FILE COPY

SITE INVESTIGATION/ REMEDIAL ALTERNATIVES REPORT FORMER JONAS AUTOMOTIVE FACILITY NEWBURGH, ORANGE COUNTY, NEW YORK

ENVIRONMENTAL RESTORATION PROJECT No. B00136-3

FIRST ENVIRONMENT

SITE INVESTIGATION/ REMEDIAL ALTERNATIVES REPORT FORMER JONAS AUTOMOTIVE FACILITY 86 WISNER AVENUE NEWBURGH, ORANGE COUNTY, NEW YORK 12550

ENVIRONMENTAL RESTORATION PROJECT No. B00136-3

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

Prepared by: First Environment
90 Riverdale Road
Riverdale, NJ 07457

FEBRUARY 2003

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

EXECUTIVE SUMMARY

First Environment, Inc. ("First Environment") has completed the investigation and initial remedial actions at the Former Jonas Automotive Facility on behalf of the City of Newburgh, who acquired the subject Site as a result of tax foreclosure. The work was completed as part of the municipal assistance environmental restoration projects "Brownfields Project." The subject Site has been assigned Environmental Restoration Project Number B00136-3 by the New York State Department of Environmental Conservation (NYSDEC).

Based on the soil and groundwater investigations conducted to date, it has been determined that soil and groundwater at the Former Jonas Automotive Facility located at 86 Wisner Avenue in Newburgh, New York has been impacted to levels that exceed recommended soil cleanup objectives and groundwater standards respectively.

Groundwater underlying the Site has been impacted with the chlorinated volatile organic compound tetrachloroethene (PCE) and methyl tertiary butyl ether (MTBE). PCE was detected at concentrations marginally above the regulatory standard of five parts per billion (ppb). However, based on the calculated groundwater flow direction and the results from a downgradient monitoring well, it appears that the PCE is not migrating offsite. MTBE was not detected above the 10 ppb guidance value during the August 2001 sampling event but was detected at 1,200 ppb during the September 2002 event at one monitoring well (MW-3). The September 2002 sampling event result for MTBE at MW-3 was suspect due to the fluctuation in concentration from the previous event, therefore, it was re-sampled in December 2003 at which time MTBE was identified at 29 ppb. No samples from any other wells, including downgradient wells MW-5 and MW-6, contained MTBE above the groundwater standard of 10 ppb. Metals were detected in groundwater above regulatory levels during the August 2001 sampling event. However, the metals in groundwater were attributed to sample turbidity rather than naturally occurring conditions. This was verified during the September 2002 sampling event in which additional measures were taken to minimize turbidity, the results being no metals concentrations detected above the groundwater standards or guidance values in any of the groundwater samples.

Soils at the Site have been found to be impacted with metals above applicable standards, primarily lead and mercury. It has not been determined if the metals concentrations in the soil

are the result of past practices at the Site, historic filling operations at the Site, or background conditions. No ongoing sources of organic compounds such as petroleum or volatile organic compounds that could contaminate groundwater were identified as remaining onsite.

Remedial activities completed at the Site to date have been effective in removing potential sources of contamination, thereby preventing further degradation of Site conditions. The remedial activities conducted at the Site consisted of the removal of an underground storage tank, an aboveground storage tank, and various containers which consist primarily of drums containing various liquids that had been discarded at the Site.

Based on the levels and limited extent of groundwater contaminants identified, no active remediation of groundwater is recommended. Rather, the implementation of institutional controls prohibiting future use of untreated groundwater at the Site is proposed. Furthermore, to confirm that natural attenuation is occurring the City is proposing to conduct semi-annual groundwater monitoring for VOCs.

In the event that elevated metals concentrations that could potentially impact human health or the environment are present in soil across the Site, remedial actions will be necessary. The recommended remedial alternative for metals contaminated soils onsite consists of the excavation and off-site disposal of the lead contaminated soils at the former drum storage area, and a limited area of mercury contaminated soil on the south side of the Site, combined with the implementation of engineering and/or institutional controls for the entire Site. Excavated soils would be replaced with clean fill. The determination of the engineering controls will be dependent on the extent of contaminants present and the proposed future use of the Site. For the purposes of estimating remedial costs, it is assumed the entire Site will be capped with 75 percent being asphalt and 25 percent being approximately 12 inches of clean fill for unpaved areas. A demarcation barrier, such as a geotextile fabric, would be placed under the cover to delineate the level of contaminated soils.

INTRODUCTION

This Site Investigation/Remedial Alternatives Report (SI/RAR) has been prepared by First Environment, Inc. (First Environment) on behalf of the City of Newburgh for the Former Jonas Automotive Facility (Site). The City of Newburgh has conducted the activities onsite as part of the municipal assistance environmental restoration projects "Brownfields program" (project number B00136-3). The New York State Department of Environmental Conservation (NYSDEC) administered the investigation.

The investigation and remedial activities were conducted as described in the Site Investigation / Remedial Action Workplan SI/RAW prepared for the Site by First Environment. Based on comments received from the NYSDEC on the January 2002 draft SI/RAR, additional site investigation activities were conducted. This report documents the investigation and remedial actions conducted to date at the Site.

The introduction provides the regulatory framework and identifies the entities involved in the project. The environmental setting section provides information regarding the Site including regional and site geology and hydrogeology, as well as Site history. The site investigation and remediation activities are discussed including all field activities and quality assurance and quality control procedures. The specific activities are detailed on an area-by-area basis including the results of laboratory testing in relation to applicable regulatory standards or guidelines. A discussion of possible remedial alternatives for contaminants remaining onsite is provided followed by conclusions and recommendations for further activities. Separate test data and backup documentation are provided as Appendices to this report, as necessary.

ENVIRONMENTAL SETTING

SITE DESCRIPTION

The site is located at 86 Wisner Avenue in the City of Newburgh, Orange County, New York (Figure 1). The site is located in a mixed-use area of commercial and residential parcels. Adjacent properties to the north and west of the Site are primarily residential, although there is a vehicle inspection station north of the Site that appears to conduct automobile repair operations. The adjacent properties to the south consist of an industrial facility (Prime, Inc.), a restaurant (Planet Wings) and a car dealer (Nissan Used Car Authority). To the east is an open, undeveloped, low-lying area.

The Site consists of approximately 1.5 acres of fairly level land. With the exception of the areas occupied by the buildings, the Site is unpaved and covered with fill consisting of gravel and cinders with vegetation in the less traveled areas.

There are two buildings onsite, a 1,500 square foot garage and a 16,000 square foot former foundry building (Figure 2). The garage is a single story building constructed of concrete block. The former foundry building is a slab on grade, brick and steel framed building consisting primarily of one large story with an overhead crane traversing the center of the building and mezzanines running along either side. The overhead crane extends out the east end of the building to encompass a covered area. An abandoned railroad spur is located east of the building.

The other notable features on the Site are an abandoned school bus located on the northeast corner of the Site, an abandoned pickup truck located in the garage, and an abandoned tractor truck (without trailer) west of the garage. There is a chain link fence on the north and west sides of the Site, with a gate on the driveway located at the northwest corner of the property.

REGIONAL GEOLOGY AND HYDROGEOLOGY

The former Jonas site lies within the Valley and Ridge Physiographic Province. The predominant features associated with this province are narrow valleys and ridges formed as a result of differential erosion of the underlying sandstone and shale formations. Specifically, the

Newburgh area is characterized by alluvial deposits underlain by meta-sedimentary and sedimentary bedrock formations.

Alluvium in the area is comprised of flood plain sediments (sand, silt and clay) associated with the Hudson River. Glacial deposition in the area consists primarily of till and unsorted outwash. The outwash is predominantly a mixture of gravel, sand, silt and clay. The bedrock underlying this region consists of middle Ordovician Taconian Sequence, primarily shales and graywackes.

Regionally, groundwater occurs in both the overburden and bedrock under confined or unconfined conditions. Regional groundwater flow in the Newburgh area is to the east, towards the Hudson River.

As identified in the water well survey, conducted as part of this investigation, wells were identified within one mile of the Site with groundwater occurring in either sand and gravel and lake deposit units in the overburden, or the Onondaga limestone bedrock.

SITE GEOLOGY AND HYDROGEOLOGY

The discussion of the Site geology is based on observations by First Environment during drilling and excavation activities conducted during investigation and remediation activities. Site investigation locations are shown in Figure 3. Based on observations during monitoring well installation, the Site is underlain by approximately 2.5 to 7 feet of fill consisting of varying amounts of sand, silt and gravel with occasional brick fragments and cinders. Underlying the fill is silt near the southwest end of the Site (MW-1) and varying amounts of sand, gravel and cobbles at other parts of the Site (MW-2 through MW-6). Intrusive activities did not extend below a depth of 17 feet and bedrock was not encountered. Boring logs are presented in Appendix 1.

Based on observations during the site investigation, groundwater occurs at the Site at depths ranging from approximately 6 to 14 feet depending on location and seasonal variations. A decrease in water level of approximately 1.5 feet was observed in four of the five monitoring wells onsite between September 27 2001 and November 7, 2001. This decrease was likely attributable to a lack of precipitation during that time. By September 2002 groundwater elevations had returned to the levels observed in September 2001.

Based on the groundwater elevations measured, local groundwater flows to the southeast as shown in Figures 4A and 4B. Based on the hydraulic conductivity testing completed and hydraulic gradients measured, an average groundwater velocity of 8.9×10^{-4} ft/day was calculated. A more detailed discussion of field activities and findings regarding aquifer characteristics is provided in a subsequent section.

TOPOGRAPHY AND DRAINAGE

The Site is located approximately 175 feet above mean sea level and is relatively flat, with a gentle slope to the east. Stormwater that does not infiltrate the unpaved areas of the Site is expected to runoff to the low-lying area east of the Site. Some stormwater reportedly enters a catch basin located adjacent to the main building onsite, the catch basin discharges to the leachfield near the east end of the Site identified on Figure 2.

SITE HISTORY AND PRIOR USE

The Site history is based on information provided during a site inspection with the NYSDEC, information presented in the Environmental Data Resources (EDR) Radius Search for the site, and City of Newburgh tax records.

Poughkeepsie Iron Fabricators operated on the Site from 1963 until the early 1990s. Poughkeepsie Iron Fabricators are believed to have fabricated large iron structural members, such as those used in major bridge construction. Poughkeepsie Iron Fabricators is listed in the underground storage tank (UST) and aboveground storage tank (AST) databases. A 1,000-gallon gasoline UST was installed in August 1962. ASTs identified in the database consist of two 1,000-gallon (diesel and waste fluids), one 500-gallon gasoline, and one 275-gallon waste oil.

Poughkeepsie Trim and Steel operated the Site from the early 1990s until 1993 and is listed on the New York State Spills database. However, the spill event occurred in 1994 and the release was attributed to Jonas Automotive Rebuilders, as discussed below.

Jonas Automotive Rebuilders (Jonas) operated at the facility from August 1993 through March 1999. The operations conducted by Jonas reportedly included dismantling vehicles. Jonas is listed as the "spiller" in NYSDEC Spill case number 9404697. The release was the result of engine blocks being dumped on a concrete pad with engine fluids contaminating adjacent soils. According to the report, a willing responsible party existed, corrective action was taken and the spill case was closed on July 11, 1994.

Jonas Automotive is also listed in the Spills database for an incident reported by a citizen to the NYSDEC on March 2, 1998. The report was of engine blocks being dumped in the rear of the property with fluids visible on the ground. The case was assigned number 9713317. The EDR report stated the responsible party stockpiled the contaminated soil on the Site and filed to properly dispose of it. The disposal of this soil is presented in more detail in the discussion of the overhead crane area later in this report. In March 1999, the City of Newburgh acquired the property through property tax foreclosure.

During a site inspection on February 8, 2000, First Environment identified one 275-gallon (fuel oil) AST and one 275-gallon cutting oil AST as shown on Figure 2. In addition, one 1,000-gallon AST used to store waste fluids was located on the Jonas Property behind the main building. The other 500 and 1,000-gallon ASTs, listed in the EDR Report, were not identified on the property.

REMEDIAL INVESTIGATION PROCEDURES

Activities conducted at the Site were completed in accordance with the NYSDEC-approved RI/RAW. A description of the specific procedures field procedures is provided below.

SOIL BORINGS

Soil borings were advanced by geoprobe direct push method. The geoprobe borings were advanced by First Environment. Hollow stem auger borings for monitoring wells were advanced by Aquifer Drilling and Testing of Troy or New Hyde Park, New York. During the drilling of soil borings, split spoon soil samples were screened for organic vapors using a photoionization detector (PID) and logged by a First Environment geologist continuously to the completed depth of each boring. Soil description, groundwater level, visual and olfactory observations were recorded. Soil boring logs are presented in Appendix 1.

SOIL SAMPLING

Soil samples were collected from either soil borings during investigative activities, from surface locations or directly from excavation areas and exploratory activities. Soil sample depth intervals were based on field observations, PID readings, staining and/or odors. Soil samples were placed in laboratory-supplied containers and cooled to 4°C. The soil samples were then transported to the analytical laboratory under chain of custody procedures. Soil sampling locations are presented on Figure 3. Soil sampling results are presented in Table 1 and discussed later in this report.

MONITORING WELL INSTALLATION

All monitoring wells were installed using a hollow stem auger drill rig. The monitoring wells were constructed of two-inch diameter schedule 40, threaded, flush joint, PVC casings and slotted screens. Upon completion of the borings, a 10-foot long section of 0.010-inch slotted well screen was installed through the hollow stem augers, typically from approximately five feet below to five feet above the water table. The remainder of the well consisted of two-inch casing, which extended to the ground surface. Clean filter sand was placed in the annulus between the screen and the borehole to a level of at least one to two feet above the top of the screen as the

augers were removed. A bentonite pellet seal was placed on top of the filter sand. The remainder of the annulus was grouted with a cement bentonite grout appropriate for use in monitoring wells. The surface protection for all monitoring wells consisted of flush-mount, steel road boxes. All monitoring wells were secured with locking caps. Boring logs with well construction information are presented in Appendix 1.

Upon the completion of the monitoring well installation, each well was developed by either pumping or bailing. The wells were repeatedly purged until dry and allowed to recharge, however, some suspended sediment still remained in the purge water. The development removed fines generated during the installation and ensured that hydraulic continuity was established between the well and the aquifer. Lanc & Tully of Goshen, New York, a New York Licensed Surveyor surveyed each monitoring well. The top of the inner PVC casing (excluding the cap) was surveyed to the nearest 0.01 foot. The survey point was the highest point of the casing and was marked on each well.

GROUNDWATER SAMPLING

In order to prevent possible cross contamination, disposable sampling equipment (bailers, tubing) was used where possible. Equipment that was reused (submersible pumps) was thoroughly decontaminated between locations.

All monitoring wells were purged prior to sampling. The purging during the August 2001 sampling event consisted of the removal of a minimum of three well volumes of standing water from the well in order to ensure groundwater representative of the surrounding aquifer was sampled. After removal of each well volume, the discharge water was field tested for dissolved oxygen, pH, temperature and conductivity to confirm that conditions had stabilized, verifying the groundwater to be sampled was representative of the surrounding aquifer rather than stagnant groundwater from the well casing.

During the September 2002 groundwater sampling event, wells were sampled using low flow purging procedures. Purging rates were reduced to 50 milliliters per minute and wells were purged until specific conductance, pH and dissolved oxygen stabilized. This procedure was effective in reducing turbidity, with final turbidity at the time of sampling for each location being approximately 50 Nephelometric Turbidity Units (NTUs) or less as shown on Table 2.

Monitoring well MW-3 was re-sampled for VOCs only in December 2002 to evalute the presence of MTBE identified in the September 2002 event. No other wells were sampled during this event.

After purging, samples were collected using disposable Teflon bailers and were placed into laboratory-provided sample bottles. The samples were preserved according to the requirements of the specific analytical methods and cooled to 4°C. The samples were then transported to the analytical laboratory under chain of custody procedures. Groundwater sampling results are presented in Table 2 and discussed later in this report.

GROUNDWATER ELEVATION MEASUREMENTS

In order to determine groundwater flow direction and hydraulic gradient, First Environment collected synoptic (same day) rounds of water level measurements. Water level measurements were conducted on the same dates as groundwater sampling (August 28, 2001 and September 5, 2002) and aquifer testing (September 27, 2001 and November 7, 2001). The synoptic rounds were conducted in order to determine groundwater flow in the shallow overburden.

Prior to recording water level measurements, the wells were opened and allowed to equilibrate to atmospheric pressure. The water level and total depth for each monitoring well was measured from the top of the PVC casing using an electronic water level indicator to an accuracy of 0.01 foot. The groundwater elevation at each well was calculated by subtracting the measured depth to groundwater from the surveyed elevation of the PVC casing. Groundwater elevations are presented in Table 3. Groundwater elevation contours and estimated groundwater flow direction for August 28, 2001 and September 5, 2002 for the overburden aquifer, are presented on Figures 4A and 4B, respectively and show groundwater flowing to the southeast. The groundwater flow direction and hydraulic gradients for September and November 2001 were similar to that shown on Figures 4A and 4B.

AQUIFER TESTING

In order to determine the site-specific hydraulic conductivity of the overburden, First Environment conducted rising head, in-situ hydraulic conductivity tests (slug tests) at four of the

five monitoring wells onsite. Monitoring well MW-1 could not be tested because there was insufficient water within the well to effectively stress the aquifer. Falling head aquifer tests were not conducted because it would be an inappropriate test for partially penetrating wells screened across the water table, as are present onsite.

Prior to testing each well, all down-hole equipment (pressure transducer and slug) was thoroughly decontaminated to prevent potential cross contamination between wells. The field permeability testing consisted of inserting a pressure transducer, connected to an In-Situ Hermit datalogger, into the well to be tested to a depth immediately above the base of the well. A sealed, sand-filled PVC pipe one-inch diameter by five feet long (slug) was then inserted into the well. The groundwater level in the well was permitted to recover to approximately 80 to 90 percent of the initial groundwater level displacement. The slug was then removed and the water level was again permitted to recover to approximately 90 percent of the initial water level displacement (rising head test) as water level data was being recorded by the data logger.

Aqtesolv for Windows Version 3.0 using the Bouwer and Rice Method was utilized to calculate the hydraulic conductivity (permeability) for each well. The results of the hydraulic conductivity analysis are presented in Table 4 and Appendix 2. Well construction information and estimates of aquifer thickness based on available information were used for the hydraulic conductivity calculations.

QUALITY ASSURANCE / QUALITY CONTROL

The Quality Assurance/Quality Control QA/QC procedures were conducted as described in the QA/QC plan included as Appendix 3 of this report. Laboratory analytical methods and data validation procedures are summarized below.

LABORATORY ANALYTICAL METHODS

All sample containers were provided by and chemical analysis was conducted by Chemtech, of Mountainside, New Jersey, or Hampton Clarke-Veritech Laboratories of Fairfield, New Jersey, both New York State Department of Health ELAP-Certified laboratories. Semi-volatile organic compounds were analyzed by method 8270. Metals were analyzed by method 6010 except for mercury, which was analyzed by method 7471. Volatile organic compounds were analyzed by methods 8260 or 8021 for soil samples and by method 8260 for groundwater samples. PCBs were analyzed by method 8082.

DATA VALIDATION

The analytical data packages were reviewed in order to determine compliance with the NYSDEC requirements. The review of the analytical data identified the data as useable although some sample spike recoveries and calibrations were slightly outside of the QC limits. All holding times for the samples were met. Data Usability Summary Reports for each sample package are presented in Appendix 4 of this report. Analytical data packages are available upon request.

INVESTIGATION FINDINGS

The purpose of the investigation and remedial action were to evaluate site conditions and to remediate potential sources of ongoing contamination. Activities conducted onsite consisted of the investigation and/or remediation of environmental concerns previously identified in nine study areas identified in the SI/RAW. The findings and results for these areas are discussed in the following sections. The findings of the well search are presented in Table 5.

AREA 1 – DRUM STORAGE AREA

During a site inspection, 14 drums were identified along the north side of the main building and two drums were identified along the east side of the building in the vicinity of the dry well. During the February 8, 2000 site inspection by First Environment and the NYDEC, one drum was identified as leaking a petroleum material. This drum was identified as a potential threat to the environment and was over-packed on February 20, 2000.

A number of other containers ranging in size from small containers to drums were identified within the building as listed on Table 6. All containers were characterized and consolidated into drums between August 22 and September 9, 2000 by Code Environmental Services, Inc. of Carteret, New Jersey (Code) in accordance with the procedures identified in the RI/RAW under the direct oversight of First Environment. Code sampled the drums and First Environment submitted the samples to the laboratory for analysis. Based on the results of the chemical analyses, the drums were segregated, properly labeled and manifested as hazardous or non-hazardous, as appropriate.

The drums from the consolidation of containers within the building, as well as those identified during the initial inspection, were manifested and removed from the Site on November 9, 2000 by Waste Management, Inc. Manifests for the disposal of the drums and other wastes removed from the Site are included in Appendix 5.

The exterior drum storage area was located on the north side of the main building as shown in Figure 2. A small concrete pad is located in this area. Soil samples were collected at the perimeter of the concrete pad in order to evaluate whether there had been adverse impacts from possible past releases from the drums.

SAMPLE COLLECTION

In order to investigate the exterior drum storage area, five soil samples (S-1 through S-5) were collected from a depth of 0 to 6 inches. Based on elevated photo-ionization detector (PID) readings recorded at boring S-3, an additional soil sample was collected from this location at a depth of 6.5 to 7 feet. The shallow soil samples were analyzed for base/neutral extractable organics (BNs), polychlorinated biphenyls (PCBs) and metals. The deeper sample from boring S-3 was analyzed for volatile organic compounds (VOCs) and BNs.

In order to further evaluate the extent of lead detected in soil samples from the drum area in the initial (2001) sampling, samples were collected from seven additional locations on August 12, 2002. Five samples were collected from four locations (SS-10 through SS-13) for total lead analysis. In addition, three samples (SS-7 through SS-9) were collected and analyzed for toxicity characteristic leaching procedure (TCLP) lead to determine if the soil may be a characteristic hazardous waste if excavated.

ANALYTICAL RESULTS

Soil sampling analytical results were compared to the NYSDEC Technical Administrative Guidance Series (TAGM) 4046 Recommended Soil Cleanup Objectives (RSCOs). As stated in the TAGM, "Recommended soil cleanup objectives should be utilized in the development of final cleanup levels through the Feasibility Study (FS) process." "After the detailed evaluation of the preferred remedial action, the final cleanup levels which can be achieved using the preferred remedial action must be established." Analytical results for the soil sampling from Area 1 are presented on Table 1 and discussed below.

One soil sample (S-3 from 6.5 to 7 feet) was analyzed for VOCs. The only VOCs detected were ethylbenzene at 810 ppb, below the RSCO of 5,500 ppb and total xylenes at 1,400 ppb slightly above the RSCO of 1,200 ppb.

The only BN analytes detected above the RSCOs in shallow soil samples were dibenz(a,h)anthracene at 101 ppb at SB-1, and benzo(a)pyrene detected at estimated

concentrations of 260 ppb at SB-2. All of the other detected compounds were below the RSCOs.

The five surface soil samples from the drum storage area were analyzed for PCBs. Based on the results, the PCB arochlor 1254 was detected in four of the five soil samples at concentrations ranging from 18 to 48 ppb, all below the RSCO for surface soils of 1 ppm (1,000 ppb).

The RSCOs for most metals list a value or site background (SB), however, there has not been any site background sampling conducted to date. Therefore, in order to put the values into some context, the detections identified were to be compared to the RSCOs listed and the Eastern USA background values listed in TAGM 4046.

The five soil samples from the drum storage area were analyzed for metals. Metals including cadmium, chromium, copper, lead, mercury, nickel and zinc were detected in one or more samples at levels above both the RSCOs and the listed Eastern USA background values. Most notably were lead and zinc detected at concentrations of 834 to 6,600 ppm and 364 to 697 ppm respectively.

The additional soil sampling from this area demonstrated that the vertical and horizontal extent of lead-impacted soil is limited. Specifically, all concentrations were near the range of typical background levels, with the highest, SS-12 (0-0.2 feet) at 750 ppm, and concentrations at SS-10 dropping off to 240 ppm at 1 to 1.2 feet and 29 ppm at 2.3 to 2.5 feet. The TCLP testing of one of the three soil samples analyzed demonstrated levels above the RCRA limit for the toxicity characteristic for lead of 5 mg/l. Based on this information, soil excavated from this area would be expected to be hazardous for lead.

AREA 2 - OVERHEAD CRANE AREA

The overhead crane area refers to the area at the east end of the main building that has a roof, but is otherwise open to the elements. Presumably, this area was constructed to allow large pieces of iron or steel to be moved to and from the main building. The area contains a concrete pad and a loading dock, with the balance of the area being unpaved. The concrete pad was

previously used to store automotive parts including engines. Soil below the crane and adjacent to the concrete pad appeared to have been impacted by petroleum.

Based on discussions with Mr. Larry Ricci, formerly of the NYSDEC, during the site inspection, the area under the overhead crane historically received runoff and was prone to flooding. According to the NYSDEC, runoff of engine fluids flowed from the concrete pad, through a trough around the concrete pad and into an adjacent catch basin (Area 5). Stormwater runoff from the concrete pad area sometimes overflowed to a dry well (Area 4) located adjacent to the loading dock. The drywell subsequently discharged to a leachfield located 96 feet east of the drywell.

Due to past poor housekeeping practices, the concrete pad was observed to have significant amounts of free product and product staining with some product staining also observed in the adjacent shallow soil. According to Mr. Ricci, the stained soil adjacent to the concrete pad was excavated under his direction as part of an emergency action by the NYSDEC. The contaminated soil was stockpiled onsite for future disposal. The stockpiled soil was subsequently sampled by First Environment and characterized as non-hazardous. 122.79 tons of petroleum-contaminated soil was disposed of off-site at Mt. Hope Recycling of Wharton, New Jersey on December 6, 1999. Bills of lading for the soil disposal are included in Appendix 5. It should be noted that the spill was attributed to waste oil from past operations, not unleaded gasoline from an underground storage tank as listed on the Bills of lading.

SAMPLE COLLECTION

Additional soil sampling was conducted in order to determine if this area had been impacted by past releases. Soil samples were collected from six locations (S-6 through S-11) at the overhead crane area. Soil samples were collected from a depth of 0 to 6 inches, and based on the analytical results of the shallow samples; analyses were conducted on deeper (18 to 24 inch) interval samples. The shallow samples were analyzed for BNs, PCBs and metals. The deeper samples were analyzed for VOCs, and depending on the results of the shallow samples, were also analyzed for BNs.

In addition, as requested by the NYSDEC, to further delineate general soil conditions onsite, including those in the general vicinity of the overhead crane area, four surface samples (SS-1, SS-2, SS-3 and SS-6) were collected on August 12, 2002 and analyzed for metals and SVOCs.

ANALYTICAL RESULTS

Trace concentrations of the VOCs chloroform, methylene chloride and/or tetrachloroethene (PCE) were detected in one or more of the samples, but all at concentrations well below the RSCOs. The results of the soil investigation of Area 2 are presented on Table 1.

PCB analyses identified arochlor 1254 in two of the five samples at concentrations of 28 ppb and 78 ppb, both well below the RSCO of 1 ppm (1,000 ppb).

Based on the results of the shallow sample BN analysis discussed below; samples from the deeper (18 to 24 inch) interval from three borings were selected for BN analysis. Exceedances of the RSCO for one or more PAH compound were detected in the surface samples from S-6, S-7, S-9 and S-11, therefore, contingent analysis was conducted at S-6, S-9 and S-11. The only analyte exceeding the RSCO at S-7 was benzo(a)pyrene at 84 ppb, only slightly above the RSCO of 61 ppb, therefore no contingent analysis was conducted form the deeper sample interval at this location.

Six PAHs were detected above the RSCOs from Sample S-6 (0 to 6 inches) collected between the main building and the concrete pad, while the 18 to 24-inch interval sample from the same location detected only two of the PAHs, benzo(a)anthracene and benzo(a)pyrene, above the RSCOs, although at lower concentrations then those detected from the 0 to 6-inch depth interval. The 0 to 6-inch sample at S-9 revealed concentrations of benzo(a)anthracene and benzo(a)pyrene above the RSCOs, however, no targeted BNs were detected in the 18 to 24-inch sample interval. The 0 to 6-inch sample interval from S-11 detected only benzo(a)pyrene above the RSCOs, however, the 18 to 24-inch interval detected benzo(a)pyrene and three other PAH compounds at higher concentrations and above the RSCOs. All samples collected from this area contained benzo(a)pyrene above the RSCO, although all below 1 ppm, and two samples SS-2 and SS-6 marginally exceeded the RSCO for benzo(a)anthracene.

Based on the results of the metals analysis, the following metals were identified above the RSCOs and eastern USA background levels; arsenic was detected at S-6 at 26 ppm, chromium was detected at S-6 and S-7 at 54.5 and 46.5 ppm, respectively. Mercury was detected at S-6 through S-8 at concentrations ranging from 0.32 to 0.46 ppm, and zinc was detected at S-6 and S-7 at 2,070 and 223 ppm, respectively. An evaluation of the metals analysis from the August 12, 2002 sampling identified levels of one or more of the following in each of the four samples collected north and south of the overhead crane area as above regional background levels: cadmium, copper, chromium, lead, mercury, nickel and zinc. The most notable detection was mercury which ranged from 48 ppm at SS-1 to 3.8 ppm at SS-3 located south of the building. No mercury was detected at SS-6 located north of the building.

AREA 3 – LOW-LYING GROUND AREA

A low-lying area is located east of the overhead crane area as shown on Figure 2. According to the NYSDEC, this area was observed to have flooded in the past. It is suspected that the flooding included surface run off from the Site, including the overhead crane area that could have potentially impacted this area. The area identified as the low-lying ground area may extend onto the adjacent parcel to the east.

SAMPLE COLLECTION

As requested by the NYSDEC, the low-lying area was investigated through the collection of soil samples from three locations (S-12 through S-14). Soil samples were collected from a depth of 0 to 6 inches, and based on the analytical results of the shallow samples; contingent analyses were conducted on deeper (18 to 24 inches) interval samples. The shallow samples were analyzed for BNs and metals, the deeper samples were analyzed for VOCs and depending on the results of the shallow samples, were also analyzed for BNs. In addition, two samples SS-4 and SS-5 were collected from the low-lying ground area on August 12, 2002 and analyzed for metals and SVOCs.

ANALYTICAL RESULTS

The results of the soil investigation of Area 3 are presented in Table 1 and discussed below. The only targeted VOC detected in any of the samples from the low-lying area was PCE at S-14 at a concentration of 3.9 ppb, below the RSCO of 1400 ppb.

The only BN detected above the RSCOs was benzo(a)pyrene at 920 ppb at SS-4. The surface samples from S-13 and S-14 had concentrations above the RSCOs for six PAHs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and dibenz(a,h)anthracene.

No PCBs were detected in the surface samples from S-12, S-13 and S-14.

One or more metals were detected above the RSCOs in each of the five surface soil samples, specifically zinc. Other metals detected above the RSCOs and/or the eastern USA background levels in one or more samples were arsenic, cadmium, chromium, copper, lead, mercury and nickel.

AREA 4 – DRY WELL AND LEACHFIELD

Based on discussions with the NYSDEC, the drywell (Area 4) and the east end of the main building historically received runoff from the concrete pad. The dry well (a concrete catch basin) was piped to a leachfield located 96 feet to the east. According to the NYSDEC, the catch basin would receive runoff potentially including petroleum-impacted stormwater from the concrete pad.

SAMPLE COLLECTION

Soil samples were collected from three locations, S-15 through S-17, at a depth of 0 to 6 inches and submitted for analysis for BNs and metals. Based on the analytical results of the shallow samples, contingent analysis was conducted for BNs on deeper (18 to 24 inches) interval samples. In addition, the deeper samples were all analyzed for VOCs. One sample (S-18) was also collected from the sediment within the drywell and analyzed for BNs, PCBs and metals.

The depth and location of the leachfield was identified by excavating the length of the pipe starting at the drywell and continuing eastward to the terminus of the pipe at the leachfield as shown on Figure 2. The pipe was constructed of four-inch diameter schedule 80 PVC and the pipe appeared to be in good condition with no cracks or perforations. The length of the pipe was field screened with a PID and one soil sample (S-32) was collected from the six-inch interval underlying the midpoint of the pipe and analyzed for VOCs, BNs and metals. The drainage pipe was left in place and after collecting the soil sample, the excavation was backfilled with the excavated soil.

The leachfield, located 96 feet south of the drywell, consisted of cobble-sized rocks extending to a depth of approximately 5.5 feet. The leachfield was investigated through the collection of one soil sample from immediately beneath the cobbles. The soil sample (S-33) was analyzed for VOCs, BNs and metals. After sampling, the leachfield excavation was backfilled with the excavated material.

ANALYTICAL RESULTS

The results of the soil investigation of Area 4, including the drywell, piping and leachfield are presented in Table 1 and discussed below.

The results of the VOC soil sample analysis from the area of the drywell revealed PCE at one location (S-15) at a concentration of 7.6 ppb, which is below the RSCO. No VOCs were detected in the soil samples collected from the leachfield area or associated piping (S-32 and S-33).

No BNs were detected above the RSCOs in any of the three surface samples collected from the drywell area. Two BNs were detected in the soil sample collected beneath the pipe draining to the leachfield (S-32) at concentrations slightly above the RSCOs. The compounds detected were benzo(a)anthracene at 230 ppb and benzo(a)pyrene at 220 ppb. The soil sample from beneath the leachfield (S-33) revealed a concentration of benzo(a)pyrene at 110 ppb, which is slightly above the RSCO of 61 ppb.

No PCBs were detected in any of the shallow soil samples from the drywell area.

Although several metals were detected in surface soil samples from the dry well area, most were within the typical background range expected for the eastern USA. Zinc was detected slightly above the expected background with concentrations ranging from 51.5 ppm to 83.3 ppm. Metals detected in sample S-32 above the published background ranges, include mercury (0.62 ppb), nickel (40.2 ppb) and zinc (137 ppb). Metals concentrations exceeding the eastern background concentration for the soil sample S-31, collected from beneath the leachfield include chromium (78.8 ppb), copper (56.8 ppb), lead (973 ppb), mercury (0.28 ppb), nickel (35.6 ppb) and zinc (359 ppb).

Benzo(a)pyrene was detected in the sample of the sediment collected from within the dry well (S-18) at a concentration of 130 ppb. Metals detected in the sediment sample above the RSCOs include copper (110 ppm), lead (438 ppm) and zinc (282 ppm). The sediment was subsequently removed from the site on June 22, 2001 by Clean Harbors.

AREA 5 – CATCH BASIN

Based on discussions with the NYSDEC during the site inspection, the catch basin area located along the rear of the facility (overhead crane area) historically received run off and was prone to flooding. In addition, as a result of poor housekeeping, this area was observed to have product staining in the shallow soil and catch basin area. According to Mr. Ricci, petroleum impacted storm water would enter the catch basin during periods of high precipitation. Based on past operations conducted at the Site, the visual observations made at the time of the site inspection and the descriptions provided by Mr. Ricci, this area may have been impacted by petroleum products. This area also received petroleum that had run off the concrete slab from past operations.

The catch basin was cleaned on June 22, 2001 by Clean Harbors of Newburgh, New York and inspected by First Environment to determine its structural integrity. The contents of the catch basin were drummed and ultimately disposed of off-site.

The catch basin measures 3.5 feet by 4.5 feet by 3.75 feet deep and is constructed of concrete. The catch basin had a single four-inch diameter PVC pipe entering the catch basin from the south, with no outlet pipe. The concrete was in good condition with no evidence of cracks or leaks observed.

SAMPLE COLLECTION

The area of the catch basin was further investigated through the collection of soil samples from three locations, S-19 through S-21. Soil samples were collected from a depth of 0 to 6 inches, and based on the analytical results of the shallow samples, contingent analysis was conducted on deeper (18 to 24 inch, 30 to 36 inch or 72 to 78 inch) interval samples. The shallow samples were analyzed for BNs and metals, the deeper samples were analyzed for VOCs, and depending on the results of the shallow samples were also analyzed for BNs and/or metals.

ANALYTICAL RESULTS

The results of the soil investigation of Area 5 are presented in Table 1. The VOCs detected in soil samples from the catch basin area included ethylbenzene, toluene, xylenes and PCE. However, no VOCs were detected in any of the soil samples above the RSCOs, and no VOCs were detected in the deepest soil sample collected from this area (S-19 from 72 to 78 inches).

No PCBs were detected in either of the surface soil samples (S-19 and S-20) collected from the catch basin area.

Benzo(a) pyrene was detected above the RSCO of 61 ppb at S-19 (0-0.5) S-20 (0-0.5) and S-21 (2.5-3.0) at concentrations of 110 ppb, 320 ppb and 88 ppb, respectively. Chrysene was detected at S-20 (0-0.5) at 610 ppb, which is above the RSCO of 400 ppb. No other PAHs were detected in any of the soil samples from this area above the RSCOs.

Metals detected in the surface samples from S-19 and S-20 and the 1.5 to 2.0 foot interval sample from S-21 were typically either below the RSCOs or within the range of background concentration for the eastern USA.

Sample S-22, collected from the sediment within the catch basin had elevated concentrations of chromium (60.7), copper (470), lead (862) and zinc (1480). As previously discussed, the catch basin was cleaned and the sediment was removed from the Site for off-site disposal.

