	ND	NA	ND	ND	NA	78 J	220 J	NA	ND	1,100
Phenanthrene	50,000	ND	NA	ND	ND	NA	170 J	45 J	NA	58 J	640	NA	160 J	930
Pyrene	50,000	ND	NA	ND	ND	NA	320 J	180 J	NA	57 J	2,000	NA	200 J	1,100
SVOCs TIC		**7355 J**	**NA**	**4205 J**	**4470 B**	**NA**	**14663 J**	**3526 J**	**NA**	**25340 J**	**6830 J**	**NA**	**5880 J**	**17270 J**
PCBs - (ug/Kg)	1,000 Total PCBs													
AROCLOR 1016		ND	NA	NA	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA
AROCLOR 1221		ND	NA	NA	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA
AROCLOR 1232		ND	NA	NA	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA
AROCLOR 1242		ND	NA	NA	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA
AROCLOR 1248		ND	NA	NA	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA
AROCLOR 1254		ND	NA	NA	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA
AROCLOR 1260		ND	NA	NA	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA

TABLE 1
Remedial Investigation Soil Contamination Summary
Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

Sample Location	TAGM 4046 Recommended Soil Cleanup Objectives	S-16	S-16	S-16	S-17	S-17	S-18 (DW)	S-19	S-19	S-19	S-20	S-20	S-21	S-22 (CB)
Sample Date		06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/13/01	06/20/01
Sample Depth (feet)		0'-0.5'	1.5'-2.0'	7.0'-7.5'	0'-0.5'	1.5'-2.0'	(Sediment)	0'-0.5'	1.5'-2.0'	7.0'-7.5'	0'-0.5'	1.5'-2.0'	2.5'-3.0'	(Sediment)
Study Area		4	4	4	4	4	4	5	5	5	5	5	5	5
PARAMETER (units)														
METALS - (mg/Kg)	RSCO (Eastern USA Background)													
Antimony	SB (Not Available)	1.0 B	NA	NA	1.2 B	NA	3.6 B	2.2 B	NA	NA	1.9 B	NA	1.6 B	6.0 B
Arsenic	7.5 or SB (3 to 12)	5.4	NA	NA	6.7	NA	10.7	10.1	NA	NA	9.8	NA	6.7	6.6
Barium	300 or SB (15 to 600)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.16(HEAST) or SB(0 to 1.75)	0.41 B	NA	NA	0.50 B	NA	0.78 B	0.59	NA	NA	0.44 B	NA	0.50 B	0.91
Cadmium	1 or SB (0.1 to 1)	0.06 B	NA	NA	0.08 B	NA	0.98	0.46 B	NA	NA	0.51 B	NA	**1.6**	**13.8**
Chromium	10 or SB(1.5 to 40)	16	NA	NA	20	NA	**54.3**	**160**	NA	NA	20.0	NA	17.6	**60.7**
Copper	25 or SB(1 to 50)	16.2	NA	NA	24	NA	**110**	**83.9**	NA	NA	**53.8**	NA	43.5	**470**
Lead	SB(200 to 500)	9.6	NA	NA	200	NA	438	160	NA	NA	196	NA	140	**862**
Mercury	0.1 (0.001 to 0.2)	0.02	NA	NA	0.06	NA	0.08	0.09	NA	NA	**0.20**	NA	**0.38**	**0.21**
Nickel	13 or SB (0.5 to 25)	13.6	NA	NA	16.4	NA	**32.0**	**31.8**	NA	NA	17.5	NA	18.1	**71**
Selenium	SB (0.1 to 3.9)	ND	NA	NA	ND	NA	ND	ND	NA	NA	0.55 B	NA	ND	0.58 B
Silver	SB (Not Available)	0.79 B	NA	NA	1.2 B	NA	2.7	1.1 B	NA	NA	1.1	NA	1.4	5
Thallium	SB (Not Available)	0.56 B	NA	NA	ND	NA	ND	ND	NA	NA	ND	NA	ND	1.0 B
Zinc	20 or SB (9 to 50)	**51.5**	NA	NA	**83.0**	NA	**282**	**157**	NA	NA	**199**	NA	**236**	**1,480**
TCLP Lead (mg / L)	5 (RCRA)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
B = Compound detected in Lab blank
SB = Soil cleanup objective is the site background level
TIC = Tentatively Identified Compound
NA = Not analyzed
J = The concentration was detected at a value below the MDL
E = Sample Dilution required, original analysis beyond instrument calibration range
Shaded values = Analyte detected in excess of groundwater standard or guideline

TABLE 1
Remedial Investigation Soil Contamination Summary
Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

Sample Location	TAGM 4046 Recommended Soil Cleanup Objectives	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	S-31	S-32	S-33	SS-1	SS-2
Sample Date		06/21/01	06/21/01	06/21/01	06/21/01	06/21/01	06/21/01	06/20/01	06/20/01	06/20/01	06/20/01	06/20/01	08/12/02	08/12/02
Sample Depth (feet)		6.5'-7.0'	6.5'-7.0'	6.5'-7.0'	6.5'-7.0'	6.5'-7.0'	2.0'-2.5'	0.6'-1.0'	0.6'-1.0'	0.6'-1.0'	5.5'-6.0'	5.5'-6.0'	0.2'-0.3'	0.3'-0.4'
Study Area		6	6	6	6	6	6	7	7	7	6	6		
PARAMETER (units)														
VOCs - (µg/Kg)														
Benzene	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
Bromodichloromethane	--	NA	NA	NA	NA	NA	NA	ND	ND	ND	12	ND	NA	NA
n-Butylbenzne	--	ND	ND	ND	ND	240	ND	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	ND	ND	ND	ND	14	ND	NA	NA	NA	NA	NA	NA	NA
Chloroform	300	NA	NA	NA	NA	NA	NA	ND	NA	NA	57	57	NA	NA
Ethylbenzene	5,500	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	NA	NA
Methylene Chloride	100	NA	NA	NA	NA	NA	NA	ND	NA	NA	4.2 B	3.8 B	NA	NA
Naphthalene	1,300	ND	ND	ND	ND	88	ND	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1,400	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	ND	NA	NA
Toluene	1,500	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	NA	NA
Total Xylenes	1,200	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	NA	NA
VOCs TIC		ND	ND	ND	ND	342	ND	ND	NA	NA	ND	ND	NA	NA
SVOCs - (ug/Kg)														
2-Methylnapththalene	36,400	NA	NA	NA	NA	NA	NA	56 J	ND	56 J	ND	ND	ND	ND
Acenaphthalene	41,000	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	50,000	NA	NA	NA	NA	NA	NA	ND	ND	77 J	ND	ND	ND	79 J
Anthracene	50,000	NA	NA	NA	NA	NA	NA	ND	ND	84 J	72 J	ND	ND	73 J
Benzo(a)anthracene	224	NA	NA	NA	NA	NA	NA	ND	ND	190 J	**230 J**	110 J	90 J	**330 J**
Benzo(a)pyrene	61	NA	NA	NA	NA	NA	NA	ND	ND	**230 J**	**220 J**	**110 J**	**110 J**	**350 J**
Benzo(b)fluoranthene	1,100	NA	NA	NA	NA	NA	NA	ND	ND	250 J	230 J	140 J	140 J	530
Benzo(g,h,I)perylene	50,000	NA	NA	NA	NA	NA	NA	130 J	ND	140 J	120 J	ND	86 J	140 J
Benzo(k)fluoranthene	1,100	NA	NA	NA	NA	NA	NA	ND	ND	330 J	140 J	91 J	81 J	260 J
Bis(2-Ethylhexyl)phthalate	50,000	NA	NA	NA	NA	NA	NA	3500 D	97 J	330 J	ND	64 J	47 J	130 J
Butylbenzylphthalate	50,000	NA	NA	NA	NA	NA	NA	840	ND	78 J	ND	ND	ND	ND
Chrysene	400	NA	NA	NA	NA	NA	NA	ND	ND	260 J	250 J	120 J	120 J	370
Dibenzo(a,h)anthracene	14	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	7,100	NA	NA	NA	NA	NA	NA	ND	75 J	ND	ND	ND	ND	ND
Di-n-butylphthalate	8,100	NA	NA	NA	NA	NA	NA	ND	ND	ND	49 J	ND	ND	38 JB
Di-n-octylphthalate	50,000	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50,000	NA	NA	NA	NA	NA	NA	ND	ND	280 J	480	170 J	190 J	740
Fluorene	50,000	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	3,200	NA	NA	NA	NA	NA	NA	47 J	ND	52 J	110 J	ND	81 J	140 J
Napthalene	13,000	NA	NA	NA	NA	NA	NA	ND	ND	40 J	ND	ND	ND	ND
Phenanthrene	50,000	NA	NA	NA	NA	NA	NA	ND	ND	200 J	270 J	110 J	93 J	300 J
Pyrene	50,000	NA	NA	NA	NA	NA	NA	1,200	ND	480	440	190 J	160 J	570
SVOCs TIC		**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**7565 J**	**3160 J**	**11280 J**	**1454 J**	**2851 J**	**1,400 J[1]**	**5,650 J[1,2]**
PCBs - (ug/Kg)	1,000 Total PCBs													
AROCLOR 1016		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1221		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1232		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1242		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1248		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1254		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1260		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1
Remedial Investigation Soil Contamination Summary
Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

Sample Location	TAGM 4046 Recommended Soil Cleanup Objectives	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	S-31	S-32	S-33	SS-1	SS-2
Sample Date		06/21/01	06/21/01	06/21/01	06/21/01	06/21/01	06/21/01	06/20/01	06/20/01	06/20/01	06/20/01	06/20/01	08/12/02	08/12/02
Sample Depth (feet)		6.5'-7.0'	6.5'-7.0'	6.5'-7.0'	6.5'-7.0'	6.5'-7.0'	2.0'-2.5'	0.6'-1.0'	0.6'-1.0'	0.6'-1.0'	5.5'-6.0'	5.5'-6.0'	0.2'-0.3'	0.3'-0.4'
Study Area		6	6	6	6	6	6	7	7	7	6	6		
PARAMETER (units)														
METALS - (mg/Kg)	RSCO (Eastern USA Background)													
Antimony	SB (Not Available)	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Arsenic	7.5 or SB (3 to 12)	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.1	10.7	8.7	**12**
Barium	300 or SB (15 to 600)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	74	97
Beryllium	0.16(HEAST) or SB(0 to 1.75)	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.50 B	0.51 B	ND	ND
Cadmium	1 or SB (0.1 to 1)	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	**1.7**
Chromium	10 or SB(1.5 to 40)	NA	NA	NA	NA	NA	NA	NA	NA	NA	29	**78.8**	36	**59**
Copper	25 or SB(1 to 50)	NA	NA	NA	NA	NA	NA	NA	NA	NA	43	**56.8**	**50**	**140**
Lead	SB(200 to 500)	NA	NA	NA	NA	NA	NA	NA	NA	NA	296	**973**	290	450
Mercury	0.1 (0.001 to 0.2)	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.62**	**0.28**	**48**	**5.6**
Nickel	13 or SB (0.5 to 25)	NA	NA	NA	NA	NA	NA	NA	NA	NA	**40.2**	**35.6**	**31**	**50**
Selenium	SB (0.1 to 3.9)	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Silver	SB (Not Available)	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Thallium	SB (Not Available)	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Zinc	20 or SB (9 to 50)	NA	NA	NA	NA	NA	NA	NA	NA	NA	**137**	**359**	**190**	**260**
TCLP Lead (mg / L)	5 (RCRA)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
B = Compound detected in Lab blank
SB = Soil cleanup objective is the site background level
TIC = Tentatively Identified Compound
NA = Not analyzed
J = The concentration was detected at a value below the MDL
E = Sample Dilution required, original analysis beyond instrument calibration range
Shaded values = Analyte detected in excess of groundwater standard or guideline

TABLE 1
Remedial Investigation Soil Contamination Summary
Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

Sample Location	TAGM 4046 Recommended Soil Cleanup Objectives	SS-3	SS-4	SS-5	SS-5 (DNDp)	SS-6	SS-7	SS-8	SS-9	SS-10	SS-10	SS-11	SS-12	SS-13
Sample Date		08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02
Sample Depth (feet)		0.2'-0.3'	0'-0.2'	0'-0.2'	0'-0.2'	0.3'-0.4'	0'-0.2'	0'-0.2'	0'-0.2'	1.0'-1.2'	2.3'-2.5'	0.2'-0.3'	0'-0.2'	0.3'-0.4'
Study Area														
PARAMETER (units)														
VOCs - (µg/Kg)														
Benzene	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzne	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	5,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1,400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOCs TIC		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs - (ug/Kg)														
2-Methylnapththalene	36,400	38 J	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthalene	41,000	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	50,000	43 J	300 J	41 J	38 J	45 J	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	50,000	65 J	150 J	72 J	68 J	47 J	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	224	180 J	**770**	**230 J**	190 J	**290 J**	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	61	**220 J**	**920**	**260 J**	**210 J**	**300 J**	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1,100	360	**1,300**	350 J	300 J	530	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,I)perylene	50,000	120 J	330 J	100 J	82 J	130 J	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	1,100	170 J	600	180 J	150 J	170 J	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-Ethylhexyl)phthalate	50,000	170 J	89 J	91 J	74 J	390	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	50,000	48 J	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	400	240 J	**800**	290 J	240 J	320 J	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	14	ND	**54 J**	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	7,100	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	8,100	77 JB	43 JB	39 JB	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	50,000	37 J	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	50,000	420	1,200	520	490	630	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	50,000	ND	44 J	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	3,200	98 J	340 J	100 J	84 J	120 J	NA	NA	NA	NA	NA	NA	NA	NA
Napthalene	13,000	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	50,000	200 J	440	340 J	310 J	210 J	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	50,000	350 J	1,100	430	360	550	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs TIC		**5,447 J[1,2]**	**6,607 J[1,2]**	**9,630 J[1]**	**10,360 J[1]**	**9,080 J[1]**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
PCBs - (ug/Kg)	1,000 Total PCBs													
AROCLOR 1016		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1221		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1232		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1242		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1248		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1254		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR 1260		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

Sample Location	TAGM 4046 Recommended Soil Cleanup Objectives	SS-3	SS-4	SS-5	SS-5 (DNDp)	SS-6	SS-7	SS-8	SS-9	SS-10	SS-10	SS-11	SS-12	SS-13
Sample Date		08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02	08/12/02
Sample Depth (feet)		0.2'-0.3'	0'-0.2'	0'-0.2'	0'-0.2'	0.3'-0.4'	0'-0.2'	0'-0.2'	0'-0.2'	1.0'-1.2'	2.3'-2.5'	0.2'-0.3'	0'-0.2'	0.3'-0.4'
Study Area														
PARAMETER (units)														
METALS - (mg/Kg)	RSCO (Eastern USA Background)													
Antimony	SB (Not Available)	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	7.5 or SB (3 to 12)	11	11	8.7	8.3	7.1	NA	NA	NA	NA	NA	NA	NA	NA
Barium	300 or SB (15 to 600)	79	99	120	110	130	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.16(HEAST) or SB(0 to 1.75)	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	1 or SB (0.1 to 1)	**1.4**	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	10 or SB(1.5 to 40)	**51**	**51**	**58**	**63**	**77**	NA	NA	NA	NA	NA	NA	NA	NA
Copper	25 or SB(1 to 50)	**84**	**81**	**57**	**51**	**78**	NA	NA	NA	NA	NA	NA	NA	NA
Lead	SB(200 to 500)	330	**510**	**710**	**750**	**1,000**	NA	NA	NA	240	29	80	**750**	440
Mercury	0.1 (0.001 to 0.2)	**3.8**	**2.7**	**1.1**	**0.78**	ND	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	13 or SB (0.5 to 25)	**43**	**39**	**33**	**27**	**32**	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	SB (0.1 to 3.9)	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Silver	SB (Not Available)	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	SB (Not Available)	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	20 or SB (9 to 50)	**220**	**270**	**310**	**290**	**280**	NA	NA	NA	NA	NA	NA	NA	NA
TCLP Lead (mg / L)	5 (RCRA)	NA	NA	NA	NA	NA	0.6	0.38	**6.4**	NA	NA	NA	NA	NA

NOTES:
B = Compound detected in Lab blank
SB = Soil cleanup objective is the site background level
TIC = Tentatively Identified Compound
NA = Not analyzed
J = The concentration was detected at a value below the MDL
E = Sample Dilution required, original analysis beyond instrument calibration range
Shaded values = Analyte detected in excess of groundwater standard or guideline

TABLE 2
Remedial Investigation Groundwater Contamination Summary
Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

SAMPLE ID	***NYSDEC Ambient Water Quality Standards and Guidance Values***	MW-1				MW-2				MW-3					
LABORATORY SAMPLE NUMBER		001		AB67366		003		AB67368		004		AB67370		P5587-01	
SAMPLE DATE		08/28/01		09/06/02		08/28/01		09/06/02		08/28/01		09/06/02		12/17/02	
Volatile Organic Compounds															
Acetone	**50 (GV)**	17	B	ND		9.1	B	ND		6.6	B	ND		ND	
Methylene Chloride	**5 (S)**	0.5	J	ND		ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	**5 (S)**	ND		ND		ND		ND		0.6	J	ND		ND	
Trichloroethene	**5 (S)**	ND		ND		ND		ND		ND		ND		ND	
Tetrachloroethene	**5 (S)**	4.1		**5.9**		**7.2**		**6.6**		1.3	J	ND		ND	
Methyl tert-butyl ether	**10 (G)**	ND		ND		ND		ND		2.9		**1,200**		**29**	
TOTAL VOC's		4.6		5.9		7.2		6.6		4.8		1,200		29	
TOTAL TIC's		38		7.1	J	ND		6.6	J	ND		58	J	ND	
TOTAL VOC's & TIC's		42.6		13.0	J	7.2		13.2	J	4.8		1,258	J	29	
Semivolatile Organic Compounds															
Diethylphthalate	**50 (GV)**	ND		NA		ND		NA		1.3	J	NA		NA	
bis(2-Ethylhexyl)phthalate	**5 (S)**	ND		NA		2.5	J	NA		ND		NA		NA	
TOTAL BNs		ND		NA		2.5	J	NA		1.3	J	NA		NA	
TOTAL TICs		21.24	BJ	NA		ND		NA		93.9	JB	NA		NA	
TOTAL BNs & TICs		21.24	BJ	NA		2.5	J	NA		95.2	JB	NA		NA	
Total Petroleum Hydrocarbons		NA		ND		NA		ND		NA		NA		NA	
Metals															
Antimony	**3 (S)**	ND		ND		ND		ND		**9.9**	B	ND		NA	
Arsenic	**25 (S)**	8.6	B	ND		ND		ND		18.3		6.1		NA	
Barium	**1000 (S)**	NA		32		NA		ND		NA		38		NA	
Beryllium	**3 (GV)**	0.69	B	ND		0.34	B	ND		0.92	B	ND		NA	
Cadmium	**5 (S)**	0.82	B	ND		ND		ND		ND		ND		NA	
Chromium	**50 (S)**	18.7		ND		7.4	B	ND		25.2		ND		NA	
Copper	**200 (S)**	59.9		ND		47.6		ND		95.6		ND		NA	
Lead	**25 (S)**	**25.1**		ND		13.5		ND		**46**		ND		NA	
Mercury	**0.7 (S)**	ND		ND		ND		ND		ND		ND		NA	
Nickel	**100 (S)**	22.2	B	ND		6	B	ND		33.5	B	ND		NA	
Selenium	**10 (S)**	5.9		ND		2.6	B	ND		ND		ND		NA	
Silver	**50 (S)**	ND		ND		ND		ND		ND		ND		NA	
Thallium	**0.5 (GV)**	ND		ND		ND		ND		**13**		ND		NA	
Zinc	**2000 (GV)**	130	E	ND		80.1	E	ND		200	E	ND		NA	
Turbidity (NTUs)		549		14.4		1,000		27.4		1,000		38.8		NA	

NOTES:

B = Compound detected in Lab blank

BN = Base / Nuetral Semivolatile Compound

TIC = Tentatively Identified Compound

NA = Not analyzed

J = The concentration was detected at a value below the MDL

E = Sample Dilution required, original analysis beyond instrument calibration range

Shaded values Analyte detected in excess of groundwater standard or guideline

All compounds measured in parts per billion (ppb)

Turbidity measured in field, not measured at MW-6 dur to malfunction

TABLE 2
Remedial Investigation Groundwater Contamination Summary
Jonas Automotive Co. Site, SAC No. C303487
Enivornmental Restoration Program - Remediation

SAMPLE ID	***NYSDEC Ambient Water Quality Standards and Guidance Values***	MW-4				MW-5				MW-6		Field Blank		Trip Blank	
LABORATORY SAMPLE NUMBER		005		AB67372		002		AB67374		AB67376		AB67378		AB67379	
SAMPLE DATE		08/28/01		09/06/02		08/28/01		09/06/02		09/06/02		09/06/02		09/06/02	
Volatile Organic Compounds															
Acetone	**50 (GV)**	13	B	ND		15	B	ND		ND		ND		ND	
Methylene Chloride	**5 (S)**	ND		ND		ND		ND		ND		ND		ND	
cis-1,2-Dichloroethene	**5 (S)**	ND		ND		ND		ND		ND		ND		ND	
Trichloroethene	**5 (S)**	1.1	J	ND		ND		ND		ND		ND		ND	
Tetrachloroethene	**5 (S)**	**8.7**		**9.7**		ND		ND		ND		ND		ND	
Methyl tert-butyl ether	**10 (G)**	ND		ND		1.2		3.9		3.4		ND		ND	
TOTAL VOC's		9.8		9.7		1.2		3.9		3.4		ND		ND	
TOTAL TIC's		ND		8.1	J	ND		11.4	J	7.6	J	3.4	J	10	J
TOTAL VOC's & TIC's		9.8		17.8	J	1.2		15.3	J	11.0	J	3.4	J	10	J
Semivolatile Organic Compounds															
Diethylphthalate	**50 (GV)**	ND		NA		ND		NA		NA		NA		NA	
bis(2-Ethylhexyl)phthalate	**5 (S)**	ND		NA		ND		NA		NA		NA		NA	
TOTAL BNs		ND		NA		ND		NA		NA		NA		NA	
TOTAL TICs		48	JB	NA		9.1	JB	NA		NA		NA		NA	
TOTAL BNs & TICs		48	JB	NA		9.1	JB	NA		NA		NA		NA	
Total Petroleum Hydrocarbons		NA		ND		NA		NA		ND		NA		NA	
Metals															
Antimony	**3 (S)**	ND		ND		**9.6**	B	ND		ND		--		--	
Arsenic	**25 (S)**	ND		ND		**41.6**		ND		ND		--		--	
Barium	**1000 (S)**	NA		27		NA		30		110		--		--	
Beryllium	**3 (GV)**	0.1	B	ND		2.2	B	ND		ND		--		--	
Cadmium	**5 (S)**	0.72	B	ND		ND		ND		ND		--		--	
Chromium	**50 (S)**	8.2	B	ND		**67**		ND		ND		--		--	
Copper	**200 (S)**	15.5	B	ND		**215**		ND		ND		--		--	
Lead	**25 (S)**	7.6		ND		**83.8**		ND		ND		--		--	
Mercury	**0.7 (S)**	ND		ND		ND		ND		ND		--		--	
Nickel	**100 (S)**	ND		ND		**109**		ND		ND		--		--	
Selenium	**10 (S)**	4.2	B	ND		ND		ND		ND		--		--	
Silver	**50 (S)**	ND		ND		1.8	B	ND		ND		--		--	
Thallium	**0.5 (GV)**	**10.9**		ND		ND		ND		ND		--		--	
Zinc	**2000 (GV)**	78.3	E	ND		510	E	ND		ND		--		--	
Turbidity (NTUs)		>1,000		53.8		>1,000		1.3		NM					

NOTES:

B = Compound detected in Lab blank

BN = Base / Nuetral Semivolatile Compound

TIC = Tentatively Identified Compound

NA = Not analyzed

J = The concentration was detected at a value below the MDL

E = Sample Dilution required, original analysis beyond instrument calibration range

Shaded values Analyte detected in excess of groundwater standard or guideline

All compounds measured in parts per billion (ppb)

Turbidity measured in field, not measured at MW-6 dur to malfunction

TABLE 3
Applicable Soil Clean-up Objectives from NYCCR Part 375-6
Protection of Groundwater (POG) from 6 NYCRR PART 375-6
Jonas Automotive Co. Site, SAC No. C303487
ENVIRONMENTAL RESTORATION PROGRAM - REMEDIATION

Contaminant	CAS Number	Unrestricted Use Soil Cleanup Objectives	Restricted Use Soil Cleanup Objectives	
			Protection of Public Health Commercial	Protection of Groundwater
Metals				
Arsenic	7440-38-2	13c	16	16
Lead	7439-92-1	63c	1,000	450
Mercury	7439-97-6	0.18c	2.8	0.73
Semivolatiles				
Acenaphthene	83-32-9	20	500b	98
Acenapthylene	208-96-8	100a	500b	107
Anthracene	120-12-7	100a	500b	1,000c
Benz(a)anthracene	56-55-3	1c	5.6	1f
Benzo(a)pyrene	50-32-8	1c	1f	22
Benzo(b)fluoranthene	205-99-2	1c	5.6	1.7
Benzo(g,h,i)perylene	191-24-2	100	500b	1,000c
Benzo(k)fluoranthene	207-08-9	0.8c	56	1.7
Chrysene	218-01-9	1c	56	1f
Dibenz(a,h)anthracene	53-70-3	0.33b	0.56	1,000c
Fluoranthene	206-44-0	100a	500b	1,000c
Fluorene	86-73-7	30	500b	386
Indeno(1,2,3-cd)pyrene	193-39-5	0.5c	5.6	8.2
m-Cresol	108-39-4	0.33b	500b	0.33e
Naphthalene	91-20-3	12	500b	12
o-Cresol	95-48-7	0.33b	500b	0.33e
p-Cresol	106-44-5	0.33b	500b	0.33e
Pentachlorophenol	87-86-5	0.8b	6.7	0.8e
Phenanthrene	85-01-8	100	500b	1,000c
Phenol	108-95-2	0.33b	500b	0.33e
Pyrene	129-00-0	100	500b	1,000c

Contaminant	CAS Number	Unrestricted Use Soil Cleanup Objectives	Restricted Use Soil Cleanup Objectives	
			Protection of Public Health Commercial	Protection of Groundwater
Volatiles				
1,1,1-Trichloroethane	71-55-6	0.68	500b	0.68
1,1-Dichloroethane	75-34-3	0.27	240	0.27
1,1-Dichloroethene	75-35-4	0.33	500b	0.33
1,2-Dichlorobenzene	95-50-1	1.1	500b	1.1
1,2-Dichloroethane	107-06-2	0.02c	30	0.02f
cis-1,2-Dichloroethene	156-59-2	0.25	500b	0.25
trans-1,2-Dichloroethene	156-60-5	0.19	500b	0.19
1,3-Dichlorobenzene	541-73-1	2.4	280	2.4
1,4-Dichlorobenzene	106-46-7	1.8	130	1.8
1,4-Dioxane	123-91-1	0.1b	130	0.1e
Acetone	67-64-1	0.05	500b	0.05
Benzene	71-43-2	0.06	44	0.06
Butylbenzene	104-51-8	12	500b	12
Carbon tetrachloride	56-23-5	0.76	22	0.76
Chlorobenzene	108-90-7	1.1	500b	1.1
Chloroform	67-66-3	0.37	350	0.37
Ethylbenzene	100-41-4	1	390	1
Hexachlorobenzene	118-74-1	0.33b	6	3.2
Methyl ethyl ketone	78-93-3	0.12	500b	0.12
Methyl tert-butyl ether	1634-04-4	0.93	500b	0.93
Methylene chloride	75-09-2	0.05	500b	0.05
n-Propylbenzene	103-65-1	3.9	500b	3.9
sec-Butylbenzene	135-98-8	11	500b	11
tert-Butylbenzene	98-06-6	5.9	500b	5.9
Tetrachloroethene	127-18-4	1.3	150	1.3
Toluene	108-88-3	0.7	500b	0.7
Trichloroethene	79-01-6	0.47	200	0.47
1,2,4-Trimethylbenzene	95-63-6	3.6	190	3.6
1,3,5-Trimethylbenzene	108-67-8	8.4	190	8.4
Vinyl chloride	75-01-4	0.02	13	0.02
Xylene (mixed)	1330-20-7	0.26	500b	1.6

All soil cleanup objectives (SCOs) are in parts per million (ppm).