AREA 6 – UNDERGROUND STORAGE TANK

A gasoline dispenser pump was identified on the south side of the main building during the site inspection. The pump previously dispensed gasoline from an adjacent 1,000-gallon underground storage tank (UST). Based on the registration information, the UST was reported to have been installed in August 1962.

The UST was removed from the Site on June 21, 2001 by Clean Harbors under the direct supervision of First Environment.

The 1,000-gallon gasoline UST dispenser pump and associated piping were removed in accordance with the procedures outlined in Appendix A of the September 2000 SI/RAW and as discussed below. Prior to removing the UST, approximately 1.5 inches of gasoline remaining in the tank was pumped out for off-site disposal and the UST was inerted to an oxygen-deficient atmosphere. The UST was then opened and cleaned prior to being removed. The UST was inspected and no holes were identified. The excavation was also inspected for evidence of a release such as staining or odors with none detected. The location of each soil sample was field screened with a PID for organic vapors. No organic vapors were detected in the sidewall samples, however, the soil sample from the base of the excavation had a PID reading of 38 parts per million (ppm).

SAMPLE COLLECTION

A total of five post-excavation soil samples, S-23 through S-27, were collected from the base and sidewalls of the excavation. In addition, one soil sample (S-28) was collected from beneath an elbow on the discharge pipe from the UST to the dispenser pump. Each soil sample was analyzed for STARS list VOCs using USEPA method 8021.

ANALYTICAL RESULTS

The results of the soil analysis for Area 6 are presented in Table 1. No VOCs were detected in five of the six soil samples from the UST area. The only soil sample from the area with detectable VOCs was S-27, collected from the base of the excavation, with concentrations of

sec-butylbenzene (14 ppb), n-butylbenzene (240 ppb) and naphthalene (88 ppb). All of the concentrations were below the applicable RSCOs.

AREA 7 – ABOVEGROUND STORAGE TANK

During the site inspection, a 1,000-gallon aboveground storage tank (AST) was identified near the east end of the main building. According to NYSDEC personnel, the 1,000-gallon AST was used to containerize waste engine fluids.

A total of approximately 700 gallons of product/water was pumped from the 1,000-gallon waste oil AST on June 21, 2001 by Clean Harbors and disposed of off-site. The AST appeared to be in good condition, free of holes, or other signs of leakage. The empty AST was then taken off-site by Clean Harbors to be recycled as scrap metal.

SAMPLE COLLECTION

Three soil samples, S-29 through S-31, were collected from the location of the former 1,000-gallon AST. Soil samples were proposed to be collected from 0 to 2 inches, however due to the presence of gravel, samples were collected immediately below the gravel at a depth of 8 to 12 inches. The soil samples were analyzed for BNs. In addition, sample S-29 was analyzed for VOCs.

ANALYTICAL RESULTS

The results of the soil analysis for Area 6 are presented in Table 1. No VOCs were detected in sample S-29. The BN analysis identified a single PAH, benzo(a)pyrene at S-31 with a concentration of 230 ppb above the RSCO of 61 ppb. No other PAHs were detected above the RSCOs in any of other samples from this area.

AREA 8 BUILDING INTERIOR, DRAINS AND SUMPS

The main building was investigated for the presence of floor drains and sumps. Accessible areas were investigated, however, an area adjacent to the engine trough was covered with a steel plate and was inaccessible. The trough formerly accepted run off of engine fluids from the

dismantling/repair of automobile engines and the trough emptied into a 275-gallon AST, discussed below, which was used as a collection tank for the waste engine fluids. The area under the trough and adjacent areas were examined and found to contain a significant buildup of oily residues. The residues were not readily accessible during the field activities, but should be addressed as part of future remedial actions. The cleaning of the oil residues will require removal of the metal trough to allow access to the underlying areas.

One sump was identified at the west end of the conveyor. This sump was pumped out by Clean Harbors on June 21, 2001. The sump was observed to be in good condition, however, a small pipe was observed discharging to the sump after the sump was pumped out. The origin of this pipe is unknown. No other pipes were observed in the sump. No additional investigation of this area was conducted.

Two 275-gallon ASTs were removed from within the building. One of the 275-gallon ASTs was on its side at the end of the production line trough and contained approximately 200 gallons of a petroleum product/water mixture. The second 275-gallon AST was upright and contained approximately 150 gallons of a petroleum product/water mixture. Both ASTs were pumped clean and no holes or evidence of leakage were observed at either 275-gallon AST. Since the two ASTs were observed to be free of holes, and the underlying concrete appeared to be in good condition, no soil sampling was conducted.

AREA 9 - GROUNDWATER

MONITORING WELL INSTALLATION

Monitoring wells MW-1 through MW-5 were installed between August 7 and August 8, 2001 and MW-6 was installed on August 12, 2002 by Aquifer Drilling & Testing Inc., of Troy New York under the supervision of a First Environment geologist as previously discussed.

SAMPLE COLLECTION

The monitoring wells (MW-1 through MW-5) were sampled on August 28, 2001 in accordance with the procedures outlined in the RI/RAW, and as summarized below. It should be noted that despite efforts to limit turbidity, such as reduced pumping rates, and allowing the wells to rest

between purging and sampling, turbidity above desired levels was observed. Turbidity levels are presented in Table 2. As directed by the NYSDEC, only unfiltered samples were analyzed during this sampling event. During the 2001 groundwater sampling event, samples were analyzed for VOCs by method 8260, BNs by method 8270 and target analyte list (TAL) metals by appropriate USEPA methods.

In order to evaluate the impact of turbidity on metals in groundwater, the monitoring wells (MW-1 through MW-6) were purged by the low flow technique and sampled September 6, 2002. Turbidity levels were dramatically reduced, as shown on Table 2. These samples were analyzed for VOCs by method 8260 and priority pollutant metals by appropriate USEPA methods.

In order to evaluate potential impacts from site operations, groundwater samples from MW-1, MW-2, MW-4 and MW-6 during the 2002 sampling event were analyzed for total petroleum hydrocarbons (TPH) by method 418.1.

Based on an apparently anomalous VOC analytical result at MW-3 from the September 2002 sampling event, this well was resampled for VOCs in December 2002.

ANALYTICAL RESULTS

The results of the groundwater sampling is presented Table 2 and discussed below.

The results of the 2001 VOC analysis of groundwater identified PCE at four of the five locations, however, it only exceeded the groundwater standard of 5 ppb at two locations, MW-2 and MW-4 at 7.2 ppb and 8.7 ppb, respectively. No other VOCs were detected above the groundwater standard. Trichloroethene (TCE) was detected at MW-4 at 1.1 ppb, below the groundwater standard of 5 ppb. Methyl tertiary-butyl ether (MTBE) was detected in MW-3 at 2.9 ppb and MW-5 at 1.2 ppb, both below the groundwater standard. Acetone, which was detected in the field blank, trip blank and method blank, indicating laboratory contamination, was detected at concentrations below the groundwater standards in all groundwater samples. Methylene chloride, another common laboratory contaminant, was detected in the field and trip blanks and at MW-1 below the groundwater standard.

The 2002 VOC analysis were nearly identical to the 2001 except PCE in MW-1 increased from 4.1 to 5.9 ppb in MW-1 and MTBE in MW-3 had increased from 2.9 ppb to 1,200 ppb, now above the groundwater standard of 10 ppb. MTBE is almost exclusively used as a gasoline additive, however, other gasoline components, specifically benzene, toluene, ethylbenzene and xylenes (BTEX) were not detected in groundwater onsite. MTBE is known to travel faster than BTEX compounds in groundwater, therefore, MW-3 is suspected to be at the leading edge of a plume of gasoline impacted groundwater. Based on the relatively high concentration of MTBE (1,200 ppb) and no detectable BTEX, it was suspected that the detection for MTBE was anomalous and/or the source area for the detected VOCs is a significant distance from MW-3 that would allow for this level of separation of MTBE from BTEX, indicating a possible off-site source, northwest of the Site. The December 2002 re-sampling of MW-3 for VOCs detected MTBE at 29 ppb, still above the groundwater standard of 10 ppb, but believed to be representative of site conditions unlike the concentration of 1200 ppb detected in September 2002. Once again, no BTEX compounds were detected at this location.

No BNs were detected in any of the groundwater samples above groundwater standards during the 2001 sampling event. The only targeted BNs detected in groundwater were bis(2-ethylhexyl)phthalate at 2.5 ppb in MW-2 and diethylphthalate at 1.3 ppb in MW-3. Both of the compounds were below their respective groundwater standards of 5 and 50 ppb.

Metals were detected above the groundwater standards at four of the five monitoring wells onsite during the 2001 sampling event. Lead was detected just above the groundwater standard of 25 ppb in MW-1 at 25.1 ppb, MW-3 at 46 ppb and in MW-5 at 83.8 ppb. Thallium was detected above the groundwater guidance value of 0.5 ppb in MW-3 at 13 ppb and in MW-4 at 10.9 ppb. Other metals detected in MW-5 which exceeded their applicable standards included arsenic, chromium, copper and nickel. During the 2002 sampling event, on which sample turbidity was minimized, no metals were detected except barium which was detected at up to 110 ppb, well below the groundwater standard of 1000 ppb.

Based on the results of the two sampling events, the metals concentrations detected in the groundwater samples in 2001 are attributable to turbidity in groundwater and are not representative of Site conditions. The groundwater samples from 2002 demonstrate that there are no impacts to groundwater underlying Site due to metals observed in the soil.

No petroleum hydrocarbons were detected in the four monitoring wells, MW-1, MW-2, MW-4 and MW-6, analyzed for TPH during the 2002 sampling event.

GROUNDWATER FLOW CHARACTERISTICS

The hydraulic gradient at the Site was established based on measured groundwater elevations. Groundwater elevations were established based on depth to groundwater measurements collected on August 28, 2001 from surveyed elevations at each well. Groundwater levels measured during subsequent field activities on September 27, 2001 and November 11, 2001 confirmed the initial results. Groundwater elevations and groundwater flow direction for the August 28, 2001 and September 6, 2002 measurements are presented on Figure 4A and 4B, respectively. Based on the groundwater elevation measurements, groundwater flows to the southeast at a gradient of 0.025 ft/ft. Therefore, monitoring well MW-4 is the most upgradient and monitoring wells MW-5 and MW-6 are the downgradient wells onsite.

Aquifer characteristics were evaluated through in-situ hydraulic conductivity tests (slug tests) conducted at each well. The procedure was as outlined in the SI/RAW and conducted as described below. The SI/RAW proposed doing both slug in (falling head) and slug out (rising head) tests for each location, however, due to well construction only slug out tests were conducted. The slug in (falling head) tests is not valid for wells screened across the water table. The slug tests were conducted on September 27, 2001 using a one-inch diameter slug to displace the groundwater within each well. The measurements were collected using an In-Situ® pressure transducer and recorded by an In-Situ® Hermit 3000 Environmental Data Logger.

The hydraulic conductivity values were calculated using Aqtesolv for windows software. The slug test calculations are presented in Appendix 2 and summarized in Table 4. Based on the slug test data, the average hydraulic conductivity values onsite ranged from 1.07×10^{-4} ft/day (5.44×10^{-5} cm/sec) at MW-2 to 1.42×10^{-3} ft/day ($7.19X10^{-4}$ cm/sec) at MW-4. Based on the hydraulic gradient identified and the hydraulic conductivities listed above and an assumed porosity of 0.3 the estimated groundwater velocity across the site is 8.9×10^{-4} ft/day.

WATER-WELL SURVEY

As part of the site investigation, a water well survey was conducted to evaluate whether or not groundwater in the immediate vicinity of the Site is used as a potable source. In order to determine the number and locations of wells near the subject property, local, county and state agencies were contacted and the federal, United States Geological Survey (USGS) database, was reviewed.

The City of Newburgh was also contacted. Since the City does not have a Health Department, our inquiry was directed to the City Plumbing Inspector, Mr. Jim Nugent. Mr. Nugent was not aware of any water wells in use nor was he aware of any being installed in the last five years. However, his department is not responsible for maintaining records on wells. The City of Newburgh public water supply originates from surface water from Lake Washington located over a mile southwest of the site. No on-site wells were identified for any adjacent or nearby property owners. The State records for new supply wells cover only the last two years.

Mr. Steven Collins at the Orange County Environmental Health Department was contacted and was unaware of any supply wells or domestic wells in the City of Newburgh.

Based on a review of the USGS and EDR databases, 14 wells were identified within one mile of the subject site. The information identified in the USGS database was crosschecked against the information provided in the EDR database. Available information on each well is presented in Table 5. The exact address, owner and current status of the wells are not known. The well locations, based on the coordinates provided by the USGS, are presented on Figure 5. Based on a review of the well locations, the wells appear to be either upgradient or sidegradient of the subject property. Furthermore, all wells appear to be located approximately 2,000 feet or more from the subject property. Therefore, based on the analyte concentrations detected, it is unlikely that the subject property would impact any of these wells.

Based on the finding of the water-well search, no supply wells or domestic wells were identified that are expected to be impacted by groundwater conditions onsite.

EXPOSURE ASSESSMENT

In order to evaluate potential exposure to the contaminants of concern onsite, a qualitative exposure assessment was performed. The exposure assessment evaluated the physical environment and potentially exposed human population and identified exposure pathways as well as contaminant fate and transport. An exposure pathway consists of five elements: a contaminant source; contaminant release and transport mechanisms; a point of exposure; a route of exposure; and a receptor population, each of which is described below. An exposure pathway is complete, only when all five elements are present.

CONTAMINANT SOURCES

The source(s) of soil contamination have not been fully identified, however, the extent of contamination present has been adequately defined. Elevated lead concentrations detected underlying the drum storage area are believed attributable to historic releases of materials that had been stored in that area. The source(s) of metals, including mercury detected across other areas of the site, is unknown but suspected to be related to the placement of fill. The source of fill onsite in not known. The presence of BN compounds, specifically PAHs onsite, are likely due to historic releases of petroleum onsite but also may be related to the placement of fill. In lieu of not knowing the specific source, the existing soil will be evaluated as the source.

The groundwater impacts onsite, specifically VOCs above the groundwater standards, are believed attributable to separate sources. The PCE detected just slightly above the groundwater standard of 5 ppb at MW-1, MW-2 and MW-4 are suspected to be related to past operations onsite which may have included parts cleaning that may have occurred in or around the main building onsite. This theory could not be verified as no specific locations for parts cleaning could be identified since no containers of PCE were identified, as listed on Table 6.

The source of the MTBE detected at MW-3 is unknown, but suspected to be from an off-site source north or northwest of the site. MTBE is found as an additive to gasoline, however, no BTEX compounds, the primary constituents of gasoline, have been detected in any groundwater samples collected onsite. In addition, since MTBE will migrate faster in groundwater than BTEX, the detection of MTBE without any BTEX indicates that it likely represents the leading edge of a contaminant plume some distance from the source due to the apparent separation of

the MTBE from the BTEX. Again in lieu of a specific source, the impacted groundwater will be evaluated as a source.

CONTAMINANT RELEASE AND TRANSPORT MECHANISMS

The most common transport mechanism for surface soils is erosion by wind and surface water run-off. This could include airborne dust generated by vehicle traffic onsite that could disturb surface soils. Exposure could potentially occur through dermal contact, ingestion of surface soils, or inhalation of windblown dust.

The VOCs detected in groundwater are dissolved, therefore are subject to migration with the flow of groundwater to the southeast, as previously described and presented on Figures 4A and 4B. As previously discussed, an average groundwater velocity of 8.9×10^{-4} ft/day was calculated for the site. Based on the analytical results from the groundwater sampling conducted, impacted groundwater identified is not migrating offsite, but is attenuating before reaching the southeast end of the Site.

POINT OF EXPOSURE/ROUTE OF EXPOSURE

Potential for exposure to impacted soils, although minimal, could occur through dermal contact with impacted soils, ingestion of surface soils or inhalation of windblown dust. Incidental ingestion of impacted surface soils could also occur. Inhalation of air born dust could result if wind or vehicles were to agitate contaminants in surface soil sufficiently to get them airborne. In addition, workers onsite could potentially be exposed during excavation activities, including those associated with site remediation.

Since groundwater occurs at depths of greater than six feet, direct contact with impacted groundwater is unlikely with the exception of significant excavation for Site redevelopment or through the use of Site groundwater. In the event of excavation of impacted areas onsite to depths greater than six feet, there is some potential for dermal contact or incidental ingestion of impacted groundwater. In addition, in the event that a shallow supply well were to be installed onsite within the areas of impacted groundwater, there would be the potential for ingestion or dermal contact with impacted groundwater. It should be noted that the City of Newburgh is

supplied with public water and no potable wells were identified in the vicinity of the Site, as presented in Table 5.

RECEPTOR POPULATION

The receptor population for the impacted soils could include residents, workers or trespassers onsite who could come into contact with impacted soils through direct dermal contact, inhalation, or incidental ingestion.

The receptor population for impacted groundwater would include workers onsite that could potentially encounter groundwater through excavation at depths greater than six feet within areas of impacted groundwater. In addition, if a shallow supply well were to be installed onsite, users of that well could come into contact with impacted groundwater through ingestion or dermal contact. Since impacted groundwater does not appear to be migrating offsite and no potable wells were identified in the vicinity of the site, no offsite receptor populations for impacted groundwater were identified.

SUMMARY OF FINDINGS

Based on the findings of the exposure assessment, the presence of metals, specifically lead and mercury, and PAHs in surface soils and VOCs in groundwater warrant further evaluation. Specifically, methods to break the exposure pathways to these contaminants must be determined.

The pathways to impacted soils can be terminated through the removal of all impacted soils, capping impacted soils, or a combination of removal and capping. Furthermore, institutional controls could significantly reduce the potential for exposures. Institutional controls would consist of a deed restriction on the property to eliminate the potential for future residential development as well as direction on how to handle excavated soils in the event they needed to be disturbed in the future.

The pathways to impacted groundwater can be terminated through the remediation of all VOC impacted groundwater onsite or through either remediation of impacted groundwater or a deed restriction prohibiting future use of groundwater onsite. In addition groundwater monitoring

could be continued to ensure impacted groundwater identified onsite is attenuating and is not migrating offsite. If in the future, impacted groundwater is identified as migrating offsite, then additional measures may be warranted to ensure off-site populations are not exposed to impacted groundwater.

REMEDIATION ALTERNATIVES EVALUATION

A remedial alternatives analysis was competed to identify and evaluate potential remedial alternatives for addressing soil and groundwater contamination at the site. The objective of the analysis was to determine and recommend the remedial alternatives that will be most effective in achieving approved cleanup criteria as well as having the most beneficial environmental impacts.

Soil sampling conducted at the Site has identified concentrations of metals, most significantly lead and mercury, and semi-volatile organic compounds, primarily polynuclear aromatic hydrocarbons (PAHs) above the NYSDEC recommended soil cleanup objectives.

Based on the results of the investigation, tetrachloroethylene (PCE) was detected slightly above the regulatory standard in three of the six monitoring wells onsite. In addition, MTBE was detected in one monitoring well onsite above the regulatory standard. Metals concentrations detected in groundwater during the first round of sampling were due to sample turbidity as demonstrated in the second round of sampling. Therefore, the metals in groundwater have not been identified as a concern warranting remediation.

Several remedial technologies were evaluated to address the contamination of soil and groundwater identified onsite. The technologies included both in-situ and ex-situ technologies. The effectiveness and timeliness of each technology were evaluated based on its ability to meet the appropriate cleanup criteria.

A summary of the remedial alternatives evaluated and recommended for the soil and groundwater contamination is presented in Table 7 and provided below. Based on a review of the technologies, the recommended remedial alternative for soil is the limited removal of the area of highest lead and mercury concentrations and the implementation of institutional and engineering controls. The recommended remedial option for the MTBE and PCE in groundwater is no active remediation, but rather institutional controls in the form of a deed restriction and groundwater monitoring. A discussion of how each remedial alternative meets the Remedial Action Selection Criteria is discussed in a subsequent section of this report. Estimated costs for each alternative are provided in Table 8.

SOIL REMEDIATION TECHNOLOGIES

EXTENT AND NATURE OF SOIL CONTAMINATION

The soil contamination identified above RSCOs at the Site consists primarily of metals and PAHs, although a minor exceedance of one VOC was identified at one location.

Total xylenes, were detected at one soil sample location, S-3, at the drum storage area at a depth of 6.5 to 7.0 feet. The concentration of xylenes was 1,400 ppb, just above the RSCO of 1,200 ppb. No xylenes were detected in any groundwater samples collected from the Site. Therefore, it is not believed xylenes are impacting groundwater quality. Since there has been no impact from the xylene and the fact that xylene is readily amenable to attenuation, it is not considered to be an issue for the Site.

The metals detected onsite above regional background levels consisted primarily of arsenic, cadmium, chromium, lead, mercury and zinc. The highest metals concentrations identified (samples S-1 through S-5) were located in the vicinity of Area 1, the drum storage area. At this location, surface samples identified lead from 834 to 6,600 ppm, mercury up to 0.21 ppm, and zinc up to 697 ppm. Mercury was detected at 48 ppm at SS-1 located in the unpaved area south of the building. In addition, elevated concentrations of arsenic (26 ppm), cadmium (6.1 ppm) and zinc (2,070 ppm) were detected in sample S-6 in the overhead crane area. Elevated concentrations of arsenic (104 ppm) and lead (1,120 ppm) were also detected in sample S-13 collected from the low-lying ground area (Area 3). The vertical and horizontal extent of lead contamination in the drum storage area has been largely delineated and indicates the contamination is mainly confined to the upper foot of soil as demonstrated at SS-10. Other metals detected onsite, specifically mercury, appear to be widespread and not attributed to any single source or process. However, the highest mercury concentrations identified in surface soils is clearly in the area of SS-1 where they are nearly 10 times higher than the next highest detection.

Several PAHs were detected at one or more locations in excess of the RSCOs. The highest concentrations of PAHs were identified in surface samples in the vicinity of the overhead crane area in samples S-6, S-9 and S-11 and at the low-lying ground area at S-12, S-13 and S-14.

Other PAH concentrations were identified slightly above the RSCO for benzo(a)pyrene at the aboveground tank area, the leachfield area and the drum storage area.

In addition, an oily residue was observed on the floor and within a process trench at the Site. The cost associated with the removal of the oily residue is included in each of the technologies evaluated.

EVALUATION OF TECHNOLOGIES TO ADDRESS IMPACTED SOIL

Several technologies were evaluated for remediating the soil contamination at the Jonas site. The technologies available to treat both the metals and PAHs are limited. For this study, the remedial options evaluated were narrowed to no further action, ex-situ remediation of the soil (excavation and off-site disposal or treatment), in-situ management of the soil through a combination of institutional (deed restriction) and engineering controls (capping), or a combination of soil removal for the most impacted soils, combined with engineering and institutional controls for less contaminated soils left onsite. The biological and chemical remedial alternatives typically identified to remediate organic contaminants are not effective on inorganic contaminants (metals) and therefore are not discussed.

NO FURTHER ACTION FOR IMPACTED SOILS

The No Further Action alternative for impacted soils was included as a procedural requirement and as a basis for comparison. Past remedial action conducted has been effective in removing potential contaminant source material from the Site.

SELECTION CRITERIA

Compliance with New York Standards, Criteria and Guidelines (SCGs)

The applicable SCGs for the soil onsite include soil cleanup objectives (TAGM 4046) and if applicable, RCRA regulations relating to the handling of hazardous waste, for excavated soils. Since soils exist onsite at the surface above the TAGM 4046 objectives that could result in potential exposure, the no action option does not comply with the SCGs.

Overall Protection of Human Health and the Environment

The No Further Action alternative provides no protection to human health for the potential exposure to impacted surface soils, therefore, this option does not satisfy the requirements of being protective of human health and the environment.

Short Term Impacts and Effectiveness

Since the No Further Action option would not disturb the Site, it would not create any new potential exposure routes for impacted soils as a result of remedial actions, however, it will not achieve the remedial response objectives.

Long Term Effectiveness and Permanence

The No Further Action option provides no reduction in potential exposure risk and provides no additional controls for the contaminant in soil at the Site.

Reduction of Toxicity, Mobility and Volume

The No Further Action option provides for no reduction in toxicity, mobility or volume of contaminants in soil onsite.

Implementability

There are no issues related to the implementability of the No Further Action option for soils

Cost

There are no costs associated with the No Further Action option.

EXCAVATION AND OFF-SITE TREATMENT/DISPOSAL OF ALL IMPACTED SOILS BEYOND RSCOs

The excavation and off-site treatment or disposal of all metals and PAH-contaminated soils would consist of excavating the impacted soils and transporting them offsite for treatment and/or disposal. Based on the extent of impacted soil identified to date, this technology would be applied to nearly the entire Site, estimated to a depth of up to two feet. The full extent of soils exceeding the RSCOs has not been determined. However, marginal exceedances of one or more metal or PAH was observed across most of the Site. Two areas of the Site have been identified to have relatively high concentrations of lead or mercury and could be hazardous. Further sampling would likely be required for waste classification prior to transporting any material offsite. The excavation and off-site treatment and/or disposal of contaminated soils is a proven technology that could be completed in a timely manner. The cost of the remediation would depend on the extent of soil requiring removal, however, based on excavating the entire Site to two feet, a conservative assumption, the estimated cost for this option is approximately $765,000 as shown on Table 8.

SELECTION CRITERIA

Compliance with New York Standards, Criteria and Guidelines (SCGs)

The applicable SCGs for the soil onsite include soil cleanup objectives (TAGM 4046) and if applicable, RCRA regulations relating to the handling of hazardous waste for excavated soils. The removal and off-site disposal or treatment of all impacted soils would be effective in complying with the requirements of TAGM 4046, therefore, this option complies with the SCGs. Since some soils have been found to exceed the RCRA standard for lead toxicity (TCLP lead analysis greater than 5 mg/L) soil excavated from the former drum storage area would likely be classified as a hazardous waste for lead, code D008.

Overall Protection of Human Health and the Environment

The excavation and off-site disposal of impacted soils is protective of human health and the environment as it removes the contaminants from the Site. The extent of excavation of all soil impacted beyond the RSCOs would be protective of human health and the environment.

Short Term Impacts and Effectiveness

The potential exposures to workers and the community during excavation activities, specifically dust, can be minimized or eliminated through the use of proper monitoring equipment and engineering controls. The duration of field activities related the excavation of the entire Site is expected to take approximately one month to complete.

Long Term Effectiveness and Permanence

The excavation and off-site treatment/disposal of all impacted soil would permanently remove the contaminants from the affected area of the Site.

Reduction of Toxicity, Mobility and Volume

Depending on the off-site treatment or disposal options, excavation and off-site disposal may be effective in reducing the mobility of contaminants, if the excavated soil requires treatment for lead prior to disposal.

Implementability

Excavation and off-site treatment/disposal of contaminated soils is a technically feasible option that is well proven. There are numerous facilities permitted and available to accept D008 coded lead contaminated soils. Equipment and personnel are readily available to conduct the excavation and off-site treatment/disposal.

Cost

The estimated cost associated with the excavation of the entire Site is estimated to be approximately $765,000. This estimate is believed to be conservative and the actual cost will be largely dictated by the extent of soil requiring removal.

INSTITUTIONAL AND ENGINEERING CONTROLS (DEED RESTRICTION AND SITE CAPPING)

Based on the future use of the Site, an alternative remedial approach would be to leave soil contaminated above the applicable unrestricted use remedial criteria in place and establish institutional and engineering controls to protect future users of the Site. This would require conducting a risk assessment to identify the contaminant concentrations that are suitable to be left in place based on the designated engineering control and future use of the Site.

The institutional control would consist of a deed restriction prohibiting future residential development of the property. By restricting the property to non-residential use, less stringent remediation criteria could be applied to the Site thereby reducing the scope and cost of the remediation. The deed restriction would identify the nature and extent of soil and groundwater contamination onsite, such that future landowners could be aware of the impacts to future development and the proper handling of impacted soils in the event that excavation of the Site was necessary for future development or to install or maintain subsurface utilities.

The engineering controls that could be implemented onsite are intended to prevent exposure to contaminants remaining above regulatory guidelines. The engineering control would most likely be in the form of a cap covering areas of shallow soil contamination (estimated to be 75 percent of the Site) and gravel or soil and seeded landscape areas (estimated to be 25 percent of the Site). The specific construction of a cap would be based on the extent of soil to be covered and the future use of the property. For the purposes of this estimation, the cap is assumed to be constructed of asphalt over a gravel sub base. Underlying the cap material would be a demarcation barrier, typically a geotextile fabric or similar material. It is anticipated that a future commercial or industrial use of the Site would require parking areas, therefore the cap could potentially be constructed of asphalt pavement to facilitate parking areas. It is also anticipated

that some re-grading of the low-lying area at the east end of the Site would be necessary prior to capping.

SELECTION CRITERIA

Compliance with New York Standards, Criteria and Guidelines (SCGs)

By instituting institutional controls (deed restrictions) and constructing engineering controls (capping), exposure to impacted soils onsite can be eliminated. Therefore, the institutional and engineering controls will meet the basis for soil cleanup objectives as described in (TAGM 4046). In addition, if soils are not excavated, then no hazardous wastes would be generated, therefore, the RCRA regulations relating to the handling of hazardous waste would no longer be applicable.

Overall Protection of Human Health and the Environment

By eliminating the potential exposures to the impacted soil, this remediation option, engineering and institutional controls, will be protective of human health and the environment. In addition, since no groundwater impacts have been identified related to the soil impacts, leaving impacted soil onsite would not contribute to degradation of groundwater quality. Furthermore, if the proposed cap were to be impervious, the potential for leaching of contaminants from soil to groundwater would be further reduced. A soil management plan would be prepared directing future Site owners or operators on care to be taken in the event that future soil excavation is necessary.

Short Term Impacts and Effectiveness

The potential exposures to workers and the community during capping activities, specifically dust, can be minimized or eliminated through the use of proper monitoring equipment and engineering controls. The duration of field activities related capping would be short term and expected to last a few weeks, therefore, impacts would be minimal. Based on this information, the short-term impacts from implementing engineering controls can be readily mitigated.

Long Term Effectiveness and Permanence

Institutional controls, specifically a deed restriction, are typically permanently binding on the property. The engineering controls, specifically a cap, would require inspection and maintenance on a regular basis. Depending on cap design and construction, it would require inspection and, as necessary, maintenance and annual certification to the NYSDEC to ensure its integrity. The soil management plan would ensure soil excavation activities follow all necessary precautions.

Reduction of Toxicity, Mobility and Volume

Institutional controls will have no affect on reducing toxicity, mobility or volume of contaminants present onsite. Engineering controls will aid in reducing contaminant mobility by eliminating the potential for surface soils to be transported by wind or surface water, and may reduce future leaching, but will have no affect on toxicity or volume.

Implementability

As owner of the property, the City of Newburgh has the ability to institute deed restrictions on the property. Since the anticipated use of the property is for non-residential use, instituting a deed restriction should not have a significant impact on the property's value. Constructing engineering controls, specifically capping of the Site, can be conducted using conventional construction means associated with Site paving operations. The same considerations would have to be considered for constructing a parking lot, most significantly design loads for vehicles using the area to determine sub base and pavement requirements and stormwater management issues to address stormwater runoff from the Site.

Cost

The costs associated with implementing institutional controls are minimal and consist of conducting a property survey and preparation and review of the actual deed restriction. It is anticipated the costs to develop and file the deed restriction would be approximately $5,000.

The costs associated with cap construction cannot be determined until the future demands of the Site are identified. Once the future needs of the Site are identified, the appropriate cap construction can be determined, likely either clean fill and/or asphalt pavement, and appropriate costs can then be calculated. Assuming 75 percent of the Site is paved with asphalt and 25 percent of the Site is covered in clean fill or gravel, the estimated cost for this option is approximately $150,000, including the $5,000 listed above for preparation and filing a deed restriction. It is anticipated that if asphalt pavement is selected as the appropriate option, that some of the costs can be combined with those for Site redevelopment since the resulting paved area would be used for Site parking/access.

EXCAVATION OF IMPACTED SOILS FROM HOT SPOTS WITH INSTITUTIONAL AND ENGINEERING CONTROLS (DEED RESTRICTION AND SITE CAPPING)

The excavation and off-site treatment or disposal of the potentially hazardous metal-contaminated soils would consist of excavating the impacted soils and transporting them offsite for treatment and/or disposal. Based on the extent of impacted soil identified to date, this technology would be applied to the former drum storage area where elevated lead concentrations were observed and the area south of the building in the immediate vicinity of sample SS-1 where high levels of mercury were observed. Based on the analytical results to date, it does appear some of the soils encountered at the former drum storage area are hazardous for lead. Based on the total mercury detected at SS-1, (48 mg/kg) this location has the potential to be hazardous for mercury. However, additional testing would likely be required for waste classification prior to transporting any material offsite. The excavation and off-site treatment and/or disposal of contaminated soils is a proven technology that cold be completed in a timely manner.

The cost of the remediation would depend on the extent of soil requiring removal. For this Site, cleanup objectives of 1,000 ppm for lead and 1 ppm for mercury have been established to address the impacts identified at the drum storage area and the location of SS-1, respectively. These cleanup objectives were established by the NYSDEC in conjunction with the capping alternative to address metals impacted soils identified onsite. Prior to backfilling the excavated areas with clean fill, a demarcation barrier such as a geotextile fabric would be placed in the excavations.

As previously discussed, institutional and engineering controls are effective and implementable.

SELECTION CRITERIA

Compliance with New York Standards, Criteria and Guidelines (SCGs)

The applicable SCGs for the soil onsite include soil cleanup objectives (TAGM 4046) and if applicable, RCRA regulations relating to the handling of hazardous waste for excavated soils. The removal and off-site disposal or treatment of impacted soils in conjunction with institutional and engineering controls would be effective in complying with the requirements of TAGM 4046, therefore, this option complies with the SCGs. Since some soils have been found to exceed the RCRA standard for lead toxicity (TCLP lead analysis greater than 5 mg/L) soil excavated from the former drum storage area would likely be classified as a hazardous waste for lead, code D008 and from the area of SS-1, potentially hazardous for mercury, code D009.

Overall Protection of Human Health and the Environment

The excavation and off-site disposal of impacted soils combined with institutional and engineering controls is protective of human health and the environment as it removes the most significant contaminants from the Site, then provides protection in the form of a cap and deed restriction. The extent of excavation to be conducted would determine the degree of protection to human health and the environment. The excavation of hot spots, identified as the former drum storage area and SS-1 will eliminate the identified hazardous levels of lead and potentially hazardous mercury from the Site, however, concentrations of one or more PAH or metal were detected above the RSCOs in nearly every shallow soil sample analyzed, and would remain onsite.

Based on the groundwater samples collected, impacted soil is not affecting groundwater quality onsite.

Short Term Impacts and Effectiveness

The potential exposures to workers and the community during excavation and capping activities, specifically dust, can be minimized or eliminated through the use of proper monitoring

equipment and engineering controls. The duration of field activities related to hot spot excavation would be limited to a few days, and capping would be a couple of weeks, therefore impacts would be minimal.

Long Term Effectiveness and Permanence

The excavation and off-site treatment/disposal of impacted soil would permanently remove the contaminants from the affected area of the Site. The deed restriction would be permanent, but the cap or cover would require regular inspection and maintenance.

Reduction of Toxicity, Mobility and Volume

Depending on the off-site treatment or disposal options, excavation and off-site disposal may be effective in reducing the mobility of contaminants, if the excavated soil requires treatment for lead prior to disposal. Capping has the potential to reduce future leaching from the Site.

Implementability

Excavation and off-site treatment/disposal of contaminated soils is a technically feasible option that is well proven. There are numerous facilities permitted and available to accept D008 coded lead contaminated soils as well as mercury-contaminated soils. Equipment and personnel are readily available to conduct the excavation and off-site treatment/disposal. Institutional and Engineering controls are also readily implementable.

Cost

The estimated cost associated with the excavation of lead contaminated soils from the former drum storage area, mercury contaminated soil near SS-1 and the implementing of institutional and engineering controls and cleaning of oily residues from within the main building on site is estimated to be approximately $208,000, including the preparation and filing of a deed restriction as detailed in Table 8. Nearly half of this cost is related to the covering and/or capping of the site.

RECOMMENDED REMEDIAL ALTERNATIVE OBJECTIVE

The objective of the remedial action is to protect human health and the environment through the prevention of exposure to contaminated soils onsite.

RECOMMENDED REMEDIAL ALTERNATIVE SELECTION

Based on an evaluation of the advantages, disadvantages, effectiveness and the ability to implement, three remedial methods were evaluated for this Site. Based on the information available, a combination of remediation methods is applicable to the Site. Since the extent of mostly high lead and mercury-impacted soils appears to be limited, the excavation and off-site treatment/disposal is the preferred option. However, for other areas of the Site where fairly low levels of metals contamination above the RSCOs appears to be widespread, the remediation of the Site is recommended to consist of institutional controls to restrict the future use of the Site to non-residential use through a deed restriction and further preventing potential exposure through engineering controls, specifically capping.

GROUNDWATER REMEDIATION TECHNOLOGIES

EXTENT AND NATURE OF GROUNDWATER CONTAMINATION

The groundwater sampling identified two VOCs above the NYSDEC standards. PCE was detected above the guideline of 5 ppb during the most recent (September 2002) sampling event at MW-1 (5.9 ppb), MW-2 (6.6 ppb) and MW-4 (9.7 ppb). No PCE was detected in MW-5 or MW-6, which are hydraulically downgradient of MW-1, MW-2 and MW-4.