NS=Not specified. See Technical Support Document (TSD).

Footnotes:

a The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.

b The SCOs for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.

c The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See TSD section 9.3.

d The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.

e For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

f For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

g This SCO is derived from data on mixed isomers of BHC.

h The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

i This SCO is for the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

j This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See TSD Table 5.6-1.

TABLE 4
Lead and Arsenic
Post-Excavation Results
Jonas Automotive Co. Site, SAC No. C303487
Environmental Restoration Program - Remediation

Client ID:	Subpart 375-6 Unrestricted Use Soil Cleanup Objectives	Subpart 375-6 Commerical Use Soil Cleanup Objectives	Protection of Groundwater	PE-L-1		PE-L-2		PE-L-3		PE-L-4		FIELD BLANK	
Sample Depth:				1.0/1.5'		1.0/1.5'		1.0/1.5'		1.0/1.5'		~	
Lab ID:				10485-001		10485-002		10485-003		10485-004		10485-005	
Date Sampled:				10/20/2011		10/20/2011		10/20/2011		10/20/2011		10/20/2011	
Matrix:				Soil		Soil		Soil		Soil		Soil	
PARAMETER	(ppm)	(ppm)	(ppm)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
Metals (ppm)				(mg/Kg-ppm)		(mg/Kg-ppm)		(mg/Kg-ppm)		(mg/Kg-ppm)		(mg/Kg-ppm)	
Arsenic	**13**	**16**	**16**	4.74	0.327	3.27	0.326	6.22	0.314	3.75	0.323	ND	0.250
Lead	**63**	**1,000**	**450**	**87.6**	0.164	24.1	0.163	**273**	0.157	37.9	0.162	ND	0.125

ND = Analyzed for but Not Detected at the MDL

ppm = Parts Per Million

Detected concentration exceeds Commercial Use Soil Cleanup Objectives

Detected concentration exceeds Unrestriced Use Soil Cleanup Objectives

NYSDEC Site Specific Guidance

TABLE 5
Mercury Excavation
Post-Ex Results
Jonas Automotive Co. SITE, SAC No. C303487
Enivornmental Restoration Program - Remediation

Lab ID:	Subpart 375-6 Unrestricted Use Soil Cleanup Objectives	Subpart 375-6 Commercial Use Soil Cleanup Objectives	Protection of Groundwater	11055-001		11055-002		11055-003		11055-006		11055-007		11055-009	
Client ID:				PE-1		PE-2		PE-3		PE-4		PE-5		PE-6	
Depth:				1.5/2'		1.5/2'		1.5/2'		1.5/2'		2/2.5'		1.5/2'	
Matrix:				Soil		Soil		Soil		Soil		Soil		Soil	
Sampled Date				11/3/11		11/3/11		11/3/11		11/3/11		11/3/11		11/3/11	
PARAMETER	**(ppm)**	**(ppm)**	**(ppm)**	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
Metals				ppm		ppm		ppm		ppm		ppm		ppm	
Mercury	**0.18**	**2.8**	**0.73**	**0.182**	0.00642	0.060	0.00635	0.090	0.00617	**1.01**	0.00667	0.035	0.00584	**0.357**	0.00606

Notes
ND = Analyzed for but Not Detected at the MDL
ppm = Parts Per Million
Detected concentration is in excess of one or more standard.

TABLE 5
Mercury Excavation
Post-Ex Results
Jonas Automotive Co. SITE, SAC No. C303487
Enivornmental Restoration Program - Remediation

Lab ID:	Subpart 375-6			11055-010		11055-004		11055-005		11055-008		11055-011		11055-012		11055-013		11055-014	
Client ID:	Unrestricted	Subpart 375-6		PE-7		PE-8		PE-9		PE-10		PE-11		DUP #1		DUP #2		FIELD BLANK	
Depth:	Use Soil	Commercial Use	Protection of	1.5/2'		1.5/2'		1.5/2'		2/2.5'		1.5/2'		1.5/2'		2/2.5'		~	
Matrix:	Cleanup	Soil Cleanup	Groundwater	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Aqueous	
Sampled Date	Objectives	Objectives		11/3/11		11/3/11		11/3/11		11/3/11		11/3/11		11/3/11		11/3/11		11/3/11	
PARAMETER	**(ppm)**	**(ppm)**	**(ppm)**	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
Metals				ppm		ppm		ppm		ppm		ppm		ppm		ppm		ppm	
Mercury	**0.18**	**2.8**	**0.73**	**0.123**	0.00655	0.032	0.00662	0.033	0.00594	**0.269**	0.00648	0.076	0.00594	**0.934**	0.00641	**0.250**	0.00642	ND	0.006

Notes
ND = Analyzed for but Not Detected at the MDL
ppm = Parts Per Million
Detected concentration is in excess of one or more standard.

FIGURES

MAPLE STREET

WISNER AVENUE

POINT OF BEGINNING

CAPPED IRON ROD FOUND S08°16'12"W 0.65'

CAPPED IRON ROD FOUND N37°05'44"W 0.36'

IRON PIPE FOUND N05°21'42"W 0.40'

IRON ROD FOUND N25°36'24"E 0.67'

CAPPED IRON ROD FOUND S10°38'56"E 0.58'

TOGETHER WITH AND SUBJECT TO A 7' WIDE DRIVEWAY EASEMENT PER LIBER 3871 PAGE 288

TOGETHER WITH A 20' WIDE RIGHT OF WAY PER LIBER 3871 PAGE 288

VEGETATED CAP

EDGE OF GRAVEL

1 STORY BRICK BLDG

2 1/2 STORY FRAME BLDG

1 STORY BLOCK BLDG

1 STORY BLDG (OPEN SIDES) WITH ROOF OVERHANG

MACHINE EQUIPMENT

SUMP

CONVEYOR/TRENCH

CONC PAD LOADING DOCK

CONC PAD

REMAINS OF OLD FOUNDATION

GARAGE

BLDG ON LINE

BLDG 0.6' CLEAR

BLDG 0.2' CLEAR

BLDG 1.6' CLEAR

WOOD DECK

DECK OVER 0.7'

MW-1

MW-2

MW-3

MW-4

MW-5

MW-6

METAL CANOPY EXTENDS OFF SITE

STORMWATER INFILTRATION TRENCH

EDGE OF PAVEMENT

CONC WALK

HEDGE

DRAIN

GAS METER

IRF

CIRF

LEGEND

- Property Line
- GAS — Gas Line
- ST — Sewer Line
- Fence
- Drainage Pipe
- MW-1 — Monitoring Wells
- Existing Structures
- Vegetated Cap Area
- Gravel Cap Area

SCALE

0 20

10 (FEET) 40

REFERENCES:
TOPOGRAPHIC & BOUNDARY SURVEY, Drawn By N. Lahens of Ewell W. Finley P.C. Consulting Engineers & Land Surveyors, Dated April 6, 2010, Job Number 2021.

NOTES:

1. Removed petroleum impacted debris from conveyor/trench area.
2. Cleaned machine equipment adjacent to conveyor/trench area.
3. Cap consits of 8" or 3/4" stone covered with 4" of quarry processed material.
4. For stormwater drain and basin details see Appendix C.

Howard D. Feiler Lic. No. 081666-1
Professional Engineer State of New York

JONAS AUTOMOTIVE
NEWBURGH, NEW YORK
FINAL SITE PLAN
FIGURE 1
REVISED CJM DRAWN GBF CHKD. TCB
SCALE AS SHOWN
DATE 8/1/2012 DATE 6/29/11 DATE 8/1/12
FIRST ENVIRONMENT
BOONTON NEW JERSEY

MAPLE STREET

WISNER AVENUE

POINT OF BEGINNING

CAPPED IRON ROD FOUND S08°16'12"W 0.65'

CAPPED IRON ROD FOUND N37°05'44"W 0.36'

IRON PIPE FOUND N05°21'42"W 0.40'

IRON ROD FOUND N25°36'24"E 0.67'

CAPPED IRON ROD FOUND S10°38'36"E 0.58'

TOGETHER WITH AND SUBJECT TO A 7' WIDE DRIVEWAY EASEMENT PER LIBER 3871 PAGE 288

TOGETHER WITH A 20' WIDE RIGHT OF WAY PER LIBER 3871 PAGE 288

HEDGE

CONC WALK

2 1/2 STORY FRAME BLDG

GARAGE

BLDG ON LINE

BLDG 0.6' CLEAR

BLDG 0.2' CLEAR

WOOD DECK

DECK OVER 0.7'

1 STORY BRICK BLDG

1 STORY BLOCK BLDG

BLDG 1.6' CLEAR

RETAINING WALL

VEGETATED CAP

EDGE OF GRAVEL

MW-1

MW-2 (167.81)

MW-3 (166.80)

MW-4 (169.72)

MW-5

MW-6

MACHINE EQUIPMENT

SUMP

CONVEYOR/TRENCH

1 STORY BRICK BLDG (OPEN SIDES) WITH ROOF OVERHANG

STORMWATER INFILTRATION TRENCH

METAL CANOPY EXTENDS OFF SITE

CONC PAD LOADING DOCK

CONC PAD

REMAINS OF OLD FOUNDATION

DRAIN

GAS METER

EDGE OF PAVEMENT

169

168

167

16.3'

16.5'

129.7'

141.2'

MAGNETIC

LEGEND

- Groundwater Contour
- Groundwater Contour (Inferred)
- (167.81) Groundwater Elevation
- Direction of Flow
- Property Line
- GAS Gas Line
- ST Sewer Line
- Fence
- Drainage Pipe
- Monitoring Wells
- Existing Structures
- Vegetated Cap Area
- Gravel Cap Area

SCALE

0 20 10 (FEET) 40

REFERENCES:
TOPOGRAPHIC & BOUNDARY SURVEY, Drawn By N. Lahens of Ewell W. Finley P.C. Consulting Engineers & Land Surveyors, Dated April 6, 2010, Job Number 2021.

Howard D. Feiler, Professional Engineer — Lic. No. 081666-1, State of New York

JONAS AUTOMOTIVE

NEWBURGH, NEW YORK

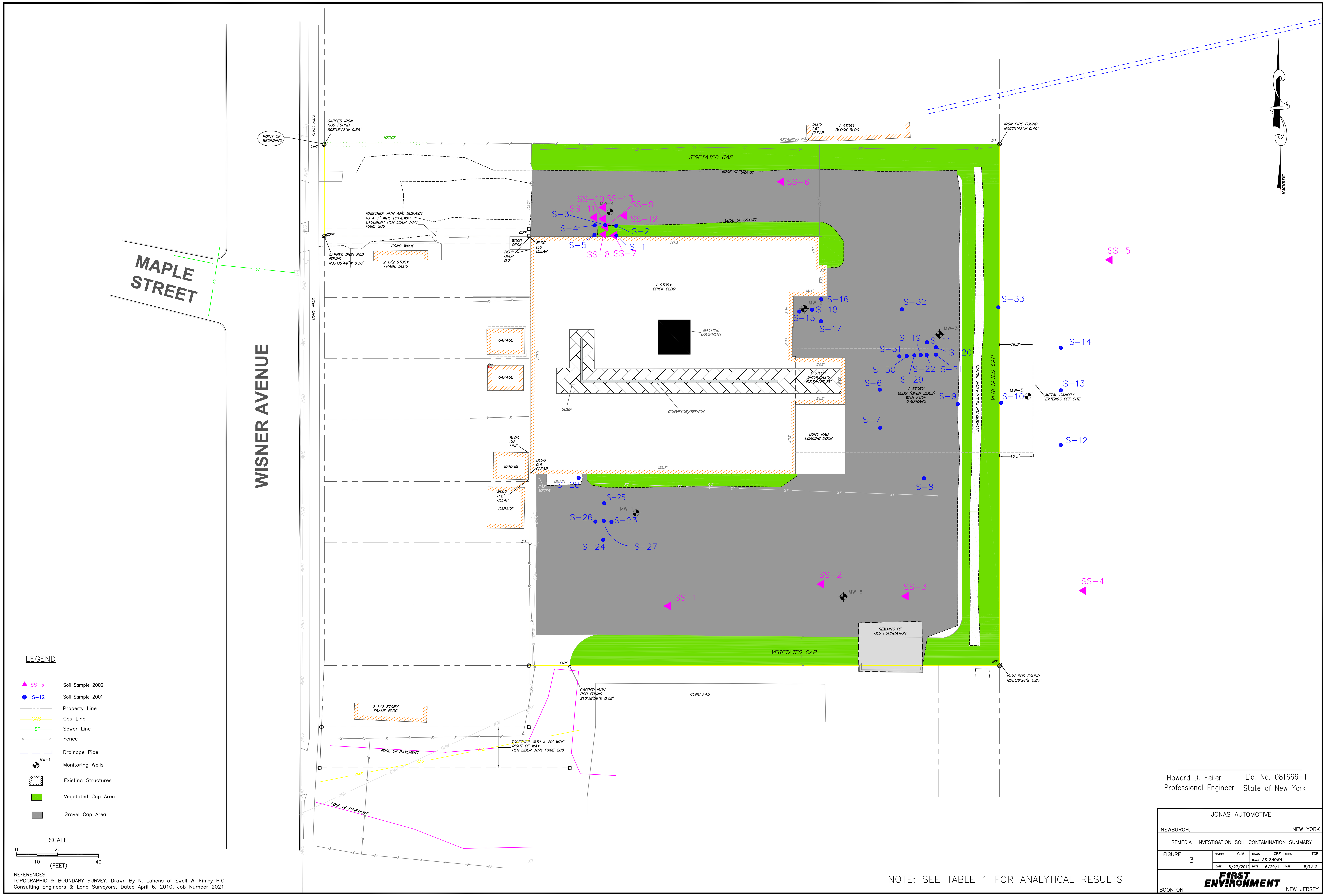
GROUNDWATER FLOW

FIGURE 2

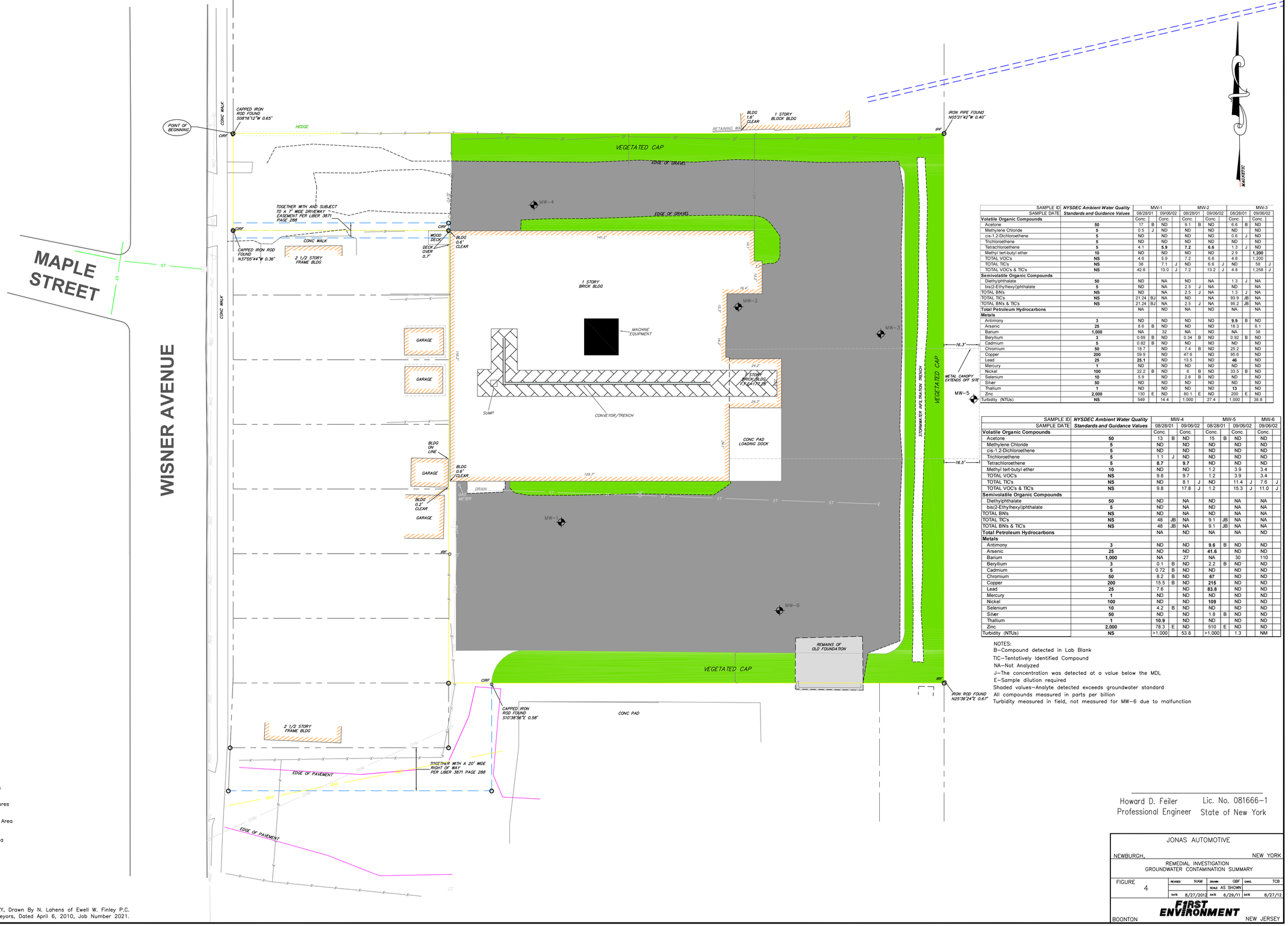
REVISED	CJM	DRAWN	GBF	CHKD.	TCB
		SCALE	AS SHOWN		
DATE	8/27/12	DATE	6/29/11	DATE	8/1/12

FIRST ENVIRONMENT

BOONTON NEW JERSEY



MAPLE STREET
WISNER AVENUE
POINT OF BEGINNING
CAPPED IRON ROD FOUND S08°16'12"W 0.65'
HEDGE
CONC WALK
TOGETHER WITH AND SUBJECT TO A 7' WIDE DRIVEWAY EASEMENT PER LIBER 3871 PAGE 288
CAPPED IRON ROD FOUND N37°05'44"W 0.36'
2 1/2 STORY FRAME BLDG
WOOD DECK
DECK OVER 0.7'
BLDG 0.6' CLEAR
GARAGE
BLDG ON LINE
BLDG 0.2' CLEAR
VEGETATED CAP
EDGE OF GRAVEL
1 STORY BRICK BLDG
MACHINE EQUIPMENT
SUMP
CONVEYOR/TRENCH
1 STORY BLDG (OPEN SIDES) WITH ROOF OVERHANG
CONC PAD LOADING DOCK
STORMWATER INFILTRATION TRENCH
METAL CANOPY EXTENDS OFF SITE
REMAINS OF OLD FOUNDATION
BLDG 1.6' CLEAR
1 STORY BLOCK BLDG
RETAINING WALL
IRON PIPE FOUND N05°21'42"W 0.40'
IRON ROD FOUND N25°36'24"E 0.67'
CAPPED IRON ROD FOUND S10°38'56"E 0.58'
CONC PAD
TOGETHER WITH A 20' WIDE RIGHT OF WAY PER LIBER 3871 PAGE 288
EDGE OF PAVEMENT
MAGNETIC
SS-1 SS-2 SS-3 SS-4 SS-5 SS-6 SS-7 SS-8 SS-9 SS-10 SS-11 SS-12 SS-13
S-1 S-2 S-3 S-4 S-5 S-6 S-7 S-8 S-9 S-10 S-11 S-12 S-13 S-14 S-15 S-16 S-17 S-18 S-19 S-20 S-21 S-22 S-23 S-24 S-25 S-26 S-27 S-28 S-29 S-30 S-31 S-32 S-33
MW-1 MW-2 MW-3 MW-4 MW-5 MW-6
LEGEND
SS-3 Soil Sample 2002
S-12 Soil Sample 2001
Property Line
Gas Line
Sewer Line
Fence
Drainage Pipe
Monitoring Wells
Existing Structures
Vegetated Cap Area
Gravel Cap Area
SCALE
0 10 20 40
(FEET)
REFERENCES:
TOPOGRAPHIC & BOUNDARY SURVEY, Drawn By N. Lahens of Ewell W. Finley P.C. Consulting Engineers & Land Surveyors, Dated April 6, 2010, Job Number 2021.
NOTE: SEE TABLE 1 FOR ANALYTICAL RESULTS
Howard D. Feiler Professional Engineer
Lic. No. 081666-1 State of New York
JONAS AUTOMOTIVE
NEWBURGH, NEW YORK
REMEDIAL INVESTIGATION SOIL CONTAMINATION SUMMARY
FIGURE 3
SCALE AS SHOWN
8/27/2012 6/29/11 8/1/12
CJM GBF TCB
FIRST ENVIRONMENT
BOONTON NEW JERSEY



SAMPLE ID	NYSDEC Ambient Water Quality	MW-1		MW-2		MW-3	
SAMPLE DATE	Standards and Guidance Values	08/28/01	09/06/02	08/28/01	09/06/02	08/28/01	09/06/02
Volatile Organic Compounds		Conc.	Conc.	Conc.	Conc.	Conc.	Conc.
Acetone	**50**	17 B	ND	9.1 B	ND	6.6 B	ND
Methylene Chloride	**5**	0.5 J	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	**5**	ND	ND	ND	ND	0.6 J	ND
Trichloroethene	**5**	ND	ND	ND	ND	ND	ND
Tetrachloroethene	**5**	4.1	**5.9**	**7.2**	**6.6**	1.3 J	ND
Methyl tert-butyl ether	**10**	ND	ND	ND	ND	2.9	**1,200**
TOTAL VOC's	**NS**	4.6	5.9	7.2	6.6	4.8	1,200
TOTAL TIC's	**NS**	38	7.1 J	ND	6.6 J	ND	58 J
TOTAL VOC's & TIC's	**NS**	42.6	13.0 J	7.2	13.2 J	4.8	1,258 J
Semivolatile Organic Compounds							
Diethylphthalate	**50**	ND	NA	ND	NA	1.3 J	NA
bis(2-Ethylhexyl)phthalate	**5**	ND	NA	2.5 J	NA	ND	NA
TOTAL BN's	**NS**	ND	NA	2.5 J	NA	1.3 J	NA
TOTAL TIC's	**NS**	21.24 BJ	NA	ND	NA	93.9 JB	NA
TOTAL BN's & TIC's	**NS**	21.24 BJ	NA	2.5 J	NA	95.2 JB	NA
Total Petroleum Hydrocarbons		NA	ND	NA	ND	NA	NA
Metals							
Antimony	**3**	ND	ND	ND	ND	**9.9** B	ND
Arsenic	**25**	8.6 B	ND	ND	ND	18.3	6.1
Barium	**1,000**	NA	32	NA	ND	NA	38
Beryllium	**3**	0.69 B	ND	0.34 B	ND	0.92 B	ND
Cadmium	**5**	0.82 B	ND	ND	ND	ND	ND
Chromium	**50**	18.7	ND	7.4 B	ND	25.2	ND
Copper	**200**	59.9	ND	47.6	ND	95.6	ND
Lead	**25**	**25.1**	ND	13.5	ND	**46**	ND
Mercury	**1**	ND	ND	ND	ND	ND	ND
Nickel	**100**	22.2 B	ND	6 B	ND	33.5 B	ND
Selenium	**10**	5.9	ND	2.6 B	ND	ND	ND
Silver	**50**	ND	ND	ND	ND	ND	ND
Thallium	**1**	ND	ND	ND	ND	**13**	ND
Zinc	**2,000**	130 E	ND	80.1 E	ND	200 E	ND
Turbidity (NTUs)	**NS**	549	14.4	1,000	27.4	1,000	38.8

SAMPLE ID	NYSDEC Ambient Water Quality	MW-4		MW-5		MW-6	
SAMPLE DATE	Standards and Guidance Values	08/28/01	09/06/02	08/28/01	09/06/02	09/06/02	
Volatile Organic Compounds		Conc.	Conc.	Conc.	Conc.	Conc.	
Acetone	**50**	13 B	ND	15 B	ND	ND	
Methylene Chloride	**5**	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethene	**5**	ND	ND	ND	ND	ND	
Trichloroethene	**5**	1.1 J	ND	ND	ND	ND	
Tetrachloroethene	**5**	**8.7**	**9.7**	ND	ND	ND	
Methyl tert-butyl ether	**10**	ND	ND	1.2	3.9	3.4	
TOTAL VOC's	**NS**	9.8	9.7	1.2	3.9	3.4	
TOTAL TIC's	**NS**	ND	8.1 J	ND	11.4 J	7.6 J	
TOTAL VOC's & TIC's	**NS**	9.8	17.8 J	1.2	15.3 J	11.0 J	
Semivolatile Organic Compounds							
Diethylphthalate	**50**	ND	NA	ND	NA	NA	
bis(2-Ethylhexyl)phthalate	**5**	ND	NA	ND	NA	NA	
TOTAL BN's	**NS**	ND	NA	ND	NA	NA	
TOTAL TIC's	**NS**	48 JB	NA	9.1 JB	NA	NA	
TOTAL BN's & TIC's	**NS**	48 JB	NA	9.1 JB	NA	NA	
Total Petroleum Hydrocarbons		NA	ND	NA	NA	ND	
Metals							
Antimony	**3**	ND	ND	**9.6** B	ND	ND	
Arsenic	**25**	ND	ND	**41.6**	ND	ND	
Barium	**1,000**	NA	27	NA	30	110	
Beryllium	**3**	0.1 B	ND	2.2 B	ND	ND	
Cadmium	**5**	0.72 B	ND	ND	ND	ND	
Chromium	**50**	8.2 B	ND	**67**	ND	ND	
Copper	**200**	15.5 B	ND	**215**	ND	ND	
Lead	**25**	7.6	ND	**83.8**	ND	ND	
Mercury	**1**	ND	ND	ND	ND	ND	
Nickel	**100**	ND	ND	**109**	ND	ND	
Selenium	**10**	4.2 B	ND	ND	ND	ND	
Silver	**50**	ND	ND	1.8 B	ND	ND	
Thallium	**1**	**10.9**	ND	ND	ND	ND	
Zinc	**2,000**	78.3 E	ND	510 E	ND	ND	
Turbidity (NTUs)	**NS**	>1,000	53.8	>1,000	1.3	NM	

NOTES:
B–Compound detected in Lab Blank
TIC–Tentatively Identified Compound
NA–Not Analyzed
J–The concentration was detected at a value below the MDL
E–Sample dilution required
Shaded values–Analyte detected exceeds groundwater standard
All compounds measured in parts per billion
Turbidity measured in field, not measured for MW-6 due to malfunction

LEGEND

- Property Line
- Gas Line
- Sewer Line
- Fence
- Drainage Pipe
- Monitoring Wells
- Existing Structures
- Vegetated Cap Area
- Gravel Cap Area

SCALE
0 20
10 (FEET) 40

REFERENCES:
TOPOGRAPHIC & BOUNDARY SURVEY, Drawn By N. Lahens of Ewell W. Finley P.C. Consulting Engineers & Land Surveyors, Dated April 6, 2010, Job Number 2021.

Howard D. Feiler Professional Engineer Lic. No. 081666-1 State of New York

JONAS AUTOMOTIVE
NEWBURGH, NEW YORK
REMEDIAL INVESTIGATION
GROUNDWATER CONTAMINATION SUMMARY

FIGURE 4

REVISED	NAM	DRAWN	GBF	CHKD.	TCB
		SCALE	AS SHOWN		
DATE	8/27/2012	DATE	6/29/11	DATE	8/27/12

FIRST ENVIRONMENT
BOONTON NEW JERSEY

MAPLE STREET

WISNER AVENUE

EXCAVATION AREA (E1)
AREA: 155 SQFT
AVERAGE DEPTH: 2'
VOLUME: 12 CUBIC YARDS

POINT OF BEGINNING

CAPPED IRON ROD FOUND S08°16'12"W 0.65'

CAPPED IRON ROD FOUND N37°05'44"W 0.36'

IRON PIPE FOUND N05°21'42"W 0.40'

TOGETHER WITH AND SUBJECT TO A 7' WIDE DRIVEWAY EASEMENT PER LIBER 3871 PAGE 288

HEDGE

CONC WALK

2 1/2 STORY FRAME BLDG

WOOD DECK

DECK OVER 0.7'

BLDG 0.6' CLEAR

BLDG 1.6' CLEAR

1 STORY BLOCK BLDG

RETAINING WALL

VEGETATED CAP

EDGE OF GRAVEL

1 STORY BRICK BLDG

MACHINE EQUIPMENT

1 STORY BRICK BLDG. (OPEN SIDES) WITH ROOF OVERHANG

1 STORY BLDG (OPEN SIDES) WITH ROOF OVERHANG

CONVEYOR/TRENCH

SUMP

CONC PAD LOADING DOCK

STORMWATER INFILTRATION TRENCH

16.5'

MW-5

METAL CANOPY EXTENDS OFF SITE

GARAGE

BLDG ON LINE

BLDG 0.6' CLEAR

BLDG 0.7' CLEAR

DRAIN

GAS METER

MW-1

MW-2

MW-3

MW-4

MW-6

REMAINS OF OLD FOUNDATION

IRON ROD FOUND N25°36'24"E 0.67'

CAPPED IRON ROD FOUND S10°38'36"E 0.58'

CONC PAD

EXCAVATION AREA (E2)
AREA: 2600 SQFT
AVERAGE DEPTH: 2'
VOLUME: 190 CUBIC YARDS

TOGETHER WITH A 20' WIDE RIGHT OF WAY PER LIBER 3871 PAGE 288

EDGE OF PAVEMENT

EDGE OF PAVEMENT

57

15

MAGNETIC

LEGEND

- Excavation Area
- Property Line
- GAS Gas Line
- ST Sewer Line
- Fence
- Drainage Pipe
- MW-1 Monitoring Wells
- Existing Structures
- Vegetated Cap Area
- Gravel Cap Area

SCALE

0 20 10 (FEET) 40

REFERENCES:
TOPOGRAPHIC & BOUNDARY SURVEY, Drawn By N. Lahens of Ewell W. Finley P.C. Consulting Engineers & Land Surveyors, Dated April 6, 2010, Job Number 2021.

Howard D. Feiler
Professional Engineer

Lic. No. 081666-1
State of New York

JONAS AUTOMOTIVE

NEWBURGH, NEW YORK

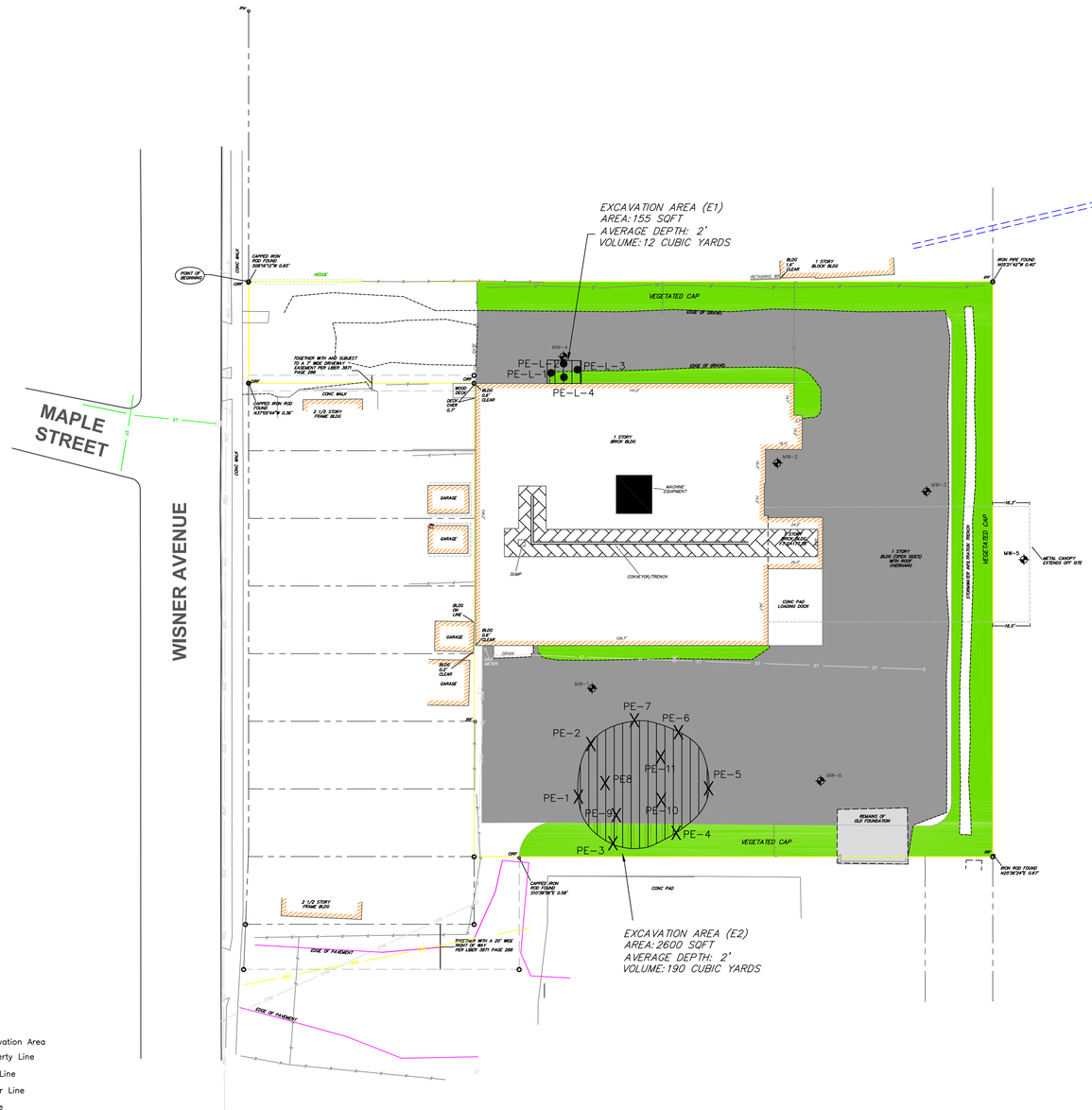
EXTENT OF REMEDIAL EXCAVATION PERFORMED

FIGURE 5

REVISED	CJM	DRAWN	GBF	CHKD.	TCB
		SCALE	AS SHOWN		
DATE	8/27/12	DATE	6/29/11	DATE	8/27/12

FIRST ENVIRONMENT

BOONTON NEW JERSEY



LEGEND

- Excavation Area
- Property Line
- Gas Line
- Sewer Line
- Fence
- Drainage Pipe
- MW-1 Monitoring Wells
- Existing Structures
- Vegetated Cap Area
- Gravel Cap Area

SCALE

0 15 30 60 (FEET)

REFERENCES:
TOPOGRAPHIC & BOUNDARY SURVEY, Drawn By N. Lahens of Ewell W. Finley P.C. Consulting Engineers & Land Surveyors, Dated April 6, 2010, Job Number 2021.

LEAD ANALYTICAL DATA

Client ID:	PE-L-1	PE-L-2	PE-L-3	PE-L-4
Sample Depth:	1.0/1.5'	1.0/1.5'	1.0/1.5'	1.0/1.5'
Date Sampled:	10/20/2011	10/20/2011	10/20/2011	10/20/2011
Matrix:	Soil	Soil	Soil	Soil
PARAMETER	Conc	Conc	Conc	Conc
Metals (ppm)	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	4.74	3.27	6.22	3.75
Lead	**87.6**	24.1	**273**	37.9

MERCURY ANALYTICAL DATA

Client ID:	PE-1	PE-2	PE-3	PE-8	PE-9	PE-4
Depth:	1.5/2	1.5/2	1.5/2	1.5/2	1.5/2	1.5/2
Matrix:	Soil	Soil	Soil	Soil	Soil	Soil
Sampled Date	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11
PARAMETER	Conc	Conc	Conc	Conc	Conc	Conc
Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Mercury	**0.182**	0.060	0.090	0.032	0.033	**1.01**

Client ID:	PE-5	PE-10	PE-6	PE-7	PE-11
Depth:	2/2.5	2/2.5	1.5/2	1.5/2	1.5/2
Matrix:	Soil	Soil	Soil	Soil	Soil
Sampled Date	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11
PARAMETER	Conc	Conc	Conc	Conc	Conc
Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Mercury	0.035	**0.269**	**0.357**	**0.123**	0.076

Howard D. Feiler
Professional Engineer
Lic. No. 081666-1
State of New York

JONAS AUTOMOTIVE
NEWBURGH, NEW YORK
LOCATION OF REMAINING SOIL CONTAMINATION ABOVE UNRESTRICTED LEVELS

FIGURE	REVISED	CJM	DRAWN	GBF	CHKD.	TCB
6			SCALE	AS SHOWN		
	DATE	8/27/12	DATE	6/29/11	DATE	8/27/12

FIRST ENVIRONMENT
BOONTON NEW JERSEY

MAPLE ST.

WISNER AVENUE

(60' WIDE)

TWO & HALF STORY FRAME DWELLING

ONE STORY BLOCK BUILDING

NO PROPOSED DISTURBANCE

3.5' WIDE DRIVEWAY EASEMENT

MW-4

SHED

REMOVED SHED AND SLAB

AREA WHERE FINAL GRADES MATCH EXISTING

AREA REQUIRED ~1.5 FEET OF 2.5-INCH CLEAN CRUSHED STONE UNDER 1-FOOT CAP

ONE STORY BRICK BUILDING

GRAVEL CAP (SEE CAP DETAIL)

METAL CANOPY EXTENDS OFF SITE

MW-3

MW-2

4" PVC

MW-5

LOADING DOCK

INV = 173.25

210.00'

TRANSITION AREA WHERE FINAL GRADES AT BUILDING ENTRANCES MATCH EXISTING, AND RISE AT 5% MAX. TO REACH NEW FINAL GRADE TO THE SOUTH & EAST

GARAGE

GARAGE

PIPE

BIT

MW-1

MW-6

ONE STORY BLOCK BUILDING

REMOVED STRUCTURE (SLAB REMAINS)

FENCE

FENCE

CONCRETE SLAB

TWO & HALF STORY FRAME DWELLING

SWD

GAS LINE

GATE

BIT PAVEMENT

SOIL/VEGETATED CAP DETAIL

CAPPING SOIL STABILIZED WITH VEGETATION

CAPPING TOP SOIL MIN. 1.0'

NATIVE SOIL

80-MIL THICK NON-WOVEN GEOTEXTILE FILTER FABRIC

GRAVEL CAP DETAIL

1' THICK LAYER OF 3/4" CLEAN CRUSHED STONE

80-MIL THICK NON-WOVEN GEOTEXTILE FILTER FABRIC

NATIVE SOIL

LEGEND

- Property Line
- Gas Line
- Sewer Line
- Fence
- Drainage Pipe
- MW-1 Monitoring Wells to be Preserved during to Remediation
- Gas Manhole
- Existing Structures
- Vegetated Cap Area (Approximately 0.220 Acres)
- Gravel Cap Area (Approximately 0.707 Acres)

SCALE

0 20 10 (FEET) 40

REFERENCES:
TOPOGRAPHIC & BOUNDARY SURVEY, Drawn By N. Lahens of Ewell W. Finley P.C. Consulting Engineers & Land Surveyors, Dated April 6, 2010, Job Number 2021.

Howard D. Feiler
Professional Engineer

Lic. No. 081666-01
State of New York

JONAS AUTOMOTIVE

NEWBURGH, NEW YORK

SITE WIDE COVER SYSTEM PLAN

FIGURE 7

MODIFIED	NAM	DRAWN	GBF	CHKD.	TCB
		SCALE	AS SHOWN		
DATE	8/27/2012	DATE	6/29/11	DATE	8/27/2012

FIRST ENVIRONMENT

BOONTON NEW JERSEY

MAPLE STREET

WISNER AVENUE

POINT OF BEGINNING

CAPPED IRON ROD FOUND S08°16'12"W 0.65'

CIRF

HEDGE

CONC WALK

TOGETHER WITH AND SUBJECT TO A 7' WIDE DRIVEWAY EASEMENT PER LIBER 3871 PAGE 288

CAPPED IRON ROD FOUND N37°05'44"W 0.36'

2 1/2 STORY FRAME BLDG

WOOD DECK

DECK OVER 0.7'

BLDG 0.6' CLEAR

BLDG 1.4' CLEAR

1 STORY BLOCK BLDG

RETAINING WALL

IRON PIPE FOUND N05°21'42"W 0.40'

IPF

VEGETATED CAP

EDGE OF GRAVEL

MW-4

MW-2

MW-3

MW-5

MW-1

MW-6

1 STORY BRICK BLDG

1 STORY BRICK BLDG F.F.E.=177.28'

CONC PAD LOADING DOCK

GARAGE

BLDG ON LINE

BLDG 0.6' CLEAR

BLDG 0.2' CLEAR

DRAIN

GAS METER

STORMWATER INFILTRATION TRENCH

16.3'

16.5'

METAL CANOPY EXTENDS OFF SITE

REMAINS OF OLD FOUNDATION

CAPPED IRON ROD FOUND S10°38'36"E 0.58'

IRON ROD FOUND N25°36'24"E 0.67'

CONC PAD

2 1/2 STORY FRAME BLDG

TOGETHER WITH A 20' WIDE RIGHT OF WAY PER LIBER 3871 PAGE 288

EDGE OF PAVEMENT

EDGE OF PAVEMENT

MAGNETIC

57

45

LEGEND

- Property Line
- GAS — Gas Line
- ST — Sewer Line
- Fence
- Drainage Pipe
- MW-1 — Monitoring Wells
- Existing Structures
- Vegetated Cap Area
- Gravel Cap Area

SCALE

0 20 10 (FEET) 40

REFERENCES:
TOPOGRAPHIC & BOUNDARY SURVEY, Drawn By N. Lahens of Ewell W. Finley P.C. Consulting Engineers & Land Surveyors, Dated April 6, 2010, Job Number 2021.

Howard D. Feiler Lic. No. 081666-01
Professional Engineer State of New York

JONAS AUTOMOTIVE

NEWBURGH, NEW YORK

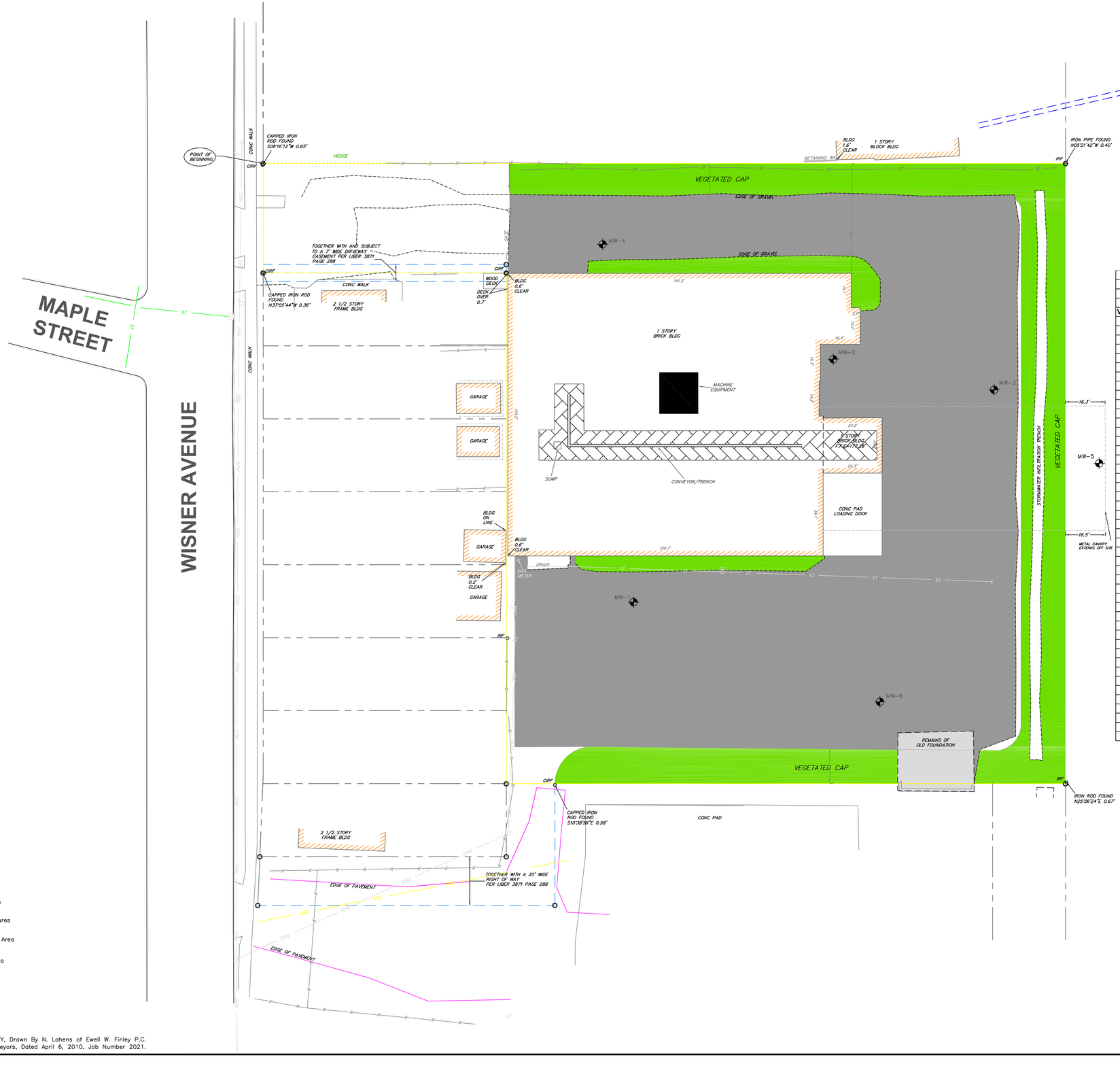
GROUNDWATER MONITORING WELL NETWORK

FIGURE 8

	REVISED	NAM	DRAWN	GBF	CHKD.	TCB
			SCALE	AS SHOWN		
	DATE	8/27/2012	DATE	6/29/11	DATE	8/27/12

FIRST ENVIRONMENT

BOONTON NEW JERSEY



CLIENT ID:	NYS Ambient	MW-2	MW-3	MW-4
COLLECTION DATE:	Groundwater	9/22/2011	9/22/2011	9/22/2011
SAMPLE MATRIX:	Standard TOGS	Aqueous	Aqueous	Aqueous
SAMPLE UNITS:	1.1.1	ug/L	ug/L	ug/L
Volatiles		Conc.	Conc.	Conc.
1,1,1-Trichloroethane	5	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND
1,2,3-Trichlorobenzene	NA	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND
1,2-Dibromo-3-chloropropane	0.04	ND	ND	ND
1,2-Dibromoethane	NA	ND	ND	ND
1,2-Dichlorobenzene	3	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND
1,3-Dichlorobenzene	3	ND	ND	ND
1,4-Dichlorobenzene	3	ND	ND	ND
1,4-Dioxane	NA	ND	ND	ND
2-Butanone	NA	ND	ND	ND
2-Hexanone	NA	ND	ND	ND
4-Methyl-2-pentanone	NA	ND	ND	ND
Acetone	50	ND	ND	ND
Benzene	1	ND	ND	ND
Bromochloromethane	5	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND
Bromoform	50	ND	ND	ND
Bromomethane	5	ND	ND	ND
Carbon disulfide	60	ND	ND	ND
Carbon tetrachloride	5	ND	ND	ND
Chlorobenzene	5	ND	ND	ND
Chloroethane	5	ND	ND	ND
Chloroform	7	ND	ND	ND
Chloromethane	5	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND
cis-1,3-Dichloropropene	0.4	ND	ND	ND
Cyclohexane	NA	ND	ND	ND
Dibromochloromethane	50	ND	ND	ND
Dichlorodifluoromethane	5	ND	ND	ND
Ethylbenzene	5	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND
m&p-Xylenes	5	ND	ND	ND
Methyl Acetate	NA	ND	ND	ND
Methylcyclohexane	NA	ND	ND	ND
Methylene chloride	NA	ND	ND	ND
Methyl-t-butyl ether	5	ND	ND	ND
o-Xylene	5	ND	ND	ND
Styrene	5	ND	ND	ND
Tetrachloroethene	5	2.2	ND	3

NOTES:
ND–Not Detected
All compounds measured in parts per billion
MW–1, MW–5, MW–6 not sampled

LEGEND

- Property Line
- Gas Line
- Sewer Line
- Fence
- Drainage Pipe
- Monitoring Wells
- Existing Structures
- Vegetated Cap Area
- Gravel Cap Area

SCALE
0 20
10 (FEET) 40

REFERENCES:
TOPOGRAPHIC & BOUNDARY SURVEY, Drawn By N. Lahens of Ewell W. Finley P.C. Consulting Engineers & Land Surveyors, Dated April 6, 2010, Job Number 2021.