During the September 2002 sampling event, MTBE was detected at MW-3 at 1,200 ppb, above the NYSDEC guideline of 10 ppb while the previous (August 2001) sampling event identified MTBE at this location at 2.9 ppb. Since the September 2002 MTBE results were so varied from the August 2001 event, MW-3 was re-sampled in December 2002 and MTBE was identified at 29 ppb, which is believed to be representative of Site conditions. The reason for the high MTBE detection at MW-3 in September 2002 has not been determined, but may be attributable to cross contamination of either sampling or laboratory equipment. The only other detections for MTBE during the September 2002 sampling event were 3.9 ppb and 3.4 ppb at MW-5 and MW-

6 respectively. Based on the concentration of MTBE detected, combined with the fact that no BTEX compounds were detected, it is suspected that this is the leading edge of a plume related to a gasoline release some distance northwest of MW-3, potentially offsite.

Metals detected in groundwater during the August 2001 sampling event were due to sample turbidity and were not representative of Site conditions. This was verified during the September 2002 sampling event when turbidity was controlled and all metals were either not detected, or detected at concentrations below NYSDEC standards.

EVALUATION OF TECHNOLOGIES

Several technologies were evaluated for remediating the groundwater contamination at the Jonas site. The technologies evaluated to remediate VOCs in groundwater included air sparging/vacuum extraction, groundwater extraction and treatment, chemical oxidation, and institutional controls. In addition, the option of no action was evaluated as a procedural requirement and as a basis for comparison. Due to the limited extent of VOC impacts in groundwater, specifically no concentrations of VOCs in groundwater in the downgradient wells above NYSDEC standards, air sparging/vacuum extraction, groundwater extraction and treatment, and chemical oxidation were eliminated in the preliminary screening. The remaining options of no action and institutional controls, both with semi-annual monitoring, are described below.

NO ACTION

The no action alternative for groundwater was included as a procedural requirement and as a basis for comparison. The No Action alternative provides for three years of semi-annual groundwater monitoring, but no active remediation.

SELECTION CRITERIA

Compliance with New York Standards, Criteria and Guidelines (SCGs)

The applicable SCGs for the groundwater onsite include the technical and operational guidance series 1.1.1 (TOGs) groundwater quality standards and guidelines. Although the No Action

option does not address the TOGs guidelines onsite, analyte concentrations appear, however, to decrease to below the TOGs standards and guidelines below groundwater migrates off-site.

Overall Protection of Human Health and the Environment

The No Action alternative provides no additional protection to human health for the potential exposure to impacted groundwater. However, the groundwater levels are only marginally above standard for PCE and the MTBE detected in MW-3 is not likely to be Site related. Based on the low levels observed, continued monitoring would be considered protective of human health. In addition, since the migration of groundwater is monitored, there is minimal potential for it to migrate off site unchecked and potentially impacting off-site receptors.

Short Term Impacts and Effectiveness

Since the No Action option would not disturb the Site, it would not create any new potential exposure routes for impacted groundwater as a result of remedial actions, however, the remedial response objectives would not be met.

Long Term Effectiveness and Permanence

The No Action option provides no reduction in potential exposure risk and provides no additional controls for the impacted groundwater at the Site.

Reduction of Toxicity, Mobility and Volume

The No Action option provides for no reduction in toxicity, mobility or volume of contaminants in groundwater onsite. Contaminants in groundwater would be expected to be reduced over time due to natural attenuation. This would be evaluated through the semi-annual monitoring program.

Implementability

There are no issues related to the implementability of the No Action option for groundwater. Groundwater monitoring can be readily implemented on a semi-annual basis.

Cost

The costs associated with the No Action option is estimated to be $49,000 for semi-annual groundwater monitoring and reporting.

INSTITUTIONAL CONTROLS AND GROUNDWATER MONITORING

Institutional controls for groundwater on the Site are expected to consist of a deed restriction prohibiting the use of untreated groundwater at the Site. The Site is served by public water by the City of Newburgh, therefore the prohibition on the use of groundwater should not be an issue. Groundwater monitoring as described above will provide for an evaluation of natural attenuation of groundwater occurring onsite

The groundwater concentrations for PCE during the September 2002 sampling event of 5.9 ppb, 6.6 ppb and 9.7 ppb, in monitoring wells MW-1, MW-2 and MW-4, respectively, are only marginally higher than the NYSDEC Technical and Operational Guidance Series (TOGs) standard of 5 ppb. Furthermore, the groundwater samples from monitoring wells MW-5 and MW-6, located downgradient of MW-1, MW-2 and MW-4, contained no PCE indicating natural attenuation is occurring at the Site. Although MTBE was detected at MW-3 at 1200 ppb, it was not detected at downgradient wells MW-5 and MW-6 above the TOGs guideline of 10 ppb demonstrating the MTBE is not currently migrating offsite at concentrations above the TOGs guideline.

Semi-annual groundwater monitoring can be implemented to evaluate the migration of impacted groundwater. In the event that Site conditions change indicating the possible off-site migration of impacted groundwater, additional remediation measures can be implemented.

SELECTION CRITERIA

Compliance with New York Standards, Criteria and Guidelines (SCGs)

The applicable SCGs for the groundwater onsite include the technical and operational guidance series 1.1.1 (TOGs) groundwater quality standards and guidelines. Institutional controls,

combined with groundwater monitoring, address groundwater impacted beyond the TOGs standards from the Site. Based on current data it would appear to be effective in preventing the unchecked migration of impacted groundwater from the Site.

Overall Protection of Human Health and the Environment

The implementation of institutional controls onsite and groundwater monitoring provides for the protection of human health and the environment by preventing human exposure to groundwater onsite and by verifying impacted groundwater above the TOGs guidelines is not migrating offsite. Since impacted groundwater remains onsite, there is some potential for human exposure during excavation activities. However, this can be minimized through institutional controls identifying the impacted groundwater and appropriate precautions to be taken for current and future property owners.

Short Term Impacts and Effectiveness

Since the institutional controls and groundwater monitoring option would not disturb the Site, it would not create any new potential exposure routes for impacted groundwater as a result of remedial actions.

Long Term Effectiveness and Permanence

The monitored natural attenuation option provides no reduction in potential exposure risk onsite, except as described above through institutional controls. However, groundwater monitoring would be effective in identifying groundwater quality leaving the Site. The natural attenuation of groundwater is effective in permanently reducing groundwater contaminant levels.

Reduction of Toxicity, Mobility and Volume

The monitored natural attenuation option provides for limited reduction in volume and concentration of contaminants in groundwater over time. Although it is not effective in reducing the mobility of contaminants in groundwater, the mobility of contaminants can be monitored and evaluated.

Implementability

The use of institutional controls and groundwater monitoring is readily implementable. The City of Newburgh owns the Site and therefore can dictate deed restrictions, and potable water is provided by public water from the City of Newburgh. Groundwater monitoring can be conducted using the six existing monitoring wells onsite.

Cost

The estimated cost for the institutional control (deed restriction) and three years of semi-annual groundwater monitoring for VOCs is $55,000 as shown on Table 8.

RECOMMENDED REMEDIAL ALTERNATIVE OBJECTIVE

The objective of the remedial action is to prevent exposure to impacted groundwater and to prevent its off-site migration.

RECOMMENDED REMEDIAL ALTERNATIVE SELECTION

Based on an evaluation of the advantages, disadvantages, effectiveness and the ability to implement, institutional controls to prevent the use of groundwater onsite combined with semi-annual groundwater monitoring is the recommended alternative to address the groundwater contamination present. Through the sampling of the existing groundwater monitoring wells onsite, it has been shown that the PCE contamination identified at monitoring wells MW-1, MW-2 and MW-4 is not migrating offsite and therefore appears to be attenuating prior to reaching downgradient monitoring wells MW-5 and MW-6.

Additional groundwater monitoring for VOCs is recommended on a semi-annual basis to verify the attenuation of the PCE and MTBE. In the event that elevated PCE or MTBE concentrations above the TOGs standard are identified at MW-5 or MW-6 in the future, an alternative groundwater remediation method may be warranted.

SUMMARY AND CONCLUSIONS

The remediation activities conducted at the Site to date have been effective in removing the potential sources of contamination identified. The potential sources of contamination identified consisted of the stockpiled petroleum contaminated soil, the underground gasoline tank and associated piping, the three aboveground storage tanks, and the drums and other miscellaneous containers that had been discarded at the Site. The proper removal and off-site disposal of these concerns has ensured conditions at the Site will not degrade further in the future.

The delineation of contaminated soils has been conducted. Based on the results of the sampling, soil impacts exist above the RSCOs for metals and PAHs. The recommended remedial approach to address the impacted soils is excavation and off-site treatment or disposal for the lead-impacted soils at the former drum storage area and mercury contaminated soils in the area of sample SS-1, and the implementation of institutional and engineering controls for the balance of the Site. The removal of soils from these areas will reduce potential future exposures during any Site excavation that may happen in the future. The specific construction of the engineering controls will depend on the extent contamination present as well as any future plans for the redevelopment of the Site.

Based on the calculated groundwater flow direction and the groundwater analytical data, the downgradient extent of PCE and MTBE in groundwater has been delineated. Since no PCE or MTBE have been identified in the downgradient monitoring wells MW-5 and MW-6, institutional controls combined with groundwater monitoring represents the most feasible and cost effective remedial option for the groundwater at the Site.

RECOMMENDATIONS

The impacted soils immediately adjacent to the drum storage area and sample SS-1 should be excavated and removed from the Site to prevent potential exposures or possible degradation of groundwater quality. A deed restriction should be implemented identifying the extent of soil impacts identified and directing current and future owners of necessary precautions to take to prevent exposures. The Site should be capped to prevent exposures to contaminants remaining after removal of the above listed areas. The design and construction of the cap will be dependent on the future use of the Site, but is expected to be some combination of asphalt cap and gravel-covered or landscaped areas.

Institutional controls (deed restriction prohibiting use of groundwater) and semi-annual groundwater monitoring for VOCs is warranted in order to prevent possible exposure to contaminated groundwater and to verify the effectiveness of natural attenuation.

The abandoned vehicles onsite should be removed to ensure fluids that may be present do not impact the Site. In addition, the property should be secured to prevent future dumping at the Site.

TABLE 1 (Page 1 of 11)
SOIL SAMPLING ANALYTICAL RESULTS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Sample Location *Sample Date* *Sample Depth (feet)* *Study Area* PARAMETER (units)	*TAGM Recommended Soil Cleanup Objectives*	S-1 06/13/01 0'-0.5' 1	S-2 06/13/01 0'-0.5' 1	S-3 06/13/01 0'-0.5' 1	S-3 06/13/01 6.5'-7.0' 1	S-4 06/13/01 0'-0.5' 1	S-5 06/13/01 0'-0.5' 1	S-6 06/13/01 0'-0.5' 2
VOCs - (µg/Kg)								
Benzene	*60*	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	--	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzne	--	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	NA	NA	NA	NA	NA	NA	NA
Chloroform	*300*	NA	NA	NA	ND	NA	NA	NA
Ethylbenzene	*5,500*	NA	NA	NA	810	NA	NA	NA
Methylene Chloride	*100*	NA	NA	NA	ND	NA	NA	NA
Naphthalene	*1,300*		NA	NA	NA	NA	NA	NA
Tetrachloroethene	*1,400*	NA	NA	NA	ND	NA	NA	NA
Toluene	*1,500*	NA	NA	NA	ND	NA	NA	NA
Total Xylenes	*1,200*	NA	NA	NA	1400	NA	NA	NA
VOCs TIC		NA	NA	NA	8430 J	NA	NA	NA
SVOCs - (ug/Kg)								
2-Methylnapththalene	*36,400*	ND	ND	ND	ND	ND	ND	ND
Acenaphthalene	*41,000*	ND	ND	ND	ND	ND	ND	78 J
Acenaphthylene	*50,000*	ND	57 J	ND	ND	ND	ND	150 J
Anthracene	*50,000*	ND	75 J	ND	1400 J	ND	ND	430 J
Benzo(a)anthracene	*224*	72 J	160 J	ND	ND	ND	ND	1,400
Benzo(a)pyrene	*61*	57 J	260 J	ND	ND	ND	ND	1,200
Benzo(b)fluoranthene	*1,100*	160 J	250 J	ND	ND	37 J	ND	1,200
Benzo(g,h,i)perylene	*50,000*	280 J	370 J	ND	ND	51 J	ND	440 J
Benzo(k)fluoranthene	*1,100*	140 J	320 J	ND	ND	ND	ND	1,200
Bis(2-Ethylhexyl)phthalate	*50,000*	770	520	300 J	ND	370	610	46 J
Butylbenzylphthalate	*50,000*	ND	110 J	ND	ND	39 J	ND	ND
Chrysene	*400*	100 J	180 J	ND	ND	ND	46 J	1,500
Dibenzo(a,h)anthracene	*14*	101 J	ND	ND	ND	ND	ND	61 J
Diethylphthalate	*7,100*	102 J	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	*8,100*	103 J	ND	ND	ND	ND	ND	ND
Di-n-octylphthalate	*50,000*	104 J	ND	ND	ND	ND	ND	ND
Fluoranthene	*50,000*	105 J	160 J	ND	930 J	ND	49 J	2,800
Fluorene	*50,000*	106 J	53 J	ND	6,200	ND	ND	140 J
Indeno(1,2,3-cd)pyrene	*3,200*	107 J	120 J	ND	ND	ND	ND	380 J
Napthalene	*13,000*	108 J	220 J	ND	29,000	39 J	38 J	ND
Phenanthrene	*50,000*	109 J	250 J	ND	11,000	ND	38 J	1,700
Pyrene	*50,000*	260 J	660	41 J	1100 J	50 J	84 J	2,300
SVOCs TIC		2870 J	3902 J	20460 J	133710 J	2136 J	3567 J	3124 J
PCBs - (ug/Kg)	*1,000 Total PCBs*							
AROCLOR 1016		ND	ND	ND	NA	ND	ND	ND
AROCLOR 1221		ND	ND	ND	NA	ND	ND	ND
AROCLOR 1232		ND	ND	ND	NA	ND	ND	ND
AROCLOR 1242		ND	ND	ND	NA	ND	ND	ND
AROCLOR 1248		ND	ND	ND	NA	ND	ND	ND
AROCLOR 1254		48	43	ND	NA	18	19	ND
AROCLOR 1260		ND	ND	ND	NA	ND	ND	ND
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
Arsenic	*7.5 or SB (3 to 12)*	6.3	6.3	5.9	NA	5.2	7.1	26
Barium	*300 or SB (15 to 600)*	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
Cadmium	*1 or SB (0.1 to 1)*	1.5	1.4	0.64	NA	0.52 B	1.8	6.1
Chromium	*10 or SB(1.5 to 40)*	49.7	104	93.1	NA	394	100	54.5
Copper	*25 or SB(1 to 50)*	77.9	85.5	71.1	NA	52.5	113	217
Lead	*SB(200 to 500)*	834	2400	6600	NA	6330	1,250	441
Mercury	*0.1 (0.001 to 0.2)*	0.21	0.04	0.02	NA	0.06	0.05	0.32
Nickel	*13 or SB (0.5 to 25)*	27.3	32.8	32.1	NA	26.1	40.2	53
Selenium	*SB (0.1 to 3.9)*	ND	ND	ND	NA	ND	ND	0.53 B
Silver	*SB (Not Available)*	3.5	24.4	3.7	NA	2.8	6.3	4.5
Thallium	*SB (Not Available)*	ND	ND	ND	NA	ND	ND	ND
Zinc	*20 or SB (9 to 50)*	364	697	406	NA	399	460	2070
TCLP Lead (mg / L)	*5 (RCRA)*	NA	NA	NA	NA	NA	NA	NA

See Notes on Final Page of this table.

TABLE 1 (Page 2 of 11)
SOIL SAMPLING ANALYTICAL RESULTS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Sample Location *Sample Date* *Sample Depth (feet)* *Study Area* PARAMETER (units)	*TAGM Recommended Soil Cleanup Objectives*	S-6 06/13/01 1.5'-2.0' 2	S-7 06/13/01 0'-0.5' 2	S-7 06/13/01 1.5'-2.0' 2	S-8 06/13/01 0'-0.5' 2	S-8 06/13/01 1.5'-2.0' 2	S-9 06/13/01 0'-0.5' 2	S-9 06/13/01 1.5'-2.0' 2
VOCs - (µg/Kg)								
Benzene	*60*	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	--	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzne	--	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	NA	NA	NA	NA	NA	NA	NA
Chloroform	*300*	2.6 J	NA	ND	NA	ND	NA	ND
Ethylbenzene	*5,500*	ND	NA	ND	NA	ND	NA	ND
Methylene Chloride	*100*	5 J	NA	4.8 J	NA	4.4 J	NA	3.4 J
Naphthalene	*1,300*	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	*1,400*	ND	NA	15	NA	12	NA	8.6
Toluene	*1,500*	ND	NA	ND	NA	ND	NA	ND
Total Xylenes	*1,200*	ND	NA	ND	NA	ND	NA	ND
VOCs TIC		10 J	NA	ND	NA	5.7 J	NA	1100 J
SVOCs - (ug/Kg)								
2-Methylnapththalene	*36,400*	ND	ND	NA	ND	NA	ND	ND
Acenaphthalene	*41,000*	58 J	ND	NA	ND	NA	170 J	ND
Acenaphthylene	*50,000*	63 J	ND	NA	ND	NA	94 J	ND
Anthracene	*50,000*	74 J	ND	NA	ND	NA	380	ND
Benzo(a)anthracene	*224*	200 J	76 J	NA	ND	NA	490	ND
Benzo(a)pyrene	*61*	250 J	84 J	NA	ND	NA	510	ND
Benzo(b)fluoranthene	*1,100*	210 J	89 J	NA	ND	NA	380	ND
Benzo(g,h,I)perylene	*50,000*	140 J	63 J	NA	ND	NA	320 J	ND
Benzo(k)fluoranthene	*1,100*	280 J	82 J	NA	ND	NA	550	ND
Bis(2-Ethylhexyl)phthalate	*50,000*	ND	180 J	NA	110 J	NA	580	ND
Butylbenzylphthalate	*50,000*	ND	ND	NA	ND	NA	ND	ND
Chrysene	*400*	270 J	95 J	NA	ND	NA	590	ND
Dibenzo(a,h)anthracene	*14*	ND	ND	NA	ND	NA	ND	ND
Diethylphthalate	*7,100*	ND	ND	NA	ND	NA	ND	ND
Di-n-butylphthalate	*8,100*	ND	ND	NA	ND	NA	ND	ND
Di-n-octylphthalate	*50,000*	ND	ND	NA	ND	NA	ND	ND
Fluoranthene	*50,000*	550	150 J	NA	ND	NA	1,100	ND
Fluorene	*50,000*	58 J	ND	NA	ND	NA	200 J	ND
Indeno(1,2,3-cd)pyrene	*3,200*	130 J	ND	NA	ND	NA	310 J	ND
Napthalene	*13,000*	46 J	ND	NA	ND	NA	140 J	ND
Phenanthrene	*50,000*	530 J	74 J	NA	ND	NA	1,600	ND
Pyrene	*50,000*	400	140 J	NA	ND	NA	2,300	ND
SVOCs TIC		2142	1570 J	NA	535 J	NA	1317 J	3526
PCBs - (ug/Kg)	*1,000 Total PCBs*							
AROCLOR 1016		NA	ND	NA	ND	NA	ND	NA
AROCLOR 1221		NA	ND	NA	ND	NA	ND	NA
AROCLOR 1232		NA	ND	NA	ND	NA	ND	NA
AROCLOR 1242		NA	ND	NA	ND	NA	ND	NA
AROCLOR 1248		NA	ND	NA	ND	NA	ND	NA
AROCLOR 1254		NA	78	NA	ND	NA	ND	NA
AROCLOR 1260		NA	ND	NA	ND	NA	ND	NA
Metals - (mg/Kg)	*RSCO (Eastern USA Background)*							
Antimony	*SB (Not Available)*	NA	2.2 B	NA	1.4 B	NA	2.1 B	NA
Arsenic	*7.5 or SB (3 to 12)*	NA	7.3	NA	6.9	NA	9	NA
Barium	*300 or SB (15 to 600)*	NA	NA	NA	NA	NA	NA	NA
Beryllium	*0.16(HEAST) or SB(0 to 1.75)*	NA	0.50 B	NA	0.48 B	NA	0.52 B	NA
Cadmium	*1 or SB (0.1 to 1)*	NA	0.50 B	NA	0.46 B	NA	0.37 B	NA
Chromium	*10 or SB(1.5 to 40)*	NA	46.5	NA	21.3	NA	22.9	NA
Copper	*25 or SB(1 to 50)*	NA	44.5	NA	43.4	NA	56.8	NA
Lead	*SB(200 to 500)*	NA	584	NA	79.7	NA	105	NA
Mercury	*0.1 (0.001 to 0.2)*	NA	0.47	NA	0.4	NA	0.16	NA
Nickel	*13 or SB (0.5 to 25)*	NA	20.5	NA	24.1	NA	23.7	NA
Selenium	*SB (0.1 to 3.9)*	NA	ND	NA	ND	NA	ND	NA
Silver	*SB (Not Available)*	NA	1.2	NA	1.1	NA	1.2	NA
Thallium	*SB (Not Available)*	NA	ND	NA	ND	NA	ND	NA
Zinc	*20 or SB (9 to 50)*	NA	223	NA	99.2	NA	132	NA
TCLP Lead (mg / L)	*5 (RCRA)*	NA	NA	NA	NA	NA	NA	NA

See Notes on Final Page of this table.

TABLE 1 (Page 3 of 11)
SOIL SAMPLING ANALYTICAL RESULTS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Sample Location *Sample Date* *Sample Depth (feet)* *Study Area* PARAMETER (units)	*TAGM Recommended Soil Cleanup Objectives*	S-10 06/13/01 0'-0.5' 2	S-10 06/13/01 1.5'-2.0' 2	S-11 06/13/01 0'-0.5' 2	S-11 06/13/01 1.5'-2.0' 2	S-12 06/13/01 0'-0.5' 3	S-12 06/13/01 1.0'-1.5' 3	S-13 06/13/01 0'-0.5' 3
VOCs - (µg/Kg)								
Benzene	*60*	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	--	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzne	--	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	NA	NA	NA	NA	NA	NA	NA
Chloroform	*300*	NA	ND	NA	ND	NA	ND	NA
Ethylbenzene	*5,500*	NA	ND	NA	ND	NA	ND	NA
Methylene Chloride	*100*	NA	3.5 J	NA	ND	NA	ND	NA
Naphthalene	*1,300*	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	*1,400*	NA	4.8 J	NA	ND	NA	ND	NA
Toluene	*1,500*	NA	ND	NA	ND	NA	ND	NA
Total Xylenes	*1,200*	NA	ND	NA	ND	NA	ND	NA
VOCs TIC		NA	7.8 J	NA	ND	NA	ND	NA
SVOCs - (ug/Kg)								
2-Methylnapththalene	*36,400*	ND	NA	ND	ND	ND	NA	ND
Acenaphthalene	*41,000*	ND	NA	ND	430	ND	NA	94 J
Acenaphthylene	*50,000*	ND	NA	ND	52 J	54 J	NA	1,400
Anthracene	*50,000*	ND	NA	ND	720	ND	NA	1,200
Benzo(a)anthracene	*224*	ND	NA	53 J	830	120 J	NA	3,800
Benzo(a)pyrene	*61*	ND	NA	93 J	860	130 J	NA	3,500
Benzo(b)fluoranthene	*1,100*	ND	NA	110 J	520	120 J	NA	5200 D
Benzo(g,h,I)perylene	*50,000*	ND	NA	ND	500	68 J	NA	1,200
Benzo(k)fluoranthene	*1,100*	ND	NA	95 J	1000	210 J	NA	3,800
Bis(2-Ethylhexyl)phthalate	*50,000*	230 J	NA	190 J	ND	140 J	NA	540
Butylbenzylphthalate	*50,000*	ND	NA	ND	ND	100 J	NA	83 J
Chrysene	*400*	ND	NA	74 J	880	150 J	NA	3,700
Dibenzo(a,h)anthracene	*14*	ND	NA	ND	54 J	ND	NA	220 J
Diethylphthalate	*7,100*	53 J	NA	ND	ND	ND	NA	ND
Di-n-butylphthalate	*8,100*	ND	NA	ND	ND	ND	NA	ND
Di-n-octylphthalate	*50,000*	ND	NA	ND	ND	ND	NA	ND
Fluoranthene	*50,000*	ND	NA	91 J	1700	280 J	NA	10000 D
Fluorene	*50,000*	ND	NA	ND	430	ND	NA	520 J
Indeno(1,2,3-cd)pyrene	*3,200*	ND	NA	150 J	410	ND	NA	770
Napthalene	*13,000*	ND	NA	ND	190 J	ND	NA	97 J
Phenanthrene	*50,000*	ND	NA	57 J	1900	140 J	NA	390
Pyrene	*50,000*	47 J	NA	290 J	1400	240 J	NA	8400 D
SVOCs TIC		6420 J	NA	603 J	3586	13730 J	NA	18470 J
PCBs - (ug/Kg)	*1,000 Total PCBs*							
AROCLOR 1016		ND	NA	ND	NA	ND	NA	ND
AROCLOR 1221		ND	NA	ND	NA	ND	NA	ND
AROCLOR 1232		ND	NA	ND	NA	ND	NA	ND
AROCLOR 1242		ND	NA	ND	NA	ND	NA	ND
AROCLOR 1248		ND	NA	ND	NA	ND	NA	ND
AROCLOR 1254		ND	NA	28	NA	ND	NA	ND
AROCLOR 1260		ND	NA	ND	NA	ND	NA	ND
Metals - (mg/Kg)	*RSCO (Eastern USA Background)*							
Antimony	*SB (Not Available)*	1.3 B	NA	1.4 B	NA	4.5 B	NA	6.7 B
Arsenic	*7.5 or SB (3 to 12)*	8.6	NA	5.9	NA	12.3	NA	104
Barium	*300 or SB (15 to 600)*	NA	NA	NA	NA	NA	NA	NA
Beryllium	*0.16(HEAST) or SB(0 to 1.75)*	0.34 B	NA	0.48 B	NA	0.4 B	NA	0.67 B
Cadmium	*1 or SB (0.1 to 1)*	0.81	NA	0.39 B	NA	2	NA	3.4
Chromium	*10 or SB(1.5 to 40)*	18.5	NA	33	NA	66.9	NA	105
Copper	*25 or SB(1 to 50)*	42.5	NA	29.1	NA	143	NA	171
Lead	*SB(200 to 500)*	46.8	NA	169	NA	435	NA	1120
Mercury	*0.1 (0.001 to 0.2)*	0.02	NA	0.13	NA	0.32	NA	6.2
Nickel	*13 or SB (0.5 to 25)*	20.4	NA	26.4	NA	41.1	NA	50.6
Selenium	*SB (0.1 to 3.9)*	ND	NA	ND	NA	0.98	NA	ND
Silver	*SB (Not Available)*	ND	NA	1.2	NA	10.2	NA	8
Thallium	*SB (Not Available)*	ND	NA	ND	NA	ND	NA	0.76 B
Zinc	*20 or SB (9 to 50)*	105	NA	126	NA	320	NA	600
TCLP Lead (mg / L)	*5 (RCRA)*	NA	NA	NA	NA	NA	NA	NA

See Notes on Final Page of this table.

TABLE 1 (Page 4 of 11)
SOIL SAMPLING ANALYTICAL RESULTS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Sample Location *Sample Date* *Sample Depth (feet)* *Study Area* PARAMETER (units)	*TAGM Recommended Soil Cleanup Objectives*	S-13 06/13/01 1.0'-1.5' 3	S-14 06/13/01 0'-0.5' 3	S-14 06/13/01 1.0'-1.5' 3	S-15 06/13/01 0'-0.5' 3	S-15 06/13/01 1.5'-2.0' 3	S-16 06/13/01 0'-0.5' 4	S-16 06/13/01 1.5'-2.0' 4
VOCs - (µg/Kg)								
Benzene	*60*	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	–	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzne	–	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	–	NA	NA	NA	NA	NA	NA	NA
Chloroform	*300*	ND	NA	ND	NA	ND	NA	ND
Ethylbenzene	*5,500*	ND	NA	ND	NA	ND	NA	ND
Methylene Chloride	*100*	ND	NA	ND	NA	ND	NA	ND
Naphthalene	*1,300*	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	*1,400*	ND	NA	3.9	NA	7.6	NA	ND
Toluene	*1,500*	ND	NA	ND	NA	ND	NA	ND
Total Xylenes	*1,200*	ND	NA	ND	NA	ND	NA	ND
VOCs TIC		22 J	NA	7.8 J	NA	ND	NA	ND
SVOCs - (ug/Kg)								
2-Methylnapththalene	*36,400*	NA	ND	NA	ND	NA	ND	NA
Acenaphthalene	*41,000*	NA	260 J	NA	ND	NA	ND	NA
Acenaphthylene	*50,000*	NA	160 J	NA	ND	NA	ND	NA
Anthracene	*50,000*	NA	660	NA	ND	NA	ND	NA
Benzo(a)anthracene	*224*	NA	1,300	NA	ND	NA	ND	NA
Benzo(a)pyrene	*61*	NA	1,200	NA	ND	NA	ND	NA
Benzo(b)fluoranthene	*1,100*	NA	1,300	NA	ND	NA	ND	NA
Benzo(g,h,i)perylene	*50,000*	NA	360 J	NA	ND	NA	ND	NA
Benzo(k)fluoranthene	*1,100*	NA	1,200	NA	ND	NA	ND	NA
Bis(2-Ethylhexyl)phthalate	*50,000*	NA	190 J	NA	57 J	NA	ND	NA
Butylbenzylphthalate	*50,000*	NA	53 J	NA	ND	NA	ND	NA
Chrysene	*400*	NA	1,500	NA	ND	NA	ND	NA
Dibenzo(a,h)anthracene	*14*	NA	51 J	NA	ND	NA	ND	NA
Diethylphthalate	*7,100*	NA	54 J	NA	ND	NA	ND	NA
Di-n-butylphthalate	*8,100*	NA	ND	NA	ND	NA	ND	NA
Di-n-octylphthalate	*50,000*	NA	ND	NA	ND	NA	ND	NA
Fluoranthene	*50,000*	NA	3,000	NA	ND	NA	ND	NA
Fluorene	*50,000*	NA	300 J	NA	ND	NA	ND	NA
Indeno(1,2,3-cd)pyrene	*3,200*	NA	220 J	NA	ND	NA	ND	NA
Napthalene	*13,000*	NA	81 J	NA	ND	NA	ND	NA
Phenanthrene	*50,000*	NA	2,600	NA	ND	NA	ND	NA
Pyrene	*50,000*	NA	2,700	NA	ND	NA	ND	NA
SVOCs TIC		NA	10952 J	NA	2907 J	NA	7355 J	NA
PCBs - (ug/Kg)	*1,000 Total PCBs*							
AROCLOR 1016		NA	ND	NA	ND	NA	ND	NA
AROCLOR 1221		NA	ND	NA	ND	NA	ND	NA
AROCLOR 1232		NA	ND	NA	ND	NA	ND	NA
AROCLOR 1242		NA	ND	NA	ND	NA	ND	NA
AROCLOR 1248		NA	ND	NA	ND	NA	ND	NA
AROCLOR 1254		NA	ND	NA	ND	NA	ND	NA
AROCLOR 1260		NA	ND	NA	ND	NA	ND	NA
Metals - (mg/Kg)	*RSCO (Eastern USA Background)*							
Antimony	*SB (Not Available)*	NA	1.7 B	NA	1.6 B	NA	1.0 B	NA
Arsenic	*7.5 or SB (3 to 12)*	NA	14.5	NA	8.7	NA	5.4	NA
Barium	*300 or SB (15 to 600)*	NA	NA	NA	NA	NA	NA	NA
Beryllium	*0.16(HEAST) or SB(0 to 1.75)*	NA	0.44 B	NA	0.49 B	NA	0.41 B	NA
Cadmium	*1 or SB (0.1 to 1)*	NA	0.49 B	NA	0.27 B	NA	0.06 B	NA
Chromium	*10 or SB(1.5 to 40)*	NA	21.1	NA	17.5	NA	16	NA
Copper	*25 or SB(1 to 50)*	NA	33.4	NA	54.2	NA	16.2	NA
Lead	*SB(200 to 500)*	NA	265	NA	39.6	NA	9.6	NA
Mercury	*0.1 (0.001 to 0.2)*	NA	0.19	NA	ND	NA	0.02	NA
Nickel	*13 or SB (0.5 to 25)*	NA	20.2	NA	21.4	NA	13.6	NA
Selenium	*SB (0.1 to 3.9)*	NA	ND	NA	ND	NA	ND	NA
Silver	*SB (Not Available)*	NA	5.5	NA	0.95 B	NA	0.79 B	NA
Thallium	*SB (Not Available)*	NA	0.58 B	NA	ND	NA	0.56 B	NA
Zinc	*20 or SB (9 to 50)*	NA	140	NA	83.3	NA	51.5	NA
TCLP Lead (mg / L)	*5 (RCRA)*	NA	NA	NA	NA	NA	NA	NA

See Notes on Final Page of this table.

TABLE 1 (Page 5 of 11)
SOIL SAMPLING ANALYTICAL RESULTS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Sample Location *Sample Date* *Sample Depth (feet)* *Study Area* PARAMETER (units)	*TAGM Recommended Soil Cleanup Objectives*	S-16 06/13/01 7.0'-7.5' 4	S-17 06/13/01 0'-0.5' 4	S-17 06/13/01 1.5'-2.0' 4	S-18 (DW) 06/13/01 (Sediment) 4	S-19 06/13/01 0'-0.5' 5	S-19 06/13/01 1.5'-2.0' 5	S-19 06/13/01 7.0'-7.5' 5
VOCs - (µg/Kg)								
Benzene	*60*	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	--	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzne	--	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	NA	NA	NA	NA	NA	NA	NA
Chloroform	*300*	ND	NA	ND	NA	NA	ND	ND
Ethylbenzene	*5,500*	ND	NA	ND	NA	NA	ND	ND
Methylene Chloride	*100*	ND	NA	ND	NA	NA	ND	ND
Naphthalene	*1,300*	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	*1,400*	ND	NA	ND	NA	NA	6.3	ND
Toluene	*1,500*	ND	NA	ND	NA	NA	ND	ND
Total Xylenes	*1,200*	ND	NA	ND	NA	NA	ND	ND
VOCs TIC		ND	NA	ND	NA	NA	26.7 J	16 J
SVOCs - (ug/Kg)								
2-Methylnapththalene	*36,400*	ND	ND	NA	ND	ND	NA	ND
Acenaphthalene	*41,000*	ND	ND	NA	ND	ND	NA	ND
Acenaphthylene	*50,000*	ND	ND	NA	ND	81 J	NA	ND
Anthracene	*50,000*	ND	ND	NA	ND	ND	NA	ND
Benzo(a)anthracene	*224*	ND	ND	NA	110 J	ND	NA	ND
Benzo(a)pyrene	*61*	ND	ND	NA	130 J	110 J	NA	ND
Benzo(b)fluoranthene	*1,100*	ND	ND	NA	100 J	120 J	NA	ND
Benzo(g,h,I)perylene	*50,000*	ND	ND	NA	ND	ND	NA	ND
Benzo(k)fluoranthene	*1,100*	ND	ND	NA	180 J	190 J	NA	ND
Bis(2-Ethylhexyl)phthalate	*50,000*	ND	ND	NA	990	1,400	NA	260 J
Butylbenzylphthalate	*50,000*	ND	ND	NA	510 J	ND	NA	ND
Chrysene	*400*	ND	ND	NA	140 J	ND	NA	ND
Dibenzo(a,h)anthracene	*14*	ND	ND	NA	ND	ND	NA	ND
Diethylphthalate	*7,100*	ND	ND	NA	ND	ND	NA	ND
Di-n-butylphthalate	*8,100*	ND	ND	NA	ND	ND	NA	ND
Di-n-octylphthalate	*50,000*	ND	ND	NA	91 J	ND	NA	ND
Fluoranthene	*50,000*	ND	44 J	NA	220 J	ND	NA	ND
Fluorene	*50,000*	ND	ND	NA	ND	ND	NA	ND
Indeno(1,2,3-cd)pyrene	*3,200*	ND	ND	NA	ND	100 J	NA	ND
Napthalene	*13,000*	ND	ND	NA	ND	ND	NA	78 J
Phenanthrene	*50,000*	ND	ND	NA	170 J	45 J	NA	58 J
Pyrene	*50,000*	ND	ND	NA	320 J	180 J	NA	57 J
SVOCs TIC		4205 J	4470 B	NA	14663 J	3526 J	NA	25340 J
PCBs - (ug/Kg)	*1,000 Total PCBs*							
AROCLOR 1016		NA	ND	NA	ND	ND	NA	NA
AROCLOR 1221		NA	ND	NA	ND	ND	NA	NA
AROCLOR 1232		NA	ND	NA	ND	ND	NA	NA
AROCLOR 1242		NA	ND	NA	ND	ND	NA	NA
AROCLOR 1248		NA	ND	NA	ND	ND	NA	NA
AROCLOR 1254		NA	ND	NA	ND	ND	NA	NA
AROCLOR 1260		NA	ND	NA	ND	ND	NA	NA
Metals - (mg/Kg)	*RSCO (Eastern USA Background)*							
Antimony	*SB (Not Available)*	NA	1.2 B	NA	3.6 B	2.2 B	NA	NA
Arsenic	*7.5 or SB (3 to 12)*	NA	6.7	NA	10.7	10.1	NA	NA
Barium	*300 or SB (15 to 600)*	NA	NA	NA	NA	NA	NA	NA
Beryllium	*0.16(HEAST) or SB(0 to 1.75)*	NA	0.50 B	NA	0.78 B	0.59	NA	NA
Cadmium	*1 or SB (0.1 to 1)*	NA	0.08 B	NA	0.98	0.46 B	NA	NA
Chromium	*10 or SB(1.5 to 40)*	NA	20	NA	54.3	160	NA	NA
Copper	*25 or SB(1 to 50)*	NA	24	NA	110	83.9	NA	NA
Lead	*SB(200 to 500)*	NA	200	NA	438	160	NA	NA
Mercury	*0.1 (0.001 to 0.2)*	NA	0.06	NA	0.08	0.09	NA	NA
Nickel	*13 or SB (0.5 to 25)*	NA	16.4	NA	32.0	31.8	NA	NA
Selenium	*SB (0.1 to 3.9)*	NA	ND	NA	ND	ND	NA	NA
Silver	*SB (Not Available)*	NA	1.2 B	NA	2.7	1.1 B	NA	NA
Thallium	*SB (Not Available)*	NA	ND	NA	ND	ND	NA	NA
Zinc	*20 or SB (9 to 50)*	NA	83.0	NA	282	157	NA	NA
TCLP Lead (mg / L)	*5 (RCRA)*	NA	NA	NA	NA	NA	NA	NA

See Notes on Final Page of this table.

TABLE 1 (Page 6 of 11)
SOIL SAMPLING ANALYTICAL RESULTS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Sample Location *Sample Date* *Sample Depth (feet)* *Study Area* PARAMETER (units)	*TAGM Recommended Soil Cleanup Objectives*	S-20 06/13/01 0'-0.5' 5	S-20 06/13/01 1.5'-2.0' 5	S-21 06/13/01 2.5'-3.0' 5	S-22 (CB) 06/20/01 (Sediment) 5	S-23 06/21/01 6.5'-7.0' 6	S-24 06/21/01 6.5'-7.0' 6
VOCs - (µg/Kg)							
Benzene	*60*	ND	ND	ND	170	ND	ND
Bromodichloromethane	--	ND	ND	ND	ND	NA	NA
n-Butylbenzne	--	NA	NA	NA	NA	ND	ND
sec-Butylbenznene	--	NA	NA	NA	NA	ND	ND
Chloroform	*300*	NA	ND	ND	ND	NA	NA
Ethylbenzene	*5,500*	NA	23	ND	560	ND	ND
Methylene Chloride	*100*	NA	ND	ND	180 B	NA	NA
Naphthalene	*1,300*	NA	NA	NA	NA	ND	ND
Tetrachloroethene	*1,400*	NA	10	87	50 J	NA	NA
Toluene	*1,500*	NA	6.2	ND	1500	ND	ND
Total Xylenes	*1,200*	NA	164	ND	3900	ND	ND
VOCs TIC		NA	1300 J	38 J	28,200 J	ND	ND
SVOCs - (ug/Kg)							
2-Methylnapthlhalene	*36,400*	ND	NA	ND	2,600	NA	NA
Acenaphthalene	*41,000*	ND	NA	ND	ND	NA	NA
Acenaphthylene	*50,000*	150 J	NA	ND	ND	NA	NA
Anthracene	*50,000*	150 J	NA	47 J	910	NA	NA
Benzo(a)anthracene	*224*	ND	NA	84 J	ND	NA	NA
Benzo(a)pyrene	*61*	320 J	NA	88 J	ND	NA	NA
Benzo(b)fluoranthene	*1,100*	190 J	NA	79 J	ND	NA	NA
Benzo(g,h,I)perylene	*50,000*	250 J	NA	64 J	99 J	NA	NA
Benzo(k)fluoranthene	*1,100*	340 J	NA	110 J	ND	NA	NA
Bis(2-Ethylhexyl)phthalate	*50,000*	2,600	NA	ND	4400 D	NA	NA
Butylbenzylphthalate	*50,000*	ND	NA	ND	4,200	NA	NA
Chrysene	*400*	610	NA	99 J	ND	NA	NA
Dibenzo(a,h)anthracene	*14*	ND	NA	ND	ND	NA	NA
Diethylphthalate	*7,100*	ND	NA	ND	ND	NA	NA
Di-n-butylphthalate	*8,100*	ND	NA	ND	160 J	NA	NA
Di-n-octylphthalate	*50,000*	ND	NA	ND	ND	NA	NA
Fluoranthene	*50,000*	ND	NA	200 J	ND	NA	NA
Fluorene	*50,000*	ND	NA	ND	500 J	NA	NA
Indeno(1,2,3-cd)pyrene	*3,200*	340 J	NA	ND	ND	NA	NA
Napthalene	*13,000*	220 J	NA	ND	1,100	NA	NA
Phenanthrene	*50,000*	640	NA	160 J	930	NA	NA
Pyrene	*50,000*	2,000	NA	200 J	1,100	NA	NA
SVOCs TIC		6830 J	NA	5880 J	17270 J	NA	NA
PCBs - (ug/Kg)	*1,000 Total PCBs*						
AROCLOR 1016		ND	NA	NA	NA	NA	NA
AROCLOR 1221		ND	NA	NA	NA	NA	NA
AROCLOR 1232		ND	NA	NA	NA	NA	NA
AROCLOR 1242		ND	NA	NA	NA	NA	NA
AROCLOR 1248		ND	NA	NA	NA	NA	NA
AROCLOR 1254		ND	NA	NA	NA	NA	NA
AROCLOR 1260		ND	NA	NA	NA	NA	NA
Metals - (mg/Kg)	*RSCO (Eastern USA Background)*						
Antimony	*SB (Not Available)*	1.9 B	NA	1.6 B	6.0 B	NA	NA
Arsenic	*7.5 or SB (3 to 12)*	9.8	NA	6.7	6.6	NA	NA
Barium	*300 or SB (15 to 600)*	NA	NA	NA	NA	NA	NA
Beryllium	*0.16(HEAST) or SB(0 to 1.75)*	0.44 B	NA	0.50 B	0.91	NA	NA
Cadmium	*1 or SB (0.1 to 1)*	0.51 B	NA	1.6	13.8	NA	NA
Chromium	*10 or SB(1.5 to 40)*	20.0	NA	17.6	60.7	NA	NA
Copper	*25 or SB(1 to 50)*	53.8	NA	43.5	470	NA	NA
Lead	*SB(200 to 500)*	196	NA	140	862	NA	NA
Mercury	*0.1 (0.001 to 0.2)*	0.20	NA	0.38	0.21	NA	NA
Nickel	*13 or SB (0.5 to 25)*	17.5	NA	18.1	71	NA	NA
Selenium	*SB (0.1 to 3.9)*	0.55 B	NA	ND	0.58 B	NA	NA
Silver	*SB (Not Available)*	1.1	NA	1.4	5	NA	NA
Thallium	*SB (Not Available)*	ND	NA	ND	1.0 B	NA	NA
Zinc	*20 or SB (9 to 50)*	199	NA	236	1480	NA	NA
TCLP Lead (mg / L)	*5 (RCRA)*	NA	NA	NA	NA	NA	NA

See Notes on Final Page of this table.

TABLE 1 (Page 7 of 11)
SOIL SAMPLING ANALYTICAL RESULTS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Sample Location *Sample Date* *Sample Depth (feet)* *Study Area* PARAMETER (units)	*TAGM Recommended Soil Cleanup Objectives*	S-25 06/21/01 6.5'-7.0' 6	S-26 06/21/01 6.5'-7.0' 6	S-27 06/21/01 6.5'-7.0' 6	S-28 06/21/01 2.0'-2.5' 6	S-29 06/20/01 0.6'-1.0' 7	S-30 06/20/01 0.6'-1.0' 7
VOCs - (µg/Kg)							
Benzene	*60*	ND	ND	ND	ND	ND	ND
Bromodichloromethane	–	NA	NA	NA	NA	ND	ND
n-Butylbenzne	–	ND	ND	240	ND	NA	NA
sec-Butylbenznene	–	ND	ND	14	ND	NA	NA
Chloroform	*300*	NA	NA	NA	NA	ND	NA
Ethylbenzene	*5,500*	ND	ND	ND	ND	ND	NA
Methylene Chloride	*100*	NA	NA	NA	NA	ND	NA
Naphthalene	*1,300*	ND	ND	88	ND	NA	NA
Tetrachloroethene	*1,400*	NA	NA	NA	NA	ND	NA
Toluene	*1,500*	ND	ND	ND	ND	ND	NA
Total Xylenes	*1,200*	ND	ND	ND	ND	ND	NA
VOCs TIC		ND	ND	342	ND	ND	NA
SVOCs - (ug/Kg)							
2-Methylnapththalene	*36,400*	NA	NA	NA	NA	56 J	ND
Acenaphthalene	*41,000*	NA	NA	NA	NA	ND	ND
Acenaphthylene	*50,000*	NA	NA	NA	NA	ND	ND
Anthracene	*50,000*	NA	NA	NA	NA	ND	ND
Benzo(a)anthracene	*224*	NA	NA	NA	NA	ND	ND
Benzo(a)pyrene	*61*	NA	NA	NA	NA	ND	ND
Benzo(b)fluoranthene	*1,100*	NA	NA	NA	NA	ND	ND
Benzo(g,h,I)perylene	*50,000*	NA	NA	NA	NA	130 J	ND
Benzo(k)fluoranthene	*1,100*	NA	NA	NA	NA	ND	ND
Bis(2-Ethylhexyl)phthalate	*50,000*	NA	NA	NA	NA	3500 D	97 J
Butylbenzylphthalate	*50,000*	NA	NA	NA	NA	840	ND
Chrysene	*400*	NA	NA	NA	NA	ND	ND
Dibenzo(a,h)anthracene	*14*	NA	NA	NA	NA	ND	ND
Diethylphthalate	*7,100*	NA	NA	NA	NA	ND	75 J
Di-n-butylphthalate	*8,100*	NA	NA	NA	NA	ND	ND
Di-n-octylphthalate	*50,000*	NA	NA	NA	NA	ND	ND
Fluoranthene	*50,000*	NA	NA	NA	NA	ND	ND
Fluorene	*50,000*	NA	NA	NA	NA	ND	ND
Indeno(1,2,3-cd)pyrene	*3,200*	NA	NA	NA	NA	47 J	ND
Napthalene	*13,000*	NA	NA	NA	NA	ND	ND
Phenanthrene	*50,000*	NA	NA	NA	NA	ND	ND
Pyrene	*50,000*	NA	NA	NA	NA	1,200	ND
SVOCs TIC		NA	NA	NA	NA	7565 J	3160 J
PCBs - (ug/Kg)	*1,000 Total PCBs*						
AROCLOR 1016		NA	NA	NA	NA	NA	NA
AROCLOR 1221		NA	NA	NA	NA	NA	NA
AROCLOR 1232		NA	NA	NA	NA	NA	NA
AROCLOR 1242		NA	NA	NA	NA	NA	NA
AROCLOR 1248		NA	NA	NA	NA	NA	NA
AROCLOR 1254		NA	NA	NA	NA	NA	NA
AROCLOR 1260		NA	NA	NA	NA	NA	NA
Metals - (mg/Kg)	*RSCO (Eastern USA Background)*						
Antimony	*SB (Not Available)*	NA	NA	NA	NA	NA	NA
Arsenic	*7.5 or SB (3 to 12)*	NA	NA	NA	NA	NA	NA
Barium	*300 or SB (15 to 600)*	NA	NA	NA	NA	NA	NA
Beryllium	*0.16(HEAST) or SB(0 to 1.75)*	NA	NA	NA	NA	NA	NA
Cadmium	*1 or SB (0.1 to 1)*	NA	NA	NA	NA	NA	NA
Chromium	*10 or SB(1.5 to 40)*	NA	NA	NA	NA	NA	NA
Copper	*25 or SB(1 to 50)*	NA	NA	NA	NA	NA	NA
Lead	*SB(200 to 500)*	NA	NA	NA	NA	NA	NA
Mercury	*0.1 (0.001 to 0.2)*	NA	NA	NA	NA	NA	NA
Nickel	*13 or SB (0.5 to 25)*	NA	NA	NA	NA	NA	NA
Selenium	*SB (0.1 to 3.9)*	NA	NA	NA	NA	NA	NA
Silver	*SB (Not Available)*	NA	NA	NA	NA	NA	NA
Thallium	*SB (Not Available)*	NA	NA	NA	NA	NA	NA
Zinc	*20 or SB (9 to 50)*	NA	NA	NA	NA	NA	NA
TCLP Lead (mg / L)	*5 (RCRA)*	NA	NA	NA	NA	NA	NA

See Notes on Final Page of this table.

TABLE 1 (Page 8 of 11)
SOIL SAMPLING ANALYTICAL RESULTS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Sample Location *Sample Date* *Sample Depth (feet)* *Study Area* PARAMETER (units)	*TAGM Recommended Soil Cleanup Objectives*	S-31 06/20/01 0.6'-1.0' 7	S-32 06/20/01 5.5'-6.0' 6	S-33 06/20/01 5.5'-6.0' 6	SS-1 08/12/02 0.2'-0.3'	SS-2 08/12/02 0.3'-0.4'	SS-3 08/12/02 0.2'-0.3'
VOCs - (µg/Kg)							
Benzene	*60*	ND	ND	ND	NA	NA	NA
Bromodichloromethane	--	ND	12	ND	NA	NA	NA
n-Butylbenzne	--	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	NA	NA	NA	NA	NA	NA
Chloroform	*300*	NA	57	57	NA	NA	NA
Ethylbenzene	*5,500*	NA	ND	ND	NA	NA	NA
Methylene Chloride	*100*	NA	4.2 B	3.8 B	NA	NA	NA
Naphthalene	*1,300*	NA	NA	NA	NA	NA	NA
Tetrachloroethene	*1,400*	NA	ND	ND	NA	NA	NA
Toluene	*1,500*	NA	ND	ND	NA	NA	NA
Total Xylenes	*1,200*	NA	ND	ND	NA	NA	NA
VOCs TIC		NA	ND	ND	NA	NA	NA
SVOCs - (ug/Kg)							
2-Methylnapththalene	*36,400*	56 J	ND	ND	ND	ND	38 J
Acenaphthalene	*41,000*	ND	ND	ND	ND	ND	ND
Acenaphthylene	*50,000*	77 J	ND	ND	ND	79 J	43 J
Anthracene	*50,000*	84 J	72 J	ND	ND	73 J	65 J
Benzo(a)anthracene	*224*	190 J	230 J	110 J	90 J	330 J	180 J
Benzo(a)pyrene	*61*	230 J	220 J	110 J	110 J	350 J	220 J
Benzo(b)fluoranthene	*1,100*	250 J	230 J	140 J	140 J	530	360
Benzo(g,h,I)perylene	*50,000*	140 J	120 J	ND	86 J	140 J	120 J
Benzo(k)fluoranthene	*1,100*	330 J	140 J	91 J	81 J	260 J	170 J
Bis(2-Ethylhexyl)phthalate	*50,000*	330 J	ND	64 J	47 J	130 J	170 J
Butylbenzylphthalate	*50,000*	78 J	ND	ND	ND	ND	48 J
Chrysene	*400*	260 J	250 J	120 J	120 J	370	240 J
Dibenzo(a,h)anthracene	*14*	ND	ND	ND	ND	ND	ND
Diethylphthalate	*7,100*	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	*8,100*	ND	49 J	ND	ND	38 JB	77 JB
Di-n-octylphthalate	*50,000*	ND	ND	ND	ND	ND	37 J
Fluoranthene	*50,000*	280 J	480	170 J	190 J	740	420
Fluorene	*50,000*	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	*3,200*	52 J	110 J	ND	81 J	140 J	98 J
Napthalene	*13,000*	40 J	ND	ND	ND	ND	ND
Phenanthrene	*50,000*	200 J	270 J	110 J	93 J	300 J	200 J
Pyrene	*50,000*	480	440	190 J	160 J	570	350 J
SVOCs TIC		11280 J	1454 J	2851 J	1,400 J[1]	5,650 J[1,2]	5,447 J[1,2]
PCBs - (ug/Kg)	*1,000 Total PCBs*						
AROCLOR 1016		NA	NA	NA	NA	NA	NA
AROCLOR 1221		NA	NA	NA	NA	NA	NA
AROCLOR 1232		NA	NA	NA	NA	NA	NA
AROCLOR 1242		NA	NA	NA	NA	NA	NA
AROCLOR 1248		NA	NA	NA	NA	NA	NA
AROCLOR 1254		NA	NA	NA	NA	NA	NA
AROCLOR 1260		NA	NA	NA	NA	NA	NA
Metals - (mg/Kg)	*RSCO (Eastern USA Background)*						
Antimony	*SB (Not Available)*	NA	ND	ND	ND	ND	ND
Arsenic	*7.5 or SB (3 to 12)*	NA	8.1	10.7	8.7	12	11
Barium	*300 or SB (15 to 600)*	NA	NA	NA	74	97	79
Beryllium	*0.16(HEAST) or SB(0 to 1.75)*	NA	0.50 B	0.51 B	ND	ND	ND
Cadmium	*1 or SB (0.1 to 1)*	NA	ND	ND	ND	1.7	1.4
Chromium	*10 or SB(1.5 to 40)*	NA	29	78.8	36	59	51
Copper	*25 or SB(1 to 50)*	NA	43	56.8	50	140	84
Lead	*SB(200 to 500)*	NA	296	973	290	450	330
Mercury	*0.1 (0.001 to 0.2)*	NA	0.62	0.28	48	5.6	3.8
Nickel	*13 or SB (0.5 to 25)*	NA	40.2	35.6	31	50	43
Selenium	*SB (0.1 to 3.9)*	NA	ND	ND	ND	ND	ND
Silver	*SB (Not Available)*	NA	ND	ND	ND	ND	ND
Thallium	*SB (Not Available)*	NA	ND	ND	ND	ND	ND
Zinc	*20 or SB (9 to 50)*	NA	137	359	190	260	220
TCLP Lead (mg / L)	*5 (RCRA)*	NA	NA	NA	NA	NA	NA

See Notes on Final Page of this table.

TABLE 1 (Page 9 of 11)
SOIL SAMPLING ANALYTICAL RESULTS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Sample Location *Sample Date* *Sample Depth (feet)* *Study Area* PARAMETER (units)	*TAGM Recommended Soil Cleanup Objectives*	SS-4 08/12/02 0'-0.2'	SS-5 08/12/02 0'-0.2'	SS-5 (DNDp 08/12/02 0'-0.2'	SS-6 08/12/02 0.3'-0.4'	SS-7 08/12/02 0'-0.2'	SS-8 08/12/02 0'-0.2'
VOCs - (µg/Kg)							
Benzene	*60*	NA	NA	NA	NA	NA	NA
Bromodichloromethane	--	NA	NA	NA	NA	NA	NA
n-Butylbenzne	--	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	NA	NA	NA	NA	NA	NA
Chloroform	*300*	NA	NA	NA	NA	NA	NA
Ethylbenzene	*5,500*	NA	NA	NA	NA	NA	NA
Methylene Chloride	*100*	NA	NA	NA	NA	NA	NA
Naphthalene	*1,300*	NA	NA	NA	NA	NA	NA
Tetrachloroethene	*1,400*	NA	NA	NA	NA	NA	NA
Toluene	*1,500*	NA	NA	NA	NA	NA	NA
Total Xylenes	*1,200*	NA	NA	NA	NA	NA	NA
VOCs TIC		NA	NA	NA	NA	NA	NA
SVOCs - (ug/Kg)							
2-Methylnaphthalene	*36,400*	ND	ND	ND	ND	NA	NA
Acenaphthalene	*41,000*	ND	ND	ND	ND	NA	NA
Acenaphthylene	*50,000*	300 J	41 J	38 J	45 J	NA	NA
Anthracene	*50,000*	150 J	72 J	68 J	47 J	NA	NA
Benzo(a)anthracene	*224*	770	230 J	190 J	290 J	NA	NA
Benzo(a)pyrene	*61*	920	260 J	210 J	300 J	NA	NA
Benzo(b)fluoranthene	*1,100*	1,300	350 J	300 J	530	NA	NA
Benzo(g,h,I)perylene	*50,000*	330 J	100 J	82 J	130 J	NA	NA
Benzo(k)fluoranthene	*1,100*	600	180 J	150 J	170 J	NA	NA
Bis(2-Ethylhexyl)phthalate	*50,000*	89 J	91 J	74 J	390	NA	NA
Butylbenzylphthalate	*50,000*	ND	ND	ND	ND	NA	NA
Chrysene	*400*	800	290 J	240 J	320 J	NA	NA
Dibenzo(a,h)anthracene	*14*	54 J	ND	ND	ND	NA	NA
Diethylphthalate	*7,100*	ND	ND	ND	ND	NA	NA
Di-n-butylphthalate	*8,100*	43 JB	39 JB	ND	ND	NA	NA
Di-n-octylphthalate	*50,000*	ND	ND	ND	ND	NA	NA
Fluoranthene	*50,000*	1,200	520	490	630	NA	NA
Fluorene	*50,000*	44 J	ND	ND	ND	NA	NA
Indeno(1,2,3-cd)pyrene	*3,200*	340 J	100 J	84 J	120 J	NA	NA
Napthalene	*13,000*	ND	ND	ND	ND	NA	NA
Phenanthrene	*50,000*	440	340 J	310 J	210 J	NA	NA
Pyrene	*50,000*	1,100	430	360	550	NA	NA
SVOCs TIC		6,607 J[1,2]	9,630 J[1]	10,360 J[1]	9,080 J[1]	NA	NA
PCBs - (ug/Kg)	*1,000 Total PCBs*						
AROCLOR 1016		NA	NA	NA	NA	NA	NA
AROCLOR 1221		NA	NA	NA	NA	NA	NA
AROCLOR 1232		NA	NA	NA	NA	NA	NA
AROCLOR 1242		NA	NA	NA	NA	NA	NA
AROCLOR 1248		NA	NA	NA	NA	NA	NA
AROCLOR 1254		NA	NA	NA	NA	NA	NA
AROCLOR 1260		NA	NA	NA	NA	NA	NA
Metals - (mg/Kg)	*RSCO (Eastern USA Background)*						
Antimony	*SB (Not Available)*	ND	ND	ND	ND	NA	NA
Arsenic	*7.5 or SB (3 to 12)*	11	8.7	8.3	7.1	NA	NA
Barium	*300 or SB (15 to 600)*	99	120	110	130	NA	NA
Beryllium	*0.16(HEAST) or SB(0 to 1.75)*	ND	ND	ND	ND	NA	NA
Cadmium	*1 or SB (0.1 to 1)*	ND	ND	ND	ND	NA	NA
Chromium	*10 or SB(1.5 to 40)*	51	58	63	77	NA	NA
Copper	*25 or SB(1 to 50)*	81	57	51	78	NA	NA
Lead	*SB(200 to 500)*	510	710	750	1000	NA	NA
Mercury	*0.1 (0.001 to 0.2)*	2.7	1.1	0.78	ND	NA	NA
Nickel	*13 or SB (0.5 to 25)*	39	33	27	32	NA	NA
Selenium	*SB (0.1 to 3.9)*	ND	ND	ND	ND	NA	NA
Silver	*SB (Not Available)*	ND	ND	ND	ND	NA	NA
Thallium	*SB (Not Available)*	ND	ND	ND	ND	NA	NA
Zinc	*20 or SB (9 to 50)*	270	310	290	280	NA	NA
TCLP Lead (mg / L)	*5 (RCRA)*	NA	NA	NA	NA	0.6	0.38

See Notes on Final Page of this table.

TABLE 1 (Page 10 of 11)
SOIL SAMPLING ANALYTICAL RESULTS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Sample Location *Sample Date* *Sample Depth (feet)* *Study Area* PARAMETER (units)	*TAGM Recommended Soil Cleanup Objectives*	SS-9 08/12/02 0'-0.2'	SS-10 08/12/02 1.0'-1.2'	SS-10 08/12/02 2.3'-2.5'	SS-11 08/12/02 0.2'-0.3'	SS-12 08/12/02 0'-0.2'	SS-13 08/12/02 0.3'-0.4'
VOCs - (µg/Kg)							
Benzene	*60*	NA	NA	NA	NA	NA	NA
Bromodichloromethane	--	NA	NA	NA	NA	NA	NA
n-Butylbenzne	--	NA	NA	NA	NA	NA	NA
sec-Butylbenznene	--	NA	NA	NA	NA	NA	NA
Chloroform	*300*	NA	NA	NA	NA	NA	NA
Ethylbenzene	*5,500*	NA	NA	NA	NA	NA	NA
Methylene Chloride	*100*	NA	NA	NA	NA	NA	NA
Naphthalene	*1,300*	NA	NA	NA	NA	NA	NA
Tetrachloroethene	*1,400*	NA	NA	NA	NA	NA	NA
Toluene	*1,500*	NA	NA	NA	NA	NA	NA
Total Xylenes	*1,200*	NA	NA	NA	NA	NA	NA
VOCs TIC		NA	NA	NA	NA	NA	NA
SVOCs - (ug/Kg)							
2-Methylnapththalene	*36,400*	NA	NA	NA	NA	NA	NA
Acenaphthalene	*41,000*	NA	NA	NA	NA	NA	NA
Acenaphthylene	*50,000*	NA	NA	NA	NA	NA	NA
Anthracene	*50,000*	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	*224*	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	*61*	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	*1,100*	NA	NA	NA	NA	NA	NA
Benzo(g,h,I)perylene	*50,000*	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	*1,100*	NA	NA	NA	NA	NA	NA
Bis(2-Ethylhexyl)phthalate	*50,000*	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	*50,000*	NA	NA	NA	NA	NA	NA
Chrysene	*400*	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	*14*	NA	NA	NA	NA	NA	NA
Diethylphthalate	*7,100*	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	*8,100*	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	*50,000*	NA	NA	NA	NA	NA	NA
Fluoranthene	*50,000*	NA	NA	NA	NA	NA	NA
Fluorene	*50,000*	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	*3,200*	NA	NA	NA	NA	NA	NA
Napthalene	*13,000*	NA	NA	NA	NA	NA	NA
Phenanthrene	*50,000*	NA	NA	NA	NA	NA	NA
Pyrene	*50,000*	NA	NA	NA	NA	NA	NA
SVOCs TIC		NA	NA	NA	NA	NA	NA
PCBs - (ug/Kg)	*1,000 Total PCBs*						
AROCLOR 1016		NA	NA	NA	NA	NA	NA
AROCLOR 1221		NA	NA	NA	NA	NA	NA
AROCLOR 1232		NA	NA	NA	NA	NA	NA
AROCLOR 1242		NA	NA	NA	NA	NA	NA
AROCLOR 1248		NA	NA	NA	NA	NA	NA
AROCLOR 1254		NA	NA	NA	NA	NA	NA
AROCLOR 1260		NA	NA	NA	NA	NA	NA
Metals - (mg/Kg)	*RSCO (Eastern USA Background)*						
Antimony	*SB (Not Available)*	NA	NA	NA	NA	NA	NA
Arsenic	*7.5 or SB (3 to 12)*	NA	NA	NA	NA	NA	NA
Barium	*300 or SB (15 to 600)*	NA	NA	NA	NA	NA	NA
Beryllium	*0.16(HEAST) or SB(0 to 1.75)*	NA	NA	NA	NA	NA	NA
Cadmium	*1 or SB (0.1 to 1)*	NA	NA	NA	NA	NA	NA
Chromium	*10 or SB(1.5 to 40)*	NA	NA	NA	NA	NA	NA
Copper	*25 or SB(1 to 50)*	NA	NA	NA	NA	NA	NA
Lead	*SB(200 to 500)*	NA	240	29	80	750	440
Mercury	*0.1 (0.001 to 0.2)*	NA	NA	NA	NA	NA	NA
Nickel	*13 or SB (0.5 to 25)*	NA	NA	NA	NA	NA	NA
Selenium	*SB (0.1 to 3.9)*	NA	NA	NA	NA	NA	NA
Silver	*SB (Not Available)*	NA	NA	NA	NA	NA	NA
Thallium	*SB (Not Available)*	NA	NA	NA	NA	NA	NA
Zinc	*20 or SB (9 to 50)*	NA	NA	NA	NA	NA	NA
TCLP Lead (mg / L)	*5 (RCRA)*	6.4	NA	NA	NA	NA	NA

See Notes on Final Page of this table.

Notes

NA - Analysis not run for parameter indicated
ND - Parameter not detected above laboratory method detection limit.
SB - Site Background
TIC - Tentatively Identified Compound
RSCO - Recommended Soil Cleanup Objective
-- No RSCO identified
Shaded values exceed RSCO or Eastern USA Background
[1] - Soil samples SS1 to SS6 had significant TICs detected which were also detected in the blanks. Those TICs found in the blanks are NOT included in the above reported totals
[2] - Carbazole was reported by the laboratory in SS2 to SS4 as a listed SVOC. In previous sampling (S-1 to S-33) Carbazole was reported as an SVOC TIC. For consistency, Carbazole detected in samples SS2 to SS4 has been added to the SVOC TICs reported. There is no RSCO for Carbazole.

TABLE 2
GROUNDWATER SAMPLING ANALYTICAL RESULTS - ORGANICS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

SAMPLE ID	GROUND			MW-1		MW-2		MW-3	
LABORATORY SAMPLE NUMBER	WATER	MDL		001	AB67366	003	AB67368	004	AB67370
SAMPLE DATE	STANDARD	08/28/01	09/06/02	08/28/01	09/06/02	08/28/01	09/06/02	08/28/01	09/06/02
Volatile Organic Compounds									
Acetone	50 (GV)		20	17 B	ND	9.1 B	ND	6.6 B	ND
Methylene Chloride	5 (S)	1.1	5.0	0.5 J	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5 (S)	1.8	5.0	ND	ND	ND	ND	0.6 J	ND
Trichloroethene	5 (S)	2.8	5.0	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5 (S)	1.6	5.0	4.1	5.9	7.2	6.6	1.3 J	ND
Methyl tert-butyl ether	10 (G)	1.0	1.0	ND	ND	ND	ND	2.9	1200
TOTAL VOC's				4.6	5.9	7.2	6.6	4.8	1200
TOTAL TIC's				38	7.1 J	ND	6.6 J	ND	58 J
TOTAL VOC's & TIC's				42.6	13.0 J	7.2	13.2 J	4.8	1258 J
Semivolatile Organic Compounds									
Diethylphthalate	50 (GV)	10		ND	NA	ND	NA	1.3 J	NA
bis(2-Ethylhexyl)phthalate	5 (S)	10		ND	NA	2.5 J	NA	ND	NA
TOTAL BN's				ND	NA	2.5 J	NA	1.3 J	NA
TOTAL TIC's				21.24 BJ	NA	ND	NA	93.9 JB	NA
TOTAL BN's & TIC's				21.24 BJ	NA	2.5 J	NA	95.2 JB	NA
Total Petroleum Hydrocarbons				NA	ND	NA	ND	NA	NA

TABLE 2
GROUNDWATER SAMPLING ANALYTICAL RESULTS - ORGANICS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

SAMPLE ID	GROUND			MW-1		MW-2		MW-3	
LABORATORY SAMPLE NUMBER	WATER	MDL		001	AB67366	003	AB67368	004	AB67370
SAMPLE DATE	STANDARD	08/28/01	09/06/02	08/28/01	09/06/02	08/28/01	09/06/02	08/28/01	09/06/02
Metals									
Antimony	3 (S)	8.9	20	ND	ND	ND	ND	9.9 B	ND
Arsenic	25 (S)	6.2	8	8.6 B	ND	ND	ND	18.3	6.1
Barium	1000 (S)		200	NA	32	NA	ND	NA	38
Beryllium	3 (GV)		20	0.69 B	ND	0.34 B	ND	0.92 B	ND
Cadmium	5 (S)	0.6	2	0.82 B	ND	ND	ND	ND	ND
Chromium	50 (S)		10	18.7	ND	7.4 B	ND	25.2	ND
Copper	200 (S)		1000	59.9	ND	47.6	ND	95.6	ND
Lead	25 (S)		10	25.1	ND	13.5	ND	46	ND
Mercury	0.7 (S)	0.2	0.5	ND	ND	ND	ND	ND	ND
Nickel	100 (S)	1.6	10	22.2 B	ND	6 B	ND	33.5 B	ND
Selenium	10 (S)	1.6	10	5.9	ND	2.6 B	ND	ND	ND
Silver	50 (S)	1.7	2	ND	ND	ND	ND	ND	ND
Thallium	0.5 (GV)	4.3	10	ND	ND	ND	ND	13	ND
Zinc	2000 (GV)		30	130 E	ND	80.1 E	ND	200 E	ND
Turbidity (NTUs)				549	14.4	1,000	27.4	1,000	38.8

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
GROUNDWATER SAMPLING ANALYTICAL RESULTS - ORGANICS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

SAMPLE ID	GROUND			MW-4		MW-5		MW-6	Field Blank	Trip Blank
LABORATORY SAMPLE NUMBER	WATER	MDL		005	AB67372	002	AB67374	AB67376	AB67378	AB67379
SAMPLE DATE	STANDARD	08/28/01	09/06/02	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)		20	13 B	ND	15 B	ND	ND	ND	ND
Methylene Chloride	5 (S)	1.1	5.0	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5 (S)	1.8	5.0	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5 (S)	2.8	5.0	1.1 J	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5 (S)	1.6	5.0	8.7	9.7	ND	ND	ND	ND	ND
Methyl tert-butyl ether	10 (G)	1.0	1.0	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)	10		ND	NA	ND	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	5 (S)	10		ND	NA	ND	NA	NA	NA	NA
TOTAL BN's				ND	NA	ND	NA	NA	NA	NA
TOTAL TIC's				48 JB	NA	9.1 JB	NA	NA	NA	NA
TOTAL BN's & TIC's				48 JB	NA	9.1 JB	NA	NA	NA	NA
Total Petroleum Hydrocarbons				NA	ND	NA	NA	ND	NA	NA

TABLE 2
GROUNDWATER SAMPLING ANALYTICAL RESULTS - ORGANICS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

SAMPLE ID	GROUND			MW-4		MW-5		MW-6	Field Blank	Trip Blank
LABORATORY SAMPLE NUMBER	WATER	MDL		005	AB67372	002	AB67374	AB67376	AB67378	AB67379
SAMPLE DATE	STANDARD	08/28/01	09/06/02	08/28/01	09/06/02	08/28/01	09/06/02	09/06/02	09/06/02	09/06/02
Metals										
Antimony	3 (S)	8.9	20	ND	ND	9.6 B	ND	ND	--	--
Arsenic	25 (S)	6.2	8	ND	ND	41.6	ND	ND	--	--
Barium	1000 (S)		200	NA	27	NA	30	110	--	--
Beryllium	3 (GV)		20	0.1 B	ND	2.2 B	ND	ND	--	--
Cadmium	5 (S)	0.6	2	0.72 B	ND	ND	ND	ND	--	--
Chromium	50 (S)		10	8.2 B	ND	67	ND	ND	--	--
Copper	200 (S)		1000	15.5 B	ND	215	ND	ND	--	--
Lead	25 (S)		10	7.6	ND	83.8	ND	ND	--	--
Mercury	0.7 (S)	0.2	0.5	ND	ND	ND	ND	ND	--	--
Nickel	100 (S)	1.6	10	ND	ND	109	ND	ND	--	--
Selenium	10 (S)	1.6	10	4.2 B	ND	ND	ND	ND	--	--
Silver	50 (S)	1.7	2	ND	ND	1.8 B	ND	ND	--	--
Thallium	0.5 (GV)	4.3	10	10.9	ND	ND	ND	ND	--	--
Zinc	2000 (GV)		30	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
GROUNDWATER ELEVATION DATA
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Monitoring Well ID	Inner Casing Elevation	28 August 2001		27 September 2001		7 November 2001		5 September 2002	
		Depth to Groundwater	Groundwater Elevation	Depth to Groundwater	Groundwater Elevation	Depth to Groundwater	Groundwater Elevation	Depth to Groundwater	Groundwater Elevation
MW-1	176.92	13.03	163.89	12.47	164.45	14.08	162.84	12.25	164.67
MW-2	171.96	6.87	165.09	6.35	165.61	7.88	164.08	6.25	165.71
MW-3	173.75	9.30	164.45	8.67	165.08	10.44	163.31	8.64	165.11
MW-4	175.82	8.78	167.04	7.89	167.93	9.42	166.40	9.00	166.82
MW-5	172.77	9.74	163.03	9.16	163.61	11.25	161.52	9.09	163.68
MW-6	174.61	--	--	--	--	--	--	11.02	163.59

Notes:
All measurements are in feet
MW-6 was installed 12 August 2002

TABLE 4
HYDRAULIC CONDUCTIVITY VALUES SUMMARY
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NY

Well I.D.	Hydraulic Conductivity		Average ft/day	Average cm/sec
	ft/min	cm/sec		
MW-1	~	~	~	~
MW-2	1.07E-04	5.436E-05	1.07E-04	5.44E-05
MW-3	3.68E-04	1.87E-04	4.21E-04	2.14E-04
	4.73E-04	2.40E-04		
MW-4	1.89E-03	9.60E-04	1.42E-03	7.19E-04
	9.42E-04	4.79E-04		
MW-5	1.26E-03	6.40E-04	8.22E-04	4.18E-04
	3.84E-04	1.95E-04		
MW-6	~	~	~	~

Average Site Hydraulic Conductivity = 3.51E-04 cm/sec
8.86E-04 ft/day

Note:
~ Indicates there is no data available.