Howard D. Feiler
Professional Engineer
Lic. No. 081666–01
State of New York

JONAS AUTOMOTIVE
NEWBURGH, NEW YORK
BASELINE GROUNDWATER QUALITY
FIGURE 9
REVISED NAM DRAWN GBF CHKD. TCB
SCALE AS SHOWN
DATE 8/27/2012 DATE 6/29/11 DATE 8/27/12
FIRST ENVIRONMENT
BOONTON NEW JERSEY

APPENDIX B

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Capital District Office (518) 273-0055
North Country Office (518) 812-0513

SURVEY DESCRIPTION

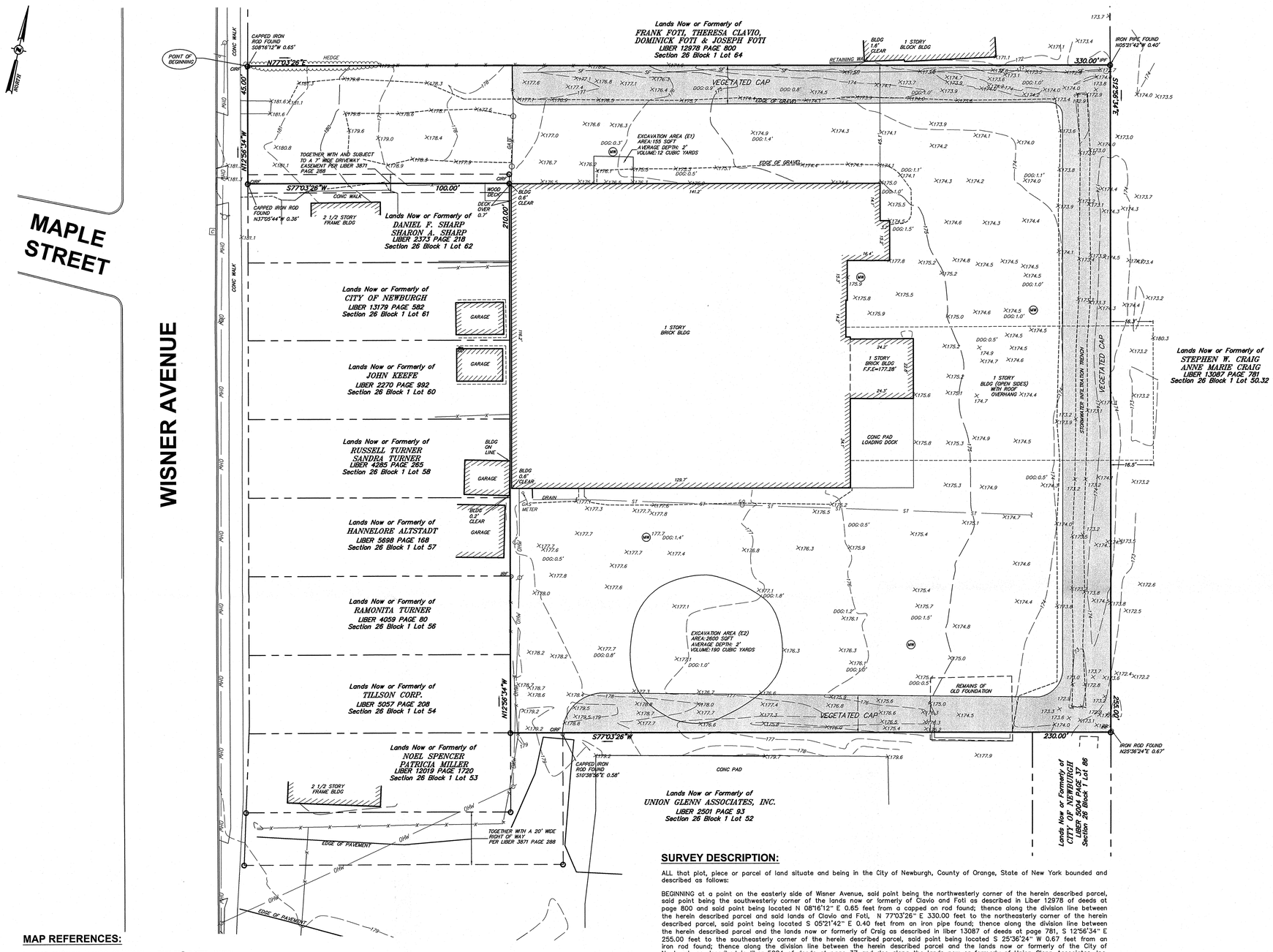
ALL that plot, piece or parcel of land situate and being in the City of Newburgh, County of Orange, State of New York bounded and described as follows:

BEGINNING at a point on the easterly side of Wisner Avenue, said point being the northwesterly corner of the herein described parcel, said point being the southwesterly corner of the lands now or formerly of Clavio and Foti as described in Liber 12978 of deeds at page 800 and said point being located N 08°16'12" E 0.65 feet from a capped on rod found; thence along the division line between the herein described parcel and said lands of Clavio and Foti, N 77°03'26" E 330.00 feet to the northeasterly corner of the herein described parcel, said point being located S 05°21'42" E 0.40 feet from an iron pipe found; thence along the division line between the herein described parcel and the lands now or formerly of Craig as described in liber 13087 of deeds at page 781, S 12°56'34" E 255.00 feet to the southeasterly corner of the herein described parcel, said point being located S 25°36'24" W 0.67 feet from an iron rod found; thence along the division line between the herein described parcel and the lands now or formerly of the City of Newburgh as described in liber 5004 of deeds at page 37 and also along the lands now or formerly of Union Glenn Associates, Inc. as described in liber 2501 of deeds at page 93, S 77°03'26" W 230.00 feet to the southwesterly corner of the herein described parcel; thence along the division line between the herein described parcel and the lands now or formerly of Tillson Corp. as described in liber 5057 of deeds at page 208, Turner as described in liber 4059 of deeds at page 80, Altstadt as described in liber 5698 of deeds at page 168, Turner as described in liber 4285 of deeds at page 265, Keefe as described in liber 2270 of deeds at page 992, City of Newburgh as described in liber 13179 of deeds at page 582, and Sharp as described in liber 2373 of deeds at page 218, N 12°56'34" W 210.00 feet to a capped iron rod found; thence continuing along the division the division line between the herein described parcel and said lands of Sharp, S 77°03'26" W 100.00 feet to a point on the easterly side of Wisner Avenue, said point being located S 37°05'44" E 0.36 feet from a capped iron rod found; thence along the easterly side of Wisner Avenue, N 12°56'34" W 45.00 feet to the point or place of beginning.

CONTAINING 1.45 ACRE OF LAND MORE OR LESS.

Together with and subject to a 7 foot wide driveway easement as described in liber 3871 of deeds at page 288.

Together with a 20 foot wide right of way as described in liber 3871 of deeds at page 288.
December 14, 2011



LEGEND:

- NO PHYSICAL BOUNDS
- ADJACENT PROPERTY LINE
- 110 — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 500.5 × DOG:1.1' — EXISTING SPOT GRADE / DEPTH OF GRAVEL PLACED
- EXISTING PROPERTY EASEMENT
- EXISTING FENCE
- SF — EXISTING SILT FENCE
- EXISTING BRUSH LINE
- OHW — EXISTING OVERHEAD WIRES
- ST — EXISTING UNDERGROUND STORM LINE
- EXISTING SIGN
- C — EXISTING CATCH BASIN
- CIRF — EXISTING CAPPED IRON ROD
- EXISTING CLEANOUT
- EXISTING GUY WIRE
- EXISTING HYDRANT
- IPF — EXISTING IRON PIPE
- IRF — EXISTING IRON ROD
- EXISTING UTILITY POLE

NOTES

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S INKED SEAL OR HIS EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

CERTIFICATIONS INDICATED HEREON SIGNIFY THAT THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE EXISTING CODE OF PRACTICE FOR PROFESSIONAL LAND SURVEYORS AS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS. SAID CERTIFICATIONS SHALL RUN ONLY TO THE PERSON SO NOTED. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS, THEIR SUCCESSORS AND/OR ASSIGNS, OR SUBSEQUENT OWNERS.

SURVEYED FROM RECORD DESCRIPTION AND AS IN POSSESSION.

TOPOGRAPHY SHOWN HEREON WAS COMPILED FROM A FIELD SURVEY COMPLETED NOVEMBER 21, 2011, BY C.E.L.S. DATUM PER MAP REFERENCE #3, 1 FOOT CONTOUR INTERVAL.

UNDERGROUND FACILITIES AND STRUCTURES SHOWN HEREON WERE TAKEN FROM DATA OBTAINED FROM PREVIOUS MAPS AND RECORD DRAWINGS. ALL ABOVE GROUND STRUCTURES AND SURFACE FEATURES SHOWN HEREON ARE THE RESULT OF A FIELD SURVEY UNLESS OTHERWISE NOTED. THERE MAY BE OTHER UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH ARE NOT KNOWN OR CERTIFIED BY THE UNDERSIGNED. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES. THE UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION MUST BE NOTIFIED PRIOR TO CONDUCTING TEST BORINGS, EXCAVATION AND CONSTRUCTION.

DEED REFERENCE

CITY OF NEWBURGH.
LIBER 5110 PAGE 73
DATED JULY 23, 1999

TAX PARCEL NUMBER

CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK
SECTION 26 BLOCK 1 LOT 59.1

FLOOD ZONE NOTE

PARCEL SHOWN HEREON LIES WITHIN FLOOD ZONE X AS SHOWN ON FIRM MAPPING FOR THE CITY OF NEWBURGH COMMUNITY #360626 PANEL 144 SUFFIX E DATED AUGUST 3, 2009.

TOTAL PARCEL AREA

63,150 SQUARE FEET
1.45 ACRES

CERTIFICATIONS

1. PEOPLE OF THE STATE OF NEW YORK ACTING THROUGH ITS COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.
2. CITY OF NEWBURGH
3. FIRST ENVIRONMENT, INC.

ALTA/ACSM CERTIFICATION

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 8, 11A, 13, 16, 18, 19, AND 20A OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON NOVEMBER 21, 2011.

STATE OF NEW YORK · STEVEN JAY ALEX · 050016 · LICENSED LAND SURVEYOR

2/9/12

STEVEN J ALEXANDS. — Date
REGISTERED SURVEYOR, STATE OF NEW YORK
REGISTRATION NO. 050016

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Together with a 20 foot wide right of way as described in liber 3871 of deeds at page 288.

MAP REFERENCES:

1. MAP ENTITLED "LANDS OF ANSON J. FOWLER" DATED AUGUST 1914 MADE BY BLAKE AND WOODHULL ENGINEERS AND FILED IN THE ORANGE COUNTY CLERKS OFFICE SEPTEMBER 1914.
2. MAP ENTITLED "LOT LINE CHANGE FOR STEPHEN W. CRAIG AND ANN MARIE CRAIG AND FREDERICK McCORDY" PREPARED BY PATRICK T. KENNEDY L.S. AND FILED IN THE ORANGE COUNTY CLERKS OFFICE ON APRIL 16, 2010 AS FILED MAP #170-10
3. MAP ENTITLED "TOPOGRAPHIC AND BOUNDARY SURVEY JONAS AUTOMOTIVE SITE" PREPARED BY EWELL W. FINLEY P.C. AND THOMAS SCHAFER P.L.S. DATED APRIL 2, 2010 LAST REVISED APRIL 6, 2010.

0 1 2 3
ORIGINAL SCALE IN INCHES

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Environmental Scientists
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CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., P.C.

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21 Fox Street
Poughkeepsie, New York 12601
Phone: (845) 454-3980

Capital District Office:
547 River Street
Troy, New York 12180
Phone: (518) 273-0055

North Country Office:
100 Glen Street
Glens Falls, New York 12801
Phone: (518) 812-0513

rev.	date	description

86 WISNER AVENUE

ALTA / ACSM LAND TITLE SURVEY PREPARED FOR FIRST ENVIRONMENT INC.

CITY OF NEWBURGH, ORANGE COUNTY, STATE OF NEW YORK

designed	checked
TCR	SJA
date	scale
12/15/11	1"=20'
project no.	
51140.00	
sheet no.	
SV1	
1 OF 1	

Drawing Name: X:\S\51100-51199\51140.00 Jones Auto\survey\dwg\X-ALTA 2011.dwg
Xref's Attached: orginal spots
Date Printed: Feb 08, 2012 10:22am

6301

APPENDIX C

Site Health and Safety Plan[1]

Section 1: General Information

Overall Haz Eval:	Medium-low	**Project Manager:**	Dan Lattanzi
Site Name:	Former Jonas Automotive Facility	**Site Emer Contact:**	Vacant – Ian MacDougall
Project Name:	Jonas	**Site Emer Contact #:**	(845) 569-7383
Project Number:	Jonas002	**HASP Revision #:**	4
Project Location:	Newburgh, NY	**HASP Approval Date:**	9/15/2011
Client Name:	City of Newburgh	**HASP Effective Date:**	9/15/2011
Site Contact:	Ian MacDougall – Planning & Development Director		
Contact #:	(845) 569 7383		

Section 2: Emergency Contact Information

Local Service Contact Numbers

Ambulance:	911	**Poison Control:**	800-462-6642
Fire:	911	**Fire (non-emergency):**	845-562-1212
Police:	911	**Police (non-emergency):**	845-561-3131

Spill Response Information

DOT HazMat Info:	202-366-4488	CHEMTREC	800-424-9300
National Response Center Hotline:	800-424-8802	CMA Chemical Referral Center:	800-262-8200
State Spill Response Hotline Name	NYSDEC Spill Hotline	Emergency Response Contractor Name:	Not applicable
State Spill Response Hotline number:	1-800-457-7362	Emergency Response Contractor Number:	Not applicable

First Environment Contact Information

Project Manager:	Dan Lattanzi	FE Office Number:	973-334-0003
Cell Phone:	908-472-8662	Alternate FE Contact:	Tom Bambrick
Home Phone:	None	Cell Phone:	(973) 224-9962
FE Medical Consultant:	Jeffrey Liva, M.D.	FE Human Resources Dir:	Scott Kymer
FE Medical Consultant #:	201-444-3060	Cell Phone:	973-632-6741

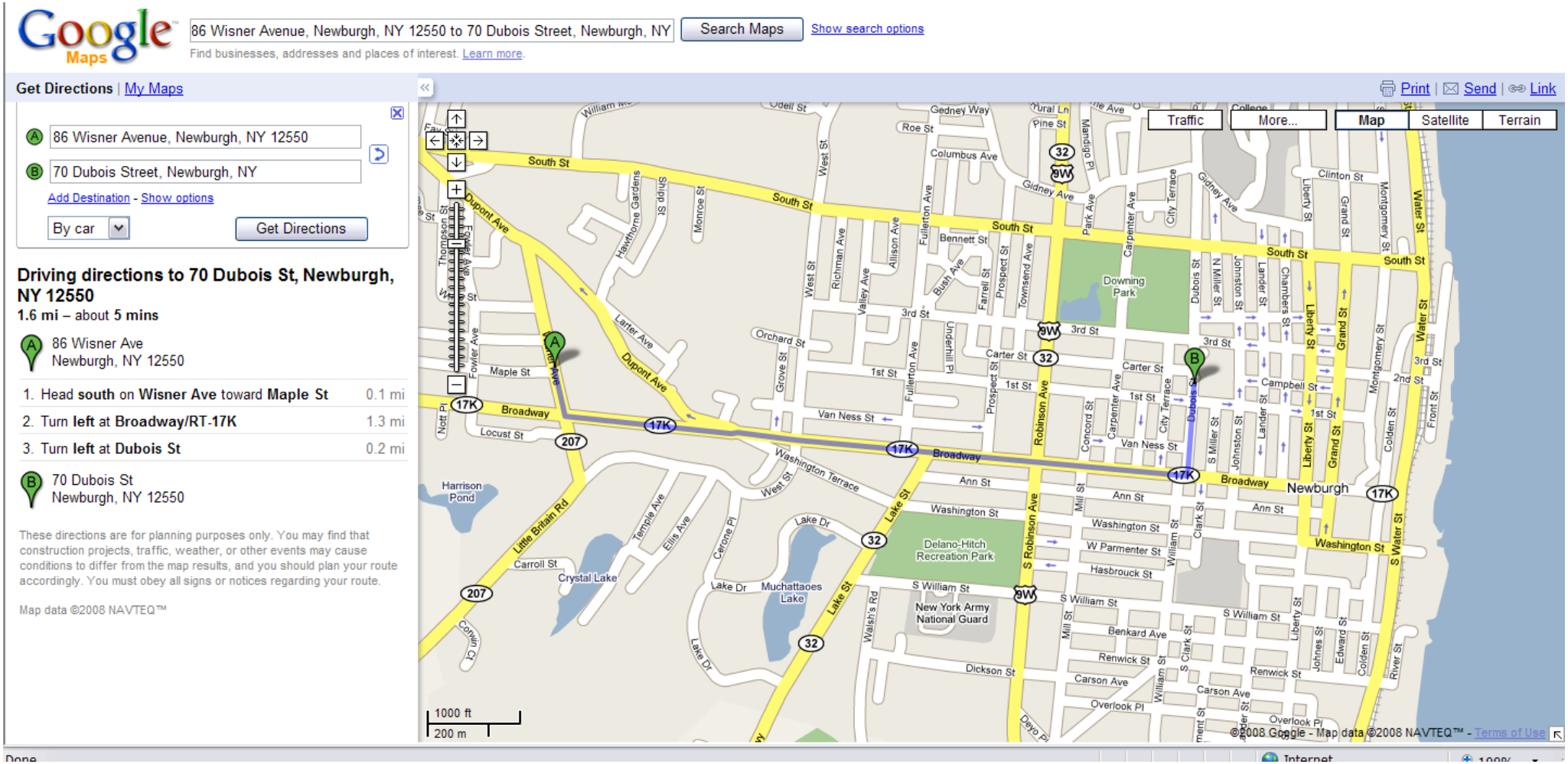
Hospital Information (Do NOT attempt to transport anyone for anything other than a minor injury in which the individual is ambulatory. Call 911 for an ambulance instead.)

Name:	St. Luke's Hosp.		
Address:	70 Dubois Street, Newburgh, NY		
Non-Emerg. Phone:	(845) 561-4400	Hours of Operation:	24 hours per day for emergency care
Verified by:	Dan Lattanzi	Date:	08/29/2012

[1] Note: This Health and Safety Plan has been written for the use of First Environment, Inc. and its employees. The plan is written for specific trained personnel who are under medical surveillance. The plan is applicable for the specific purposes and objectives stated and is representative of conditions believed to exist at the time of its preparation. First Environment, Inc. claims no responsibility for its use by others

Section 3: Map to Hospital

This page reserved for a map and directions to the hospital.



Section 4: Site Description

Field Effort Objectives

Initial Assessment
Delineate contamination
Remediate contamination
Other (list below)

Site Characteristics (check all that apply)

First Entry		Hazardous (CERCLA/State Superfund)	
Previously Characterized	x	Hazardous (RCRA)	?
Active		HAZWOPER	x
Inactive	x	Sanitary or C and D Landfill	
UST/LUST		Secure	
Manufacturing		Other (list below)	
Construction			

Project History

Poughkeepsie Iron Fabricators operated on the site from 1963 until the early 1990s. Poughkeepsie Trim and Steel then operated the site until 1993. Jonas Automotive Rebuilders operated the facility from August 1993 through March 1999 and used the facility for the dismantling of automobile motors for salvaging. Engines were unloaded onto a concrete pad in the overhead crane area and dismantled within the building on a large conveyor. A trough along the conveyor collected engine fluids which drained into a 275-gal tank. In March 1999, the City of Newburgh acquired the site through property tax foreclosure.

The 14 drums previously onsite were classified, manifested, and removed by Waste Management, Inc. on November 9, 2000. Stained soil adjacent to the concrete pad had been stockpiled by the NYSDEC and was removed from the site on December 9, 1999. The 1,000-gal UST and 1,000-gal AST were removed from the site on June 21, 2001. The two 275-gal ASTs were pumped out and removed from inside the building.

Site Security and Control Measures

Vehicle access is restricted with a gate blocking main entrance. Contractor to set up silt fence around site during remediation.

Section 5 Work Description

If multiple tasks with different hazard profiles and risk controls are planned, copy Sections 5, 6, and 7 and fill out for each task with different hazards requiring different controls.

Tasks to be performed by First Environment
Task 1: Groundwater Sampling

Tasks to be performed by First Environment Contractors[2]

Task:
Contractor:

Task:
Contractor:

Task:
Contractor:

Task:
Contractor:

[2] Site characteristics to the best of First Environment's knowledge are included in this HASP. Per the subcontractor agreement, each subcontractor must assess hazards associated with their site activities and have a site- specific health and safety plan covering their work on site.

Section 6: Hazard Assessment

Potential Chemical Hazards

Identify suspected compounds and levels if known. If levels are unknown, indicate unknown. If compounds are not present or not suspected to be present indicate with NA. If a class of compounds (in bold) is not present at the site, indicate NA for the class, it is then not necessary to fill in NA for compounds within the class.

Unknown or partially characterized			
Compounds	**Levels**		**Symptoms of Acute Exposure**
	Soil (mg/kg)	**W/GW** (μg/L)	
Nonchlorinated VOCs			
Methyl-t-butyl Ether (MTBE)		ND-29	
Xylene	ND-1.4		
Chlorinated VOCs			
Tetrachloroethylene (PCE)		ND-9.7	Irritation; Eyes, Skin, Nose; Throat, Respiratory System; Nausea; Flush Face and Neck; Dizziness; Lack of Coordination; Headache; Drowsiness
Semi-Volatile Organics			
Benzo(a)anthracene	ND-3.8		
Benzo(a)pyrene	ND-3.5		
Benzo(b)fluoranthene	ND-5.2		
Benzo(k)fluoranthene	ND-3.8		
Chrysene	ND-3.7		
Dibenzo(a,h)anthracene	ND-0.22		
Naphthalene	ND-29		
Phenanthrene	ND-11		
Petroleum Products			
Fuel Oil #2			Irritation: Eyes, Skin, Mucous Membrane
Metals			
Arsenic	5.2-104		sore throat from breathing, red skin at contact point, or severe abdominal pain, vomiting, and diarrhea, often within 1 hour after ingestion. Other symptoms are anorexia, fever, mucosal irritation, and arrhythmia. Cardiovascular changes are often subtle in the early stages but can progress to cardiovascular collapse.
Lead	9.6-6630		abdominal pain, convulsions, hypertension, renal dysfunction, loss of appetite, fatigue, and sleeplessness. Other symptoms are hallucinations, headache, numbness, arthritis, and vertigo.
Mercury	0.02-48		Irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria

Chemicals Brought On-Site by FE

Alconox	X	Other (specify)	
Gasoline			
Dilute Hydrochloric Acid			
Methanol			
Dilute Nitric Acid			
Dilute Sulfuric Acid			

Is there a high potential for a chemical release beyond an incidental release? No
If yes, explain:

Potential Physical Hazards

Check all that apply.

Unknown/Partially Characterized		***Heat Stress***	X
Cold Exposure	X	Stored Energy	
Electrical (other than lines)		Confined Space*	
Explosion*		Heavy Machinery	
Fire		Slippery Surfaces	
Toxic Gases		Fall Potential	
Oxygen Deficiency*		Poisonous Plants	
Pinch Points		Venomous Spiders	
Uneven Terrain		Wild Animals	
Noise		Utility Lines	
Traffic		Biological Waste (specify)	
Venomous Snakes			
Mosquitoes, Ticks or other Biting Insects	X	Flying or Falling Material	
Poor Visibility/Inadequate Light		Pump Winch	
Ionizing Radiation*		Other (specify)	

Overall Hazard Evaluation

Overall: High Medium **Low** X Unknown

Justification: No significant hazards based on site conditions, contaminant levels, task and equipment

Section 7 Risk Control

Utilities

Utility Markout

Utility	Req.	Company Name	Telephone #
One Call		Dig Safely	800-962-7962
Gas:		Central Hudson	845-452-2700
Electric:		Central Hudson	845-452-2700
Water:		Newburgh Water Dept. Emergency #	845-565-3356 845-561-6080
Sewer:		Newburgh DPW	845-565-3297
Telephone:		Verizon Phone Verizon FIOS	914-890-6611 888-553-1555
Cable:		Time Warner	845-567-0036

Markout Ticket Confirmation #	Date

Activity modifications to address on-site utility lines:

* If this risk is identified, Senior Management must approve the HASP.

PPE

Primary protective equipment to be worn during this task

Level C **Level D** X Level D Modified

If PPE beyond Level D is required, consult the Project Manager or Senior Management

Equipment	Primary	Conting**
Respiratory		
Respirator (full)		
Respirator (half)		
Cartridge type:		
P100		
Combo		
Other		
Dust Mask		
Not Needed	X	
Head and Eye		
Safety Glasses	X	
Face Shield		
Goggles		
Hard Hat		
Not Needed		
Ears		
Hearing Protection		

Equipment	Primary	Conting*[*]
Feet		
Steel Toe Safety Boots	X	
Overboots		
Workboots		
No Special Reqts.		
Hands		
Nitrile Gloves	X	
Overgloves		
Not Needed		
Body		
Tyvek Coverall		
Polycoated Tyvek		
Cold Weather Gear (carhart)		
Rain Gear		
Safety Vest		
Not Needed	X	

Other PPE Requirements:

Trigger for Contingency Requirements[**]:

Other Equipment and Supplies:

Lighting	
Potable Water	X
Insect Repellent	X
Fire Extinguisher (2.5 lb)	X
Fire Extinguisher (5 lb)	
Fire Extinguisher (10 lb)	
Eyewash Kit	
Spill Kit	X
First Aid Kit	X
Other (specify):	

Restroom Facilities Location: None on site

If equipment at the facility is to be relied on, list the equipment and location:

Equipment	Location

*[*] If contingency is necessary, move from work area and consult the Project Manager or other Senior Personnel prior to upgrading.

Operational Control Procedures:

Decontamination Procedures:

Follow the Field Decontamination Procedure. List any differences or additions below.

Discharge Control Measures
Discharge Control Measures:

Waste Disposal Practices:
Specify Waste Disposal Practices:

Waste Type	Sample	Containerize	Dispose of off Site	Return to Site	Dispose in FE Solid Waste
Drill Cuttings					
Purge Water				X	
Soil					
PPE and other field related waste					X
Other (Specify)					

Additional waste handling instructions:

Additional discharge control instructions:

General Safe Work Practices:
To ensure the safety of First Environment personnel and the public at a site where fieldwork is being conducted, the Safe Work Practices listed below will be followed.

- Good housekeeping practices are to be maintained.
- A "buddy system" in which another worker is close enough to render immediate aid will be in effect when specified in the HASP.
- In the event of treacherous weather-related working conditions field tasks will be suspended until conditions improve or appropriate protection from the elements is provided.
- Smoking, eating, chewing gum or tobacco, or drinking are forbidden except in clean or designated area.
- Ignition of flammable liquids within or through improvised heating devices is forbidden.
- Contact with samples, excavated materials, or other contaminated materials must be minimized.
- Use of contact lenses is not advisable.
- If drilling equipment is involved, know where the 'kill switch' is.
- All electrical equipment used in outside locations, wet area or near water must be plugged into ground fault circuit interrupter protected outlets.
- Illumination - Work in the early morning or at dusk may require site lighting.

List any differences or additions below:

Buddy System required? No
If yes, describe circumstances:

Lockout – Tagout:
Is lockout – tagout required? No
Specify equipment to be locked out:
Follow the Lockout - Tagout procedure. List any differences or additions below:

Exclusion Zones:
Will exclusion zones be used at the site? No
If yes, zones indicated on the site map?

Emergency Response Procedures

Field Emergency Response:
Follow the Field Emergency Response Procedure. List any differences or additions below

Spill Response:
Follow the Field Spill Response Procedure. List any differences or additions below.

Is a stand-by external emergency response contractor required? No
Date Contacted: Contacted by:

H&S Monitoring and Measurement:

H&S Field Monitoring Required? No
If so, follow the Health and Safety Monitoring Table below.

Corrective/Preventive Action

In the event that corrective action becomes necessary and is taken in the field or a necessary preventive action is identified, the Field Team must ensure the notification of the PM so that appropriate modifications can be made to the HASP and fieldwork activities. In the event that a corrective or preventive action has application beyond the immediate project and work being performed, a PCAN must be filed.

Audits

As part of First Environment's ISO 14001 EMS, the HASP and its implementation are subject to internal audit and audit by our third party auditor. Findings are addressed through the PCAN Process.

This page reserved for a site map showing work locations, staging areas, exclusion zones as appropriate, emergency response equipment locations as appropriate, and the evacuation route and muster point.

Legend:
Evacuation Route
Muster Point

H&S Monitoring

Type of Meter/Monitoring	Monitors	Check if to be Used/ Done	Surveillance Methodology (select one)		Monitoring Locations	Guidance Action Levels*	Site Action Levels**
			Determined by FTL Based on Site Conditions	Specified Frequency			
Photoionization Detector (PID) 9.8eV 10.2eV 10.6 eV 11.7eV	Total Volatile Organics levels					5 ppm above background - evacuate and notify	
Flame Ionization Detector (FID)	Total Volatile Organics levels					5 ppm above background - evacuate and notify	
Multi-gas meters Oxygen Combustible Gas CO H2S Other Gas (Specify)	 Oxygen levels LEL Toxic gas levels Toxic gas levels					< 21% - notify < 19.5% - evacuate 10-20% - notify >20% - evacuate >9 ppm – notify >10 ppm – notify	
Other equipment (specify)							

* For notify action levels, move off worksite and contact PM to take corrective action or upgrade PPE. For evacuation move off worksite and contact PM for further instructions.
**If site levels are different from guidance levels specify reason:

Section 5 Work Description

If multiple tasks with different hazard profiles and risk controls are planned, copy Sections 5, 6, and 7 and fill out for each task with different hazards requiring different controls.

Tasks to be performed by First Environment

Tasks 2: Remediation oversight and soil sampling

Tasks to be performed by First Environment Contractors[3]

Task: Site clearing; Demolition of some on-site structures, Excavation of contaminated soil; installation of an infiltration trench; grading and capping of site; removing metal conveyor belt framework from interior trench (hot work) and cleaning of interior trench.

Contractor: ENR Contracting LLC.

Task:

Contractor:

Task:

Contractor:

Task:

Contractor:

[3] Site characteristics to the best of First Environment's knowledge are included in this HASP. Per the subcontractor agreement, each subcontractor must assess hazards associated with their site activities and have a site- specific health and safety plan covering their work on site.

Section 6: Hazard Assessment

Potential Chemical Hazards

Identify suspected compounds and levels if known. If levels are unknown, indicate unknown. If compounds are not present or not suspected to be present indicate with NA. If a class of compounds (in bold) is not present at the site, indicate NA for the class, it is then not necessary to fill in NA for compounds within the class.

Unknown or partially characterized			
Compounds	**Levels**		**Symptoms of Acute Exposure**
	Soil (mg/kg)	**W/GW** (μg/L)	
Nonchlorinated VOCs			
Methyl-t-butyl Ether (MTBE)		ND-29	
Xylene	ND-1.4		
Chlorinated VOCs			
Tetrachloroethylene (PCE)		ND-9.7	Irritation; Eyes, Skin, Nose; Throat, Respiratory System; Nausea; Flush Face and Neck; Dizziness; Lack of Coordination; Headache; Drowsiness
Semi-Volatile Organics			
Benzo(a)anthracene	ND-3.8		
Benzo(a)pyrene	ND-3.5		
Benzo(b)fluoranthene	ND-5.2		
Benzo(k)fluoranthene	ND-3.8		
Chrysene	ND-3.7		
Dibenzo(a,h)anthracene	ND-0.22		
Naphthalene	ND-29		
Phenanthrene	ND-11		
Petroleum Products			
Fuel Oil #2			Irritation: Eyes, Skin, Mucous Membrane
Metals			
Arsenic	5.2-104		sore throat from breathing, red skin at contact point, or severe abdominal pain, vomiting, and diarrhea, often within 1 hour after ingestion. Other symptoms are anorexia, fever, mucosal irritation, and arrhythmia. Cardiovascular changes are often subtle in the early stages but can progress to cardiovascular collapse.
Lead	9.6-6630		abdominal pain, convulsions, hypertension, renal dysfunction, loss of appetite, fatigue, and sleeplessness. Other symptoms are hallucinations, headache, numbness, arthritis, and vertigo.
Mercury	0.02-48		Irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria

Chemicals Brought On-Site by FE

Alconox	X	Other (specify)	
Gasoline			
Dilute Hydrochloric Acid			
Methanol			
Dilute Nitric Acid	X		
Dilute Sulfuric Acid			

Is there a high potential for a chemical release beyond an incidental release? No
If yes, explain:

Potential Physical Hazards

Check all that apply.

Unknown/Partially Characterized		***Heat Stress***	X
Cold Exposure	X	Stored Energy	
Electrical (other than lines)		Confined Space*	
Explosion*		***Heavy Machinery***	X
Fire		Slippery Surfaces	
Toxic Gases		Fall Potential	
Oxygen Deficiency*		Poisonous Plants	
Pinch Points	X	Venomous Spiders	
Uneven Terrain		Wild Animals	
Noise		Utility Lines	
Traffic		Biological Waste (specify)	
Venomous Snakes			
Mosquitoes, Ticks or other Biting Insects	X	**Flying or Falling Material**	X
Poor Visibility/Inadequate Light		Pump Winch	
Ionizing Radiation*		Other (specify)	

Overall Hazard Evaluation

Overall: High **Medium** X Low Unknown
Justification: There will be heavy machinery used, tree clearing and some demolition. Soil to be excavated may be RCRA Hazardous for lead or mercury.

Section 7 Risk Control

Utilities

Utility Markout

Utility	Req.	Company Name	Telephone #
One Call		Dig Safely	800-962-7962
Gas:		Central Hudson	845-452-2700
Electric:		Central Hudson	845-452-2700
Water:		Newburgh Water Dept. Emergency #	845-565-3356 845-561-6080
Sewer:		Newburgh DPW	845-565-3297
Telephone:		Verizon Phone Verizon FIOS	914-890-6611 888-553-1555
Cable:		Time Warner	845-567-0036

Markout Ticket Confirmation #	Date

Activity modifications to address onsite utility lines:

* If this risk is identified, Senior Management must approve the HASP.

PPE

Primary protective equipment to be worn during this task

Level C **Level D** X Level D Modified

If PPE beyond Level D is required, consult the Project Manager or Senior Management

Equipment	Primary	Conting**
Respiratory		
Respirator (full)		
Respirator (half)		
Cartridge type:		
P100		X
Combo		
Other		
Dust Mask		
Not Needed		
Head and Eye		
Safety Glasses	X	
Face Shield		
Goggles		
Hard Hat	X	
Not Needed		
Ears		
Hearing Protection		

Equipment	Primary	Conting*[*]
Feet		
Steel Toe Safety Boots	X	
Overboots		
Workboots		
No Special Reqts.		
Hands		
Nitrile Gloves	X	
Overgloves		
Not Needed		
Body		
Tyvek Coverall		
Polycoated Tyvek		
Cold Weather Gear (carhart)		As needed
Rain Gear		
Safety Vest	X	
Not Needed		

Other PPE Requirements:

Trigger for Contingency Requirements**: Sustained particulate levels above Community Air Monitoring Plan Initial Criteria of 100 micrograms per cubic meter (mcg/m3) greater than background (upwind perimeter) for a 15-minute period. Sustained VOC levels above Community Air Monitoring Plan Initial Criteria of 5 pars per million (ppm).

Other Equipment and Supplies:

Lighting	
Potable Water	X
Insect Repellent	X
Fire Extinguisher (2.5 lb)	X
Fire Extinguisher (5 lb)	
Fire Extinguisher (10 lb)	
Eyewash Kit	X
Spill Kit	X
First Aid Kit	X
Other (specify):	

Restroom Facilities Location: None on site

If equipment at the facility is to be relied on, list the equipment and location:

Equipment	Location

*[*] If contingency is necessary, move from work area and consult the Project Manager or other Senior Personnel prior to upgrading.

Operational Control Procedures:

Decontamination Procedures:

Follow the Field Decontamination Procedure. List any differences or additions below.

Discharge Control Measures
Discharge Control Measures:

Waste Disposal Practices:
Specify Waste Disposal Practices:

Waste Type	Sample	Containerize	Dispose of off Site	Return to Site	Dispose in FE Solid Waste
Drill Cuttings					
Purge Water					
Soil			X		
PPE and other field related waste					X
Other (Specify)					

Additional waste handling instructions:

Additional discharge control instructions:

General Safe Work Practices:
To ensure the safety of First Environment personnel and the public at a site where fieldwork is being conducted, the Safe Work Practices listed below will be followed.

- Good housekeeping practices are to be maintained.
- A "buddy system" in which another worker is close enough to render immediate aid will be in effect when specified in the HASP.
- In the event of treacherous weather-related working conditions field tasks will be suspended until conditions improve or appropriate protection from the elements is provided.
- Smoking, eating, chewing gum or tobacco, or drinking are forbidden except in clean or designated area.
- Ignition of flammable liquids within or through improvised heating devices is forbidden.
- Contact with samples, excavated materials, or other contaminated materials must be minimized.
- Use of contact lenses is not advisable.
- If drilling equipment is involved, know where the 'kill switch' is.
- All electrical equipment used in outside locations, wet area or near water must be plugged into ground fault circuit interrupter protected outlets.
- Illumination - Work in the early morning or at dusk may require site lighting.

List any differences or additions below:

Buddy System required? No
If yes, describe circumstances:

Lockout – Tagout:
Is lockout – tagout required? No
Specify equipment to be locked out:
Follow the Lockout - Tagout procedure. List any differences or additions below:

Exclusion Zones:
Will exclusion zones be used at the site? Yes
If yes, zones indicated on the site map? Vehicle and personnel decon.

Emergency Response Procedures

Field Emergency Response:
Follow the Field Emergency Response Procedure. List any differences or additions below

Spill Response:
Follow the Field Spill Response Procedure. List any differences or additions below.

Is a stand-by external emergency response contractor required? No
Date Contacted: Contacted by:

H&S Monitoring and Measurement:

H&S Field Monitoring Required? **Monitoring conducted under the Community Air Monitoring plan for the site**
If so, follow the Health and Safety Monitoring Table below.

Corrective/Preventive Action

In the event that corrective action becomes necessary and is taken in the field or a necessary preventive action is identified, the Field Team must ensure the notification of the PM so that appropriate modifications can be made to the HASP and fieldwork activities. In the event that a corrective or preventive action has application beyond the immediate project and work being performed, a PCAN must be filed.

Audits

As part of First Environment's ISO 14001 EMS, the HASP and its implementation are subject to internal audit and audit by our third party auditor. Findings are addressed through the PCAN Process.

This page reserved for a site map showing work locations, staging areas, exclusion zones as appropriate, emergency response equipment locations as appropriate, and the evacuation route and muster point.

Legend:

Evacuation Route

Muster Point

Exclusion Zone

H&S Monitoring

Type of Meter/Monitoring	Monitors	Check if to be Used/ Done	Surveillance Methodology (select one)		Monitoring Locations	Guidance Action Levels*	Site Action Levels**
			Determined by FTL Based on Site Conditions	Specified Frequency			
Photoionization Detector (PID) 9.8eV 10.2eV 10.6 eV 11.7eV	Total Volatile Organics levels					5 ppm above background - evacuate and notify	
Flame Ionization Detector (FID)	Total Volatile Organics levels					5 ppm above background - evacuate and notify	
Multi-gas meters Oxygen Combustible Gas CO H2S Other Gas (Specify)	Oxygen levels LEL Toxic gas levels Toxic gas levels					< 21% - notify < 19.5% - evacuate 10-20% - notify >20% - evacuate >9 ppm – notify >10 ppm – notify	
Other: Particulates will be monitored under the Community Air Monitoring Plan, which is implemented to protect the public not personnel. However sustained exceedances of the CAMP will trigger action for personnel. PDR 1000	Particulates	X		During soils work	Down wind	As per CAMP Sustained particulate levels above Community Air Monitoring Plan Initial Criteria of 100 micrograms per cubic meter (mcg/m3) greater than background (upwind perimeter) for a 15-minute period.	

* For notify action levels, move off worksite and contact PM to take corrective action or upgrade PPE. For evacuation move off worksite and contact PM for further instructions.
**If site levels are different from guidance levels specify reason:

Section 5 Work Description

If multiple tasks with different hazard profiles and risk controls are planned, copy Sections 5, 6, and 7 and fill out for each task with different hazards requiring different controls.

Tasks to be performed by First Environment

Task 3: PVC casing adjustment and resetting of well Manhole and/or abandonment oversight. TO BE COMPLETED TO REHABILITATE WELLS (AS NEEDED) AFTER REMEDIATION OF SITE IS COMPLETE.

Tasks to be performed by First Environment Contractors[4]

Task: Well abandonment (if needed)

Contractor: TBD

[4] Site characteristics to the best of First Environment's knowledge are included in this HASP. Per the subcontractor agreement, each subcontractor must assess hazards associated with their site activities and have a site- specific health and safety plan covering their work on site.

Section 6: Hazard Assessment

Potential Chemical Hazards

Identify suspected compounds and levels if known. If levels are unknown, indicate unknown. If compounds are not present or not suspected to be present indicate with NA. If a class of compounds (in bold) is not present at the site, indicate NA for the class, it is then not necessary to fill in NA for compounds within the class.

Unknown or partially characterized			
Compounds	**Levels**		**Symptoms of Acute Exposure**
	Soil (mg/kg)	**W/GW** (μg/L)	
Nonchlorinated VOCs			
Methyl-t-butyl Ether (MTBE)		ND-29	
Xylene	ND-1.4		
Chlorinated VOCs			
Tetrachloroethylene (PCE)		ND-9.7	Irritation; Eyes, Skin, Nose; Throat, Respiratory System; Nausea; Flush Face and Neck; Dizziness; Lack of Coordination; Headache; Drowsiness
Semi-Volatile Organics			
Benzo(a)anthracene	ND-3.8		
Benzo(a)pyrene	ND-3.5		
Benzo(b)fluoranthene	ND-5.2		
Benzo(k)fluoranthene	ND-3.8		
Chrysene	ND-3.7		
Dibenzo(a,h)anthracene	ND-0.22		
Naphthalene	ND-29		
Phenanthrene	ND-11		
Petroleum Products			
Fuel Oil #2			Irritation: Eyes, Skin, Mucous Membrane
Metals			
Arsenic	5.2-104		sore throat from breathing, red skin at contact point, or severe abdominal pain, vomiting, and diarrhea, often within 1 hour after ingestion. Other symptoms are anorexia, fever, mucosal irritation, and arrhythmia. Cardiovascular changes are often subtle in the early stages but can progress to cardiovascular collapse.
Lead	9.6-6630		abdominal pain, convulsions, hypertension, renal dysfunction, loss of appetite, fatigue, and sleeplessness. Other symptoms are hallucinations, headache, numbness, arthritis, and vertigo.
Mercury	0.02-48		Irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria

Chemicals Brought On-Site by FE

Alconox	X	Other (specify)	
Gasoline			
Dilute Hydrochloric Acid			
Methanol			
Dilute Nitric Acid			
Dilute Sulfuric Acid			

Is there a high potential for a chemical release beyond an incidental release? No
If yes, explain:

Potential Physical Hazards

Check all that apply.

Unknown/Partially Characterized		***Heat Stress***	X
Cold Exposure	X	Stored Energy	
Electrical (other than lines)		Confined Space*	
Explosion*		Heavy Machinery	
Fire		Slippery Surfaces	
Toxic Gases		Fall Potential	
Oxygen Deficiency*		Poisonous Plants	
Pinch Points		Venomous Spiders	
Uneven Terrain		Wild Animals	
Noise		Utility Lines	
Traffic		Biological Waste (specify)	
Venomous Snakes			
Mosquitoes, Ticks or other Biting Insects	X	Flying or Falling Material	
Poor Visibility/Inadequate Light		Pump Winch	
Ionizing Radiation*		Other (specify)	

Overall Hazard Evaluation

Overall: High Medium **Low** X Unknown

Justification: No significant hazards based on site conditions, contaminant levels, task and equipment

Section 7 Risk Control

Utilities

Utility Markout

Utility	Req.	Company Name	Telephone #
One Call		Dig Safely	800-962-7962
Gas:		Central Hudson	845-452-2700
Electric:		Central Hudson	845-452-2700
Water:		Newburgh Water Dept. Emergency #	845-565-3356 845-561-6080
Sewer:		Newburgh DPW	845-565-3297
Telephone:		Verizon Phone Verizon FIOS	914-890-6611 888-553-1555
Cable:		Time Warner	845-567-0036

Markout Ticket Confirmation #	Date

Activity modifications to address onsite utility lines:

* If this risk is identified, Senior Management must approve the HASP.

PPE

Primary protective equipment to be worn during this task

Level C **Level D** X Level D Modified

If PPE beyond Level D is required, consult the Project Manager or Senior Management

Equipment	Primary	Conting**
Respiratory		
Respirator (full)		
Respirator (half)		
Cartridge type:		
P100		
Combo		
Other		
Dust Mask		
Not Needed	X	
Head and Eye		
Safety Glasses	X	
Face Shield		
Goggles		
Hard Hat		
Not Needed		
Ears		
Hearing Protection		

Equipment	Primary	Conting*[*]
Feet		
Steel Toe Safety Boots	X	
Overboots		
Workboots		
No Special Reqts.		
Hands		
Nitrile Gloves	X	
Overgloves		
Not Needed		
Body		
Tyvek Coverall		
Polycoated Tyvek		
Cold Weather Gear (carhart)		
Rain Gear		
Safety Vest		
Not Needed	X	

Other PPE Requirements:

Trigger for Contingency Requirements:

Other Equipment and Supplies:

Lighting	
Potable Water	X
Insect Repellent	
Fire Extinguisher (2.5 lb)	X
Fire Extinguisher (5 lb)	
Fire Extinguisher (10 lb)	
Eyewash Kit	X
Spill Kit	X
First Aid Kit	X
Other (specify):	

Restroom Facilities Location: None on site

If equipment at the facility is to be relied on, list the equipment and location:

Equipment	Location

*[*] If contingency is necessary, move from work area and consult the Project Manager or other Senior Personnel prior to upgrading.

Operational Control Procedures:

Decontamination Procedures:

Follow the Field Decontamination Procedure. List any differences or additions below.

Discharge Control Measures
Discharge Control Measures:

Waste Disposal Practices:
Specify Waste Disposal Practices:

Waste Type	Sample	Containerize	Dispose of off Site	Return to Site	Dispose in FE Solid Waste
Drill Cuttings					
Purge Water					
Soil					
PPE and other field related waste					X
Other (Specify)					

Additional waste handling instructions:

Additional discharge control instructions:

General Safe Work Practices:
To ensure the safety of First Environment personnel and the public at a site where fieldwork is being conducted, the Safe Work Practices listed below will be followed.

- Good housekeeping practices are to be maintained.
- A "buddy system" in which another worker is close enough to render immediate aid will be in effect when specified in the HASP.
- In the event of treacherous weather-related working conditions field tasks will be suspended until conditions improve or appropriate protection from the elements is provided.
- Smoking, eating, chewing gum or tobacco, or drinking are forbidden except in clean or designated area.
- Ignition of flammable liquids within or through improvised heating devices is forbidden.
- Contact with samples, excavated materials, or other contaminated materials must be minimized.
- Use of contact lenses is not advisable.
- If drilling equipment is involved, know where the 'kill switch' is.
- All electrical equipment used in outside locations, wet area or near water must be plugged into ground fault circuit interrupter protected outlets.
- Illumination - Work in the early morning or at dusk may require site lighting.

List any differences or additions below:

Buddy System required? No
If yes, describe circumstances:

Lockout – Tagout:
Is lockout – tagout required? No
Specify equipment to be locked out:
Follow the Lockout - Tagout procedure. List any differences or additions below:

Exclusion Zones:
Will exclusion zones be used at the site? No
If yes, zones indicated on the site map?

Emergency Response Procedures

Field Emergency Response:
Follow the Field Emergency Response Procedure. List any differences or additions below

Spill Response:
Follow the Field Spill Response Procedure. List any differences or additions below.

Is a stand-by external emergency response contractor required? No
Date Contacted: Contacted by:

H&S Monitoring and Measurement:

H&S Field Monitoring Required? No
If so, follow the Health and Safety Monitoring Table below.

Corrective/Preventive Action

In the event that corrective action becomes necessary and is taken in the field or a necessary preventive action is identified, the Field Team must ensure the notification of the PM so that appropriate modifications can be made to the HASP and fieldwork activities. In the event that a corrective or preventive action has application beyond the immediate project and work being performed, a PCAN must be filed.

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As part of First Environment's ISO 14001 EMS, the HASP and its implementation are subject to internal audit and audit by our third party auditor. Findings are addressed through the PCAN Process.

This page reserved for a site map showing work locations, staging areas, exclusion zones as appropriate, emergency response equipment locations as appropriate, and the evacuation route and muster point.

Legend:
Evacuation Route
Muster Point

H&S Monitoring

Type of Meter/Monitoring	Monitors	Check if to be Used/ Done	Surveillance Methodology (select one)		Monitoring Locations	Guidance Action Levels*	Site Action Levels**
			Determined by FTL Based on Site Conditions	Specified Frequency			
Photoionization Detector (PID) 9.8eV 10.2eV 10.6 eV 11.7eV	Total Volatile Organics levels					5 ppm above background - evacuate and notify	
Flame Ionization Detector (FID)	Total Volatile Organics levels					5 ppm above background - evacuate and notify	
Multi-gas meters Oxygen Combustible Gas CO H2S Other Gas (Specify)	Oxygen levels LEL Toxic gas levels Toxic gas levels					< 21% - notify < 19.5% - evacuate 10-20% - notify >20% - evacuate >9 ppm – notify >10 ppm – notify	
Other equipment (specify)							

* For notify action levels, move off worksite and contact PM to take corrective action or upgrade PPE. For evacuation move off worksite and contact PM for further instructions.
**If site levels are different from guidance levels specify reason:

Section 8 Plan Approval

Plan Prepared by:	Dan Lattanzi	Date:	08/29/2012
Plan Reviewed/Approved by:		Date:	
Project Manager:	Dan Lattanzi	Date:	

If modifications are made to the plan, it must be reviewed and approved again. The revision number and approval date on the first page must be changed.

Section 9 FE Personnel Acknowledgement

First Environment employees assigned to work on-site have attended 40-hour HAZWOPER training and annual refreshers, as applicable, per 29 CFR 1910.120, and have been certified medically fit by a qualified occupational physician to work on hazardous sites and to wear a respirator. Medical and training records are maintained by Human Resources.

By signing below, First Environment employees acknowledge that they:

- have read and understand this Site Health and Safety Plan
- meet the training and medical fitness requirements
- understand the process of continual improvement and will use the PCAN process.

The effectiveness of this Health and Safety Plan is determined through periodic auditing as part of our ISO 14001 Environmental Management System.

If review of the plan at the site indicates changes to the HASP are necessary, provide the specifics on the last page of this HASP (Make changes in the HASP and initial the changes).

				Subcontractors			
Name	**Responsibilities**	**Site Task**	**Signature**	**Sub HASP[5]**	**Guide R&A[6]**	**N/A[7]**	**Date**
1	FTL / FT / FHSO			☐	☐	☐	
2	FTL / FT / FHSO			☐	☐	☐	
3	FTL / FT / FHSO			☐	☐	☐	
4	FTL / FT / FHSO			☐	☐	☐	
5	FTL / FT / FHSO			☐	☐	☐	
6	FTL / FT / FHSO			☐	☐	☐	
7	FTL / FT / FHSO			☐	☐	☐	

[5] Subcontractor is using HASP onsite and has reviewed it with employees
[6] Subcontractor has received our Guide for Subcontractors and Vendors and has signed the Read and Acknowledge Form
[7] Not applicable – No subcontractor present

8	FTL / FT / FHSO	☐	☐	☐
9	FTL / FT / FHSO	☐	☐	☐
10	FTL / FT / FHSO	☐	☐	☐
11	FTL / FT / FHSO	☐	☐	☐
12	FTL / FT / FHSO	☐	☐	☐
13	FTL / FT / FHSO	☐	☐	☐
14	FTL / FT / FHSO	☐	☐	☐
15	FTL / FT / FHSO	☐	☐	☐
16	FTL / FT / FHSO	☐	☐	☐
17	FTL / FT / FHSO	☐	☐	☐
18	FTL / FT / FHSO	☐	☐	☐
19	FTL / FT / FHSO	☐	☐	☐
20	FTL / FT / FHSO	☐	☐	☐
21	FTL / FT / FHSO	☐	☐	☐
22	FTL / FT / FHSO	☐	☐	☐
23	FTL / FT / FHSO	☐	☐	☐

[3] Subcontractor is using HASP onsite and has reviewed it with employees
[4] Subcontractor has received our Guide for Subcontractors and Vendors and has signed the Read and Acknowledge Form
[5] Not applicable – No subcontractor present

24	FTL / FT / FHSO	☐	☐	☐
25	FTL / FT / FHSO	☐	☐	☐
26	FTL / FT / FHSO	☐	☐	☐
27	FTL / FT / FHSO	☐	☐	☐
28	FTL / FT / FHSO	☐	☐	☐
29	FTL / FT / FHSO	☐	☐	☐
30	FTL / FT / FHSO	☐	☐	☐

If review of the plan at the site indicates changes to the HASP are necessary, provide the specifics below (Make changes in the HASP and initial the changes).