TABLE 5
WELL SEARCH RESULTS
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Well Number	Latitude	Longitude	Surface Elevation (ft)	Depth	Unit Screened	Depth to Groundwater (ft)	Use
1	41° 29' 20"	74° 01' 46"	140	29	Sand and Gravel	18.1	Unknown
2	41° 29' 20"	74° 01' 47"	140	37	Unknown	6.7	Unknown
3	41° 29' 20"	74° 01' 48"	110	32	Unknown	2.8	Unknown
4	41° 29' 20"	74° 01' 49"	110	24	Sand and Gravel	1	Unknown
5	41° 29' 20"	74° 01' 50"	125	33	Sand and Gravel	6.6	Unknown
6	41° 29' 21"	74° 01' 45"	135	38	Sand and Gravel	8	Unknown
7	41° 29' 21"	74° 01' 46"	130	54	Lake Deposits	Unknown	Unknown
8	41° 29' 21"	74° 01' 47"	110	25	Unknown	Unknown	Unknown
9	41° 29' 22"	74° 01' 46"	130	50	Unknown	Unknown	Unknown
10	41° 29' 28"	74° 01' 45"	120	33	Sand and Gravel	7.5	Unknown
11	41° 29' 55"	74° 02' 30"	200	285	Onondaga Limestone	Unknown	Unknown
12	41° 29' 55"	74° 03' 05"	250	92	Onondaga Limestone	20	Unknown
13	41° 29' 55"	74° 03' 06"	260	57	Onondaga Limestone	38	Unknown
14	41° 30' 25"	74° 02' 25"	200	409	Onondaga Limestone	6	Unknown

Information provided by the United States Geological Survey
Latitude and Longitude are based on NAD 1927
Elevation is based on NGVD 1929
*Depths to groundwater listed were measured between 1963 and 1965, no other data was identified

TABLE 6
DRUM / CONTAINER INVENTORY
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Waste Description	Quantity	Container Size
Drum #J-1 RQ Waste Flammable Liquid, N.O.S., 3, UN1992, II	1	30gal
Air break antifreeze and conditioner w/methanol 3X1gal D001		
Mineral spirits 1X1gal D001		
Fiberglass resin – polyester resin in solvent 1X8oz D001		
Cleaning fluid containing: petroleum distillates 1X4oz D001		
Brake fluid-poly-glycol 1X12oz		
Murphy's oil soap 1X1gal		
Drum #J-2 Waste packaged Laboratory Chemicals non-regulated	1	55gal
by DOT/RCRA		
Roof tar-asphalt, Stoddard solvent, cellulose fiber, calcium		
carbonate 3X5gall		
Murphy's oil Soap – solidified 1X1gal		
Castrol bearing crease 1X16oz		
Drum #J-3 Darmex MG-2 Synthetic metallic bearing grease	1	15gal
Drum J-4, J-5 Soil contaminated with oil	2	55gal
Drum #J-6 –J-9, J-11, Used oil and water	5	55gal
Drum #J-10 Mixed oil, diesel fuel & water	1	55gal
Drum #J-12 Lube oil	1	85gal Overpack
Drum #J-13, 14, 19 Oil contaminated speedi-dry & debris	3	55gal
Drum #J-16, 18 Oil contaminated speedi-dry & debris	2	85gal Overpack
Drum #J-20 Used oil and water	1	85gal Overpack
Drum #J-15 Alcohol based fuel treatment D001	1	55gal
Drum #J-17 Oil/water spill cleanup	1	55gal
Empty Drums	44	55gal
Empty Drums	1	20gal

TABLE 7
PRELIMINARY SCREENING OF SOIL AND GROUNDWATER REMEDIAL ALTERNATIVES
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Remedial Alternatives For Soil:

General Response Action	Remedial Technology Process	Description	Comments
No Further Action	No Further Action	As name implies, this alternative would include no further remedial activities beyond those already completed at the site	Technically feasible, will not prevent potential exposure to soils above TAGM 4046 RSCOs
Remove All Soils Above TAGM 4046 RSCOs	Excavation and off-site disposal / treatment	Excavated most of the site to a depth of approximately 2 feet, backfill with imported clean fill	Technically feasible
	Excavation and on-site treatment / reuse	Excavated most of the site to a depth of approximately 2 feet, treat soil on site for reuse	Not technically feasible, technologies are not available to cost-effectively treat soils to applicable standards. This technology not retained for soil treatment
Engineering Control: Site Capping/Cover	Prevent potential exposure to impacted soils by installing cap or cover over site	Site cap/cover would be dependent on future use, assume a combination of 75% asphalt paving and 25% (12-inch depth) imported clean soil or gravel cover over entire site	Technically feasible, future site use would dictate paving/cover requirements
Institutional Controls	Deed Restriction	Legal and/or administrative controls that mitigate potential exposure to impacted soils by detailing the presence of impacted soils on site and describing the handling of excavated soils in the future.	Technically Feasible, in combination with other technologies
Chemical Treatment	Chemical Oxidation	Oxidizing Agents such as hydrogen peroxide or potassium permangante are added to soil to react with organic compound, breaking them down chemically	Not technically feasible as it will not address metals, PAHs in soil are not readily treated by this technology. This technology not retained for soil treatment
Biodegradation	Biodegradation of contaminants in soil	Organic constituents are degraded by microorganisms, often enhanced through the introduction of oxygen or nutrients. Not applicable to inorganics (metals)	Not technically feasible as it will not address metals, and is slow to affect PAHs identified in soils. This technology not retained for soil treatment

TABLE 7
PRELIMINARY SCREENING OF SOIL AND GROUNDWATER REMEDIAL ALTERNATIVES
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

Remedial Alternatives For Groundwater:

General Response Action	Remedial Technology Process	Description	Comments
No action	No active	No active remediation of groundwater would be conducted, groundwater monitoring would continue to evaluate extent of migration.	Technically feasible, contaminant levels would be expected to decrease through natural attenuation
Institutional Controls	Deed Restriction	Legal and/or administrative controls that mitigate potential exposure to impacted groundwater by detailing the presence of impacts on site and prohibiting future use of groundwater	Technically feasible, may be used in combination with other technologies. Should be combined with groundwater monitoring.
Chemical Treatment	Chemical Oxidation	Oxidizing Agents such as hydrogen peroxide or potassium permangante are added to groundwater to react with organic compound, breaking them down chemically	Although technically feasible, this technology does not appear applicable for low levels of PCE detected. In addition, MTBE appears to be from an off-site source. This technology not retained for groundwater treatment
Ex-situ Treatment	Extraction and ex-situ treatment of groundwater (pump and treat)	Groundwater is pumped to the surface from extraction wells or recovery trenches, treated aboveground and then discharged either back to the ground or to a sewer system	Although technically feasible, this technology does not appear applicable for low levels of PCE detected. In addition, MTBE appears to be from an off-site source. This technology not retained for groundwater treatment
In-Situ Stripping of VOCs	Air Sparging/Soil Vapor Extraction	Air is bubbled through the groundwater, stripping the VOCs from the aqueous phase. The VOCs are then removed from the soil through vapor extraction wells using a blower which then typically directs the vapor stream for treatment of VOCs	Although technically feasible, this technology does not appear applicable for low levels of PCE detected. In addition, MTBE appears to be from an off-site source. This technology not retained for groundwater treatment

=Technology determined not to be feasible

TABLE 8
SUMMARY COSTS FOR REMEDIAL ALTERNATIVES
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

TECHNOLOGY: Impacted Soils

Excavate all impacted soils, backfill with clean fill	Quantity	Units	Unit Rate	Line Item Total
Develop Remedial Action Workplan	1	Lump Sum	$6,000	$6,000
Mobilization/Permits	1	Lump Sum	$5,000	$5,000
Excavate All Impacted Soil (Assume excavate all areas of site not covered with buildings (54,000 sq ft) excluding lead and mercury impacted soils, to a depth of two feet)	6,000	Tons	$20	$120,000
Transportation and Disposal of Impacted Soil (non hazardous)	6,000	Tons	$65	$390,000
Excavate Impacted soil (Assume Hazardous for lead or mercury)	180	Tons	$40	$7,200
Transportation and Disposal of Hazardous Soil (lead impacted soils, assume and area 10' by 15' by 2' deep assumes 1.5 tons per cubic yard)	20	Tons	$180	$3,600
Transportation and Disposal of Hazardous Soil (mercury impacted soils, assume and area with radius of 30' around SS-1 to a depth of 1', assumes 1.5 tons/cubic yard)	160	Tons	$210	$33,600
Import and Place Clean Fill to Backfill Excavations	6,180	Tons	$20	$123,600
Cleaning of Oily Residue in Building	5	Days	$2,000	$10,000
Disposal of Oily Residues from Building	20	Drums	$250	$5,000
Engineering Oversight	30	Days	$700	$21,000
Equipment/Expenses	30	Days	$75	$2,250
Post Excavation Sampling	150	Samples	$200	$30,000
Report Preparation	1	Lump Sum	$7,500	$7,500
Total				$764,750

Cap Site (75% Pavement, 25% Clean Fill)	Quantity	Units	Unit Rate	Line Item Total
Develop Remedial Action Workplan	1	Lump Sum	$8,000	$8,000
Mobilization/Permits	1	Lump Sum	$5,000	$5,000
Regrading East End of Site (Low Lying Area)	3	Days	$1,500	$4,500
Import and Place Clean Fill for Cover (13,500 square feet by 1' deep, assumes 1.5 tons/cubic yard)	750	Tons	$20	$15,000
Install Asphalt Cap (Assume 37,800 square feet)	4,200	Square Yards	$18	$75,600
Engineering Oversight	15	Days	$700	$10,500
Equipment/Expenses	15	Days	$75	$1,125
Soil Management Plan	1	Lump Sum	$3,000	$3,000
Cleaning of Oily Residue in Building	5	Days	$2,000	$10,000
Disposal of Oily Residues from Building	20	Drums	$250	$5,000
Preparation/Filing of Deed Restriction for Land	1	Lump Sum	$5,000	$5,000
Report Preparation	1	Lump Sum	$7,500	$7,500
Total				$150,225

Excavate Hot Spots, Cap Site (75% pavement, 25% Clean Fill)				
Develop Remedial Action Workplan	1	Lump Sum	$6,000	$6,000
Mobilization/Permits	1	Lump Sum	$5,000	$5,000
Regrading East End of Site (Low Lying Area)	3	Days	$1,500	$4,500
Excavate Impacted soil (Assume Hazardous for Metals)	180	Tons	$40	$7,200
Transportation and Disposal of Hazardous Soil (lead impacted soils, assume and area 10' by 15' by 2' deep assumes 1.5 tons per cubic yard)	20	Tons	$180	$3,600
Transportation and Disposal of Hazardous Soil (mercury impacted soils, assume and area with radius of 30' around SS-1 to a depth of 1', assumes 1.5 tons/cubic yard)	160	Tons	$210	$33,600
Post Excavation Sampling	25	Samples	$80	$2,000
Import and Place Clean Fill to Backfill Excavations	180	Tons	$20	$3,600
Import and Place Clean Fill for Cover (13,500 square feet by 1' deep, assumes 1.5 tons/cubic yard)	750	Tons	$20	$15,000
Install Asphalt Cap (Assume 37,800 square feet)	4,600	Square Yards	$18	$82,800
Equipment/Expenses	18	Days	$75	$1,350
Engineering Oversight	18	Days	$700	$12,600
Soil Management Plan	1	Lump Sum	$3,000	$3,000
Cleaning of Oily Residue in Building	5	Days	$2,000	$10,000
Disposal of Oily Residues from Building	20	Drums	$250	$5,000
Preparation/Filing of Deed Restriction for Land	1	Lump Sum	$5,000	$5,000
Report Preparation	1	Lump Sum	$7,500	$7,500
Total				$207,750

TABLE 8
SUMMARY COSTS FOR REMEDIAL ALTERNATIVES
FORMER JONAS AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

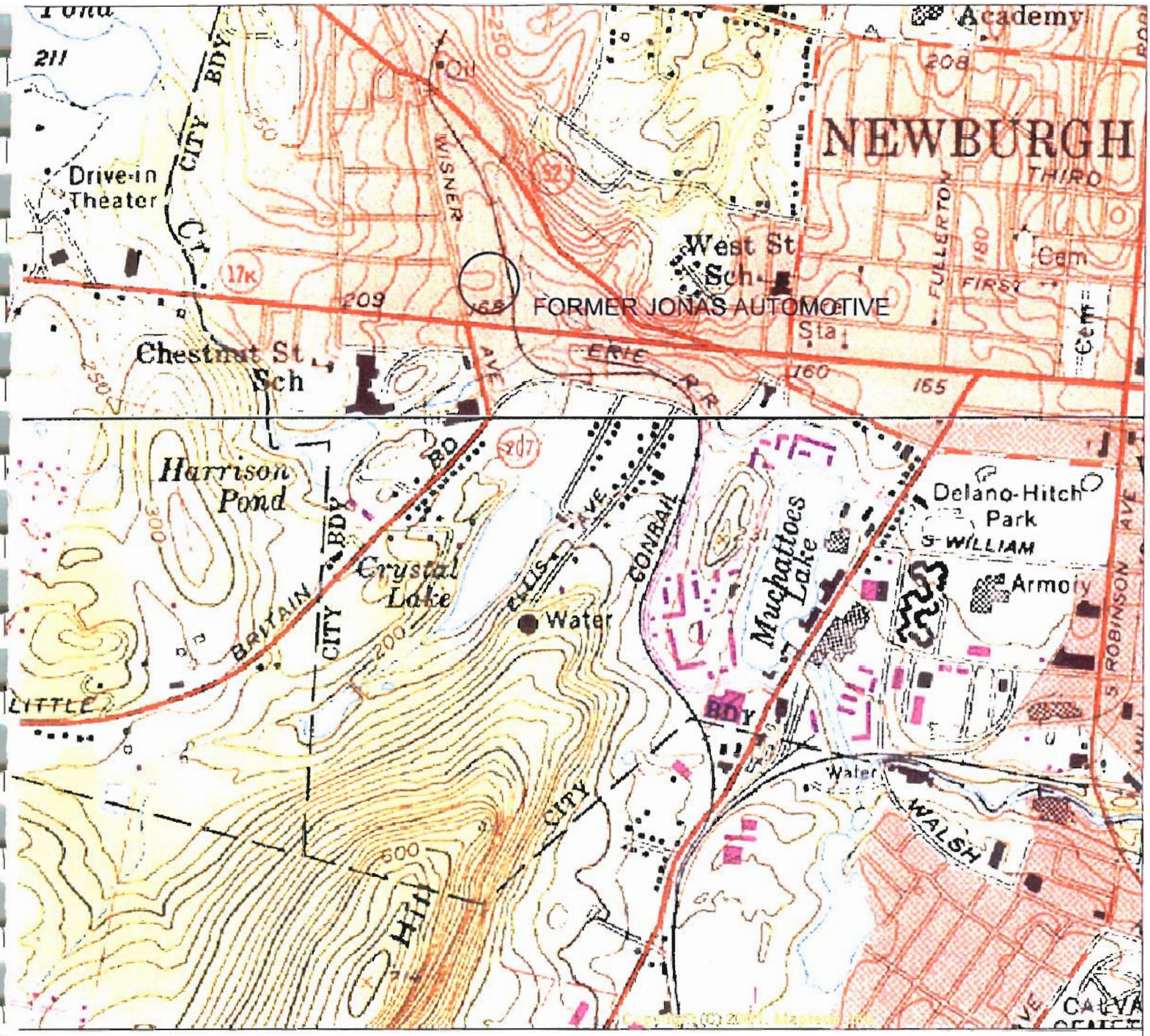
TECHNOLOGY: Impacted Groundwater

No Action, Monitor Groundwater Semi-Annually (3 Years)	Quantity	Units	Unit Rate	Line Item Total
Develop Groundwater Monitoring Plan	1	Lump Sum	$5,000	$5,000
Groundwater Sampling (Labor, Equipment, Expenses)	6	Per Event	$3,000	$16,394*
Groundwater Sample Analysis (VOCs only)	6	Per Event	$1,000	$5,464*
Groundwater Monitoring Report	6	Per Event	$4,000	$21,858*
Total				$48,716

Institutional Control, Monitor Groundwater Semi-Annually (3 Years)	Quantity	Units	Unit Rate	Line Item Total
Prepare/File Deed Restriction	1	Lump Sum	$6,000	$6,000
Develop Groundwater Monitoring Plan	1	Lump Sum	$5,000	$5,000
Groundwater Sampling (Labor, Equipment, Expenses)	6	Per Event	$3,000	$16,394*
Groundwater Sample Analysis (VOCs only)	6	Per Event	$1,000	$5,464*
Groundwater Monitoring Report	6	Per Event	$4,000	$21,858*
Total				$54,716

Note: Costs are estimated based on site conditions identified to date. Actual costs will be dependent on specific end use of site and extent of remediation warranted

* Cost represents present worth cost assuming a 5% interest rate

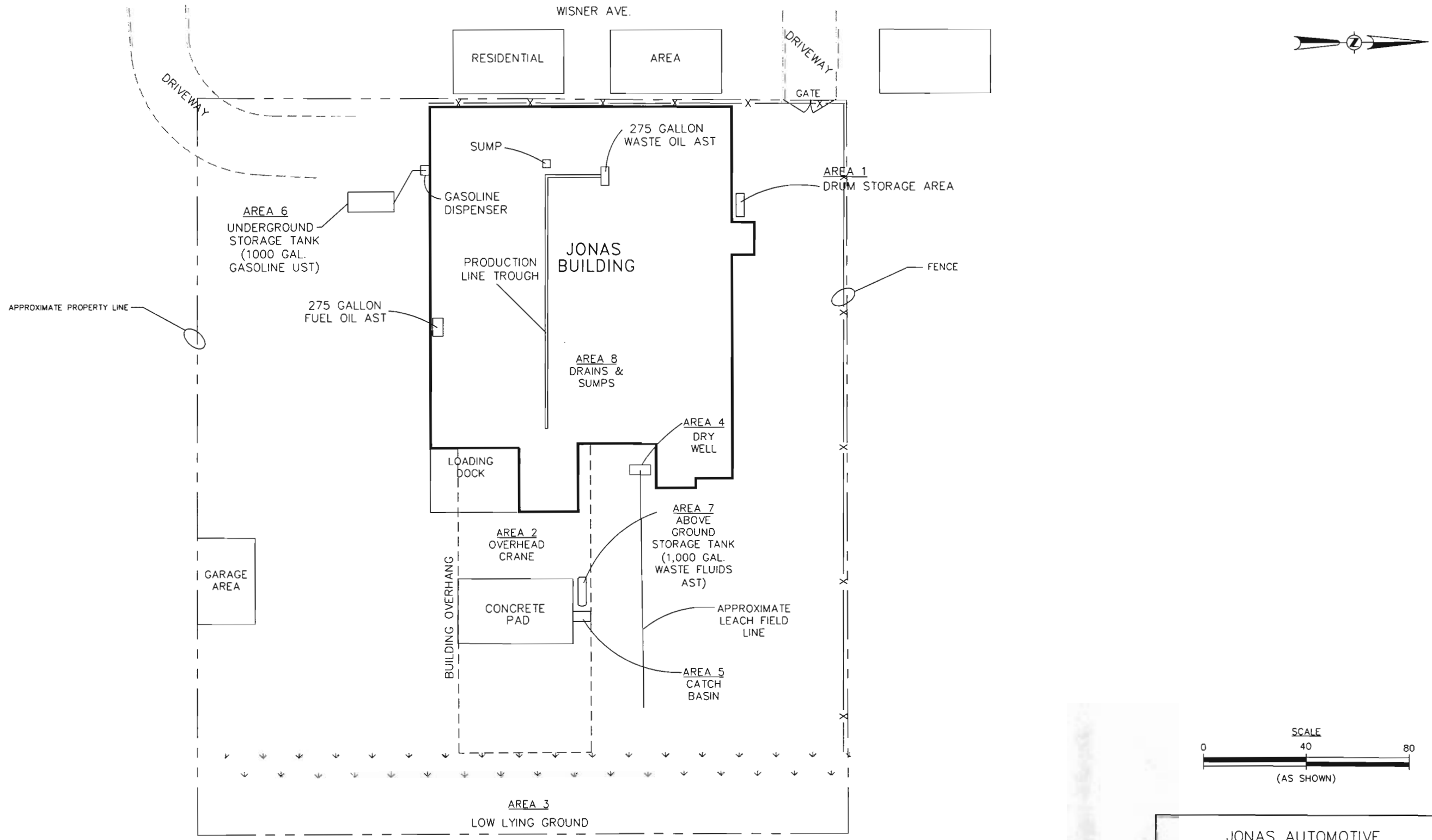


NEWBURGH AND CORNWALL USGS
7.5 MIN QUADRANGLES
1:24,000, NA DATUM 1927
DATED 1957, PHOTO REVISED 1981

FIGURE 1

SITE LOCATION MAP
FORMER JONAS
AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

S:\Drawings\JONAS\JONAS WELL SEARCH.dwg 01/03/2002 09:59:28 AM AM EST



LEGEND

APPROXIMATE PROPERTY LINE

FENCE

SCALE

0 40 80

(AS SHOWN)

JONAS AUTOMOTIVE

NEWBURGH NEW YORK

SITE PLAN

FIGURE 2

DRAWN: AMW CHKD: MEVB

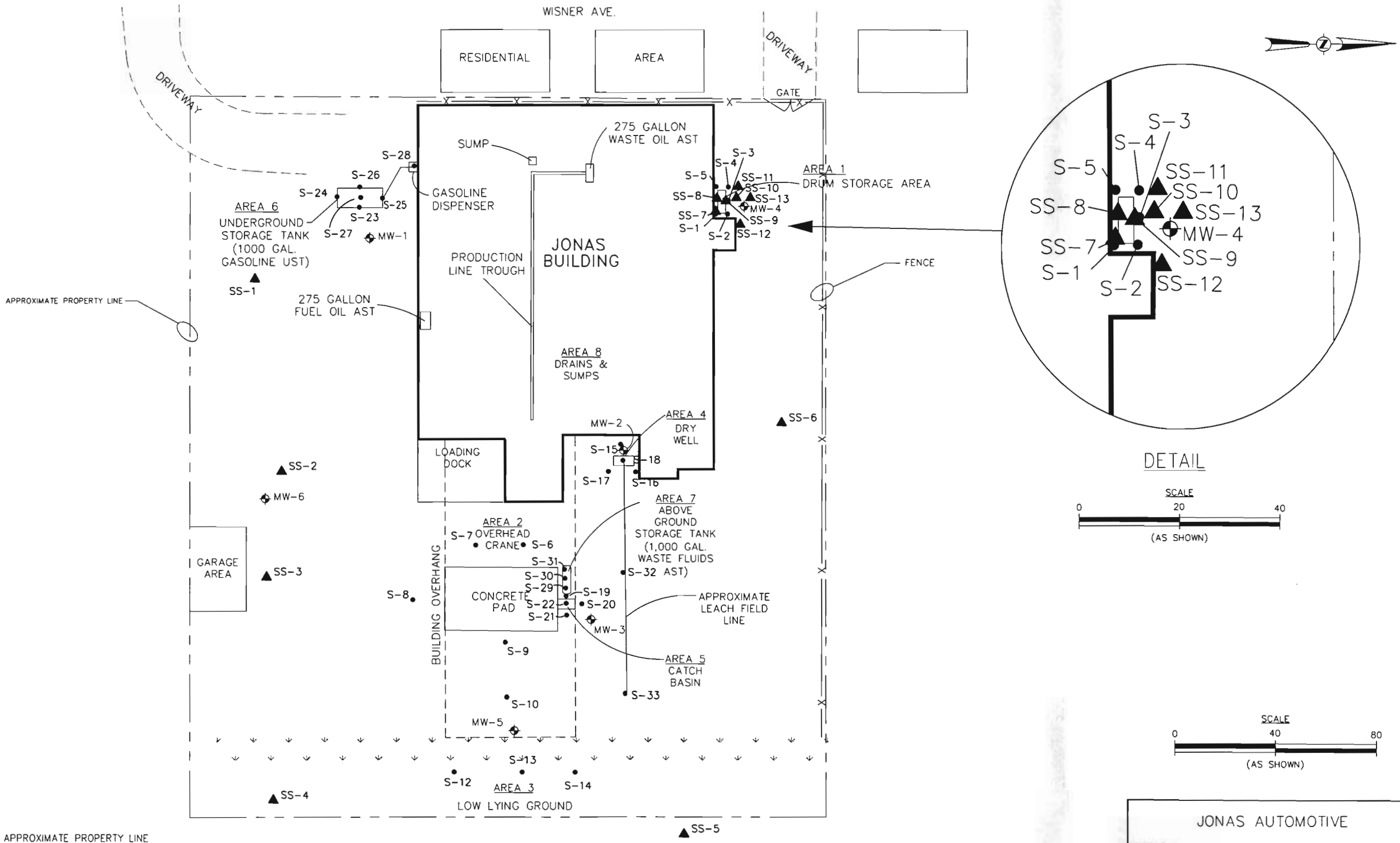
SCALE: AS SHOWN

DATE: 11/05/2002 DATE:

FIRST ENVIRONMENT

BOONTON NEW JERSEY

I:/drawings/jonas/jonas-revised site plan (11-2002).dwg 12/23/2002 12:13:00 pm est



I: /drawings/jonas/jonas-revised site plan (11-2002).dwg 12/23/2002 12:13:00 pm est

JONAS AUTOMOTIVE

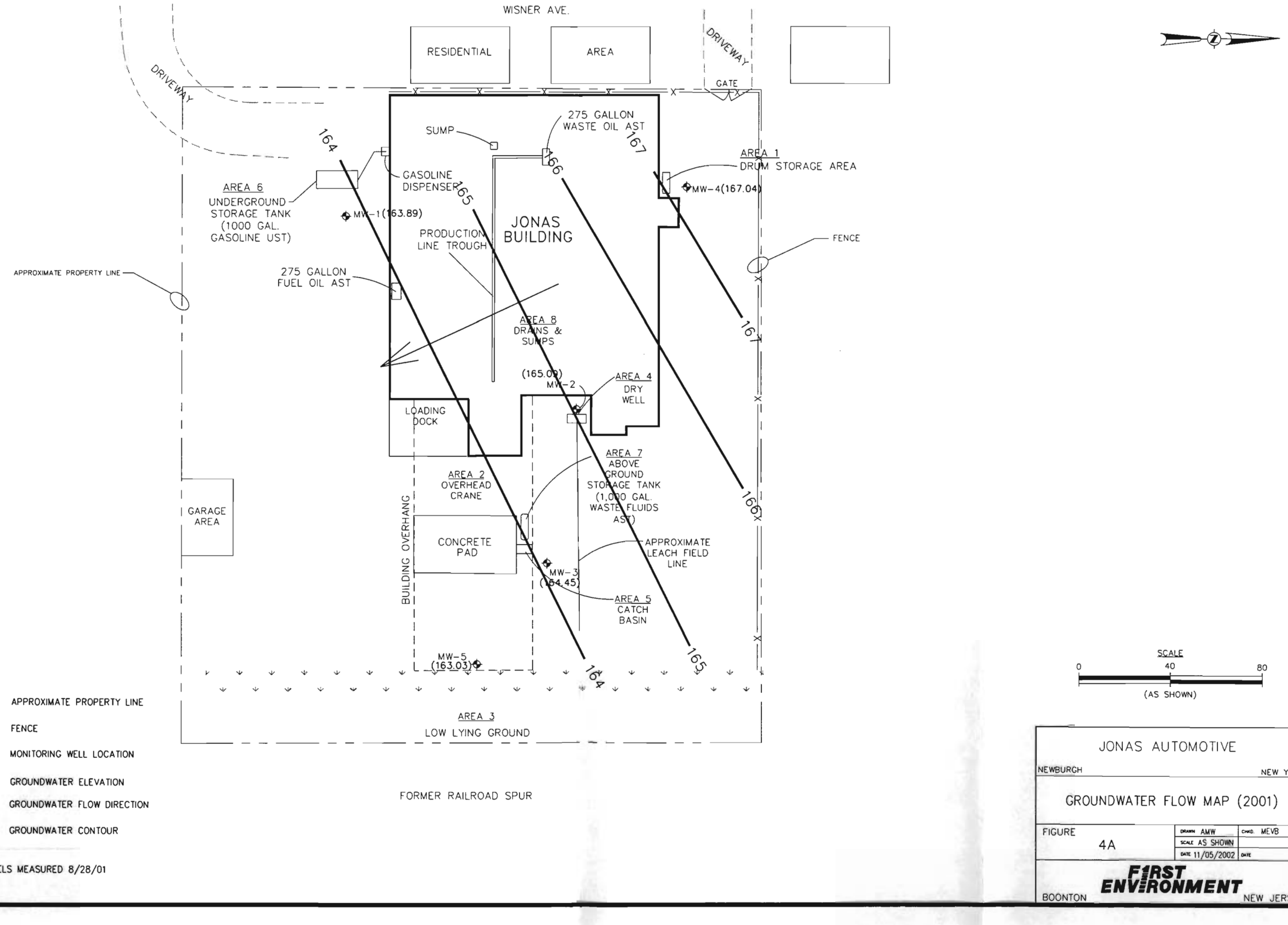
NEWBURGH NEW YORK

SAMPLE LOCATION MAP

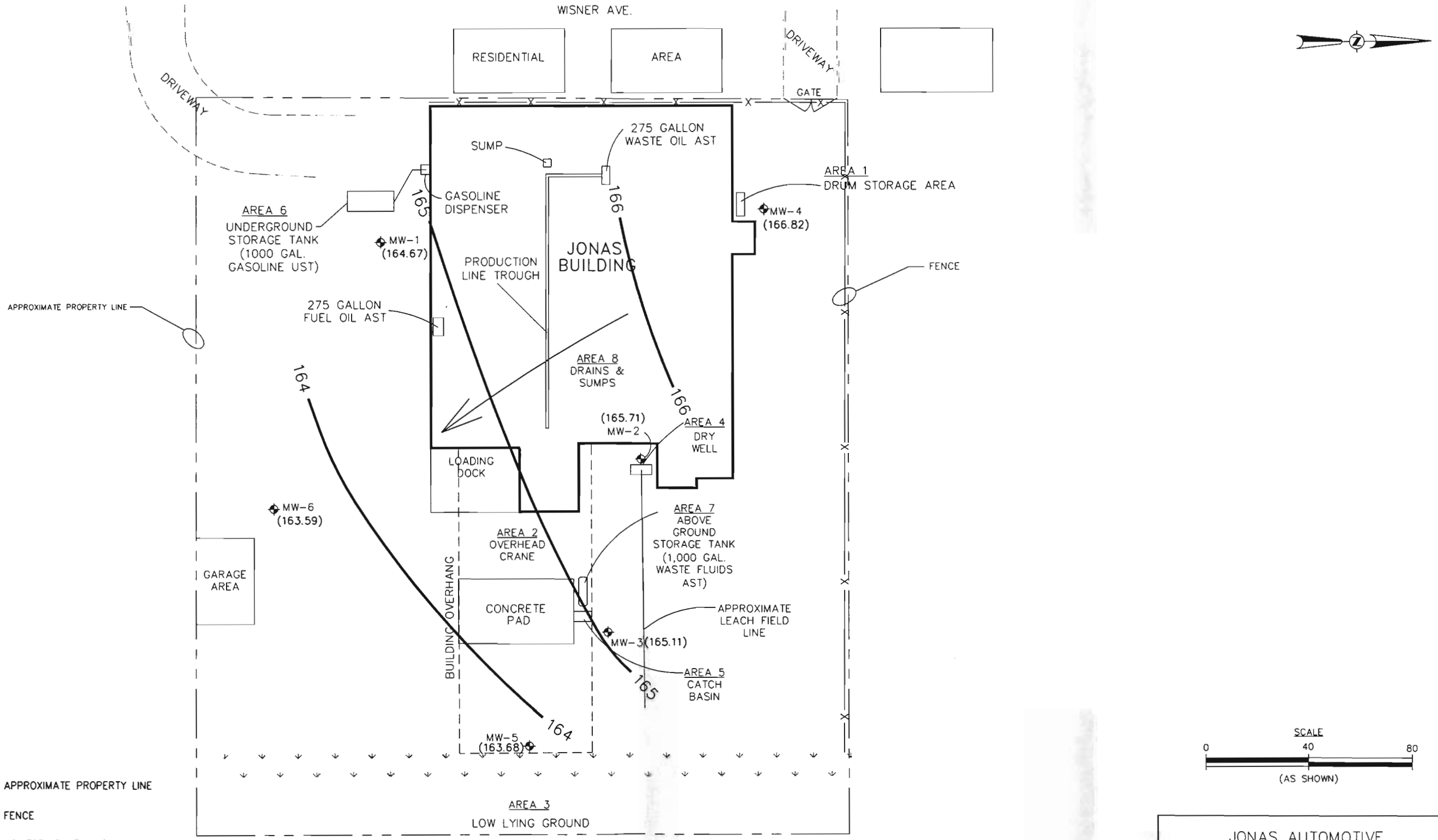
FIGURE	DRAWN AMW	CHKD. MEVB
3	SCALE AS SHOWN	
	DATE 11/05/2002	DATE

FIRST ENVIRONMENT

BOONTON NEW JERSEY



I: /drawings/jonas/jonas-revised site plan (11-2002).dwg 12/23/2002 12:13:00 pm est



LEGEND

- APPROXIMATE PROPERTY LINE
- FENCE
- MW-6 MONITORING WELL LOCATION
- (163.68) GROUNDWATER ELEVATION
- GROUNDWATER FLOW DIRECTION
- 166 GROUNDWATER CONTOUR

NOTE: WATER LEVELS MEASURED 9/5/02

SCALE
0 40 80
(AS SHOWN)

JONAS AUTOMOTIVE

NEWBURGH NEW YORK

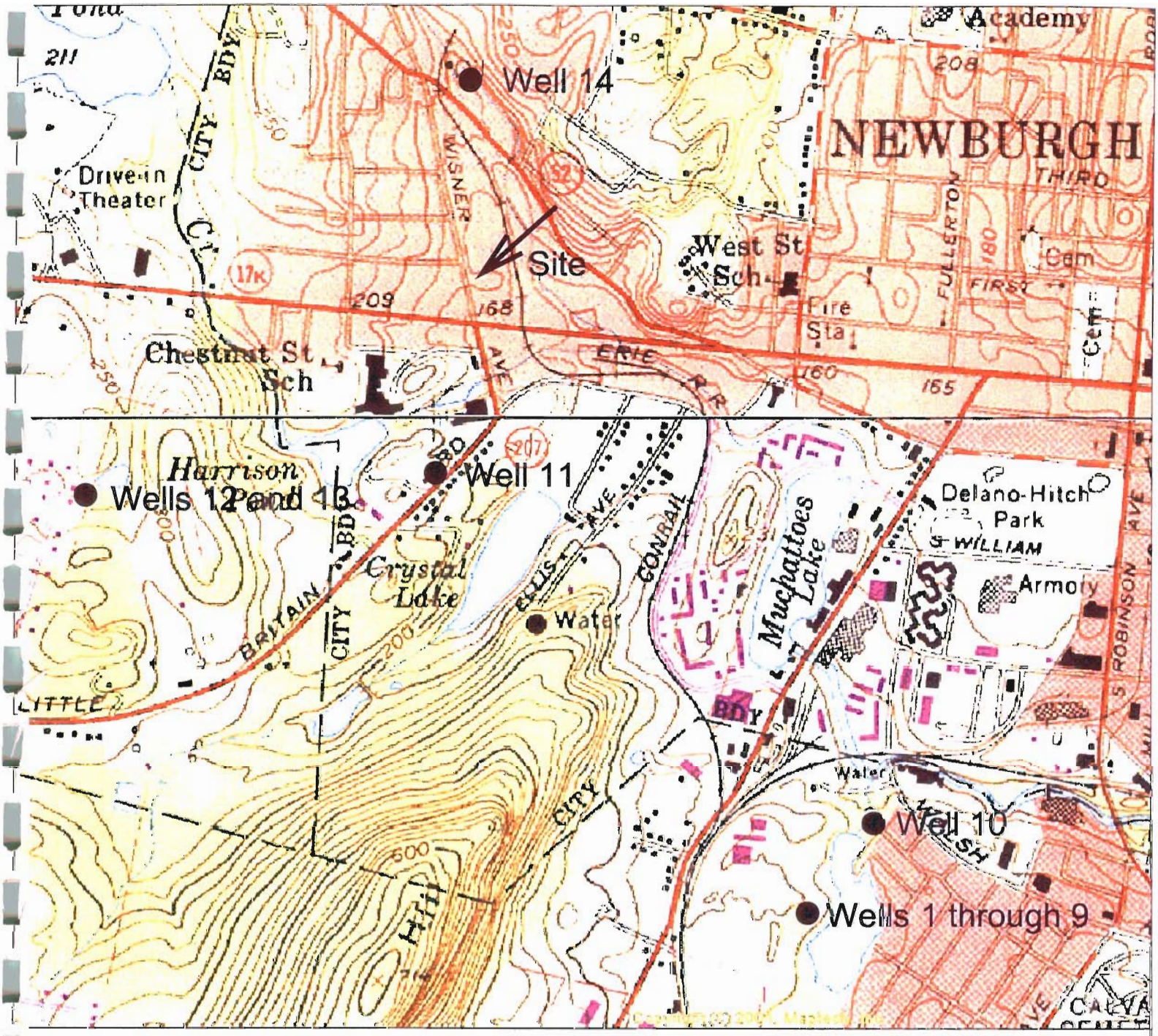
GROUNDWATER FLOW MAP (2002)

FIGURE	DRAWN AMW	CHKD. MEVB
4B	SCALE AS SHOWN	
	DATE 11/05/2002	DATE

FIRST ENVIRONMENT

BOONTON NEW JERSEY

I:/drawings/jonas/jonas-revised site plan (11-2002).dwg 12/23/2002 12:13:00 pm est

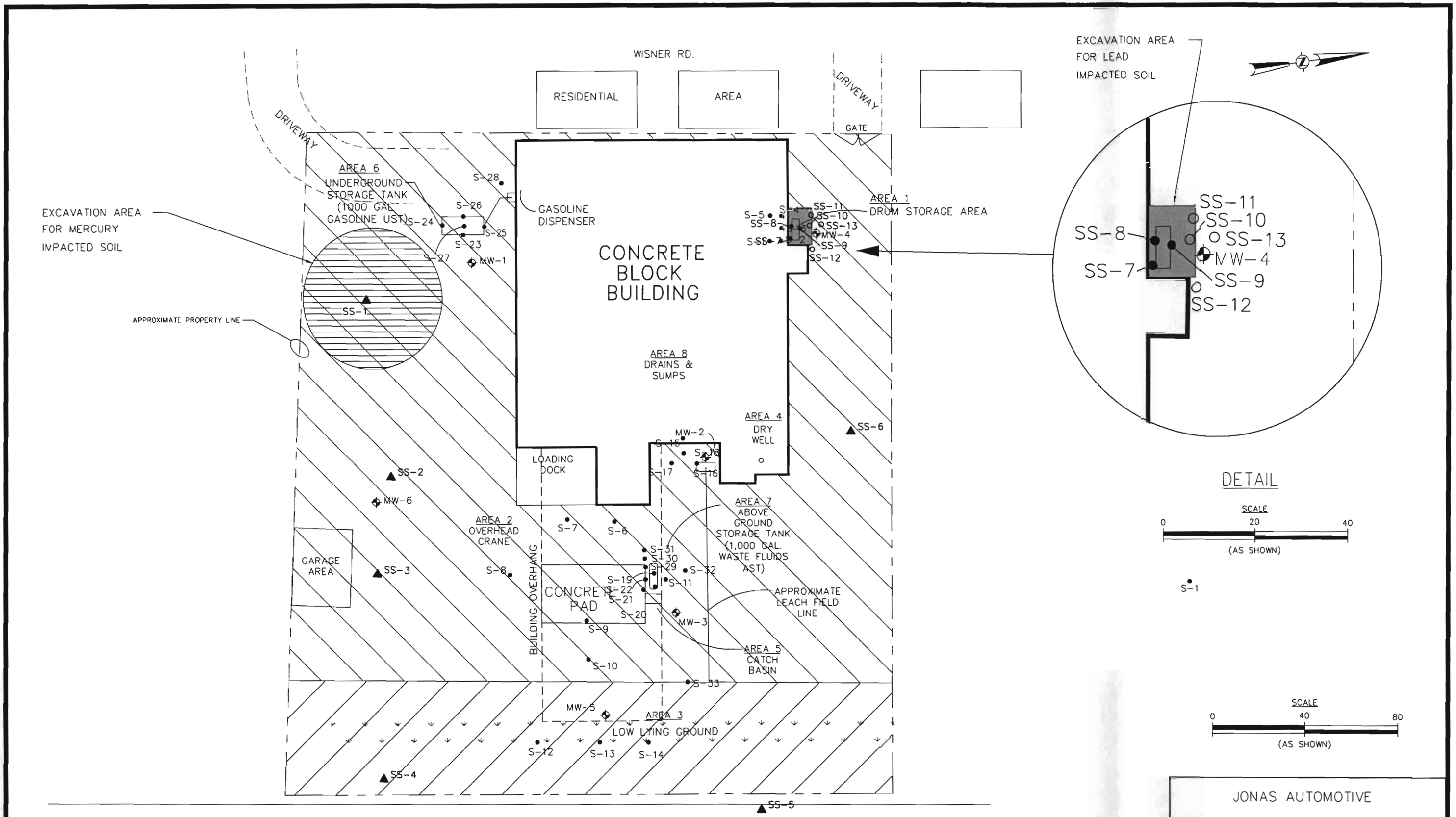


NEWBURGH AND CORNWALL USGS
7.5 MIN QUADRANGLES
1:24,000, NA DATUM 1927
DATED 1957, PHOTO REVISED 1981

FIGURE 5

WELL SEARCH RESULTS
FORMER JONAS
AUTOMOTIVE FACILITY
NEWBURGH, NEW YORK

J:\Drawings\JONAS\JONAS WELL SEARCH.dwg 01/03/2002 09:59:28 AM AM EST



EXCAVATION AREA FOR LEAD IMPACTED SOIL

DETAIL

SCALE
0 20 40
(AS SHOWN)

SCALE
0 40 80
(AS SHOWN)

LEGEND

- MONITORING WELL LOCATION
- SURFACE SOIL SAMPLE (SVOCs AND METALS) (SS-1 TO SS-6)
- SURFACE SOIL SAMPLE (TCLP LEAD) (SS-7, SS-8 & SS-9)
- SURFACE OR SUBSURFACE SAMPLE (SS-10 TO SS-13) (TOTAL LEAD)
- PROPOSED AREA OF ASPHALT CAP
- PROPOSED AREA OF SOIL COVER

JONAS AUTOMOTIVE

NEWBURGH NEW YORK

PROPOSED AREA OF REMEDIATION

FIGURE	DRAWN AMW	CHKD. MEVB
6	SCALE AS SHOWN	
	DATE 9/12/02	DATE

FIRST ENVIRONMENT

BOONTON NEW JERSEY

I:\jonas\fig 6 proposed area of remediation (jonas).dwg 01/28/2003 02:57:28 PM EST

Project No: Jonas001 **Monitoring Well ID.: MW-1**

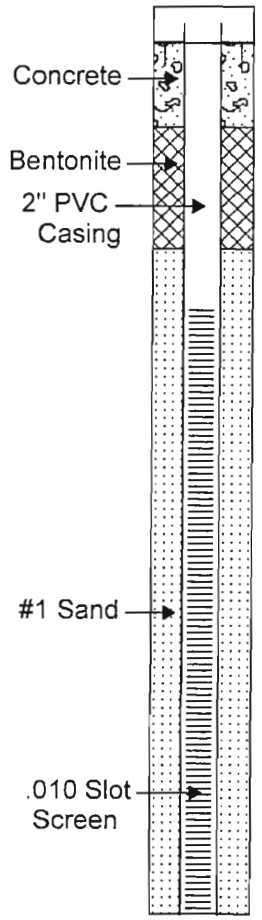
Project: Jonas Automotive

Client: City of Newburgh **Permit No.:**

Site Location: Newburgh, NY **Geologist:** Chris Viani

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

SUBSURFACE PROFILE				SAMPLE					Well Completion Details
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)	
0		Ground Surface							
0		***FINE SAND (FILL)*** Dark brown fine sand; some silt; little fine angular gravel. No staining/odor.	0.0		SS				
2		***SILT (FILL)*** Brown silt; little fine angular gravel. No staining/odor.	2.0		SS			60	
4					SS			2	
6					SS			32	
7		***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					SS			57	
14		End of Borehole	14.0						
18									



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

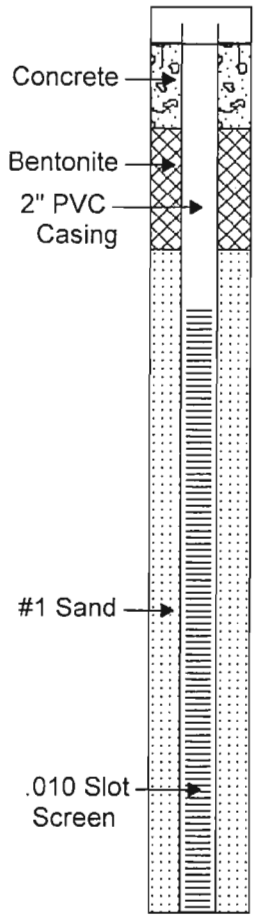
First Environment, Inc.
91 Fulton Street
Boonton, NJ
07005

SUBSURFACE PROFILE

SAMPLE

Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
		Ground Surface						
0		***SAND and GRAVEL (FILL)*** Dark gray fine sand and very angular gravel. No staining/odors. FILL.	0.0		SS			
3		***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			
10					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**

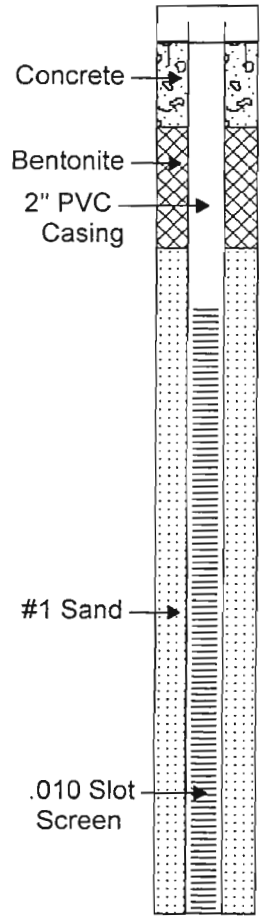
Project: Jonas Automotive

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		***SAND, SILT and GRAVEL (FILL)*** Brown to dark brown sand, silt, and angular fine to medium gravel. FILL.	0.0		SS			0	
3		***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				
5					SS			0	
7					SS			0	
9					SS			0	
11		***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	
13					SS			0	
15					SS				
15		End of Borehole	15.0						



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

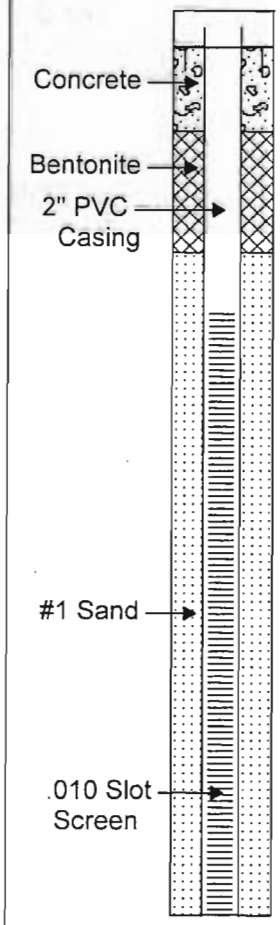
SUBSURFACE PROFILE

Depth (ft)	Symbol	Description	Depth/Elev.
		Ground Surface	
0–2		***SILT (FILL)*** Brown silt; little to some angular gravel, w/ brick fragments and cinders. No staining/odor. FILL.	0.0
2–3.5		***SILT*** Brown silt; little fine to coarse sand; little fine rounded gravel. No staining/odor.	2.5
3.5–5.5		***FINE SAND*** Light reddish brown fine sand; trace silt; with rust, gray, and brown mottles. No staining/odors.	3.5
5.5–9		***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
9–14		***SAND and GRAVEL*** Brown fine to coarse sand and fine to medium rounded gravel; little silt. Wet. No staining/odors.	9.0
14		End of Borehole	14.0

SAMPLE

Number	Type	Blows/ft	Recovery	PID Reading (ppm)
	SS			
	SS			
	SS			
	SS			
	SS			
	SS			
	SS			

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-5**

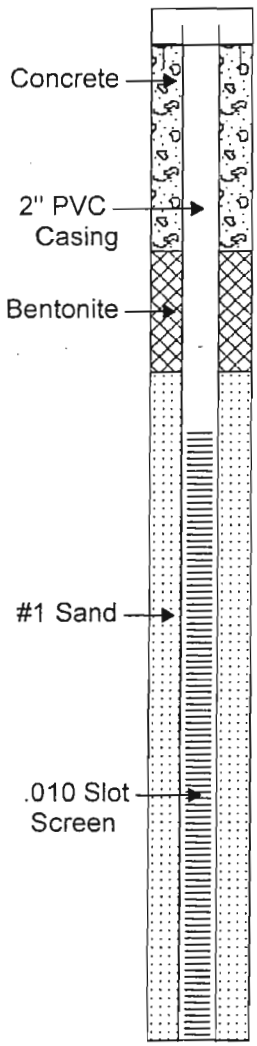
Project: Jonas Automotive

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 (FILL)*** Brown to black sand, silt, and angular fine to coarse gravel. FILL.	0.0		SS			0	
1									
2									
3					SS			0	
4		***COBBLES*** Cobbles. Very poor split-spoon recovery. Wet at 11'.	4.0						
5					SS				
6					SS				
7									
8									
9					SS				
10									
11					SS				
12									
13					SS				
14		***SAND*** Brown fine to coarse sand with occ. gray mottles; little rounded fine to medium gravel; trace silt. Wet. No staining/odor.	14.0						
15									
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**

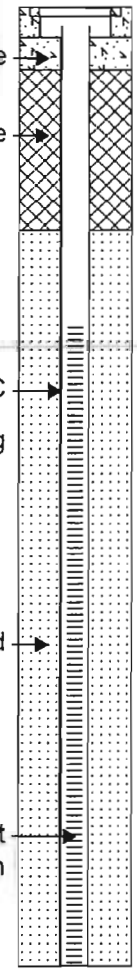
Project: Jonas Automotive

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							
		Fill gray f **GRAVEL**	0.0						
1		Brown f-m Sandy **SILT** moist	0.6	1	SS	3 11 8 6			
		Brown with trace black streaks Clayey **SILT** moist	1.2						
2			1.6						
		Brown SIlty f-m **SAND** trace f gravel moist							
3									
4									
5		Brown f-m **SAND** some silt moist	5.0						
6				2	SS	3 3 2 4			
7									
8		Brown SIlty f **SAND** trace clay wet	7.4	3	SS	6 5 7 7			
9									
10		Brown Silty CLAY trace f sand wet	9.6	4	SS	5 5 4 5			
11									
12				5	SS	4 3 16 45			
13		Brown f-c **GRAVEL** wet at 13 feet	13.0						
14		very little recovery		6	SS	12 16 20 15			
15		End of Borehole	15.0						
16									
17									



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

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

Project No: JONAS001

Soil Boring ID.: S-1

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York ***Permit No.:*** NA

Site Location: Newburgh, New York ***Geologist:*** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		SW Dark Brown to Brown f to c SAND, trace Silt	-0.5	S-1	MC			
		End of Borehole						
1								
2								
3								
4								
5								

Driller:
Drilling Method: Hand Auger
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: Jonas001 **Monitoring Well ID.: MW-1**

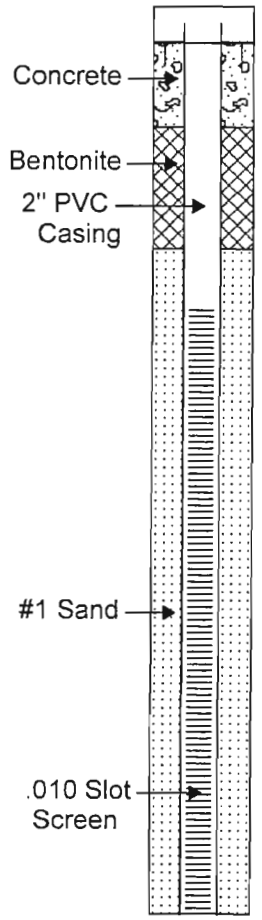
Project: Jonas Automotive

Client: City of Newburgh **Permit No.:**

Site Location: Newburgh, NY **Geologist:** Chris Viani

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

SUBSURFACE PROFILE				SAMPLE					Well Completion Details
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)	
0		Ground Surface							
0		***FINE SAND (FILL)*** Dark brown fine sand; some silt; little fine angular gravel. No staining/odor.	0.0		SS				
2		***SILT (FILL)*** Brown silt; little fine angular gravel. No staining/odor.	2.0		SS			60	
4					SS			2	
6					SS			32	
7		***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					SS			57	
14		End of Borehole	14.0						
18									



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

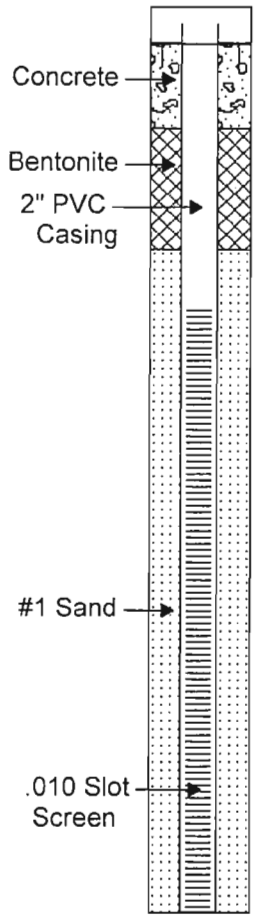
First Environment, Inc.
91 Fulton Street
Boonton, NJ
07005

SUBSURFACE PROFILE

SAMPLE

Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
		Ground Surface						
0		***SAND and GRAVEL (FILL)*** Dark gray fine sand and very angular gravel. No staining/odors. FILL.	0.0		SS			
3		***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			
10					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**

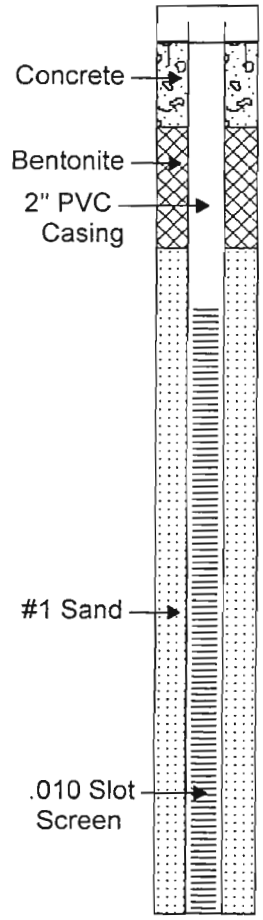
Project: Jonas Automotive

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		***SAND, SILT and GRAVEL (FILL)*** Brown to dark brown sand, silt, and angular fine to medium gravel. FILL.	0.0		SS			0	
3		***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				
5					SS			0	
7					SS			0	
9					SS			0	
11		***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	
13					SS			0	
15					SS				
15		End of Borehole	15.0						



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

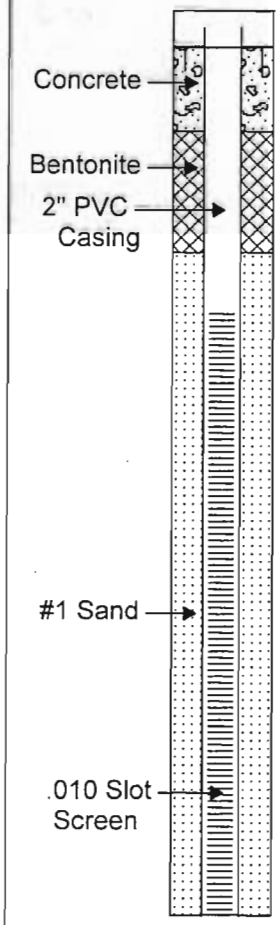
SUBSURFACE PROFILE

Depth (ft)	Symbol	Description	Depth/Elev.
		Ground Surface	
0–2		***SILT (FILL)*** Brown silt; little to some angular gravel, w/ brick fragments and cinders. No staining/odor. FILL.	0.0
2–3.5		***SILT*** Brown silt; little fine to coarse sand; little fine rounded gravel. No staining/odor.	2.5
3.5–5.5		***FINE SAND*** Light reddish brown fine sand; trace silt; with rust, gray, and brown mottles. No staining/odors.	3.5
5.5–9		***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
9–14		***SAND and GRAVEL*** Brown fine to coarse sand and fine to medium rounded gravel; little silt. Wet. No staining/odors.	9.0
14		End of Borehole	14.0

SAMPLE

Number	Type	Blows/ft	Recovery	PID Reading (ppm)
	SS			
	SS			
	SS			
	SS			
	SS			
	SS			
	SS			

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-5**

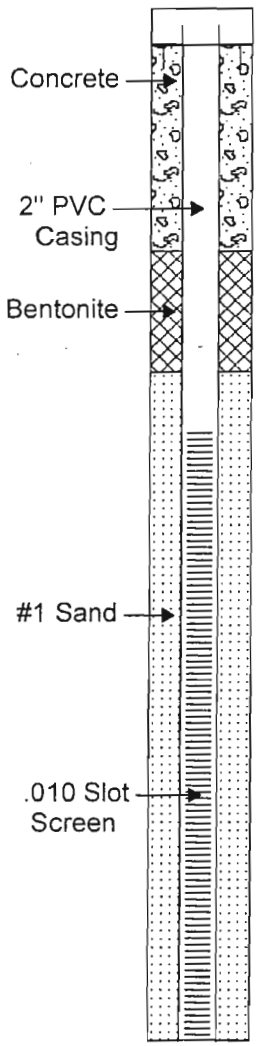
Project: Jonas Automotive

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 (FILL)*** Brown to black sand, silt, and angular fine to coarse gravel. FILL.	0.0		SS			0	
1									
2									
3					SS			0	
4		***COBBLES*** Cobbles. Very poor split-spoon recovery. Wet at 11'.	4.0						
5					SS				
6					SS				
7									
8									
9					SS				
10									
11					SS				
12									
13					SS				
14		***SAND*** Brown fine to coarse sand with occ. gray mottles; little rounded fine to medium gravel; trace silt. Wet. No staining/odor.	14.0						
15									
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

Soil Boring ID.: S-1

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York ***Permit No.:*** NA

Site Location: Newburgh, New York ***Geologist:*** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		SW Dark Brown to Brown f to c SAND, trace Silt	-0.5	S-1	MC			
		End of Borehole						
1								
2								
3								
4								
5								

Driller:
Drilling Method: Hand Auger
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-2

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		SW Dark Brown to Brown f to c SAND, trace Silt		S-2	MC			
1								
2								
3								
4								
5								

Driller:
Drilling Method: Hand Auger
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-3

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
0	SW	Dark Brown to Brown f to c SAND, trace Silt		S-3	MC			0
1								0
2			-2.0					0
2	SC	Brown, f SAND, trace Silt and Clay (fill material)						530
3			-3.5					141
4	SC	Olive/Gray f SAND, some Silt, trace Clay moist soil @ 7.0 ft bgs saturated @ 8.0 ft bgs increasing clay content with depth						132
5								0
6								0
7								730
8								250
9								340
10			-10.5					200
11		Refusal @ 11.0 ft bgs, weathered gravel						95
12								40
13				S-3	MC			53
14								510
15								0
								830
								820
								440
								0
								0
								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-2

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		SW Dark Brown to Brown f to c SAND, trace Silt		S-2	MC			
1								
2								
3								
4								
5								

Driller:
Drilling Method: Hand Auger
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-3

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
0	SW	Dark Brown to Brown f to c SAND, trace Silt		S-3	MC			0
1								0
2			-2.0					0
2	SC	Brown, f SAND, trace Silt and Clay (fill material)						530
3			-3.5					141
4	SC	Olive/Gray f SAND, some Silt, trace Clay moist soil @ 7.0 ft bgs saturated @ 8.0 ft bgs increasing clay content with depth						132
5								0
6								0
7								730
8								250
9								340
10			-10.5					200
11		Refusal @ 11.0 ft bgs, weathered gravel						95
12								40
13				S-3	MC			53
14								510
15								0
								830
								820
								440
								0
								0
								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-4

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York

Permit No.: NA

Site Location: Newburgh, New York

Geologist: S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		SW Dark Brown to Brown f to c SAND, trace Silt		S-4	MC			
1								
2								
3								
4								
5								

Driller:
Drilling Method: Hand Auger
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-5

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York

Permit No.: NA

Site Location: Newburgh, New York

Geologist: S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		SW Dark Brown to Brown f to c SAND, trace Silt		S-5	MC			
1								
2								
3								
4								
5								

Driller:

Drilling Method: Hand Auger

Completion Date: June 14, 2001

Notes:

Borehole Diameter: 2.0 in

Datum:

Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-6

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York *Permit No.:* NA

Site Location: Newburgh, New York *Geologist:* S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-6	MC			0
		SW Brown, m SAND and SILT. Debris present (fill material)						0
1								0
				S-6	MC			0
2			-2.5					0
		ML Brown/Tan, f SAND, Silt, trace Clay						0
3		increasing Brown to Dark Brown with depth with gravel, weathered rock fragments @ 8.0 ft bgs.						0
4								0
								0
5								0
								0
6								0
								0
7								0
								0
8								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-7

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York

Permit No.: NA

Site Location: Newburgh, New York

Geologist: S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					0
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-7	MC			0
1		***SW*** Brown, m SAND and SILT. Debris present (fill material)						0
								0
2				S-7	MC			0
			-2.5					0
3		***ML*** Brown/Tan, f SAND, Silt, trace Clay gravel, weathered rock fragments present						0
								0
4								0
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-8

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York *Permit No.:* NA

Site Location: Newburgh, New York *Geologist:* S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-8	MC			0
		SW Brown, m SAND and SILT. Debris present (fill material)						0
1								0
				S-8	MC			0
2			-2.5					0
		ML Brown/Tan, f SAND, Silt, trace Clay gravel, weathered rock fragments present						0
3								0
4								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-9

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-9	MC			0
		SW Brown, m SAND and SILT. Debris present (fill material)						0
1								0
								0
				S-9	MC			
2			-2.5					0
		ML Brown/Tan, f SAND, Silt, trace Clay						0
3		gravel, weathered rock fragments present						0
								0
4								0
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-10

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-10	MC			0
		SW Brown, m SAND and SILT. Debris present (fill material)						0
1								0
								0
				S-10	MC			
2								0
			-2.5					0
		ML Brown/Tan, f SAND, Silt, trace Clay gravel, weathered rock fragments present						0
3								0
								0
4								
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-11

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-11	MC			0
		SW Brown, m SAND and SILT. Debris present (fill material)						0
1								0
				S-11	MC			0
2			-2.5					0
		ML Brown/Tan, f SAND, Silt, trace Clay						0
3		gravel, weathered rock fragments present						0
4								0
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-15

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)		S-15	MC			0
								0
1			-1.0					0
		SM Brown/Tan, f SAND, Silt gravel, weathered rock fragments present						0
				S-15	MC			0
2								0
								0
3								0
								0
4								0
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-16

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					0
		Brown f to c SAND, trace Silt (Top Soil)	-0.5	S-16	MC			0
1		***GM*** Gravel/Crushed Stone (Fill Material)						0
			-2.0	S-16	MC			0
2		***SW*** Brown, f SAND and SILT, trace Clay						0
		gravel, weathered rock fragments present @ 6.5 to 7.0 ft bgs.						0
3								0
4								0
5								0
6								0
			-7.0					0
7		***SW*** Brown, m to c SAND and SILT		S-16	MC			0
		saturated @ 7.5 ft bgs.						0
8								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-17

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)		S-17	MC			0
								0
1			-1.0					0
		SM Brown/Tan, f SAND, Silt						0
		gravel, weathered rock fragments present		S-17	MC			
2								0
								0
3								0
								0
4								0
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-19

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York

Permit No.: NA

Site Location: Newburgh, New York

Geologist: S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					0
		Gravel/Crushed Stone (Surface Cover)	-0.5	S-19	MC			0
1		***SW*** Brown, f to m SAND, trace Silt. Debris present (Fill Material).						0
								0
2				S-19	MC			0
								0
3			-3.0					0
		ML Olive/Brown f SAND, trace Silt, trace Clay						0
4								0
								0
5								0
								0
6								0
								0
7				S-19	MC			0
								0
8								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: Jonas001 **Monitoring Well ID.: MW-1**

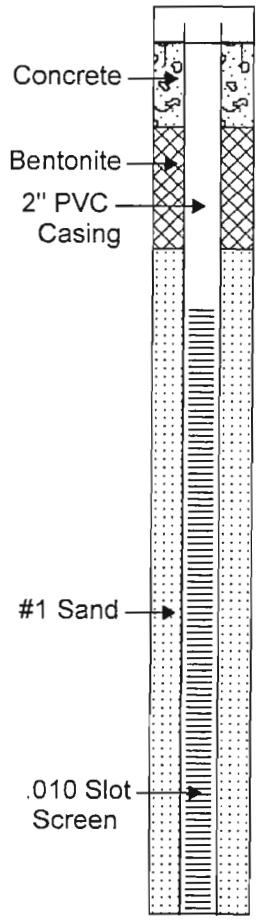
Project: Jonas Automotive

Client: City of Newburgh **Permit No.:**

Site Location: Newburgh, NY **Geologist:** Chris Viani

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

SUBSURFACE PROFILE				SAMPLE					Well Completion Details
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)	
0		Ground Surface							
0		***FINE SAND (FILL)*** Dark brown fine sand; some silt; little fine angular gravel. No staining/odor.	0.0		SS				
2		***SILT (FILL)*** Brown silt; little fine angular gravel. No staining/odor.	2.0		SS			60	
4					SS			2	
6					SS			32	
7		***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					SS			57	
14		End of Borehole	14.0						
18									



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

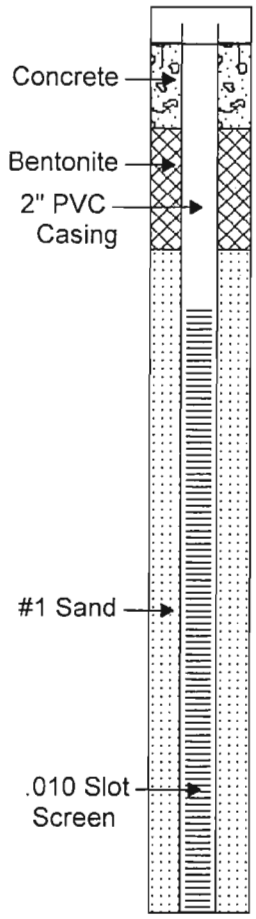
First Environment, Inc.
91 Fulton Street
Boonton, NJ
07005

SUBSURFACE PROFILE

SAMPLE

Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
		Ground Surface						
0		***SAND and GRAVEL (FILL)*** Dark gray fine sand and very angular gravel. No staining/odors. FILL.	0.0		SS			
3		***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			
10					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**

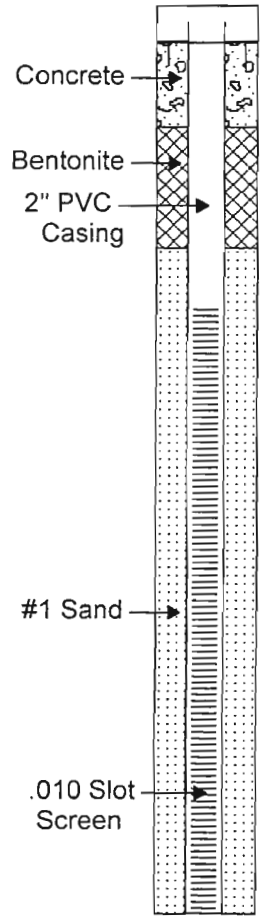
Project: Jonas Automotive

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		***SAND, SILT and GRAVEL (FILL)*** Brown to dark brown sand, silt, and angular fine to medium gravel. FILL.	0.0		SS			0	
3		***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				
5					SS			0	
7					SS			0	
9					SS			0	
11		***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	
13					SS			0	
15					SS				
15		End of Borehole	15.0						



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

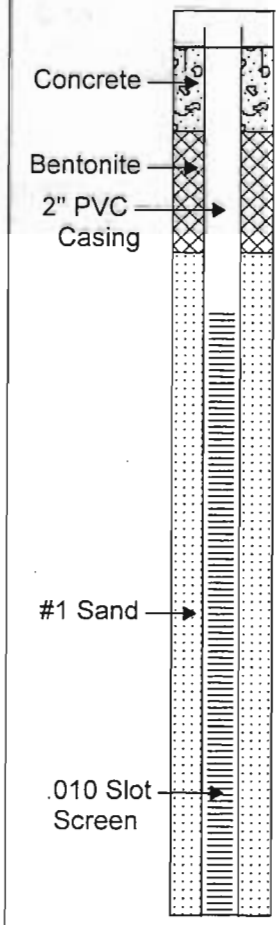
SUBSURFACE PROFILE

Depth (ft)	Symbol	Description	Depth/Elev.
		Ground Surface	
0–2		***SILT (FILL)*** Brown silt; little to some angular gravel, w/ brick fragments and cinders. No staining/odor. FILL.	0.0
2–3.5		***SILT*** Brown silt; little fine to coarse sand; little fine rounded gravel. No staining/odor.	2.5
3.5–5.5		***FINE SAND*** Light reddish brown fine sand; trace silt; with rust, gray, and brown mottles. No staining/odors.	3.5
5.5–9		***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
9–14		***SAND and GRAVEL*** Brown fine to coarse sand and fine to medium rounded gravel; little silt. Wet. No staining/odors.	9.0
14		End of Borehole	14.0

SAMPLE

Number	Type	Blows/ft	Recovery	PID Reading (ppm)
	SS			
	SS			
	SS			
	SS			
	SS			
	SS			
	SS			

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-5**

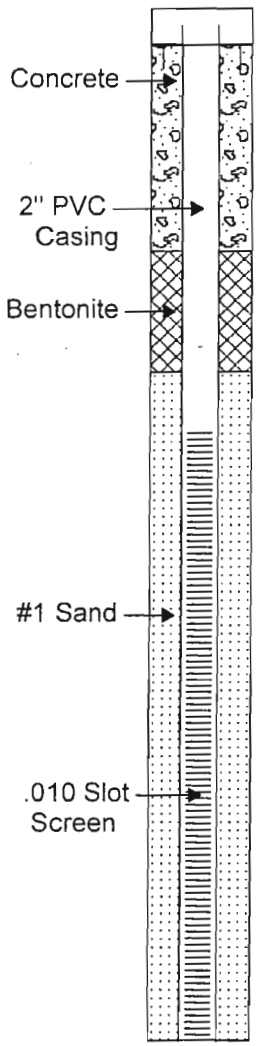
Project: Jonas Automotive

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 (FILL)*** Brown to black sand, silt, and angular fine to coarse gravel. FILL.	0.0		SS			0	
1									
2									
3					SS			0	
4		***COBBLES*** Cobbles. Very poor split-spoon recovery. Wet at 11'.	4.0						
5					SS				
6					SS				
7									
8									
9					SS				
10									
11					SS				
12									
13					SS				
14		***SAND*** Brown fine to coarse sand with occ. gray mottles; little rounded fine to medium gravel; trace silt. Wet. No staining/odor.	14.0						
15									
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**

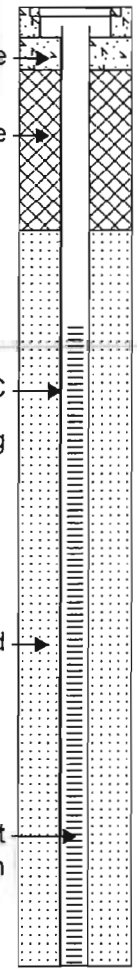
Project: Jonas Automotive

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							
		Fill gray f **GRAVEL**	0.0						
1		Brown f-m Sandy **SILT** moist	0.6	1	SS	3 11 8 6			
		Brown with trace black streaks Clayey **SILT** moist	1.2						
2			1.6						
		Brown SIlty f-m **SAND** trace f gravel moist							
3									
4									
5		Brown f-m **SAND** some silt moist	5.0						
6				2	SS	3 3 2 4			
7									
8		Brown SIlty f **SAND** trace clay wet	7.4	3	SS	6 5 7 7			
9									
10		Brown Silty CLAY trace f sand wet	9.6	4	SS	5 5 4 5			
11									
12				5	SS	4 3 16 45			
13		Brown f-c **GRAVEL** wet at 13 feet	13.0						
14		very little recovery		6	SS	12 16 20 15			
15		End of Borehole	15.0						
16									
17									



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

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

Project No: JONAS001

Soil Boring ID.: S-1

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York ***Permit No.:*** NA

Site Location: Newburgh, New York ***Geologist:*** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		SW Dark Brown to Brown f to c SAND, trace Silt	-0.5	S-1	MC			
		End of Borehole						
1								
2								
3								
4								
5								

Driller:
Drilling Method: Hand Auger
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-2

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		SW Dark Brown to Brown f to c SAND, trace Silt		S-2	MC			
1								
2								
3								
4								
5								

Driller:
Drilling Method: Hand Auger
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-3

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
0	SW	Dark Brown to Brown f to c SAND, trace Silt		S-3	MC			0
1								0
2			-2.0					0
2	SC	Brown, f SAND, trace Silt and Clay (fill material)						530
3			-3.5					141
4	SC	Olive/Gray f SAND, some Silt, trace Clay moist soil @ 7.0 ft bgs saturated @ 8.0 ft bgs increasing clay content with depth						132
5								0
6								0
7								730
8								250
9								340
10			-10.5					200
11		Refusal @ 11.0 ft bgs, weathered gravel						95
12								40
13				S-3	MC			53
14								510
15								0
								830
								820
								440
								0
								0
								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-4

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York

Permit No.: NA

Site Location: Newburgh, New York

Geologist: S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		SW Dark Brown to Brown f to c SAND, trace Silt		S-4	MC			
1								
2								
3								
4								
5								

Driller:
Drilling Method: Hand Auger
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-5

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York

Permit No.: NA

Site Location: Newburgh, New York

Geologist: S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		SW Dark Brown to Brown f to c SAND, trace Silt		S-5	MC			
1								
2								
3								
4								
5								

Driller:

Drilling Method: Hand Auger

Completion Date: June 14, 2001

Notes:

Borehole Diameter: 2.0 in

Datum:

Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-6

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York *Permit No.:* NA

Site Location: Newburgh, New York *Geologist:* S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-6	MC			0
		SW Brown, m SAND and SILT. Debris present (fill material)						0
1								0
				S-6	MC			0
2			-2.5					0
		ML Brown/Tan, f SAND, Silt, trace Clay						0
3		increasing Brown to Dark Brown with depth with gravel, weathered rock fragments @ 8.0 ft bgs.						0
4								0
								0
5								0
								0
6								0
								0
7								0
								0
8								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-7

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York

Permit No.: NA

Site Location: Newburgh, New York

Geologist: S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					0
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-7	MC			0
1		***SW*** Brown, m SAND and SILT. Debris present (fill material)						0
								0
2				S-7	MC			0
			-2.5					0
3		***ML*** Brown/Tan, f SAND, Silt, trace Clay gravel, weathered rock fragments present						0
								0
4								0
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-8

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York *Permit No.:* NA

Site Location: Newburgh, New York *Geologist:* S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-8	MC			0
		SW Brown, m SAND and SILT. Debris present (fill material)						0
1								0
				S-8	MC			0
2			-2.5					0
		ML Brown/Tan, f SAND, Silt, trace Clay gravel, weathered rock fragments present						0
3								0
4								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-9

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-9	MC			0
		SW Brown, m SAND and SILT. Debris present (fill material)						0
1								0
								0
				S-9	MC			
2			-2.5					0
		ML Brown/Tan, f SAND, Silt, trace Clay						0
3		gravel, weathered rock fragments present						0
								0
4								0
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-10

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-10	MC			0
		SW Brown, m SAND and SILT. Debris present (fill material)						0
1								0
								0
				S-10	MC			
2								0
			-2.5					0
		ML Brown/Tan, f SAND, Silt, trace Clay gravel, weathered rock fragments present						0
3								0
								0
4								
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-11

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)	-0.5	S-11	MC			0
		SW Brown, m SAND and SILT. Debris present (fill material)						0
1								0
				S-11	MC			0
2			-2.5					0
		ML Brown/Tan, f SAND, Silt, trace Clay						0
3		gravel, weathered rock fragments present						0
4								0
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-15

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					
		GP Gravel/Crushed Stone (Surface Cover)		S-15	MC			0
								0
1			-1.0					0
		SM Brown/Tan, f SAND, Silt gravel, weathered rock fragments present						0
				S-15	MC			0
2								0
								0
3								0
								0
4								0
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-16

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					0
		Brown f to c SAND, trace Silt (Top Soil)	-0.5	S-16	MC			0
1		***GM*** Gravel/Crushed Stone (Fill Material)						0
			-2.0	S-16	MC			0
2		***SW*** Brown, f SAND and SILT, trace Clay						0
		gravel, weathered rock fragments present @ 6.5 to 7.0 ft bgs.						0
3								0
4								0
5								0
6								0
			-7.0					0
7		***SW*** Brown, m to c SAND and SILT		S-16	MC			0
		saturated @ 7.5 ft bgs.						0
8								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-19

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York

Permit No.: NA

Site Location: Newburgh, New York

Geologist: S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					0
		Gravel/Crushed Stone (Surface Cover)	-0.5	S-19	MC			0
1		***SW*** Brown, f to m SAND, trace Silt. Debris present (Fill Material).						0
								0
2				S-19	MC			0
								0
3			-3.0					0
		ML Olive/Brown f SAND, trace Silt, trace Clay						0
4								0
								0
5								0
								0
6								0
								0
7				S-19	MC			0
								0
8								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-20

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					0
		Gravel/Crushed Stone (Surface Cover)	-0.5	S-20	MC			0
1		***SW*** Brown, f to m SAND, trace Silt. Debris present (Fill Material).						0
2				S-20	MC			0
								0
3			-3.0					0
		ML Olive/Brown f SAND, trace Silt, trace Clay						0
4								0
5								0
6								0
7								0
8								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-21

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					0
		Gravel/Crushed Stone (Surface Cover)	-0.5					0
1		***SW*** Brown, f to m SAND, trace Silt. Debris present (Fill Material). Sample taken below invert of catchbasin						0
2								0
								0
3			-3.0	S-21	MC			0
		ML Olive/Brown f SAND, trace Silt, trace Clay						0
4								0
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-20

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					0
		Gravel/Crushed Stone (Surface Cover)	-0.5	S-20	MC			0
1		***SW*** Brown, f to m SAND, trace Silt. Debris present (Fill Material).						0
2				S-20	MC			0
								0
3			-3.0					0
		ML Olive/Brown f SAND, trace Silt, trace Clay						0
4								0
5								0
6								0
7								0
8								0

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1

Project No: JONAS001

Soil Boring ID.: S-21

Project: Former Jonas Automotive Facility

Client: City of Newburgh, New York **Permit No.:** NA

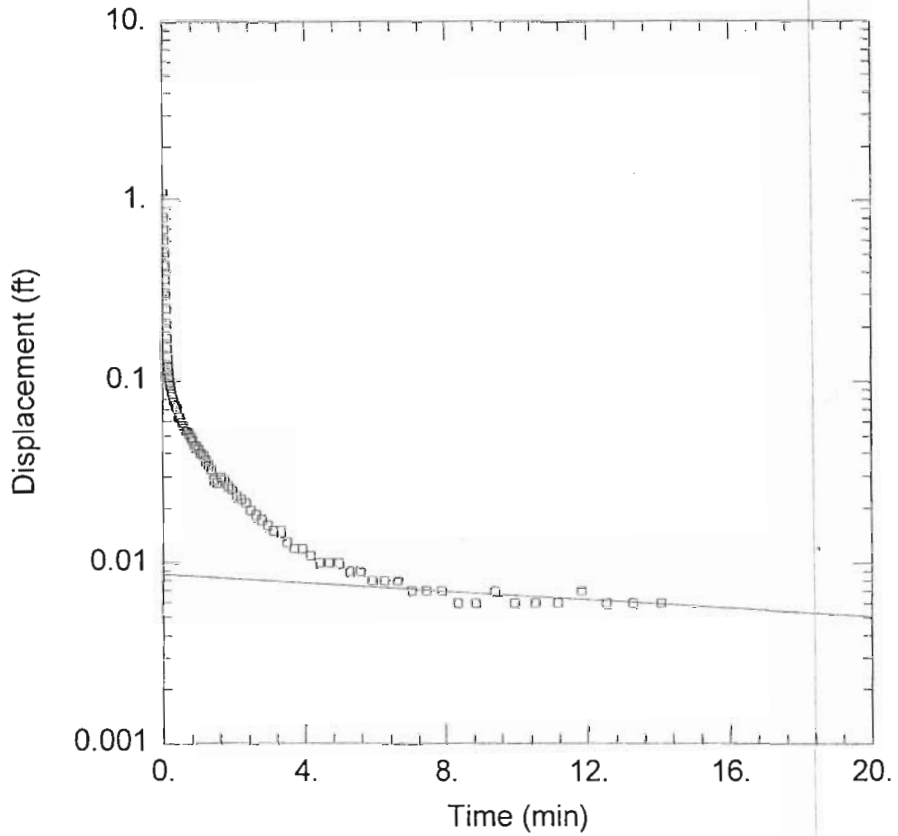
Site Location: Newburgh, New York **Geologist:** S. Green/J. Engdahl

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

SUBSURFACE PROFILE				SAMPLE				
Depth (ft)	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	PID Reading (ppm)
0		Ground Surface	0.0					0
		Gravel/Crushed Stone (Surface Cover)	-0.5					0
1		***SW*** Brown, f to m SAND, trace Silt. Debris present (Fill Material). Sample taken below invert of catchbasin						0
2								0
								0
3			-3.0	S-21	MC			0
		ML Olive/Brown f SAND, trace Silt, trace Clay						0
4								0
5								

Driller: Probe Support, Inc.
Drilling Method: GeoProbe
Completion Date: June 14, 2001
Notes:

Borehole Diameter: 2.0 in
Datum:
Sheet: 1 of 1



MW-2 SLUG TEST RESULTS

Data Set: G:\...\MW-2_2 Jonas.aqt
Date: 02/06/03 Time: 09:09:52

PROJECT INFORMATION

Company: First Environment, Inc.
Client: Former Jonas Automotive
Project: JONAS001
Test Location: Newburgh, NY
Test Well: MW-2
Test Date: September 27, 2001

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0001072 ft/min
y0 = 0.00864 ft

AQUIFER DATA

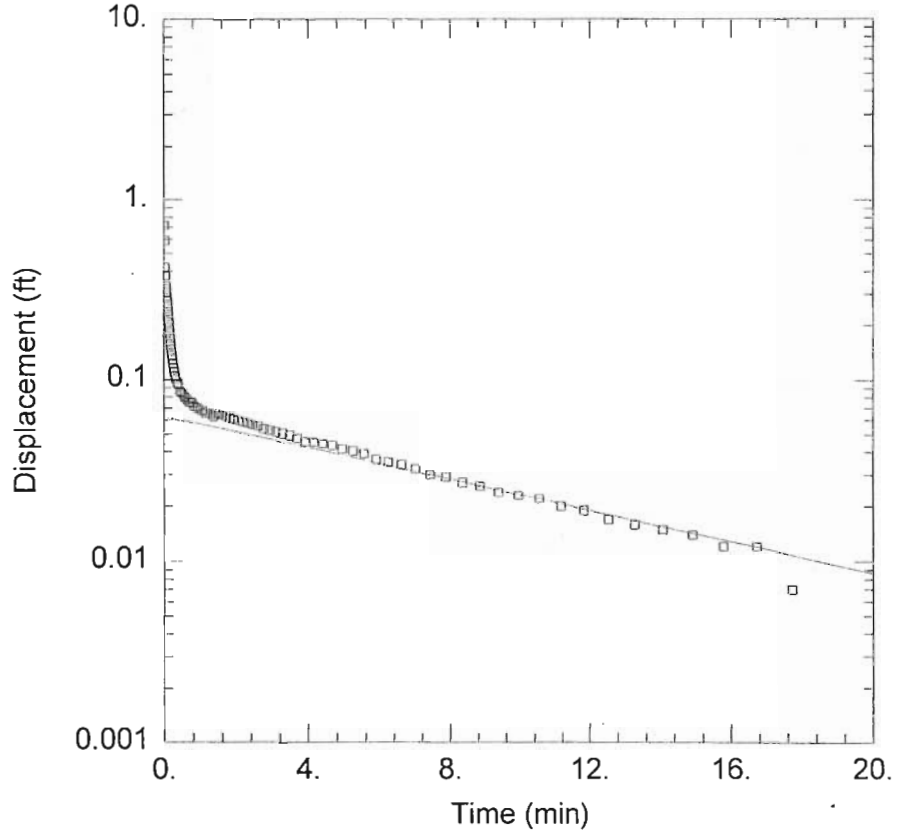
Saturated Thickness: 30. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 1.101 ft
Wellbore Radius: 0.333 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3

Casing Radius: 0.0833 ft
Well Skin Radius: 0.333 ft
Total Well Penetration Depth: 8.65 ft



MW-3 SLUG TEST RESULTS

Data Set: G:\...\MW-3_1Jonas.aqt
Date: 02/06/03 Time: 09:10:37

PROJECT INFORMATION

Company: First Environment, Inc.
Client: Former Jonas Automotive
Project: JONAS001
Test Location: Newburgh, NY
Test Well: MW-3
Test Date: September 27, 2001

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0003684 ft/min
y0 = 0.06235 ft

AQUIFER DATA

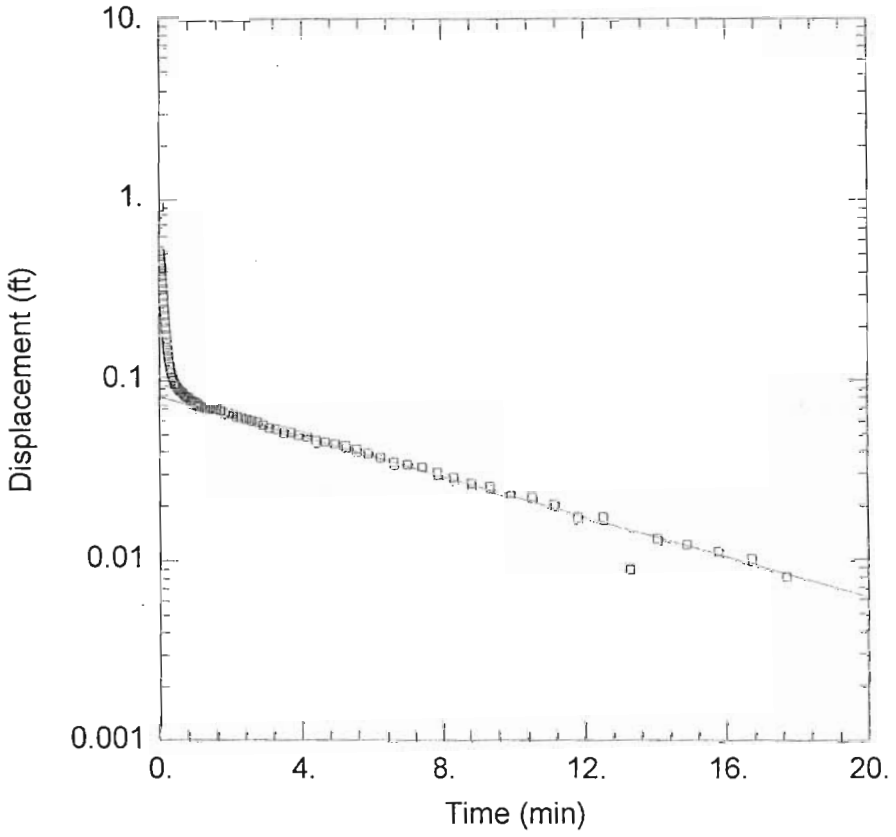
Saturated Thickness: 30. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-3)

Initial Displacement: 0.717 ft
Wellbore Radius: 0.333 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3

Casing Radius: 0.0833 ft
Well Skin Radius: 0.333 ft
Total Well Penetration Depth: 6.33 ft



MW-3 SLUG TEST RESULTS

Data Set: G:\...\MW-3_2 Jonas.aqt
Date: 02/06/03 Time: 09:10:55

PROJECT INFORMATION

Company: First Environment, Inc.
Client: Former Jonas Automotive
Project: JONAS001
Test Location: Newburgh, NY
Test Well: MW-3
Test Date: September 27, 2001

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0004736 ft/min
y0 = 0.07864 ft

AQUIFER DATA

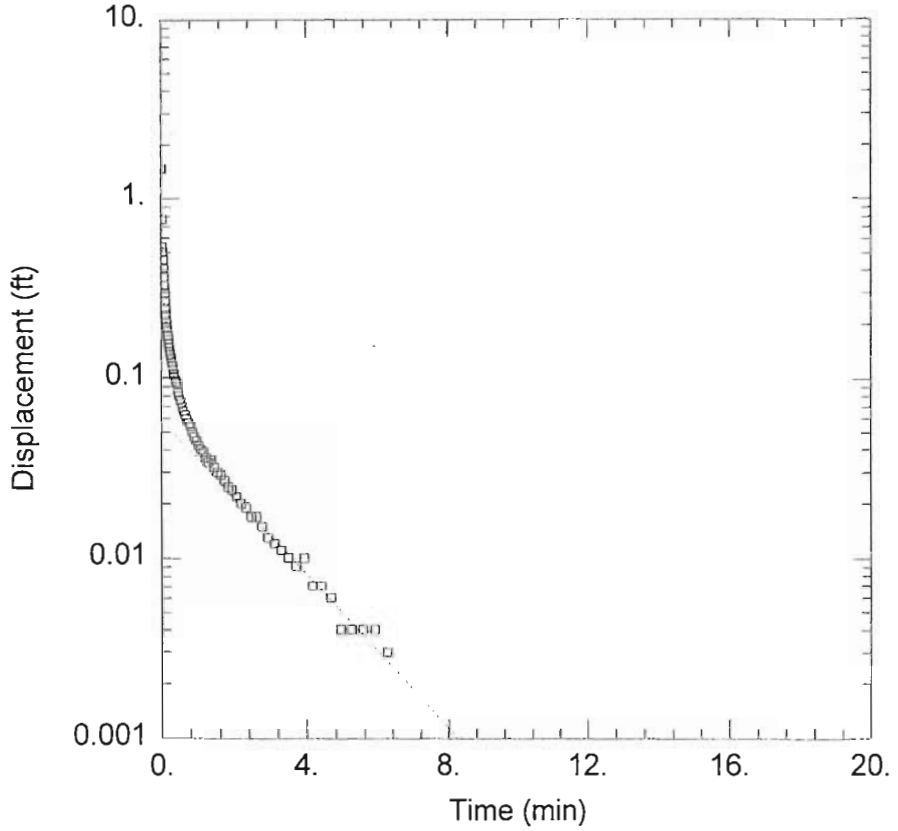
Saturated Thickness: 30. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-3)

Initial Displacement: 0.915 ft
Wellbore Radius: 0.333 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3

Casing Radius: 0.0833 ft
Well Skin Radius: 0.333 ft
Total Well Penetration Depth: 6.33 ft



MW-4 SLUG TEST RESULTS

Data Set: G:\...\MW-4_1 Jonas.aqt
Date: 02/06/03 Time: 09:11:17

PROJECT INFORMATION

Company: First Environment, Inc.
Client: Former Jonas Automotive
Project: JONAS001
Test Location: Newburgh, NY
Test Well: MW-4
Test Date: September 27, 2001

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.00189 ft/min
y0 = 0.05837 ft

AQUIFER DATA

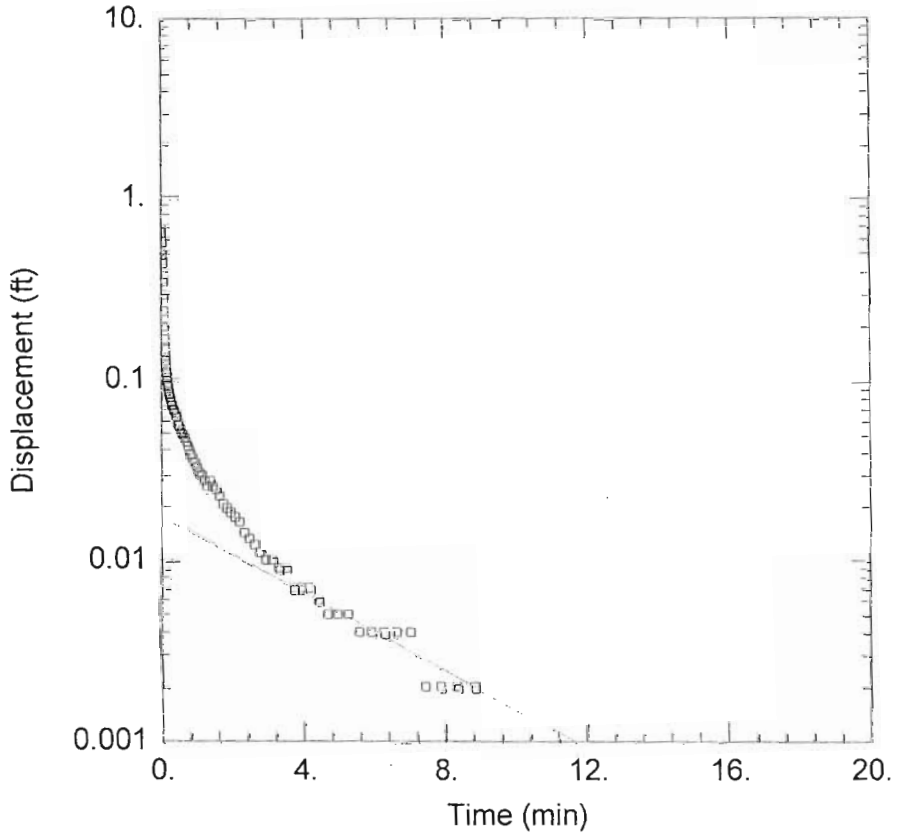
Saturated Thickness: 30. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-4)

Initial Displacement: 1.471 ft
Wellbore Radius: 0.333 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3

Casing Radius: 0.0833 ft
Well Skin Radius: 0.333 ft
Total Well Penetration Depth: 7.11 ft



MW-4 SLUG TEST RESULTS

Data Set: G:\...\MW-4_2 Jonas.aqt
Date: 02/06/03 Time: 09:11:39

PROJECT INFORMATION

Company: First Environment, Inc.
Client: Former Jonas Automotive
Project: JONAS001
Test Location: Newburgh, NY
Test Well: MW-4
Test Date: September 27, 2001

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0009426 ft/min
y0 = 0.01761 ft

AQUIFER DATA

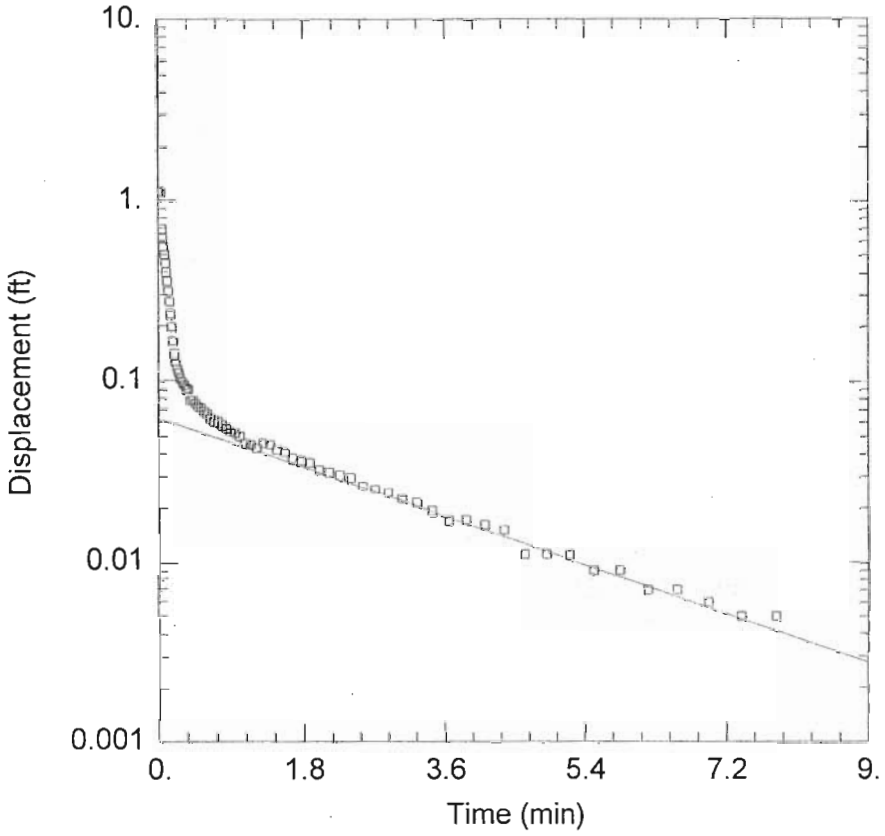
Saturated Thickness: 30. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-4)

Initial Displacement: 0.655 ft
Wellbore Radius: 0.333 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3

Casing Radius: 0.0833 ft
Well Skin Radius: 0.333 ft
Total Well Penetration Depth: 7.11 ft



MW-5 SLUG TEST RESULTS

Data Set: G:\...\MW-5_1 Jonas.aqt
Date: 02/06/03 Time: 09:12:01

PROJECT INFORMATION

Company: First Environment, Inc.
Client: Former Jonas Automotive
Project: JONAS001
Test Location: Newburgh, NY
Test Well: MW-5
Test Date: September 27, 2001

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.00126 ft/min
y0 = 0.06207 ft

AQUIFER DATA

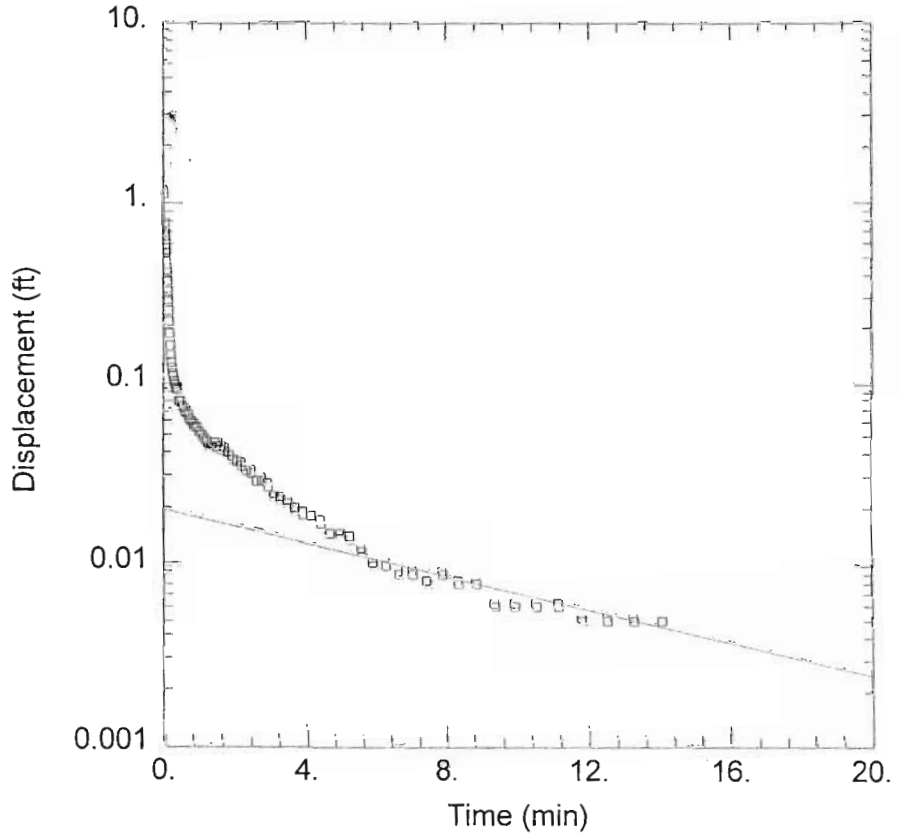
Saturated Thickness: 30. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-5)

Initial Displacement: 1.131 ft
Wellbore Radius: 0.333 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3

Casing Radius: 0.0833 ft
Well Skin Radius: 0.333 ft
Total Well Penetration Depth: 5.84 ft



MW-5 SLUG TEST RESULTS

Data Set: G:\...\MW-5_2 Jonas.aqt
Date: 02/06/03 Time: 09:12:26

PROJECT INFORMATION

Company: First Environment, Inc.
Client: Former Jonas Automotive
Project: JONAS001
Test Location: Newburgh, NY
Test Well: MW-5
Test Date: September 27, 2001

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0003841 ft/min
y0 = 0.02028 ft

AQUIFER DATA

Saturated Thickness: 30. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-5)

Initial Displacement: 1.131 ft
Wellbore Radius: 0.333 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3

Casing Radius: 0.0833 ft
Well Skin Radius: 0.333 ft
Total Well Penetration Depth: 5.84 ft

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PLAN

The soil and groundwater, surface water and sediment sampling techniques to be employed at the Provan facility in Newburgh, New York, are detailed below. All efforts will be made to eliminate sample contamination and maximize the reliability to the analytical results. These efforts include proper use and cleaning of sampling equipment and sample containers to eliminate sample contamination, use of a quality assurance program to maximize accuracy and precision of the analytical results, proper installation of groundwater monitoring wells and the use of chain-of-custody procedures to track the samples from source to analysis and minimize the opportunity for tampering.

SAMPLING EQUIPMENT AND PROCEDURES

SAMPLING EQUIPMENT AND CLEANING PROCEDURES

The sample containers, glass jars with Teflon™ lined-plastic screw-on lids, will be provided by the contracted New York State Department of Health ELAP Certified Laboratory. Containers used to collect soil and water samples will be specifically designed for that purpose. The containers will be cleaned prior to shipment by the laboratory, using standard, in-house procedures.

Soil samples will be collected with either a hand auger, split-spoon sampler or Geoprobe Macrocore device. If a split-spoon sampler or Macrocore device is used, a drill rig will be used to drive the sampler to the required depth and obtain soil samples. The split-spoon sampler will be 24 inches in length and in accordance with ASTM D1586-67. The Macrocore will be 48 inches in length. The Macrocore sampler will be equipped with a sample retention device and acetate liner to ensure sample quality.

All soil sampling equipment will be cleaned with a wire or bristle brush to remove any clinging soils or materials. This will be followed by a washing with a phosphate-free detergent and water. The equipment will then be rinsed with clean water, distilled water, methanol (used to avoid contaminating soils with acetone), and finally, distilled water. The drilling tools will be cleaned with a steam cleaner prior to use and between work on individual boreholes.

Prior to sampling groundwater, wells will be purged by bailing or pumping, depending on well productivity. If bailing is used, one PVC bailer will be dedicated to each well for use in purging and one stainless steel, Polyethylene, or Teflon™ bailer will be dedicated to each well for use in sampling.

All purge/sampling equipment will be cleaned before transporting to the field. Bailers will be cleaned by the certified laboratory using standard in-house procedures. After drying, the bailers will be wrapped in aluminum foil for transportation to the field. Pumps used to purge wells prior to sampling will be cleaned by rinsing with detergent, potable water, distilled water, methanol and distilled water.

USE OF QUALITY ASSURANCE SAMPLES (BLANKS, DUPLICATES)

Travel blank samples, duplicates and blank samples generated in the field will serve as an independent check on the laboratory and field sampling techniques. These samples will be coded to minimize the chance of laboratory identification.

The following QA/QC samples will be collected:

- One travel/trip blank, consisting of distilled water prepared by the laboratory and analyzed for VOC analysis, will be collected for each two days of sampling.

- One field blank for each media sampled that day will be submitted for analysis for volatile organics.

SAMPLING METHODOLOGY

All subsurface work will be conducted in a manner that produces reliable information of subsurface conditions and representative soil, sediment, surface water and groundwater samples for analysis. A First Environment degreed hydrogeologist, geologist, engineer or equivalent will supervise all drilling and sampling procedures.

Soil Sample Collection Methodology

Soil Samples.

The location of each borehole will be referenced by a grid system or some other survey control. A drill rig/Geoprobe or hand auger will be used to produce boreholes at the proper depths at each predetermined sampling location. Sample depths will be measured to ensure they are correct. Samples will be taken by driving a split-spoon sampler, Macrocore or hand auger into the undisturbed material below the bottom of the borehole. The sampler will be equipped with a sample retention device.

Prior to sample collection, sample depths will be screened with Photoionzation Detector (PID) to insure that collected samples are representative of actual soil conditions. This will accomplished through head space analysis. The PID is calibrated to 100 ppm isobutylene prior to each days activities.

A soil sample will be collected from the appropriate sampler or hand auger. To prevent contamination of sample bottle by windblown soils, each bottle will remain sealed until sample collection. Upon soil collection, the sample will be split in two bottles for headspace analysis and laboratory analysis. The sample containing the highest headspace PID reading at each boring will submit the split sample to the laboratory. This sample will bottle have the following information recorded on it:

- Job Name and Location
- Sample Location
- Time and Date of Sampling
- Depth of Sampling
- Analysis
- Boring Number

The jar will then be placed in a cooler and kept at 4°C until transported to the laboratory. This procedure will be repeated at each sample location and for successive samples at the same location.

Each sample device will be examined in the field to aid in evaluation of site stratigraphy. If boreholes are located at or near the water table, they will be sealed with a cement bentonite grout acceptable for use in monitoring wells.

Monitoring Well Installation Technique and Design

To ensure that representative samples of the groundwater are obtained, monitoring wells will be installed in accordance with NYSDEC monitoring well installation and design specifications for unconsolidated material as presented in Section 5.5.3.2 of the NYSDEC Sampling Guidelines and Protocols. All wells will be constructed of threaded, flush joint, schedule 40 PVC wells materials, supplied by the drilling contractor and will be installed using auger drilling techniques.

Upon completion of the borings, an appropriate length of 2-inch PVC, 0.010-inch slotted well screen will be installed through the hollow stem augers from approximately 10 feet below to 5 feet above the water table. Should the water table be encountered within 7 feet or less of the ground surface, the well screen will extend to within 2 feet of the ground surface. The remainder of the well will consist of 2-inch PVC casing which will extend over the ground surface. Filter sand will be placed in the annulus between the screen and the borehole to a level of at least 6 inches above the top of the screen. A bentonite pellet seal will be placed on top of the filter sand. The remainder of the annulus will be grouted with a cement bentonite ground acceptable for use in monitoring wells. The surface protection will consist of a lockable steel casing, extending approximately 2 feet above the ground surface and anchored in cement. In areas accessible to vehicular traffic, road boxes may be installed.

For the deep monitoring wells an isolation casing will be installed and grouted to the top of the clay confining layer. Drilling will be resumed through the grout, clay later and into the lower waterbearing zone (see Figure 4-7 for example of monitoring well installation using an isolation casing). If no competent clay later is encountered the wells will be installed with a single casing to a maximum depth of 35 feet.

To complete the monitoring well installation, each well will be developed by pumping, bailing or an equivalent method. This will remove fines generated during the installation and ensure that hydraulic continuity is established between the well and the aquifer.

Groundwater Flow Direction

A New York registered land surveyor will survey the reference elevation of the top of the PVC monitoring well casings. Water level measurements will be recorded to within 0.01 feet, using an electric water-level indicator. This information will be used to determine groundwater flow direction and construct groundwater contour maps.

Groundwater Sample Collection Methodology

Water samples will be collected no sooner than two weeks after development of the monitoring wells. Prior to sample collection, a minimum of three well volumes will be evacuated using a pump of dedicated bailer depending on well production. After purging, a bailer will be submerged beneath the water column in the well, filled and raised to the surface. The sample collection jar will be filled directly from the bailer. Bailing will continue until each sample jar is filled and closed. Care will be taken to ensure that samples tested for volatile organics have no air space. Sample jars will be kept closed until the time of collection, to prevent airborne contamination of the sample container. Specific conductance and pH will be measured in the field.

After closing the sample jar, the following information will be recorded on the sample container:

- Job Name
- Sample Media
- Sample Location
- Time and Date of Sampling
- Analysis

The sample will then be placed in a cooler and kept at 4°C until transported to the laboratory for analysis. This process will be repeated for each well.

A field log will also be kept and the following information recorded for each sample:

- Time and Date of Sampling
- Weather
- Name of Sampler
- Water Level Prior to Purge
- Total Well Depth
- Volume Purged
- Purging Method
- Sampler Type
- Presence and Description of any Free Product
- pH, Specific Conductance and Turbidity
- Other Characteristics (odor, color, etc.)

CHAIN-OF-CUSTODY PROCEDURES

Each sample will be recorded separately on the chain-of-custody manifest as part of the sampling procedure. The information obtained for each sample will include the following:

- Sample Identification
- Sampler's Name
- Time and Date of Sampling
- Sample Laboratory Number
- Analysis to be Performed
- Laboratory Name

Chain-of-Custody procedures will include the following:

- All samples will be listed on a chain-of-custody manifest.
- All personnel responsible for sampling, transporting and receiving samples will sign the chain-of-custody manifest.
- Analyst's name and laboratory will be recorded on the chain-of-custody manifest.
- Samples will be transported in a secured container with the chain-of-custody manifest attached.
- Samples will be kept in a locked vehicle or within sight of a custodian until received by the laboratory.

PROVISIONS FOR SPLIT SAMPLES

Approximately one week prior to soil and groundwater sampling, the department will be notified of the sampling times and dates. It will then have the option of observing or obtaining split samples.

ANALYTICAL LABORATORY AND METHODS

ANALYTICAL LABORATORY

INTEGRATED ANALYTICAL LABORATORIES (IAL)

Randolph, New Jersey 07869

ANALYTICAL METHODS

Analytical methods and detection limits are attached.

VOLATILE COMPOUNDS

	TCL	Instrument Average MDL - Aqueous (ppb)	Reported MDL, Soil (ppb)	Reported MDL, Methanol Soil (ppb)	
Acetone	x	1.640	20	2500	
Benzene	x	0.450	5	625	
Bromochloromethane	x	0.540	5	625	
Bromodichloromethane	x	0.370	5	625	
Bromoform	x	0.310	5	625	
Bromomethane	x	0.660	5	625	
2-Butanone(MEK)	x	0.730	20	2500	
Carbon disulfide	x	0.230	5	625	
Carbon tetrachloride	x	0.540	5	625	
Chlorobenzene	x	0.200	5	625	
Chloroethane	x	0.370	5	625	
Chloroform	x	0.390	5	625	
Chloromethane	x	0.730	5	625	
cis-1,2-Dichloroethene	x	0.390	5	625	
cis-1,3-Dichloropropene	x	0.370	5	625	
Cyclohexane	x				x MDL not available
1,2-Dibromo-3-chloropropane	x	0.660	5	625	
Dibromochloromethane	x	0.230	5	625	
1,2-Dibromoethane/Ethylene dibromide(EDB)	x	0.230	5	625	
1,2-Dichlorobenzene	x	0.480	5	625	
1,3-Dichlorobenzene	x	0.510	5	625	
1,4-Dichlorobenzene	x	0.370	5	625	
Dichlorodifluoromethane	x	0.620	5	625	
1,1-Dichloroethane	x	0.450	5	625	
1,2-Dichloroethane(EDC)	x	0.420	5	625	
1,1-Dichloroethene	x	0.280	5	625	
1,2-Dichloropropane	x	0.680	5	625	
Ethylbenzene	x	0.370	5	625	
2-Hexanone	x	0.620	20	2500	
Isopropylbenzene **(see note)	x	0.370	5	625	
Methyl acetate	x				x MDL not available
Methylcyclohexane	x				x MDL not available
4-Methyl-2-pentanone/Methyl Isobutyl Ketone (MIB	x	0.420	20	2500	
Methylene Chloride	x	0.420	5	625	
Methyl-tertiary-butyl ether(MTBE)	x	1.270	5	625	
Styrene	x	0.200	5	625	
1,1,2,2-Tetrachloroethane	x	0.390	5	625	
Tetrachloroethene (PERC)	x	0.310	5	625	
Toluene	x	0.510	5	625	
Total Xylenes	x	1.160	5	625	
trans-1,2-Dichloroethene	x	0.540	5	625	
trans-1,3-Dichloropropene	x	0.310	5	625	
1,2,4-Trichlorobenzene	x	0.390	5	625	
1,1,1-Trichloroethane	x	0.730	5	625	
1,1,2-Trichloroethane	x	0.450	5	625	
Trichloroethene	x	0.340	5	625	
Trichlorofluoromethane	x	0.480	5	625	
1,1,2-Trichlor-1,2,2-trifluoroethane	x				x MDL not available
Vinyl Chloride	x	0.420	5	625	

TCL from EPA Internet site 6/8/99. TCL changed 1/1/00, RR confirmed.