Date: _____ FTL: _____

[3] Subcontractor is using HASP onsite and has reviewed it with employees
[4] Subcontractor has received our Guide for Subcontractors and Vendors and has signed the Read and Acknowledge Form
[5] Not applicable – No subcontractor present

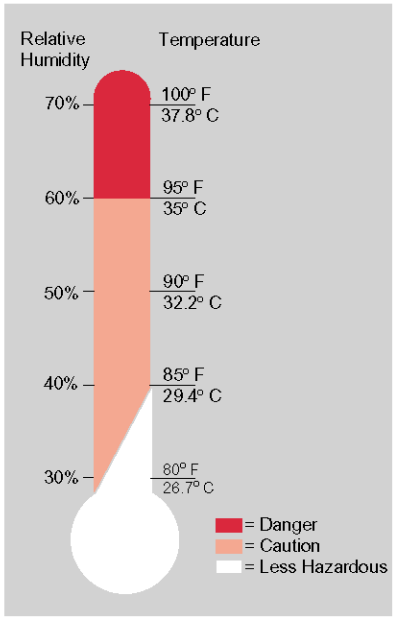
Section 10

Attach MSDSs.

THE HEAT EQUATION

HIGH TEMPERATURE + HIGH HUMIDITY + PHYSICAL WORK = HEAT ILLNESS

When the body is unable to cool itself through sweating, **serious** heat illnesses may occur. The most severe heat-induced illnesses are **heat exhaustion** and **heat stroke**. If actions are not taken to treat heat exhaustion, the illness could progress to heat stroke and possible **death**.



HEAT EXHAUSTION

What Happens to the Body:

HEADACHES, DIZZINESS/LIGHT HEADEDNESS, WEAKNESS, MOOD CHANGES (irritable, or confused/can't think straight), FEELING SICK TO YOUR STOMACH, VOMITING/THROWING UP, DECREASED and DARK COLORED URINE, FAINTING/PASSING OUT, and PALE CLAMMY SKIN.

What Should Be Done:

- Move the person to a cool shaded area to rest. Don't leave the person alone. If the person is dizzy or light headed, lay them on their back and raise their legs about 6-8 inches. If the person is sick to their stomach lay them on their side.
- Loosen and remove any heavy clothing.
- Have the person drink some cool water (a small cup every 15 minutes) if they are not feeling sick to their stomach.
- Try to cool the person by fanning them. Cool the skin with a cool spray mist of water or wet cloth.
- If the person does not feel better in a few minutes call for emergency help (Ambulance or Call 911).

(If heat exhaustion is not treated, the illness may advance to heat stroke.)

HEAT STROKE—A MEDICAL EMERGENCY

What Happens to the Body:

DRY PALE SKIN (no sweating), HOT RED SKIN (looks like a sunburn), MOOD CHANGES (irritable, confused/not making any sense), SEIZURES/FITS, and COLLAPSE/PASSED OUT (will not respond).

What Should Be Done:

- Call for emergency help (Ambulance or Call 911).
- Move the person to a cool shaded area. Don't leave the person alone. Lay them on their back and if the person is having seizures/fits remove any objects close to them so they won't strike against them. If the person is sick to their stomach lay them on their side.
- Remove any heavy and outer clothing.
- Have the person drink some cool water (a small cup every 15 minutes) if they are alert enough to drink anything and not feeling sick to their stomach.
- Try to cool the person by fanning them. Cool the skin with a cool spray mist of water, wet cloth, or wet sheet.
- If ice is available, place ice packs under the arm pits and groin area.

How to Protect Workers

- Learn the signs and symptoms of heat-induced illnesses and what to do to help the worker.
- Train the workforce about heat-induced illnesses.
- Perform the heaviest work in the coolest part of the day.
- Slowly build up tolerance to the heat and the work activity (usually takes up to 2 weeks).
- Use the buddy system (work in pairs).
- Drink plenty of cool water (one small cup every 15-20 minutes)
- Wear light, loose-fitting, breathable (like cotton) clothing.
- Take frequent short breaks in cool shaded areas (allow your body to cool down).
- Avoid eating large meals before working in hot environments.
- Avoid caffeine and alcoholic beverages (these beverages make the body lose water and increase the risk for heat illnesses).

Workers Are at Increased Risk When

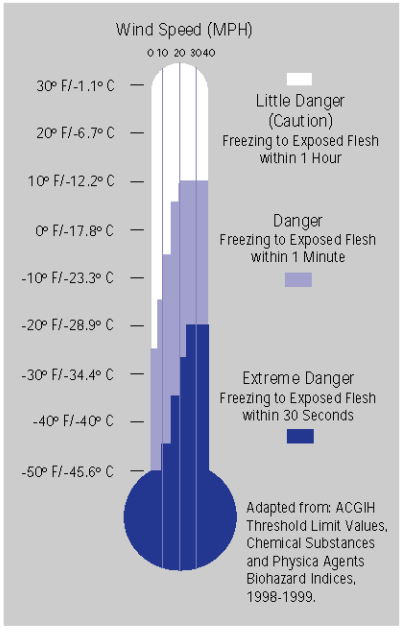
- They take certain medication (check with your doctor, nurse, or pharmacy and ask if any medicines you are taking affect you when working in hot environments).
- They have had a heat-induced illness in the past.
- They wear personal protective equipment (like respirators or suits).

U.S. Department of Labor
Occupational Safety and Health Administration
OSHA 3154
1998

THE COLD STRESS EQUATION

LOW TEMPERATURE + WIND SPEED + WETNESS = INJURIES & ILLNESS

When the body is unable to warm itself, serious cold-related illnesses and injuries may occur, and permanent tissue damage and death may result. **Hypothermia** can occur when *land temperatures* are **above** freezing or *water temperatures* are below 98.6°F/37°C. Cold-related illnesses can slowly overcome a person who has been chilled by low temperatures, brisk winds, or wet clothing.



U.S. Department of Labor
Occupational Safety and Health Administration

OSHA 3156
1998

FROST BITE

What Happens to the Body:

FREEZING IN DEEP LAYERS OF SKIN AND TISSUE; PALE, WAXY-WHITE SKIN COLOR; SKIN BECOMES HARD and NUMB; USUALLY AFFECTS THE FINGERS, HANDS, TOES, FEET, EARS, and NOSE.

What Should Be Done: (land temperatures)

- Move the person to a warm dry area. Don't leave the person alone.
- Remove any wet or tight clothing that may cut off blood flow to the affected area.
- **DO NOT** rub the affected area, because rubbing causes damage to the skin and tissue.
- **Gently** place the affected area in a warm (105°F) water bath and monitor the water temperature to **slowly** warm the tissue. Don't pour warm water directly on the affected area because it will warm the tissue too fast causing tissue damage. Warming takes about 25-40 minutes.
- After the affected area has been warmed, it may become puffy and blister. The affected area may have a burning feeling or numbness. When normal feeling, movement, and skin color have returned, the affected area should be dried and wrapped to keep it warm. **NOTE:** If there is a chance the affected area may get cold again, do not warm the skin. If the skin is warmed and then becomes cold again, it will cause severe tissue damage.
- Seek medical attention as soon as possible.

HYPOTHERMIA - (Medical Emergency)

What Happens to the Body:

NORMAL BODY TEMPERATURE (98.6°F/37°C) DROPS TO OR BELOW 95°F (35°C); FATIGUE OR DROWSINESS; UNCONTROLLED SHIVERING; COOL BLUISH SKIN; SLURRED SPEECH; CLUMSY MOVEMENTS; IRRITABLE, IRRATIONAL OR CONFUSED BEHAVIOR.

What Should Be Done: (land temperatures)

- Call for emergency help (i.e., Ambulance or Call 911).
- Move the person to a warm, dry area. Don't leave the person alone. Remove any wet clothing and replace with warm, dry clothing or wrap the person in blankets.
- Have the person drink warm, sweet drinks (sugar water or sports-type drinks) if they are alert. **Avoid drinks with caffeine** (coffee, tea, or hot chocolate) or alcohol.
- Have the person move their arms and legs to create muscle heat. If they are unable to do this, place warm bottles or hot packs in the arm pits, groin, neck, and head areas. **DO NOT** rub the person's body or place them in warm water bath. This may stop their heart.

What Should Be Done: (water temperatures)

- Call for emergency help (Ambulance or Call 911). Body heat is lost up to 25 times faster in water.
- **DO NOT** remove any clothing. Button, buckle, zip, and tighten any collars, cuffs, shoes, and hoods because the layer of trapped water closest to the body provides a layer of insulation that slows the loss of heat. Keep the head out of the water and put on a hat or hood.
- Get out of the water as quickly as possible or climb on anything floating. **DO NOT** attempt to swim unless a floating object or another person can be reached because swimming or other physical activity uses the body's heat and reduces survival time by about 50 percent.
- If getting out of the water is not possible, wait quietly and conserve body heat by folding arms across the chest, keeping thighs together, bending knees, and crossing ankles. If another person is in the water, huddle together with chests held closely.

How to Protect Workers

- Recognize the environmental and workplace conditions that lead to potential cold-induced illnesses and injuries.
- Learn the signs and symptoms of cold-induced illnesses/injuries and what to do to help the worker.
- Train the workforce about cold-induced illnesses and injuries.
- Select proper clothing for cold, wet, and windy conditions. Layer clothing to adjust to changing environmental temperatures. Wear a hat and gloves, in addition to underwear that will keep water away from the skin (polypropylene).
- Take frequent short breaks in warm dry shelters to allow the body to warm up.
- Perform work during the warmest part of the day.
- Avoid exhaustion or fatigue because energy is needed to keep muscles warm.
- Use the buddy system (work in pairs).
- Drink warm, sweet beverages (sugar water, sports-type drinks). Avoid drinks with caffeine (coffee, tea, or hot chocolate) or alcohol.
- Eat warm, high-calorie foods like hot pasta dishes.

Workers Are at Increased Risk When…

- They have predisposing health conditions such as cardiovascular disease, diabetes, and hypertension.
- They take certain medication (check with your doctor, nurse, or pharmacy and ask if any medicines you are taking affect you while working in cold environments).
- They are in poor physical condition, have a poor diet, or are older.

Community Air Monitoring Program
Former Jonas Automotive Site
86 Wisner Avenue
Newburgh, New York 12550

Site No. B00136-3

August 2013

Prepared for: City of Newburgh
83 Broadway
Newburgh, New York 12550

Prepared by: First Environment, Inc.
91 Fulton Street
Boonton, New Jersey 07005

Introduction

In addition to precautions outlined in the Health and Safety Plan, the following measures will be taken to evaluate and control, as necessary, potential fugitive particulates and volatile organic compounds (VOC) generated during both ground intrusive and non-intrusive activities. The following Community Air Monitoring Plan (CAMP) was developed using the New York State Department of Health Generic Community Air Monitoring Plan in combination with site-specific information and proposed activities.

Depending on the type of activity, levels of airborne particulates and/or VOCs will be monitored and recorded in real-time at both the upwind and downwind perimeters of the immediate work area. The purpose of the CAMP is to protect the downwind community from potential release of contaminants to the air generated during the activities. The action levels developed by the NYSDOH will be followed as part of the CAMP.

If the recorded levels approach the pre-established action level, or if airborne particulates are visually observed migrating off site or towards sensitive receptors, suppression measures will be implemented immediately. Suppression measures may include misting the particulate source with water, use of particulate suppression materials, and wetting the work area prior to initiating the activities, etc.

Scope-of-Work

This CAMP addresses three basic remedial activities that will occur at the Jonas Site:

1. excavation of the two separate areas of metals impacted soils in excess of site-specific criteria (Area E1 for Lead and Area E2 for Mercury);
2. cleaning of petroleum impacted portions of the building interior; and
3. site clearing, grading, and installation of a site-wide cover, likely via an asphalt cap, to limit contact with residual semi-volatile organic compounds (SVOCs) and metals.

Additionally, an infiltration trench will also be installed along the east end of the property

Groundwater sampling will also be conducted pre- and post-remedial activities and addressed in this CAMP.

Continuous monitoring will be required for most ground intrusive activities. Intrusive activities at the Site include soil excavation and site grading.

Periodic monitoring for volatile organic compounds (VOCs) will be required during non-intrusive activities. Non-intrusive activities at the Site will include cleaning of the building interior and the collection of groundwater samples from existing on-site monitoring wells. "Periodic" monitoring will consist of taking a reading at intervals during the building clean out or during sample collection. For sample collection, VOCs will be screened with a PID upon opening of the monitoring well cap.

Table 1 presents a summary of the various tasks during the course of remediation and the associated monitoring requirements

Table 1 – Tasks Requiring CAMP

TASK NO.	TASK DESCRIPTION	ACTIVITY TYPE	MONITORING FREQUENCY
1	Soil Excavation	Ground Intrusive	Continuous for Particulates. N/A for VOCs
2	Building Interior Cleaning	Non Ground Intrusive	N/A for Particulates. Periodic for VOCs
3a	Site Clearing and Grubbing	Ground Intrusive	Continuous for Particulates. N/A for VOCs

TASK NO.	TASK DESCRIPTION	ACTIVITY TYPE	MONITORING FREQUENCY
3b	Infiltration Trench Construction, Site Grading and Compaction	Ground Intrusive	Continuous for Particulates. N/A for VOCs
3c	Cap installation	Non Ground Intrusive	N/A for Particulates and VOCs
4	Monitoring Well Sampling	Non Ground Intrusive	N/A for Particulates Periodic for VOCs
5	Monitoring Well Reinstallation	Ground Intrusive	Periodic for Particulates and VOCs

Air Monitoring Procedures

Intrusive Activities

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the Site at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 microns in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level (Thermo MIE pDR-1000 or equivalent). The equipment will be equipped with an audible alarm or other means of alerting the operator to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

- If the downwind PM-10 level is 100 micrograms per cubic meter (mcg/m3) 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 levels do not exceed 150 mcg/m3 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 levels are greater than 150 mcg/m3 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 concentration to within 150 mcg/m3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for State (DEC and DOH) personnel to review.

VOC Monitoring, Response Levels, and Actions

Due to the nature of the Site, the planned intrusive activities will not require the monitoring of VOCs. The monitoring, response levels, and actions for VOCs will be discussed under non-intrusive activities section of this CAMP.

Non-intrusive Activities

Based on the tasks requiring a CAMP presented in Table 1 above, only monitoring well reinstallation will require periodic monitoring of particulates. Periodic monitoring for VOCs will be conducted for the building interior cleaning and groundwater sampling activities. The

monitoring for Non-Intrusive activities will be conducted on a periodic basis and will follow the same response levels and actions for VOCs as outlined below. The measurements will be collected from the immediate work area using a MiniRAE 2000 photoionization detector or equivalent.

VOCs will be monitored at the perimeter of the work area during the cleaning of petroleum stained floor areas inside the building using a MiniRAE 2000 photoionization detector or equivalent. The outdoor and indoor concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. A minimum of three measurements will be collected daily. 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 against a standard VOC calibrations gas appropriate for the contaminants of concern and for concentrations which will be comparable to the levels specified below. The monitoring, response levels, and actions for VOCs are as follows:

- If the ambient air concentration of total organic vapors in the work area 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 in the work area 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 Site 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 must be shut down.

Weather Monitoring

In order to identify the specific upgradient and downgradient sampling locations, meteorological data will be collected three times daily from a Davis Remote weather station, or equivalent, for barometric pressure, temperature, humidity, rainfall, and wind speed and direction.

APPENDIX D

Project No: Jonas001

Monitoring Well ID.: MW-1

Project: Jonas Automotive

Client: City of Newburgh

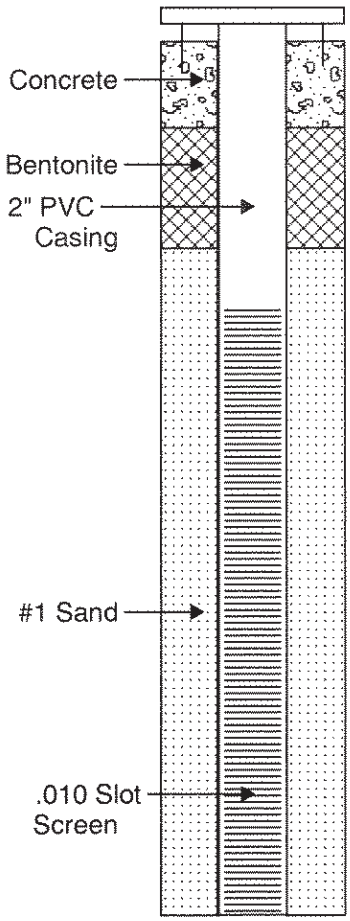
Permit No.:

Site Location: Newburgh, NY

Geologist: Chris Viani

First Environment, Inc.
91 Fulton Street
Boonton, NJ
07005

Depth (ft)	Symbol	Description	Depth/Elev.	Sample Number	Sample Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface						
0–2		***FINE SAND (FILL)*** Dark brown fine sand; some silt; little fine angular gravel. No staining/odor.	0.0		SS			
2–7		***SILT (FILL)*** Brown silt; little fine angular gravel. No staining/odor.	2.0		SS			60
4–5					SS			2
6–7					SS			32
7–14		***SILT*** Light reddish brown silt; trace to little fine sand; occaisional gray laminae. No staining/odor. Stiff. Wet at 8'.	7.0		SS			800
10–11					SS			
12–13					SS			57
14		End of Borehole	14.0					



Well Completion Details

Driller: ADT
Drilling Method: Hollow-stem auger
Well Completion Date:
Notes:

Borehole Diameter: 8"
Datum: Grade
Sheet: 1 of 1

Project No: Jonas001

Monitoring Well ID.: MW-2

Project: Jonas Automotive

Client: City of Newburgh

Permit No.:

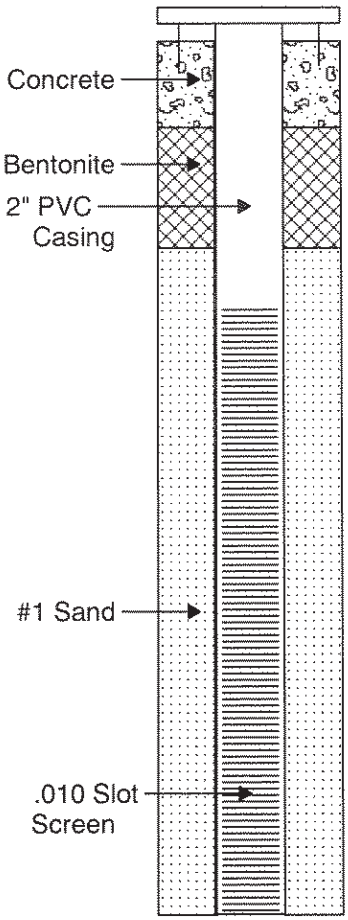
Site Location: Newburgh, NY

Geologist: Chris Viani

First Environment, Inc.
91 Fulton Street
Boonton, NJ
07005

Depth (ft)	Symbol	Description	Depth/Elev.	SAMPLE Number	SAMPLE Type	SAMPLE Blows/ft	SAMPLE Recovery	PID Reading (ppm)
		Ground Surface						
0–3		***SAND and GRAVEL (FILL)*** Dark gray fine sand and very angular gravel. No staining/odors. FILL.	0.0		SS			
3–15		***SAND and GRAVEL*** Brown fine to coarse sand and fine to medium subrounded gravel; little to some silt. Very moist, to wet at 10'. No staining/odors.	3.0		SS SS			
15		End of Borehole	15.0					

Well Completion Details



Driller: ADT
Drilling Method: Hollow-stem auger
Well Completion Date: 8/8/1
Notes:

Borehole Diameter: 8"
Datum: Grade
Sheet: 1 of 1

Project No: Jonas001

Monitoring Well ID.: MW-3

Project: Jonas Automotive

Client: City of Newburgh

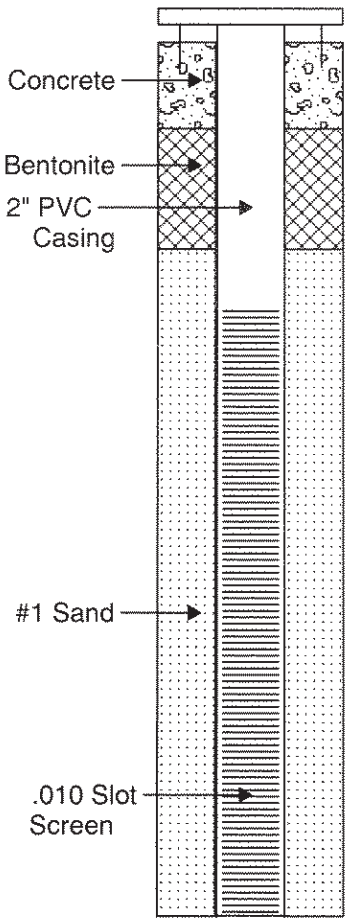
Permit No.:

Site Location: Newburgh, NY

Geologist: Chris Viani

First Environment, Inc.
91 Fulton Street
Boonton, NJ
07005

SUBSURFACE PROFILE				SAMPLE					
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)	Well Completion Details
0		Ground Surface							
0–3		***SAND, SILT and GRAVEL (F*** Brown to dark brown sand, silt, and angular fine to medium gravel. FILL.	0.0		SS			0	
3–11		***MEDIUM to COARSE SAND*** Brown medium to coarse sand; some rounded fine to medium gravel; trace to little silt. Loose. Wet at 9'. No staining/odors.	3.0		SS			0	
					SS			0	
					SS			0	
					SS			0	
					SS			0	
11–15		***MEDIUM SAND*** Brown medium sand; trace to little fine sand; trace silt; trace fine well-rounded gravel. Wet. No staining/odor.	11.0		SS			0	
					SS				
15		End of Borehole	15.0						
16–18									



Driller: ADT
Drilling Method: Hollow-stem auger
Well Completion Date: 8/7/1
Notes: Auger and split-spoon refusal at 15'.

Borehole Diameter: 8"
Datum: Grade
Sheet: 1 of 1

Project No: Jonas001

Monitoring Well ID.: MW-4

Project: Jonas Automotive

Client: City of Newburgh

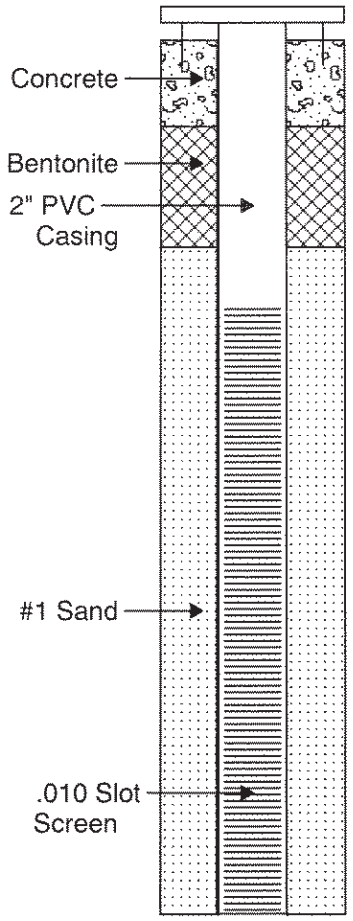
Permit No.:

Site Location: Newburgh, NY

Geologist: Chris Viani

First Environment, Inc.
91 Fulton Street
Boonton, NJ
07005

SUBSURFACE PROFILE				SAMPLE					
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)	Well Completion Details
0		Ground Surface							
0–2		***SILT (FILL)*** Brown silt; little to some angular gravel, w/ brick fragments and cinders. No staining/odor. FILL.	0.0		SS				
2–3		***SILT*** Brown silt; little fine to coarse sand; little fine rounded gravel. No staining/odor.	2.5		SS				
3–5		***FINE SAND*** Light reddish brown fine sand; trace silt; with rust, gray, and brown mottles. No staining/odors.	3.5		SS				
5–9		***SILT*** Reddish brown silt and fine sand to silt with some sand; with brown and gray mottles. Finely laminated in some intervals. Very moist. No staining/odors.	5.5		SS				
9–14		***SAND and GRAVEL*** Brown fine to coarse sand and fine to medium rounded gravel; little silt. Wet. No staining/odors.	9.0		SS				
14		End of Borehole	14.0		SS				
15–18									



Driller: ADT

Drilling Method: Hollow-stem auger

Well Completion Date: 8/8/1

Notes:

Borehole Diameter: 8"

Datum: Grade

Sheet: 1 of 1

Project No: Jonas001

Monitoring Well ID.: MW-5

Project: Jonas Automotive

Client: City of Newburgh

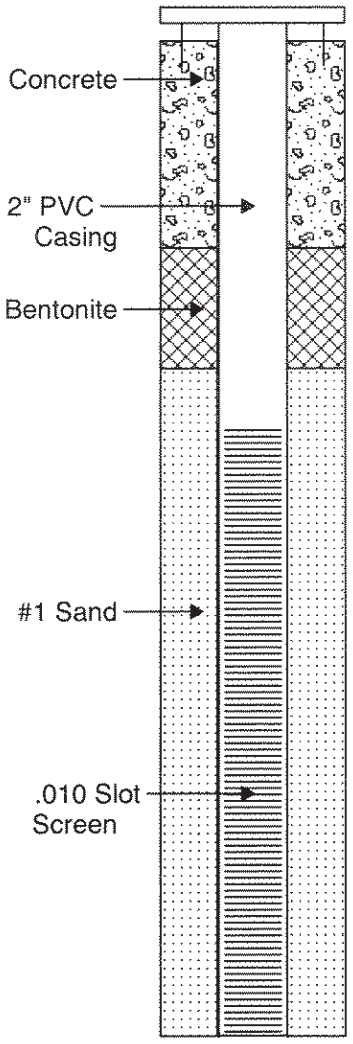
Permit No.:

Site Location: Newburgh, NY

Geologist: Chris Viani

First Environment, Inc.
91 Fulton Street
Boonton, NJ
07005

SUBSURFACE PROFILE				SAMPLE					Well Completion Details
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)	
		Ground Surface							
0		***SAND, SILT, and GRAVEL (F***	0.0						
1		Brown to black sand, silt, and angular fine to coarse gravel. FILL.			SS			0	
2									
3					SS			0	
4		***COBBLES***	4.0						
5		Cobbles. Very poor split-spoon recovery. Wet at 11'.			SS				
6					SS				
7									
8									
9					SS				
10									
11					SS				
12									
13					SS				
14		***SAND***	14.0						
15		Brown fine to coarse sand with occ. gray mottles; little rounded fine to medium gravel; trace silt. Wet. No staining/odor.							
16					SS			0	
17		End of Borehole	17.0						
18									



Driller: ADT
Drilling Method: Hollow-stem auger
Well Completion Date: 8/7/1
Notes:

Borehole Diameter: 8"
Datum: Grade
Sheet: 1 of 1

Project No: Jonas001

Monitoring Well ID.: MW-6

Project: Jonas Automotive

Client: City of Newburgh

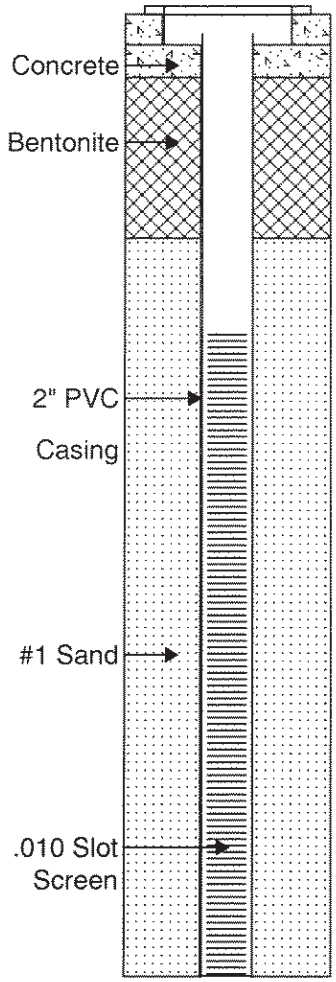
Permit No.:

Site Location: Newburgh, NY

Geologist: Mike Van Brunt

First Environment, Inc.
91 Fulton Street
Boonton, NJ
07005

SUBSURFACE PROFILE				SAMPLE					
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)	Well Completion Details
0		Ground Surface							
0		Fill gray f **GRAVEL**	0.0	1	SS	3 11 8 6			
1		Brown f-m Sandy **SILT** moist	0.6						
1		Brown with trace black streaks Clayey **SILT** moist	1.2						
2		Brown SIlty f-m **SAND** trace f gravel moist							
5		Brown f-m **SAND** some silt moist	5.0	2	SS	3 3 2 4			
7		Brown SIlty f **SAND** trace clay wet	7.4	3	SS	6 5 7 7			
9		Brown Silty CLAY trace f sand wet	9.6	4	SS	5 5 4 5			
11				5	SS	4 3 16 45			
13		Brown f-c **GRAVEL** wet at 13 feet very little recovery	13.0	6	SS	12 16 20 15			
15		End of Borehole	15.0						
17									



Driller: ADT
Drilling Method: Hollow-stem auger
Well Completion Date: 12 August 2002
Notes:

Borehole Diameter: 8"
Datum: Grade
Sheet: 1 of 1

APPENDIX E

LOW FLOW PURGING / SAMPLING LOG

Project Number: _____ Client Name: _____

Location: _____ Date: _____

Field Team: _____

Sampling Information Sample / Well Number: _____ Total Well Depth (ft)_____

Location: _____

Low Flow Purge Data *(WELLS ONLY)*

Date / Time: _____ Pump Type: _____ Init. Water Level: _____

Well Casing: Stick-up / Flush Mount Measuring Point (MP): _____ Tubing Depth (from MP): _____

Sampling Data: Date: _____Time: _____Parameters: _____Sample Id: _____

Field Observations: _____

_____

Time	pH (+/-0.1)	SC (+/-3%)	Turb (+/-10%)	DO (+/-10%)	Temp (+/-3%)	ORP (+/- 10mV)	DTW (Δ<0.3ft)	Notes: CPM/PSI

Signature: _____ Page _____ of _____

Project Number: _____ Date: _____

Sample / Well Number: _____

Time	pH (+/-0.1)	SC (+/-3%)	Turb (+/-10%)	DO (+/-10%)	Temp (+/-3%)	ORP (+/- 10mV)	DTW (Δ<0.3ft)	Notes

Signature: _____ Page _____ of _____

APPENDIX F

Quality Assurance Project Plan
Former Jonas Automotive Site
86 Wisner Avenue
Newburgh, New York 12550

Site No. B00136-3

August 2013

Prepared for: City of Newburgh
83 Broadway
Newburgh, New York 12550

Prepared by: First Environment, Inc.
91 Fulton Street
Boonton, New Jersey 07005

TABLE OF CONTENTS

TABLES

FIGURES

Introduction

This Quality Assurance Project Plan (QAPP) has been developed as part of the Remedial Design Workplan (RDWP) that has been prepared on behalf of the City of Newburgh (the City) for the Former Jonas Automotive Site (the Site), located at 86 Wisner Avenue in Newburgh, New York.

Purpose

The purpose of this QAPP is to indicate the prime responsibilities of the City and its contractors and subcontractors during the implementation of the Site Remediation/Monitoring. This QAPP also describes the policy, organization, and specific Quality Assurance (QA) and Quality Control (QC) elements necessary to achieve data quality objectives and fulfill NYSDEC requirements. The QAPP also provides detailed descriptions of the field procedures that will be used during the Site Remediation/Monitoring.

In general, there are 10 elements to be addressed in a QAPP to ensure safe, efficient, and effective practices are implemented at environment investigation and remediation sites. These elements include:

1. The project's scope and complexity and how the project relates to the overall site investigation and remediation strategy.
2. The data quality objectives specific to the site and sampling event.
3. Project organization, including the name and telephone number of each of the individuals responsible for overall project coordination, sampling activities, and laboratory analyses.
4. An "Analytical Methods/Quality Assurance Summary Table" (combination of Table 2 and Table 4).
5. A detailed description of the site-specific sampling methods, sample storage in the field, and sampling holding times requirements.
6. A detailed description of all calibration and preventative maintenance procedures for all field instrumentation.
7. A detailed description of the criteria and procedures to obtain duplicate and split samples.
8. A detailed description of the chain-of-custody procedures to be utilized in the field and the laboratory.
9. A detailed description of sample storage procedures to be utilized by the laboratory.
10. Laboratory data deliverable formats to be used.

Scope and Goals Relation to Remediation / Monitoring Strategy

The scope of the project involves addressing:

- oil residues and petroleum contaminated debris located inside the main building;
- semivolatile organic compounds (SVOC) and metals impacted surface soil on site; and
- volatile organic compound (VOC) impacted groundwater off site.

The goals of the remediation are to:

- remove petroleum impacted wastes from inside the main building;
- remove the soil on site exhibiting the highest metals impacts;
- prevent human and environmental contact with SVOC and metals impacted soil on site; and
- monitor VOC impacted groundwater.

The strategy for conducting the investigation and remediation will involve:

- a remedial design program to provide the details necessary to implement the remedial program;
- removal and off-site disposal of the petroleum impacted wastes from inside the building;
- excavation of surface soils impacted with the highest concentrations of metals;
- covering the site with a combination of clean soil or gravel and an asphalt paving system;
- imposition of an environmental easement; and
- institution of a long-term groundwater monitoring program.

Data Quality Objectives

In order to ensure that data generated during any sampling component of the Site Remediation/Monitoring is of the highest quality, the analytical results of such sampling will be compared to appropriate data quality indicators. These indicators include precision, accuracy, representativeness, completeness, and comparability. Each of these indicators is described below:

1. Precision is the agreement or reproducibility among individual measurements on the same property, usually made under the same conditions.
2. Accuracy is the degree of agreement of a measurement with the true or accepted value.
3. Representativeness is the degree to which a measurement accurately and precisely represents a characteristic of a population, parameter, variations at a sampling point, a process condition, or an environmental condition.
4. Completeness is a measure of the amount of valid data obtained from a measurements system compared with the amount that was expected to be obtained under correct and normal conditions.
5. Comparability is an expression of the confidence with which one data set can be compared with another data set with regard to the same parameter.

The data quality objectives (DQO) vary according to the specific objectives of each task that is being undertaken. For example, accuracy, precision, and representativeness of data are functions of sample origin, analytical procedures, and specific sample matrices. Quality control practices for the evaluation of these data quality indicators include the use of accepted analytical procedures, adherence to holding times, and the analysis of QC samples (blanks, duplicates, spikes, calibration standards, and reference standards).

Completeness is a function of the number of valid data results generated compared to the number of data results planned. Completeness can be less than 100 percent due to poor sample recovery, sample damage, or disqualification of results due to results being outside of laboratory control limits. Completeness is documented by including sufficient information in field logs and laboratory reports to allow the data user to assess the quality of the results. The overall completeness goal for each task is difficult to determine prior to data acquisition. However, all reasonable attempts will be made for this project to attain a completeness of 85 percent or better. The completeness goal for the analytical laboratory will be 90 percent or greater.

Comparability is a function of the analytical and field methodologies used. Ensuring comparable data will be accomplished by using standard and accepted methodologies; using methods traceable to the National Institute of Standards and Technologies (NIST), NYSDEC sources or USEPA sources; using appropriate levels of quality control; reporting results in consistent standard units of measure; and participating in studies designed to evaluate laboratory performance.

Table 1 identifies the different levels of quality assurance that are being assigned to each task that will be implemented during the Site Remediation/Monitoring.

Table 1: Levels of Quality Assurance

DQO Level	Description	Associated Activity
I	Level I is the lowest quality data but provides the fastest and least expensive results. Field screening or analysis provides Level I data. The generated data can indicate the presence or absence of certain constituents and is generally qualitative rather than quantitative.	• Health and Safety Monitoring (PID, FID)
II	Level II data are generated by field laboratory analysis using more sophisticated portable laboratory instruments or a mobile laboratory on site. This provides fast results and better-quality data than in Level I.	• Field Analyses (pH, specific conductance, temperature, dissolved oxygen)
III	Level III data may be obtained by a commercial laboratory with or without CLP procedures. The analysis does not usually use the validation or documentation procedures required of CLP (Level IV) analysis. The analyzed parameters are relevant to site characterization, risk assessment, and design and implementation of the remedial action.	• Ongoing Groundwater sampling • Waste Classification Sampling
IV	Level IV data are typically used for risk assessment, engineering design, and cost-recovery documentation. All analyses are performed in a CLP analytical laboratory and follow CLP procedures. Level IV is characterized by rigorous QC protocols, documentation, and detection limits.	• Post-excavation soil sampling • Groundwater sampling
V	Level V data are those obtained by non-standard analytical procedures. Method development or modification may be required for specific constituents or detection limits.	• Not Applicable
VI	Other methodologies not described above.	• Physical soil description • Water level measurements

Project Organization and Responsibilities

First Environment, Inc. (First Environment) and a qualified team of subcontractors will perform the work activities for this RDWP under the direction of representatives from The City. The lead regulatory agency for this project is the NYSDEC with the New York State Department of Health (NYSDOH) providing additional regulatory oversight if needed. First Environment is the primary contractor.

All of The City's, First Environment's and other appropriate project personnel and their respective roles are described below. The project organization chart for the Remedial Action is shown in Figure 1.

NYSDEC Project Manager

The NYSDEC Project Manager assigned to this project is William Bennett. Mr. Bennett is to be contacted using the following:

New York State Department of Environmental Conservation
Remediation New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7014
Phone: (518) 402-9662
Fax: (518) 402-9679
E-mail: wbbennet@gw.dec.state.ny.us

NYSDOH Public Health Specialist

The general contact information for the DOH is:

New York State Department of Health
Bureau of Environmental Exposure Investigation
Flanigan Square, Room 300
547 River Street
Troy, NY 12180-2216
Phone: (800) 458-1158

The City of Newburgh

The City has the overall responsibility for achieving all project objectives. The City will be responsible for initiating project activities; monitoring and adjusting efforts and resources as needed to assure that established schedules, work programs, and costs are maintained; and interfacing with NYSDEC on administrative matters.

The City will also be responsible for retaining a NYSDOH certified Environmental Laboratory Approval Program (ELAP) and Contract Laboratory Program (CLP) laboratory. All samples will be submitted to the chosen laboratory under the chain-of-custody procedures discussed below. In addition, the City will be responsible for retaining an appropriately licensed and certified waste transporter and disposal subcontractor for disposal of all Remediation/Monitoring-derived wastes. All wastes generated at the Site will be disposed of in accordance with NYSDEC requirements.

The City's primary project contact, business address, and telephone number are:

Ian MacDougall, City Planner
Department of Planning & Development
The City of Newburgh, NY
City Hall, Third Floor
83 Broadway
Newburgh, New York
Phone: (845) 569-9400, ext. 205
Fax: (845) 569-9700
E-mail: IMacDougall@cityofnewburgh-ny.gov

First Environment, Inc.

First Environment, Inc. will be the prime contractor implementing the site investigation/ remediation. The project responsibilities of First Environment personnel shall be as follows:

Mr. Thomas Bambrick, P.G. is a Senior Associate at First Environment and will act as the Senior Scientist and Senior Project Manager. Mr. Bambrick will provide senior management oversight and provide technical advice and review of all Remediation/Monitoring-related issues. Mr. Bambrick has the responsibility of ensuring and overseeing the preparation of all deliverables, staffing, scheduling, coordinating subcontractors, and overseeing all technical project activities.

Mr. Daniel Lattanzi is a Senior Scientist at First Environment and will act as the Project Manager. Mr. Lattanzi will be responsible for the day-to-day project operations, preparation of all deliverables, coordinating subcontractors, and the implementation and oversight of all work being performed in the field. Mr. Lattanzi will be responsible for oversight of all Health and Safety issues during the field activities.

Dr. B. Tod Delaney, Ph.D., P.E. is First Environment's President and is serving as the Project Quality Assurance Project Plan Manager. Dr. Delaney has the responsibility for all First Environment work on the project, including achieving objectives and ensuring quality.

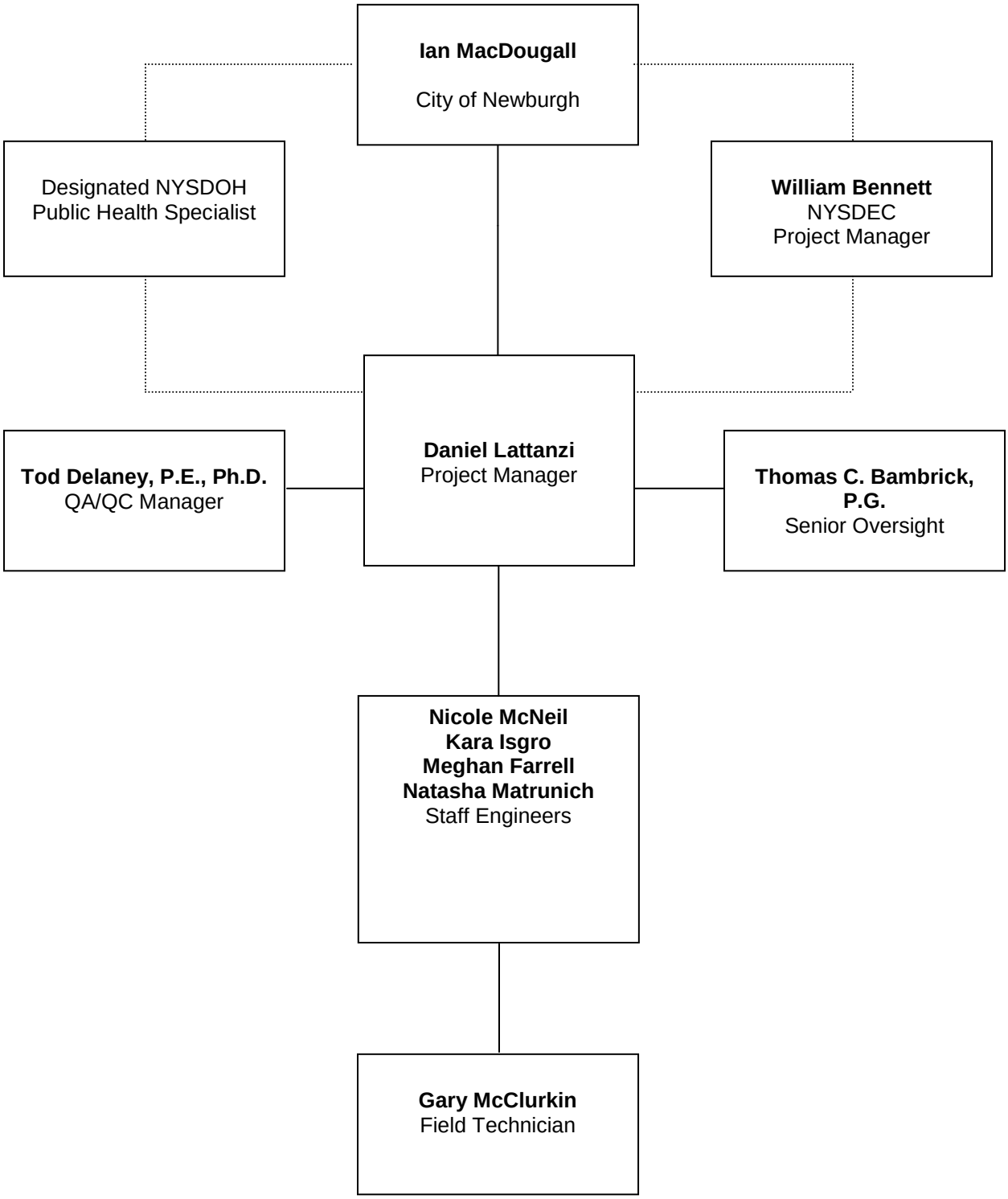
Ms. Nicole McNeil, Ms. Kara Isgro, and Ms. Natasha Matrunich are Staff Engineers at First Environment. One or more of these individuals will act as the Staff Engineers for this project. The Staff Engineers will be responsible for the completion and oversight of on-site and off-site activities, oversight of all First Environment retained subcontractors, and the Health and Safety issues during the field activities.

Mr. Gary McClurkin is First Environment's Field Technician who will assist with work being performed in the field.

All of the First Environment employees can be contacted at:

First Environment, Inc.
91 Fulton Street
Boonton, New Jersey 07005
Phone: (973) 334-0003
Fax: (973) 334-0928

Figure 1: Organization Chart



Subcontractors

First Environment is in the process of obtaining subcontractors to perform the various duties associated with the Remediation/Monitoring at the Site.

Analytical Procedures

Method references for the analyses to be performed during the Site Remediation/Monitoring are summarized in Table 2.

Table 2: Method References, Holding Times and Preservation Requirements

Parameters	Matrix	Method Reference	Holding Time	Preservation	Sample Volume	DQO Level
VOC	Aqueous	USEPA 8260	14 days	4°C, HCl	40 ml glass vial	III/IV
VOC	Soil	USEPA 8260	14 days	4°C	2 oz glass jar	III/IV
SVOCs	Aqueous	USEPA 8270B	7 days	4°C	2 L glass jar	III/IV
SVOCs	Soil	USEPA 8270	14 days	4°C	4 oz or 8 oz glass jar	III/IV
Metals	Aqueous	7000 Series	6 months	4°C, HNO3	250 ml PE jar	III/IV
Metals	Soil	6020/7471A	180 days, 28 days *	N/A	2 oz glass jar	III/IV
Dissolved Oxygen	Aqueous	Electrode	Immediate	N/A	N/A	II
Temperature	Aqueous	Thermometer	Immediate	N/A	N/A	II
Turbidity	Aqueous	Electrode	Immediate	N/A	N/A	II
Specific Conductivity	Aqueous	Electrode	Immediate	N/A	N/A	II
Organic Vapor	Air	PID or FID	Immediate	N/A	N/A	I
PH	Aqueous	Electrode	Immediate	N/A	N/A	I

* For Mercury samples only

Field Procedures

The accuracy of the data is dependent upon well-conceived and carefully implemented sampling and analysis procedures. This section presents the procedures with which samples will be collected or measurements made during the execution of this project.

Changes in Procedure

Field conditions may require changes to the QAPP. Significant changes to the sampling procedures specified in the QAPP that become necessary as a result of unanticipated field conditions will be identified to and discussed with the First Environment Project Manager prior to the implementation of any revised procedure. The First Environment Project Manager will in turn discuss the needed changes in procedure with the NYSDEC Project Manager. Changes in sampling procedures cannot be implemented unless approval is received from the NYSDEC Project Manager. Minor changes may be made with the concurrence of the First Environment Senior Project Manager but must be documented in the field logbook and/or interoffice memoranda. Any and all changes in sampling procedures will also be documented in the associated report submittal.

Acquisition of Samples

Figure 2 shows a site map of the on-site groundwater monitoring locations where samples may be collected. Post-excavation soil sample locations will be specified in the future Remedial Design Report (RDR) submittal.

All samples will be adequately marked for identification from the time of collection and packaging through handling and storage. Marking for sample identification shall be on a sample label attached to each sample container. Sample identification will include, at a minimum, the following:

- sample identification number;
- analysis required;
- sample date and time; and
- initials of the individual performing the sampling.

A description of the sample will be included in the field logbook.

Alphanumeric codes will be used to identify sample locations. The coding for sample identification numbers should be consistent, identify a single sample location and, unless otherwise directed, use the following naming convention:

Table 3: Sample Identification Naming Conventions

MW-XX	Shallow-depth Overburden Monitoring Well
RW-XX	Recovery Well
B-XX	Test Boring
TP-XX	Test Pit
GP-XX	Geoprobe boring
S-XX	Surface soil sample location
EX-YSXX	Post Excavation Sidewall
EX-BXX	Post Excavation Base
SW-XX	Surface water sampling location
W-XX	Wipe sample
WCS-XX	Soils Waste Classification
WCW-XX	Water Waste Classification

Where XX is a numerical value, and Y is coordinate such as Northwest.

The methods for collecting groundwater samples will be provided in the Groundwater Sampling Work Plan (GSWP) to be included with the Phase I RDR. The methods for collecting soil samples will be provided in the RDR as well. The laboratory will provide appropriately prepared and clean sample containers. Reagents, preservation procedures, and analytical holding times will be in accordance with the published analytical methods.

The specific requirements for sample container preparation, sample preservation, holding times, and any special handling requirements are listed in Table 2. Sample containers will be kept closed until the time each set of sample containers is to be filled. After filling, the sample containers will be securely closed, residue wiped from the sides of the containers, sample identification marked on the container label, and the container immediately placed in a cooler that contains ice. Samples will be kept chilled and delivered to or picked up by the laboratory. Samples of dissimilar matrices will be shipped in separate coolers whenever possible. All reasonable effort will be used to limit the time the sample containers are on the Site to no more than two calendar days.

Calibration Procedures

Laboratory calibration procedures and frequency of calibration will be completed in accordance with the NYSDOH ELAP CLP criteria. These criteria represent accepted techniques to ensure accurate sampling, monitoring, testing, and documentation as per QA/QC standards. Field instruments such as pH meters, dissolved oxygen meters, and specific conductivity meters will be standardized in accordance with the manufacturer's recommendations against National Institute of Standards and Technology (NIST) traceable standards, where appropriate. During sampling, calibration will be performed at the beginning of each day of use. Appropriate calibration records will be maintained in field logbooks.

Samples that do not contain concentrations of target analytes that exceed instrument calibration range, absent of matrix interference, will be analyzed so as to achieve the lowest practical quantitation limits. Samples that do contain concentrations of target analytes that exceed the instrument calibration range will be diluted in accordance with approved methodologies and good laboratory practice.

Field Sampling Procedures

The field sampling activities are divided into two categories: field screening and subsurface characterization. Field screening will be used to obtain immediate site data that can be used to ensure the health and safety of site workers and/or assist in the selection of soil and groundwater sampling locations and depths. Subsurface characterization involves the collection of samples for analysis by the laboratory. The results generated from these sample analyses will be used to characterize and monitor site conditions. The components of the Site Remediation/Monitoring include:

- on-site groundwater monitoring;
- soil sampling; and
- waste classification sampling.

Groundwater Level Measurements

Groundwater levels will be measured during Site Remediation/Monitoring. Synoptic (instantaneous) groundwater level measurements will be collected from all accessible wells and piezometers concurrently with all on-site groundwater sampling events. Groundwater level measurements will be made using a Slope Indicator electronic water level meter or equivalent.

The water level meter will be field decontaminated prior to use and between measurements at each well location. Measurements to the depth-of-water will be made to the nearest 0.01-foot relative to the northernmost point at the top of the casing elevation. This measurement will be converted to a groundwater elevation based upon the surveyed casing elevation.

If non-aqueous phase liquids are observed, then thickness measurements will be made using an oil/water interface probe, indicator paste, or other appropriate methods.

Groundwater Sampling

Groundwater sampling of any one monitoring well will be performed no sooner than one week following the development of that monitoring well unless otherwise approved by the NYSDEC. Groundwater sampling for any one sampling event will consist of determining the casing volume, purging, and sample collection. These procedures are described below:

Determination of Casing Volume

Casing volume will be determined by measuring the water level in each monitoring well and utilizing well construction information to calculate the volume of standing water in the well. An electronic water level indicator will be used to measure the depth from the top of the innermost casing to the water table to the nearest 0.01 feet. The water level indicator will be decontaminated using phosphate-free detergent and distilled or deionized water prior to its use in any one monitoring well. The depth to the bottom of the monitoring well will be determined during the first sampling event to confirm well construction details. The measurement will be taken with a field-decontaminated electronic water level indicator and recorded to the nearest 0.01 feet.

Purging

One of two groundwater purge techniques may be applied at this Site. The first method is low-flow purge method. This method minimizes data quality interference by suspended solids by purging groundwater at such a low rate so as not to cause sediment in the well to become suspended. To ensure that pore water and not casing water is sampled upon completion of purging, groundwater is purged until several indicator parameters become stable. This technique is described in detail by Puls and Barcelona (“Low-flow (minimal drawdown) groundwater sampling procedures.” EPA/540/S-95/504; April 1996).

If a low-flow purging technique is used, then groundwater will be extracted at a rate that is equal to or less than one liter per minute. Water level will be checked periodically during purging to monitor drawdown and to guide flow rate adjustment. The flow rate will be adjusted to achieve a minimal drawdown that does not exceed 0.1 meters (four inches).

If necessary, in-line water quality will be monitored during purging using a flow-through cell. The water quality indicator parameters that will be monitored will include pH, conductivity, dissolved oxygen (DO), and turbidity. Measurements will be taken every three to five minutes until water quality has stabilized. Stabilization is achieved when three successive readings are within ± 0.1 for pH, ± 3 percent for conductivity, and ± 10 percent for turbidity and DO.

If the low-flow purge technique is not used, then three to five casing volumes of water will be purged from the monitoring wells. The wells will be purged using positive displacement pumps such as a submersible pump. A bottom-filled bailer may also be used to purge a well. If a submersible pump is used, then the pump and power cord will be decontaminated prior to each use using the methods described later in this document. New ASTM drinking water grade polyethylene tubing will be attached to the submersible pump to discharge water from the monitoring well. The tubing will be discarded after use at a monitoring well.

If well or piezometer diameter is such that a positive displacement pump is not used, a peristaltic pump with dedicated thin plastic tubing will be used to purge the required volume.

The field parameters pH, specific conductance, temperature, and DO will be measured and recorded prior to purging the monitoring well. During purging, all reasonable effort must be made to keep the purging rate low and to avoid pumping the well to dryness. Monitoring well purging rates will not exceed five gpm. In some cases, the evacuation of three casing volumes may not be practical due to slow recovery. If a monitoring well is pumped to near dryness at a rate less than 0.5 gpm, then the monitoring well will be allowed to recover to a volume sufficient for sampling. Sampling will occur within two hours of purging as long as the well has sufficiently recovered. It may be necessary to allow all such monitoring wells to recover sufficiently for sampling. Details of the monitoring well's recovery rate will be noted on the field form.

The following monitoring well purge data will be recorded on the field form for each monitoring well sampled whenever the "3 to 5 volume" purge method is used:

Before Purging:

- date, time, and whether conditions;
- monitoring well identification number;
- PID measurements taken from the monitoring well immediately after the cap is removed;
- pH, DO, temperature, and specific conductivity;
- total monitoring well depth and depth-to-water from the top of the innermost casing; and
- water volume within the monitoring well.

After Purging

- start and end time of purging;
- purge method;
- purge rate;
- total volume purged; and
- pH, DO, temperature, and specific conductivity.

After Sampling

- start and end time of sampling;
- pH, DO, temperature, and specific conductivity;
- sampling method; and
- pertinent observations regarding sample characteristics (e.g., turbidity, color, odor).

Sampling

If the low-flow purge method is used, then sampling will involve disconnecting the intake hose from the flow-through cell and then using that hose to discharge the sample directly into containers provided by the laboratory.

If the “3 to 5 volume” purge method is used, monitoring well sampling will be performed within two hours of purging unless, as stated earlier, a monitoring well recovers at too slow a rate. Sampling will be performed with a dedicated clean Teflon bailer with a single check valve at the bottom.

To obtain a sample, the bailer will be slowly lowered into the well using the leader and rope until it is submerged and slowly brought back to the surface after filling. The contents of the bailer will then be slowly poured into the sampling containers provided by the laboratory.

The preferred order of sample collection is as follows:

- VOCs;
- metals (if necessary);
- wet chemistry parameters (i.e., natural attenuation parameters such as nitrate); and
- field measurements (temperature, DO, pH, and specific conductance).

Following sample collection, the sample containers will be securely closed, residue will be wiped from the sides of the containers, the containers will be properly labeled, and the containers will be immediately placed in a cooler. Samples will be kept chilled at a temperature of 4^{o}C and shipped on the day of sample collection under a chain-of-custody to the analytical laboratory. Samples of dissimilar matrices will be shipped in separate coolers whenever possible.

Soil Sampling

Post-excavation soil samples collected for VOC analysis will be collected with a properly decontaminated soil coring device or waste pile sampler from a depth of between 0 to 6 inches below the excavated surface and along the sidewalls. The frequency of the sampling will be proposed in the RDR. No samples collected for VOC analysis will be composited, unless required by a disposal facility, to prevent loss of VOCs.

Soil samples collected for metals or PAH analysis will be collected using a properly decontaminated stainless steel hand scoop/trowel and transferred to the appropriate glassware. Samples to be composited for waste classification will be composited on site prior to shipment to the laboratory, except cases in which the samples are expected to be hazardous in which case samples will be composited at the laboratory. All sample containers will consist of laboratory-cleaned bottles that, once filled with sample, are to be properly labeled and then placed into coolers and chilled to 4^{o}C.

Sampling locations shall be noted on a site map and measured from a set location, such as a monitoring well. The soil texture at each post-excavation soil sampling location shall be logged

in accordance with the Unified Soil Classification System (USCS). Waste classification and post-treatment soil samples will not be logged for texture.

Decontamination Procedures

Decontamination of equipment and other materials will be conducted at a designated on-site decontamination area. Thus, if gross contamination is observed on field sampling equipment, decontamination will involve the following steps:

1. non-phosphate detergent plus tap water wash;
2. tap water rinse;
3. distilled/deionized water rinse;
4. 10 percent nitric acid solution rinse;[1]
5. distilled/Deionized water rinse;[2]
6. Alconox rinse;[3]
7. distilled/deionized water rinse.[4]

If gross contamination is not observed, the field sampling equipment may be field-decontaminated utilizing the following procedure:

1. non-phosphate detergent and tap water scrub to remove residual particles;
2. generous potable water rinse;
3. distilled/deionized water rinse.

Decontamination of submersible pumps used for monitoring well purging and sampling will use the following procedures:

1. non-phosphate detergent and tap water wash to remove residual particles from the pump casing, hose, and cables;[5]
2. distilled/deionized water rinse;
3. flush a minimum of one gallon of potable water through the pump.

[1] Apply this step only if the sample is to be analyzed for metals.

[2] Apply this step only if the sample is to be analyzed for metals.

[3] Apply this step only if the sample is to be analyzed for organic compounds.

[4] Apply this step only if the sample is to be analyzed for organic compounds.

[5] Steam cleaning of pump casing, hose and cables may be conducted instead of applying the detergent and tap water rinse.

New ASTM drinking grade polyethylene tubing will be used for each well and discarded after use. The submersible pump, associated tubing, and other sampling equipment will be placed on clean polyethylene sheeting prior to use in order to avoid contact with the ground surface.

Waste Handling Procedures

Decontamination water and purged groundwater will be generated during the implementation of the aforementioned activities. If product, a sheen, or heavy odors generally characterized as generating a reading of 5 parts per million (ppm) or higher with a PID are observed associated with this water, it will be collected and containerized and the containers staged on site until the waste can be characterized properly for disposal. All collection, storage, and disposal of all waste material generated during the Site Remediation/Monitoring activities will be coordinated with the City. All wastes will be disposed of in accordance with NYSDEC requirements.

Field Quality Control Procedures

Field Duplicates

Field Duplicate samples are collected to evaluate the laboratory's performance by comparing two separate samples that were collected from the same location. The frequency of duplicate sample collection will be five percent or one for every 20 samples, or part thereof, per matrix. If less than 20 samples are collected for a particular matrix, then one duplicate will be collected.

The collection of a duplicate groundwater sample will be obtained by alternately filling sample containers from the same sampling device for each parameter. The sample locations that require VOC analysis should have all the VOC sample containers filled from a single sampling device, whenever possible.

Field Blanks

Field Blanks will be collected as a mechanism of control on sample equipment handling, preparation, storage, and shipment. Field Blanks will be collected for all sampling events involving the collection of groundwater. Field Blanks will be collected for sampling events involving the collection of non-aqueous samples only if the samples are to be analyzed for VOCs.

Field Blanks will be collected at a frequency of one per day during aqueous sampling events. They will be analyzed for any and all parameters analyzed during a particular sampling event on that day of sampling.

Field Blanks for non-aqueous samples will only be collected when environmental samples are to be analyzed for VOCs, and then only for those VOCs targeted for analysis in the corresponding environmental samples. In such cases, Field Blanks will be collected at a frequency of five percent of the total number of non-aqueous samples collected over the duration of the sampling event. However, the number of Field Blanks collected will not exceed one per day even if the number of samples collected on a given day exceeds 20.

For one-day non-aqueous sampling events, one Field Blank will be collected.

Field Blank water will be analyte free water provided by the analytical laboratory. The Field Blank water will be transported to the field in bottles that are of the same type as that which is used to contain the Field Blank sample. All Field Blank and sample containers will be transported to and from the field and handled in a manner that is identical, in every practical aspect, to the manner in which environmental samples and sample containers are handled.

Trip Blanks

A Trip Blank will accompany each environmental sample container (cooler) carrying aqueous samples that are to be analyzed for VOCs. The Trip Blanks will be analyzed for any and all VOC parameters that are targeted for analysis in any particular sample shipment. Trip Blanks are not required for non-aqueous sampling events.

Trip Blanks will be prepared by the analytical laboratory using analyte-free water. The Trip Blanks will be marked by the laboratory with the date and time of preparation. This date and time will represent the sampling date and time for the Trip Blank that is to be entered into the field logbooks and chain-of-custody forms.

Trip Blanks will accompany the coolers and environmental samples during transport to and from the field. Every practical step should be taken to expose the Trip Blanks to the same conditions as the environmental samples and coolers.

Table 4: Quality Assurance Sample Frequency

QA Sample Type	Aqueous	Soil
Duplicate	5%	5%
Field Blank	Daily	5% (VOCs only)[6]
Trip Blank	1 per Cooler (VOCs only)	Not Required

[6] This frequency is for a multi-day sampling event. If the sampling event is only one day in duration, then one field blank is required no matter how many samples are collected on that day. For multi-day sampling events where more than 20 samples are collected in a single day, one field blank per day is permitted.

Chain-of-Custody Procedures and Sample Storage

Chain-of-custody procedures have been established to ensure sample traceability from the time of collection through the completion of analyses. The National Enforcement Investigation/ Remediations Center (NEIC) of USEPA considers a sample to be in custody under the following conditions:

- it is in your possession; or
- it is in your view after being in your possession; or
- it was in your possession and you secured it with a lock; or
- it is in a designated secure area.

All environmental samples will be handled under strict chain-of-custody procedures beginning in the field. The First Environment Field Team Leader will be the Field Sample Custodian and will be responsible for ensuring that the procedures outlined in the applicable work plan and this QAPP will be followed. Sample custody for field activities will include the use of chain-of-custody forms, sample labels, and field logbooks. Dedicated field logbooks will be used throughout the project to document field activities.

Once samples are transported to the laboratory, custodial responsibility is transferred to the Laboratory Sample Manager to ensure that the appropriate procedures and methods are followed.

Data Reduction, Evaluation and Reporting

The laboratory will submit analytical reports to First Environment. Precision, accuracy, representativeness, comparability, and completeness of the laboratory data will be evaluated based upon adherence to sample holding times and the analysis of QA/QC samples (i.e., duplicates, spikes, and blanks). Data validation of non-CLP reduced deliverables (Category A) will be based upon method-specific QC criteria similar to the criteria of Section 8 of the USEPA 600 series methods provided in 40 CFR Part 136. The overall responsibility for reporting laboratory data lies with the laboratory director. Professional judgment will be used to determine data usability with respect to the Data Quality Objectives. Data validation of CLP deliverables (Category B) will be performed by a third party verifier and be reported in a Data Usability Summary Report (DUSR) as specified in the NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation dated December 2002.

In accordance with Section 502 of the Public Health Law, data upon which decisions impacting human health are based will be analyzed by an ELAP certified lab and documented by Category B deliverables. The following types of samples fall under this category:

- initial groundwater sampling; and
- post-excavation sampling.

Assessment of accuracy, precision, and completeness of both field and laboratory measurements is based upon obtaining acceptable results from QA/QC samples. Where appropriate, these may include blanks, duplicate samples, laboratory control spikes, or matrix spike/matrix spike duplicate samples. At least one physical set of Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples will be collected and analyzed per 20 samples for each matrix. Duplicates and MS/MSDs will be collected at least once during each major analytical event.

Method blanks, field blanks, and trip blanks are expected not to contain any targeted analytes with concentrations greater than the reported detection limit, with the possible exception of common laboratory contaminants (e.g., methylene chloride).

Field and laboratory duplicate results will be assessed based upon the relative percent difference (RPD) between values, using the following equation:

$$RPD = \frac{(D1-D2)}{(D1+D2)/2} \times 100$$

where, D1 = Primary sample result; and
D2 = Duplicate sample result.

Laboratory Control Samples will be assessed based upon the percent recovery of spiked analytes. The percent recovery will be calculated using the following equation:

$$\text{Percent Recovery} = \frac{X}{TV} \times 100$$

where, X = observed value of measurement; and
TV = "true" value of spiked analyte.

Matix Spike/Matrix Spike Duplicate (MS/MSD) data will be assessed based upon the percent recovery of spiked analytes using the following equation:

$$\text{Percent Recovery} = \frac{(SSR - SR)}{SA} \times 100$$

where, SSA = Spiked sample result for analyte x;
SR = Sample result for analyte x; and
SA = Spike of analyte x added.

Laboratory completeness will be assessed based upon the amount of valid data obtained from a particular measurement system. It may be quantitatively expressed using the following equation:

$$\text{Laboratory Completeness} = \frac{N1}{N2} \times 100$$

where, N1 = Number of valid measurements obtained; and
N2 = Number of measurements validated.

Project Data completeness will be assessed based upon the amount of valid data obtained from field sampling and laboratory analyses. It may be quantitatively expressed using the following equation:

$$\text{Project Completeness} = \frac{N1}{N2} \times 100$$

where, N1 = Number of valid measurements obtained; and
N2 = Number of measurements anticipated in the RAWP.

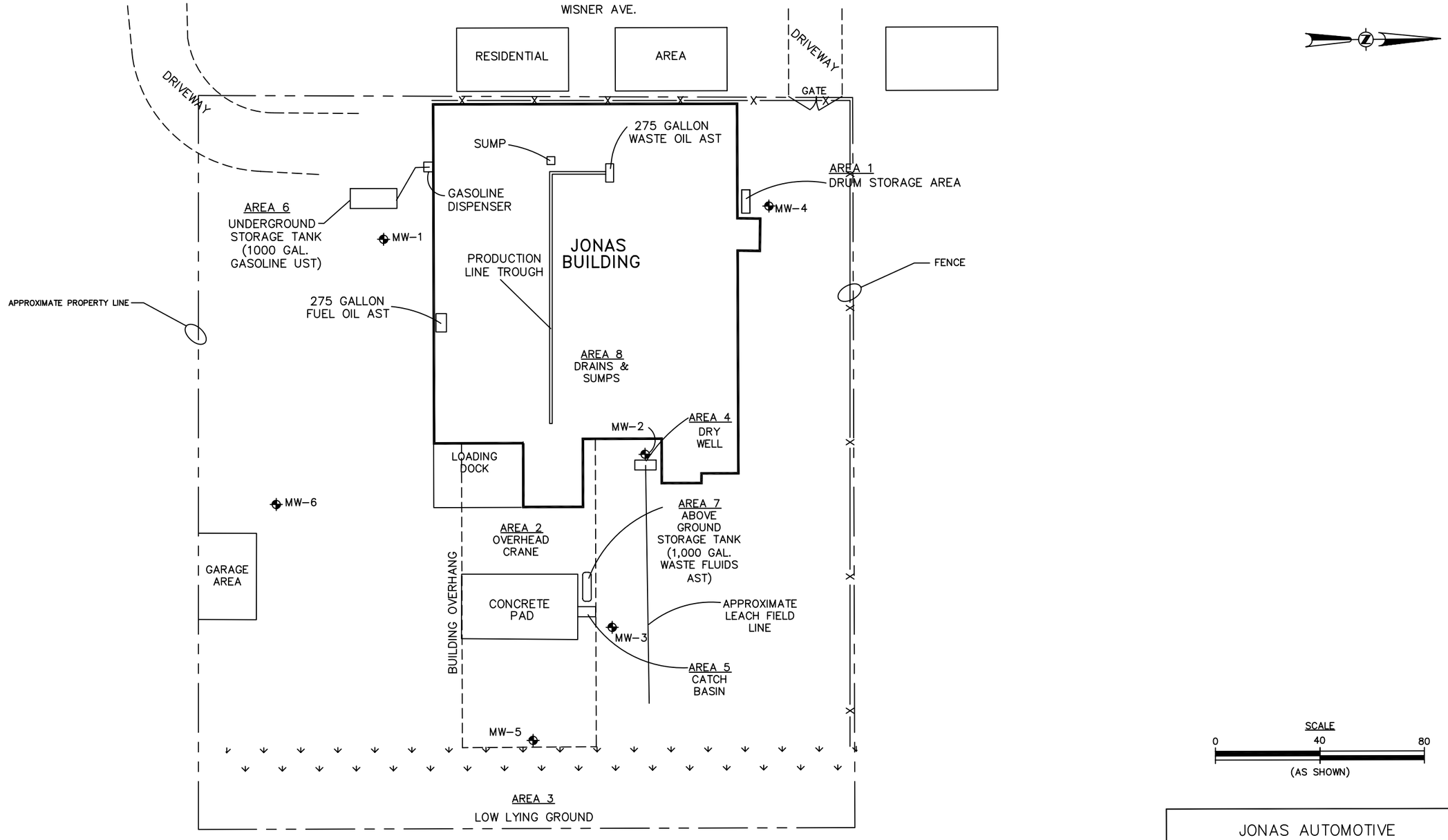
The laboratory will assess all QC data with regard to precision and accuracy. Individuals making field measurements will determine whether or not field QC criteria were met. A First Environment data validator will examine laboratory analytical data and field data to determine the usability of this data as well as the data's consistency with Analytical Data Quality Objectives.

Corrective Actions

The need for corrective action will be based upon predetermined limits for acceptability for all aspects of sample collection and analysis. Predetermined limits for acceptability may include, but are not limited to, historical data and precision, accuracy, representativeness, consistency, and completeness criteria.

Laboratory Corrective Actions are described in the laboratory's Quality Assurance Manual. Laboratory personnel will assess laboratory QC samples, and if applicable, re-analyze samples that do not meet Quality Assurance requirements prior to expirations of holding times. Other corrective actions may include collection and analysis of additional samples from the site. Problems that cannot be resolved by the laboratory's managers or QA officers will be brought to the attention of the First Environment Project Manager. The Project Manager, following consulting with NYSDEC, will determine the corrective action to be taken, if any.

The detection of system and performance problems during field activities and the implementation of any resulting corrective actions will be documented in the field logbook and placed in the project file. System and performance problems may include, but not be limited to, field equipment failure, limited or no site access, and unanticipated field conditions. The First Environment Project Manager will be notified of all system and performance problems immediately after field personnel discover them. The Project Manager may consult with the NYSDEC and the City, if necessary, to determine the corrective action to be taken, if any.



LEGEND

- APPROXIMATE PROPERTY LINE
- FENCE
- MONITORING WELL LOCATION

SCALE

0 40 80

(AS SHOWN)

JONAS AUTOMOTIVE

NEWBURGH NEW YORK

SITE MAP

FIGURE	DRAWN HIM	CHKD. ACC
2	SCALE AS SHOWN	
	DATE 04/29/2009	DATE

FIRST ENVIRONMENT

BOONTON NEW JERSEY

APPENDIX G

SITE-WIDE INSPECTION FORM

FORMER JONAS AUTOMOTIVE SITE
ORANGE COUNTY
NEWBURGH, NEW YORK
NYSDEC SITE NUMBER B00136-3

NAME OF INSPECTOR:_____

COMPANY OF INSPECTOR:_____

DATE OF INSPECTION:_____

CURRENT USE OF SITE:_____

HAS A CHANGE OF USE OCCURRED SINCE THE LAST CERTIFICATION?
_____ YES _____ NO

IF YES, THEN EXPLAIN:_____

_____

GENERAL DESCRIPTION OF COVER:_____

HAS THE COVER BEEN PENETRATED? _____YES _____NO

IF YES, THEN EXPLAIN:_____

ARE ANY OF THE MONITORING WELLS DAMAGED? _____YES _____NO

IF YES, THEN EXPLAIN:_____
_____
_____
_____

HAVE ANY GROUNDWATER USE RESTRICTION BEEN EXCEEDED? ___YES___NO

IF YES, THEN EXPLAIN:_____
_____
_____
_____

HAVE ANY STRUCTURES BEEN CONSTRUCTED ON THE SITE SINCE THE LAST INSPECTION? _____ YES _____NO

IF YES, THEN EXPLAIN:_____

HAVE COVER CONDITIONS CHANGED SINCE THE LAST INSPECTION? _____YES _____NO

IF YES, THEN EXPLAIN:_____

IS ANY MAINTENANCE OF THE COVER REQUIRED?_____YES _____NO

IF YES, THEN EXPLAIN:_____

ADDITIONAL OBSERVATIONS, CONCLUSIONS OR RECCOMMENDATIONS:

ANY CHANGES TO THE SITE OR REQUIRED MAINTENANCE SHOULD BE MARKED IN THE CORRESPONDING LOCATION ON THE ATTACHED MAP

APPENDIX H

ORANGE COUNTY – STATE OF NEW YORK
ANN G. RABBITT, COUNTY CLERK
255 MAIN STREET
GOSHEN, NEW YORK 10924

COUNTY CLERK'S RECORDING PAGE
*****THIS PAGE IS PART OF THE DOCUMENT – DO NOT DETACH*****

BOOK/PAGE: 13859 / 323
INSTRUMENT #: 20150013978

Receipt#: 1898357
Clerk: MRL
Rec Date: 03/11/2015 10:22:09 AM
Doc Grp: D
Descrip: RIGHT OF WAY (R)
Num Pgs: 10
Rec'd Frm: TOOHER & BARONE LLP

Party1: NEWBURGH CITY
Party2: PEOPLE OF STATE OF NY
Town: NEWBURGH (CITY)

Recording:	
Recording Fee	70.00
Cultural Ed	14.25
Records Management - Coun	1.00
Records Management - Stat	4.75
TP584	5.00
Sub Total:	95.00
Transfer Tax	
Transfer Tax - State	0.00
Sub Total:	0.00
Total:	95.00

****** NOTICE: THIS IS NOT A BILL ******

***** Transfer Tax *****
Transfer Tax #: 4815
Transfer Tax
Consideration: 1.00

Total: 0.00

Payment Type: Check X
Cash ___
Charge ___
No Fee ___

Comment: _____

STATE OF NEW YORK (COUNTY OF ORANGE) SS:
I, ANN G. RABBITT, COUNTY CLERK AND CLERK OF THE SUPREME AND COUNTY COURTS, ORANGE COUNTY, DO HEREBY CERTIFY THAT I HAVE COMPARED THIS COPY WITH THE ORIGINAL THEREOF FILED OR RECORDED IN MY OFFICE ON March 11, 2015 AND THE SAME IS A CORRECT TRANSCRIPT THEREOF. IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY OFFICIAL SEAL.

Ann G Rabbitt March 25, 2015

COUNTY CLERK & CLERK OF THE SUPREME COUNTY COURTS, ORANGE COUNTY

Ann G. Rabbitt
Orange County Clerk

Record and Return To:

TOOHER & BARONE LLP
313 HAMILTON ST
ALBANY NY 12210

County: Orange Site No: B00136-3 State Assistance Contract : C303487

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 13th day of February, 2015, between Owner(s) City of Newburgh, having an office at City Hall, 83 Broadway, Newburgh, County of Orange, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

26
1
59.1

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 86 Wisner Avenue in the City of Newburgh, County of Orange and State of New York, known and designated on the tax map of the County Clerk of Orange as tax map parcel numbers: Section 26 Block 1 Lot 59.1, being the same as that property conveyed to Grantor by deed dated July 14, 1999 and recorded in the Orange County Clerk's Office in Liber and Page 5110/73. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.45 +/- acres, and is hereinafter more fully described in the Land Title Survey dated December 9, 2014, prepared by Steven Alex, L.S., The Chazen Companies, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of State Assistance Contract Number: C303487, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Orange County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be

defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: B00136-3
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the

recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

City of Newburgh:

By: _____
per res 110-99

Print Name: MICHAEL G. CIARAVINO

Title: CITY MANAGER Date: 1/16/2015

County: Orange Site No: B00136-3 State Assistance Contract : C303487

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ORANGE)

On the 16th day of JANUARY, in the year 2015, before me, the undersigned, personally appeared MICHAEL CIARAVINO, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public - State of New York

MICHELLE KELSON
Notary Public, State Of New York
Sullivan County Clerk's #2564
Commission Expires: March 20, 2018

County: Orange Site No: B00136-3 State Assistance Contract : C303487

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 13th day of February, in the year 2015, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2016

Tooher & Barone LLP
313 Hamilton St
Albany NY 12210

County: Orange Site No: B00136-3 State Assistance Contract : C303487

SCHEDULE "A" PROPERTY DESCRIPTION

ALL that plot, piece or parcel of land situate and being in the City of Newburgh, County of Orange, State of New York bounded and described as follows:

BEGINNING at a point on the easterly side of Wisner Avenue, said point being the northwesterly corner of the herein described parcel, said point being the southwesterly corner of the lands now or formerly of Clavio and Foti as described in Liber 12978 of deeds at page 800 and said point being located N 08 16' 12" E 0.65 feet from a capped on rod found; thence along the division line between the herein described parcel and said lands of Clavio and Foti, N 77°03'26" E 330.00 feet to the northeasterly corner of the herein described parcel, said point being located S 05°21'42" E 0.40 feet from an iron pipe found; thence along the division line between the herein described parcel and the lands now or formerly of Craig as described in liber 13087 of deeds at page 781, S 12°56'34" E 255.00 feet to the southeasterly corner of the herein described parcel, said point being located S 25°36'24" W 0.67 feet from an iron rod found; thence along the division line between the herein described parcel and the lands now or formerly of the City of Newburgh as described in liber 5004 of deeds at page 37 and also along the lands now or formerly of Union Glenn Associates, Inc. as described in liber 2501 of deeds at page 93, S 77°03'26" W 230.00 feet to the southwesterly corner of the herein described parcel; thence along the division line between the herein described parcel and the lands now or formerly of Tillson Corp. as described in liber 5057 of deeds at page 208, Turner as described in liber 4059 of deeds at page 80, Altstadt as described in liber 5698 of deeds at page 168, Turner as described in liber 4285 of deeds at page 265, Keefe as described in liber 2270 of deeds at page 992, City of Newburgh as described in liber 13179 of deeds at page 582, and Sharp as described in liber 2373 of deeds at page 218, N 12°56'34" W 210.00 feet to a capped iron rod found; thence continuing along the division the division line between the herein described parcel and said lands of Sharp, S 77°03'26" W 100.00 feet to a point on the easterly side of Wisner Avenue, said point being located S 37°05'44" E 0.36 feet from a capped iron rod found; thence along the easterly side of Wisner Avenue, N 12°56'34" W 45.00 feet to the point or place of beginning.

CONTAINING 1.45 ACRE OF LAND MORE OR LESS.

Together with and subject to a 7 foot wide driveway easement as described in liber 3871 of deeds at page 288.

Together with a 20 foot wide right of way as described in liber 3871 of deeds at page 288.

December 14, 2011