SEMIVOLATILE COMPOUNDS

	TCL	Instrument MDL, C (Aqueous)	Reported MDLs, Soil (ppb)	
Acenaphthene	x	0.111	33.3	
Acenaphthylene	x	0.176	33.3	
Acetophenone	x			X - MDL Not Available
Anthracene	x	0.182	33.3	
Atrazine	x			X - MDL Not Available
Benzaldehyde	x			X - MDL Not Available
Benzo[a]anthracene	x	0.249	33.3	
Benzo[a]pyrene	x	0.335	33.3	
Benzo[b]fluoranthene	x	0.545	33.3	
Benzo[g,h,i]perylene	x	0.546	33.3	
Benzo[k]fluoranthene	x	0.690	33.3	
1,1-Biphenyl	x			X - MDL Not Available
Bis(2-chloroethoxy)methane	x	0.161	33.3	
Bis(2-chloroethyl)ether	x	0.167	33.3	
Bis(2-chloroisopropyl)ether **	x	0.548	33.3	** Compound also known as 2,2-oxybis (1-Chloropropane
Bis(2-ethylhexyl)phthalate	x	0.732	33.3	
4-Bromophenyl-phenylether	x	0.447	33.3	
Butylbenzylphthalate	x	0.570	33.3	
Caprolactam	x			X - MDL Not Available
Carbazole	x	0.289	33.3	
4-Chloro-3-methylphenol	x	0.432	33.3	
4-Chloroaniline	x	0.563	33.3	
2-Chloronaphthalene	x	0.295	33.3	
2-Chlorophenol	x	0.167	33.3	
4-Chlorophenyl-phenylether	x	0.442	33.3	
Chrysene	x	0.402	33.3	
Dibenz[a,h]anthracene	x	0.421	33.3	
Dibenzofuran	x	0.168	33.3	
3,3'-Dichlorobenzidine	x	0.337	33.3	
2,4-Dichlorophenol	x	0.516	33.3	
Diethylphthalate	x	0.297	33.3	
Dimethylphthalate	x	0.248	33.3	
2,4-Dimethylphenol	x	0.260	33.3	
Di-n-butylphthalate	x	0.478	33.3	
4,6-Dinitro-2-methylphenol	x	0.887	33.3	
2,4-Dinitrophenol	x	0.405	33.3	
2,4-Dinitrotoluene	x	0.864	33.3	
2,6-Dinitrotoluene	x	0.444	33.3	
Di-n-octylphthalate	x	0.629	33.3	
Fluoranthene	x	0.409	33.3	
Fluorene	x	0.372	33.3	
Hexachlorobenzene	x	0.502	33.3	
Hexachlorobutadiene	x	0.418	33.3	
Hexachlorocyclopentadiene	x	0.332	33.3	
Hexachloroethane	x	0.415	33.3	
Indeno[1,2,3-cd]pyrene	x	0.623	33.3	
Isophorone	x	0.259	33.3	
2-Methylnaphthalene	x	0.184	33.3	

TCL from EPA Internet, TCL changed 1/1/00, confirmed RR

Printed 6/23/009:45 AM

SEMIVOLATILE COMPOUNDS

	TCL	Instrument MDL, C (Aqueous)	Reported MDLs, Soil (ppb)
Methylphenol (o-Cresol)	x	0.262	33.3
Methylphenol (p-Cresol)	x	0.285	33.3
apthalene	x	0.132	33.3
Nitroaniline	x	0.510	33.3
Nitroaniline	x	0.696	33.3
Nitroaniline	x	0.929	33.3
trobenzene	x	0.414	33.3
Nitrophenol	x	0.819	33.3
Nitrophenol	x	0.687	33.3
Nitroso-di-n-propylamine	x	0.245	33.3
Nitrosodiphenylamine	x	0.338	33.3
Pachlorophenol	x	0.751	33.3
henanthrene	x	0.146	33.3
enol	x	0.269	33.3
ene	x	0.262	33.3
5-Trichlorophenol	x	0.445	33.3
,6-Trichlorophenol	x	0.583	33.3

TCL from EPA Internet,TCL changed 1/1/00, confirmed RR.

PCB's

COMPOUNDS	TCL 8082	Reported Aq (ppb) MDL's	Reported Soil (ppb) MDL's
Aroclor 1016	X	0.2	6.68
Aroclor 1221	X	0.2	6.68
Aroclor 1232	X	0.2	6.68
Aroclor 1242	X	0.2	6.68
Aroclor 1248	X	0.2	6.68
Aroclor 1254	X	0.2	6.68
Aroclor 1260	X	0.2	6.68

PESTICIDES

COMPOUNDS	TCL 8081A	Reported Aq (ppb) MDL's	Reported Soil (ppb) MDL's
4,4'-DDD	X	0.005	0.167
4,4'-DDE	X	0.005	0.167
4,4'-DDT	X	0.005	0.167
Aldrin	X	0.005	0.167
alpha-BHC	X	0.005	0.167
alpha-Chlordane	X	0.005	0.167
beta-BHC	X	0.005	0.167
delta-BHC	X	0.005	0.167
Dieldrin	X	0.005	0.167
Endosulfan I	X	0.005	0.167
Endosulfan II	X	0.005	0.167
Endosulfan sulfate	X	0.005	0.167
Endrin	X	0.005	0.167
Endrin aldehyde	X	0.005	0.167
Endrin Ketone	X	0.005	0.167
gamma-BHC (Lindane)	X	0.005	0.167
gamma-Chlordane	X	0.005	0.167
Heptachlor	X	0.005	0.167
Heptachlor Epoxide	X	0.005	0.167
Methoxychlor	X	0.005	0.167
Toxaphene	X	0.025	0.835

COMPOUNDS	Aqueous - MDL (ppm) - ICP 6010	Monitoring Well - MDL (ppm) - ICP/MS 200.8	Soil MDL (ppm) - ICP/MS 6020
Aluminum	0.1	0.1	2.0
Antimony	0.1	0.008	2.0
Arsenic	0.1	0.004	0.2
Barium	0.01	0.02	5.0
Beryllium	0.02	0.004	0.2
Cadmium	0.005	0.0006	0.2
Calcium	0.4	0.8	20.0
Chromium	0.01	0.02	0.6
Cobalt	0.02	0.04	0.4
Copper	0.02	0.04	0.4
Iron	0.05	0.10	3.0
Lead	0.004/0.029	0.004/0.029	2.0
Magnesium	0.10		20.0
Manganese	0.005	0.01	0.4
Mercury	☒	☒	☒
Nickel	0.01	0.02	0.6
Potassium	0.1		20.0
Selenium	0.1	0.008	2.0
Silver	0.02	0.0004	
Sodium	0.1		20.0
Thallium	0.004	0.008	0.08
Vanadium	0.015	0.03	0.3
Zinc	0.01	0.02	1.0

☒ = MDL for TCLP, Wastewater & Monitoring Well is 0.0005 by ColdVapor and 0.0125 for Soil by Cold Vapor.

Wet Chemistry

COMPOUNDS	SOIL - Reported MDL	AQUEOUS - Reported MDL	Aqueous Method	Soil Method	Holding Times
yanide, Total (ppm)	1.00	0.05	335.2	9010	14 days

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certification No. 11376
Laboratory Report #: L4822ASP Part I VOCs

Lab Sample #	FEI Sample #	Analysis (Method)
L4822-01	S-1 (0"-6")	8260
L4822-02	S-2 (0"-6")	8260
L4822-03	S-3 (0"-6")	8260
L4822-04	S-4 (0"-6")	8260
L4822-05	S-5 (0"-6")	8260
L4822-06	S-3 (6.5'-7.0')	8260
L4822-07	S-6 (6"-6")	8260
L4822-08	S-6 (18"-24")	8260
L4822-09	S-7 (0"-6")	8260
L4822-10	S-7 (18"-24")	8260
L4822-11	S-8 (0"-6")	8260
L4822-12	S-8 (18"-24")	8260
L4822-13	S-9 (0"-6")	8260
L4822-14	S-9 (18"-24")	8260
L4822-15	S-10 (0"-6")	8260
L4822-16	S-10 (18"-24")	8260
L4822-17	S-11 (0"-6")	8260
L4822-18	S-11 (18"-24")	8260
L4822-19	S-12 (0"-6")	8260
L4822-20	S-12 (12"-18")	8260

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on narrative.

2. Have all holding times been met? Not identified in Case Narrative.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes, except: Internal Standard Areas for S-11 18"-24" and S-9 18"-24". Blank sample had acetone due to laboratory contamination.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes, based on narrative.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on narrative.

6. Have the correct data qualifiers been used? Yes, based on narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

CHEMTECH

205 CAMPUS PLAZA I, RARITAN CENTER EDISON NEW JERSEY 08837
NEW JERSEY LAB ID#: 12013 : NEW YORK LAB ID#: 11376

GC/MS VOA CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: 14522 MATRIX: soil (low)

METHOD: 8260

		NA	NO	YES
1.	Chromatograms Labeled/Compounds Identified. (Field samples and Method Blanks)			–
2.	GC/MS Tuning Specifications BFB Meet Criteria (NOTE THAT THERE ARE DIFFERENT CRITERIA FOR NY ASP CLP, CLP AND NJ)			–
3.	GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 Series			–
4.	GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 and CLP series.			–
5.	GC/MS Calibration Requirements			–
	a. Calibration Check Compounds for 8260 and CLP			–
	b. System Performance Check Compounds for 8260 and CLP			–

8260 CALIBRATION CRITERIA

SPCC Compounds	MIN RF	CCC Compounds
Chloromethane	0.1	1,1-Dichloroethene
1,1-Dichloroethane	0.1	Chloroform
Bromoform	0.1	1,2-Dichloropropane
Chlorobenzene	0.3	Toluene
1,1,2,2-Tetrachloroethane	0.3	Ethylbenzene
		Vinyl chloride

Initial Calibration Criteria – RSD less than or equal to 30%
Continuing Calibration Criteria - %D less than or equal to 20%

6.	Blank Contamination - If yes, list compounds and concentrations in each blank:			–

Both BLK had a Acetone due to the lab contn.

7.	Surrogate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable ranges.			–
	a. VOA			
8.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range.			–
	a. VOA Fraction			

GC/MS VOA CONFORMANCE/NON-CONFORMANCE SUMMARY(CONTINUED)

		NA	NO	YES
9.	Internal Standard Area/Retention Time Shift Meet Criteria	___	✓	___

Comments: Sample # 14, 18 had lsd low but RE provided.

10. Analysis Holding Time Met ___ ___ ___
If not met, list number of days exceeded for each sample:

ADDITIONAL COMMENTS:

Analyst [signature] 08/02/01
Date

Mildred U. Reyes 8/1/01
QA REVIEW Date

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certification No. 11376
Laboratory Report #: L4822ASP Part II SVOCs

Lab Sample #	FEI Sample #	Analysis (Method)
L4822-01	S-1 (0"-6")	8270
L4822-02	S-2 (0"-6")	8270
L4822-03	S-3 (0"-6")	8270
L4822-04	S-4 (0"-6")	8270
L4822-05	S-5 (0"-6")	8270
L4822-06	S-3 (6.5'-7.0')	8270
L4822-07	S-6 (6"-6")	8270
L4822-08	S-6 (18"-24")	8270
L4822-09	S-7 (0"-6")	8270
L4822-10	S-7 (18"-24")	8270
L4822-11	S-8 (0"-6")	8270
L4822-12	S-8 (18"-24")	8270
L4822-13	S-9 (0"-6")	8270
L4822-14	S-9 (18"-24")	8270
L4822-15	S-10 (0"-6")	8270
L4822-16	S-10 (18"-24")	8270
L4822-17	S-11 (0"-6")	8270
L4822-18	S-11 (18"-24")	8270
L4822-19	S-12 (0"-6")	8270
L4822-20	S-12 (12"-18")	8270

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes, except acenaphthene MS/MSD RPD outside limits

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes, based on narrative.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on narrative.

6. Have the correct data qualifiers been used? Yes, based on narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

CHEMTECH 284 Sheffield Street, Mountainside New Jersey 07092

NEW JERSEY LAB ID#:12013 : NEW YORK LAB ID#: 11376

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY (CONTINUED)

	NA	NO	YES
7. Surrogate Recoveries Meet Criteria			✓

If not met, list those compounds and their recoveries which fall outside the acceptable ranges.

a. B/N Fraction _____

b. Acid Fraction _____

8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria		✓	

If not met, list those compounds and their recoveries which fall outside the acceptable range.

a. B/N Fraction See the Summary page. B.I. Separated

b. Acid Fraction _____

9. Internal Standard Area/Retention Time Shift Meet Criteria			✓

Comments:

_____

_____

10. Extraction Holding Time Met			✓

If not met, list number of days exceeded for each sample:

_____

_____

11. Analysis Holding Time Met			✓

If not met, list number of days exceeded for each sample:

_____

_____

ADDITIONAL COMMENTS: _____

_____

_____

Analyst _____ Date 7-26-01

QA REVIEW _____ Date _____

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENTAL

Project No.: L4822 Site: FORMER J Location: LB14593 Group: S-1 0"-6"

Matrix Spike - Sample No.: L4823-09 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
n-Nitroso-di-n-propylamine	3800	0	1900	50	(41-126)
1,2,4-Trichlorobenzene	3800	0	2500	66	(38-107)
Acenaphthene	3800	0	2200	58	(31-137)
2,4-Dinitrotoluene	3800	0	2200	58	(28-89)
Pyrene	3800	0	2100	55	(35-142)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
n-Nitroso-di-n-propylamine	3800	2200	58	15	38	(41-126)
1,2,4-Trichlorobenzene	3800	2900	76	15	23	(38-107)
Acenaphthene	3800	2700	71	20 *	19	(31-137)
2,4-Dinitrotoluene	3800	2600	68	17	47	(28-89)
Pyrene	3800	2500	66	17	36	(35-142)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Comments: _____

_____

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certification No. 11376
Laboratory Report #: L4822ASP Part II SVOCs

Lab Sample #	FEI Sample #	Analysis (Method)
L4822-01	S-1 (0"-6")	8270
L4822-02	S-2 (0"-6")	8270
L4822-03	S-3 (0"-6")	8270
L4822-04	S-4 (0"-6")	8270
L4822-05	S-5 (0"-6")	8270
L4822-06	S-3 (6.5'-7.0')	8270
L4822-07	S-6 (6"-6")	8270
L4822-08	S-6 (18"-24")	8270
L4822-09	S-7 (0"-6")	8270
L4822-10	S-7 (18"-24")	8270
L4822-11	S-8 (0"-6")	8270
L4822-12	S-8 (18"-24")	8270
L4822-13	S-9 (0"-6")	8270
L4822-14	S-9 (18"-24")	8270
L4822-15	S-10 (0"-6")	8270
L4822-16	S-10 (18"-24")	8270
L4822-17	S-11 (0"-6")	8270
L4822-18	S-11 (18"-24")	8270
L4822-19	S-12 (0"-6")	8270
L4822-20	S-12 (12"-18")	8270

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes except: Surrogate Recoveries for S-10 0"-6", S-2 0"-6", and S-3 6.5'-7.0', MS/MSD recovery of n-Nitroso-di-n-propylamine and Acenaphthene, and Internal Standard Areas for S-3 0"-6", S-11 0"-6", S-5 0"-6", S-2 0"-6", and S-3 0"-6".

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes, based on narative.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on narrative.

6. Have the correct data qualifiers been used? Yes, based on narrative.

7. Is any data rejected? If yes, specify. No data rejected.

CHEMTECH

CASE NARRATIVE

First Environment
Project Name: Former Jonas Automative
Project # Jonas 001
Chemtech Project # N4822ASP

A. Number of Samples and Date of Receipt
20 Soils Samples were delivered to the laboratory intact on 06/15/01.

B. Parameters
Tests requested on the Chain of Custody were Volatile Organics, Semivolatile Organics, PCBs & Metals. This data package contains results for Semi-Volatile Organics.

C. Analytical Techniques:
The analysis of Semivolatile Organics is based Method 8270. The samples were analyzed on instrument MSBNA"L"4 using GC Column RTX-5 SIMS which is 30 meters, 0.25mm ID, 0.25mm DF (crossbond 5% diphenyl-95% dimethyl polysiloxane).

D. QA/ QC Samples:
Surrogate Recoveries were within QC limits except for S-10 0"-6", S-2 0"-6", S-3 0"-6" and S-3 6.5'-7.0". Blank Spike recoveries met QC criteria. MS/MSD recovery of n-Nitroso-di-n-propylamine and Acenaphthene did not meet requirements. RPDs met requirements. Holding Times were met. Tuning Checks met requirements. Internal Standard Areas met requirements except for S-3 0"-6", S-11 0"-6", S-4 0"-6", S-1 0"-6", S-5 0"-6", S-10 0"-6", S-2 0"-6" and S-3 0"-6". Retention Times were acceptable. Calibrations met requirements. Blank analyses did not indicate the presence of contamination.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V. Reyes Name: Mildred V. Reyes

Date: 8/1/01 Title: QA\QC

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENTAL

Project No.: L4822 Site: NEWBUR Location: LB14541 Group: S-1 0"-6"

Matrix Spike - Sample No.: S-3 6.5'-7.0' Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	#	QC. LIMITS REC.
n-Nitroso-di-n-propylamine	4300	0	6300	147	*	(41-126)
1,2,4-Trichlorobenzene	4300	0	4100	95		(38-107)
Acenaphthene	4300	0	7500	174	*	(31-137)
2,4-Dinitrotoluene	4300	0	3300	77		(28-89)
Pyrene	4300	1100	4400	77		(35-142)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	#	% RPD	#	QC LIMITS RPD	REC.
n-Nitroso-di-n-propylamine	4300	5900	137	*	7		38	(41-126)
1,2,4-Trichlorobenzene	4300	4100	95		0		23	(38-107)
Acenaphthene	4300	7400	172	*	1		19	(31-137)
2,4-Dinitrotoluene	4300	2900	67		13		47	(28-89)
Pyrene	4300	4400	81		6		36	(35-142)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 10 out of 10 outside limits

Comments: _____

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENTAL

Project No.: L4822 Site: NEWBURGH Location: LB14540 Group: S-1 0"-6"

Level: (low/med) LOW

	SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	#	#	#	#	#	TOT OUT
01	SBLK01	53	69	62						
02	BLKSPK-1	55	65	60						
03	S-11 0"-6"	49	64	98						
04	S-12 0"-6"	47	66	71						
05	S-4 0"-6"	38	71	122						
06	S-1 0"-6"	43	75	129						
07	S-5 0"-6"	43	67	102						
08	S-10 0"-6"	41	66	144 *						1
09	S-2 0"-6"	40	73	147 *						1
10	S-3 0"-6"	6 *	18 *	36						2
11	S-7 0"-6"	54	72	63						
12	S-8 0"-6"	52	68	64						
13	S-6 6"-6"	55	71	71						
14	S-9 0"-6"	52	70	115						
15	S-3 6.5'-7.0'	268 *	67	89						1
16	S-11 0"-6"RE	51	70	104						
17	S-12 0"-6"RE	53	78	87						
18	S-4 0"-6"RE	40	69	134						
19	S-1 0"-6"RE	41	70	152 *						1
20	S-5 0"-6"RE	41	69	115						
21	S-10 0"-6"RE	39	71	168 *						1
22	S-3 0"-6"RE	9 *	21 *	38						2
23	S-3 6.5'-7.0'MS	149 *	70	79						1
24	S-3 6.5'-7.0'MS	112	74	78						
25	S-9 0"-6"RE	54	71	141 *						1
26	S-2 0"-6"RE	53	72	138 *						1
27										
28										
29										
30										

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

FORM II SV-2 3/90

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certification No. 11376
Laboratory Report #: L4822ASP Part IV PCBs

Lab Sample #	FEI Sample #	Analysis (Method)
L4822-01	S-1 (0"-6")	8082
L4822-02	S-2 (0"-6")	8082
L4822-03	S-3 (0"-6")	8082
L4822-04	S-4 (0"-6")	8082
L4822-05	S-5 (0"-6")	8082
L4822-06	S-3 (6.5'-7.0')	8082
L4822-07	S-6 (6"-6")	8082
L4822-08	S-6 (18"-24")	8082
L4822-09	S-7 (0"-6")	8082
L4822-10	S-7 (18"-24")	8082
L4822-11	S-8 (0"-6")	8082
L4822-12	S-8 (18"-24")	8082
L4822-13	S-9 (0"-6")	8082
L4822-14	S-9 (18"-24")	8082
L4822-15	S-10 (0"-6")	8082
L4822-16	S-10 (18"-24")	8082
L4822-17	S-11 (0"-6")	8082
L4822-18	S-11 (18"-24")	8082
L4822-19	S-12 (0"-6")	8082
L4822-20	S-12 (12"-18")	8082

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on the narrative.

2. Have all holding times been met? Not identified in Case Narrative

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on the narrative.

6. Have the correct data qualifiers been used? Yes, based on the narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certifiaction No. 11376
Laboratory Report #: L4822ASP Part V Metals

Lab Sample #	FEI Sample #	Analysis (Method)
L4822-01	S-1 (0"-6")	6010, 7471
L4822-02	S-2 (0"-6")	6010, 7471
L4822-03	S-3 (0"-6")	6010, 7471
L4822-04	S-4 (0"-6")	6010, 7471
L4822-05	S-5 (0"-6")	6010, 7471
L4822-06	S-3 (6.5'-7.0')	6010, 7471
L4822-07	S-6 (6"-6")	6010, 7471
L4822-08	S-6 (18"-24")	6010, 7471
L4822-09	S-7 (0"-6")	6010, 7471
L4822-10	S-7 (18"-24")	6010, 7471
L4822-11	S-8 (0"-6")	6010, 7471
L4822-12	S-8 (18"-24")	6010, 7471
L4822-13	S-9 (0"-6")	6010, 7471
L4822-14	S-9 (18"-24")	6010, 7471
L4822-15	S-10 (0"-6")	6010, 7471
L4822-16	S-10 (18"-24")	6010, 7471
L4822-17	S-11 (0"-6")	6010, 7471
L4822-18	S-11 (18"-24")	6010, 7471
L4822-19	S-12 (0"-6")	6010, 7471
L4822-20	S-12 (12"-18")	6010, 7471

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on the narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on a review of the narrative.

6. Have the correct data qualifiers been used? Yes, based on a review of the narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certification No. 11376
Laboratory Report #: L4823ASP Part I VOCs (Soil)

Lab Sample #	FEI Sample #	Analysis (Method)
L4823-01	S-13 (0"-6")	8260
L4823-02	S-13 (12"-18")	8260
L4823-04	S-14 (12"-18")	8260
L4823-05	S-15 (0"-6")	8260
L4823-06	S-15 (18"-24")	8260
L4823-07	S-16 (0"-6")	8260
L4823-08	S-16 (18"-24")	8260
L4823-09	S-16 (7.0'-7.5')	8260
L4823-10	S-17 (0"-6")	8260
L4823-11	S-17 (18"-24")	8260
L4823-12	S-18	8260
L4823-13	S-19 (0"-6")	8260
L4823-14	S-19 (18"-24")	8260
L4823-15	S-19 (7.0'-7.5')	8260
L4823-16	S-20 (0"-6")	8260
L4823-17	S-20 (18"-24")	8260
L4823-18	S-21	8260
L4823-19	FIELDBLANK	8260
L4823-20	TRIPBLANK	8260

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on the narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes except: System Monitoring Compounds for S-19, S-21, and S20, Matrix Spike recoveries, Matrix Spike Duplicate recoveries (1,1-DCE, benzene, TCE, toluene and chlorobenzene did meet requirements, % greater than QC range), and Internal Standard Areas for S-19 and S-21.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on the narrative.

6. Have the correct data qualifiers been used? Yes, based on the narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

GC/MS VOA CONFORMANCE/NON-CONFORMANCE SUMMARY(CONTINUED)

	NA	NO	YES
9. Internal Standard Area/Retention Time Shift Meet Criteria	___	✓	___
10. Analysis Holding Time Met	___	___	✓

Comments: See the Summary page.

10. If not met, list number of days exceeded for each sample:

ADDITIONAL COMMENTS:

Analyst [signature] 7-2-01 Date

QA REVIEW Mildred V. Reyes 8/2/01 Date

CHEMTECH

205 CAMPUS PLAZA I, RARITAN CENTER EDISON NEW JERSEY 08837
NEW JERSEY LAB ID#: 12013 : NEW YORK LAB ID#: 11376

GC/MS VOA CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: L4823 MATRIX: Soil

METHOD: 8260

		NA	NO	YES
1.	Chromatograms Labeled/Compounds Identified. (Field samples and Method Blanks)			✓
2.	GC/MS Tuning Specifications BFB Meet Criteria (NOTE THAT THERE ARE DIFFERENT CRITERIA FOR NY ASP CLP, CLP AND NJ)			✓
3.	GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 Series			✓
4.	GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 and CLP series.			✓
5.	GC/MS Calibration Requirements a. Calibration Check Compounds for 8260 and CLP b. System Performance Check Compounds for 8260 and CLP			✓ ✓

8260 CALIBRATION CRITERIA

SPCC Compounds	MIN RF	CCC Compounds
Chloromethane	0.1	1,1-Dichloroethene
1,1-Dichloroethane	0.1	Chloroform
Bromoform	0.1	1,2-Dichloropropane
Chlorobenzene	0.3	Toluene
1,1,2,2-Tetrachloroethane	0.3	Ethylbenzene
		Vinyl chloride

Initial Calibration Criteria – RSD less than or equal to 30%
Continuing Calibration Criteria - %D less than or equal to 20%

6.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
7.	Surrogate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable ranges. a. VOA See the Sionmary page		✓	
8.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range. a. VOA Fraction See the Sionmary page. B.I. Repeated		✓	

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENT

Project No.: L4823 Site: NEWBURG Location: LB14606 Group: 5970-VOA

Matrix Spike - Sample No.: S-19 18-24 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	#	QC. LIMITS REC.
1,1-Dichloroethene	65	0	120	185	*	(59-172)
Benzene	65	0	100	154	*	(66-142)
Trichloroethene	65	0	120	185	*	(62-137)
Toluene	65	0	120	185	*	(59-139)
Chlorobenzene	65	0	120	185	*	(60-133)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	#	% RPD	#	QC LIMITS RPD	REC.
1,1-Dichloroethene	65	100	154		18		22	(59-172)
Benzene	65	83	128		19		21	(66-142)
Trichloroethene	65	97	149	*	21		24	(62-137)
Toluene	65	100	154	*	18		21	(59-139)
Chlorobenzene	65	100	154	*	18		21	(60-133)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 8 out of 10 outside limits

Comments: _____

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENT

Project No.: L4823 Site: NEWBURGH Location: LB14606 Group: 5970-VOA

Level: (low/med) LOW

	SAMPLE NO.	SMC1 (DCE) #	SMC2 (DBFM) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT
01	VBLK01	83	89	100	98	
02	S 13 12 - 18	88	90	102	102	
03	S 14 12 - 18	82	87	96	88	
04	S 15 18 - 24	80	86	99	99	
05	S 16 18 - 24	83	87	99	96	
06	S 16 7.0 - 7.5	85	94	100	96	
07	S 17 18 - 24	87	91	95	95	
08	S-19 18-24	91	99	96	79	
09	S-19 18-24MS	95	97	102	104	
10	S-19 18-24MSD	85	91	94	97	
11	BLKSPK	86	96	101	104	
12	VBLK02	100	103	106	107	
13	S 19 7.0 - 7.5	88	88	95	95	
14	S 19 18 - 24RE	97	98	81	72 *	1
15	S 21RE	110	107	48 *	65 *	2
16	S 20 18 - 24	136 *	117	79 *	66 *	3
17	S 20 18 - 24RE	113	111	94	107	
18	S 21	111	107	84	86	
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

	QC LIMITS
SMC1 (DCE) = 1,2-Dichloroethane-d4	(70-121)
SMC2 (DBFM) = Dibromofluoromethane	(80-120)
SMC3 (TOL) = Toluene-d8	(81-117)
SMC4 (BFB) = 4-Bromofluorobenzene	(74-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certifiaction No. 11376
Laboratory Report #: L4823ASP Part II VOCs (Water)

Lab Sample #	FEI Sample #	Analysis (Method)
L4823-01	S-13 (0"-6")	8260
L4823-02	S-13 (12"-18")	8260
L4823-04	S-14 (12"-18")	8260
L4823-05	S-15 (0"-6")	8260
L4823-06	S-15 (18"-24")	8260
L4823-07	S-16 (0"-6")	8260
L4823-08	S-16 (18"-24")	8260
L4823-09	S-16 (7.0'-7.5')	8260
L4823-10	S-17 (0"-6")	8260
L4823-11	S-17 (18"-24")	8260
L4823-12	S-18	8260
L4823-13	S-19 (0"-6")	8260
L4823-14	S-19 (18"-24")	8260
L4823-15	S-19 (7.0'-7.5')	8260
L4823-16	S-20 (0"-6")	8260
L4823-17	S-20 (18"-24")	8260
L4823-18	S-21	8260
L4823-19	FIELDBLANK	8260
L4823-20	TRIPBLANK	8260

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on a review of the narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes except: System Monitoring Compound recoveries for BLKSPKMS and RPDs recovery of Benzene and Toluene.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on the narrative.

6. Have the correct data qualifiers been used? Yes, based on the narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

CHEMTECH

205 CAMPUS PLAZA I, RARITAN CENTER EDISON NEW JERSEY 08837
NEW JERSEY LAB ID#: 12013 : NEW YORK LAB ID#: 11376

GC/MS VOA CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: L4823 MATRIX: Water

METHOD: 8260

		NA	NO	YES
1.	Chromatograms Labeled/Compounds Identified. (Field samples and Method Blanks)			✓
2.	GC/MS Tuning Specifications BFB Meet Criteria (NOTE THAT THERE ARE DIFFERENT CRITERIA FOR NY ASP CLP, CLP AND NJ)			✓
3.	GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 Series			✓
4.	GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 and CLP series.			✓
5.	GC/MS Calibration Requirements a. Calibration Check Compounds for 8260 and CLP b. System Performance Check Compounds for 8260 and CLP			✓ ✓

8260 CALIBRATION CRITERIA

SPCC Compounds	MIN RF	CCC Compounds
Chloromethane	0.1	1,1-Dichloroethene
1,1-Dichloroethane	0.1	Chloroform
Bromoform	0.1	1,2-Dichloropropane
Chlorobenzene	0.3	Toluene
1,1,2,2-Tetrachloroethane	0.3	Ethylbenzene
		Vinyl chloride

Initial Calibration Criteria – RSD less than or equal to 30%
Continuing Calibration Criteria - %D less than or equal to 20%

6.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
7.	Surrogate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable ranges. a. VOA See the Summary page		✓	
8.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range. a. VOA Fraction See the Summary page. Blkspike Repeated		✓	

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENTAL

Project No.: L4823 Site: NEWBURGI Location: LB14606 Group: 5970-VOA

Matrix Spike - Sample No.: BLKSPK

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	58	116	(61-145)
Benzene	50	0	57	114	(76-127)
Trichloroethene	50	0	57	114	(71-120)
Toluene	50	0	59	118	(76-125)
Chlorobenzene	50	0	52	104	(75-130)

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	55	110	5	14	(61-145)
Benzene	50	50	100	13 *	11	(76-127)
Trichloroethene	50	50	100	13	14	(71-120)
Toluene	50	49	98	19 *	13	(76-125)
Chlorobenzene	50	46	92	12	13	(75-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 2 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

Comments: _____

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENTAL

Project No.: L4823 Site: NEWBURGH Location: LB14606 Group: 5970-VOA

	SAMPLE NO.	SMC1 (DCE) #	SMC2 (DBFM) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT
01	VBLK01	103	108	102	99	
02	BLKSPKMS	113	106	111	126 *	1
03	BLKSPKMSD	113	98	97	107	
04	BLKSPK	122	98	100	104	
05	VBLK02	127	93	103	123	
06	TRIPBLANK	122	96	105	114	
07	FIELDBLANK	123	101	109	95	
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

	QC LIMITS
SMC1 (DCE) = 1,2-Dichloroethane-d4	(68-135)
SMC2 (DBFM) = Dibromofluoromethane	(70-125)
SMC3 (TOL) = Toluene-d8	(70-125)
SMC4 (BFB) = 4-Bromofluorobenzene	(70-125)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: ChemtechNYSDOH Certification No. 11376
Laboratory Report #: L4823ASP Part III SVOCs

Lab Sample #	FEI Sample #	Analysis (Method)
L4823-01	S-13 (0"-6")	8270
L4823-02	S-13 (12"-18")	8270
L4823-04	S-14 (12"-18")	8270
L4823-05	S-15 (0"-6")	8270
L4823-06	S-15 (18"-24")	8270
L4823-07	S-16 (0"-6")	8270
L4823-08	S-16 (18"-24")	8270
L4823-09	S-16 (7.0'-7.5')	8270
L4823-10	S-17 (0"-6")	8270
L4823-11	S-17 (18"-24")	8270
L4823-12	S-18	8270
L4823-13	S-19 (0"-6")	8270
L4823-14	S-19 (18"-24")	8270
L4823-15	S-19 (7.0'-7.5')	8270
L4823-16	S-20 (0"-6")	8270
L4823-17	S-20 (18"-24")	8270
L4823-18	S-21	8270
L4823-19	FIELDBLANK	8270
L4823-20	TRIPBLANK	8270

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes except: Sample S-14 was diluted due to high concentration of target compounds, and RPDs for Acenaphthene did not meet requirements.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes, based on narrative.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on narrative.

6. Have the correct data qualifiers been used? Yes, based on narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

CHEMTECH

CASE NARRATIVE

First Environment
Project Name: Former Jonas Automative
Project # Jonas 001
Chemtech Project # L4823ASP

A. Number of Samples and Date of Receipt
18 Soils Samples, Field Blank Plus A Trip Blank were delivered to the laboratory intact on 06/15/01.

B. Parameters
Tests requested on the Chain of Custody were Volatile Organics (Soil), Volatile Organics (Water), Semivolatile Organics, PCBs & Metals. This data package contains results for Semi-Volatile Organics.

C. Analytical Techniques:
The analysis of Semivolatile Organic is based Method 8270. The samples were analyzed on instrument MSBNA"L"4, MSBNA B and MSBNA C using GC Column DB-5 SILMS which is 30 meters, 0.25mm ID, 0.25mm DF (crossbond 5% diphenyl-95% dimethyl polysiloxane).

D. QA/ QC Samples:
Surrogate Recoveries were within QC limits. Sample S-14 12"-18" was diluted due to high concentration of target compounds. Blank Spike recoveries met QC criteria. MS/MSD recoveries met requirements. RPDs met requirements except for Acenaphthene. Holding Times were met. Tuning Checks met requirements. Internal Standard Areas and Retention Times were acceptable. Calibrations met requirements. Blank analyses did not indicate the presence of contamination.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V. Reyes Name: Mildred V. Reyes

Date: 8/2/01 Title: QA\QC

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certification No. 11376
Laboratory Report #: L4823ASP Part IV SVOCs

Lab Sample #	FEI Sample #	Analysis (Method)
L4823-01	S-13 (0"-6")	8270
L4823-02	S-13 (12"-18")	8270
L4823-04	S-14 (12"-18")	8270
L4823-05	S-15 (0"-6")	8270
L4823-06	S-15 (18"-24")	8270
L4823-07	S-16 (0"-6")	8270
L4823-08	S-16 (18"-24")	8270
L4823-09	S-16 (7.0'-7.5')	8270
L4823-10	S-17 (0"-6")	8270
L4823-11	S-17 (18"-24")	8270
L4823-12	S-18	8270
L4823-13	S-19 (0"-6")	8270
L4823-14	S-19 (18"-24")	8270
L4823-15	S-19 (7.0'-7.5')	8270
L4823-16	S-20 (0"-6")	8270
L4823-17	S-20 (18"-24")	8270
L4823-18	S-21	8270
L4823-19	FIELDBLANK	8270
L4823-20	TRIPBLANK	8270

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on the narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes except: Sample S-13 0"-6" was diluted due to high concentration of target compounds, RPDs for Acenaphthene, and Internal Standard Areas for S-19 0"-6" and S-20 0"-6".

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on the narrative.

6. Have the correct data qualifiers been used? Yes, based on the narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

CHEMTECH

CASE NARRATIVE

First Environment
Project Name: Former Jonas Automative
Project # Jonas 001
Chemtech Project # L4823ASP

A. Number of Samples and Date of Receipt
18 Soils Samples, Field Blank Plus A Trip Blank were delivered to the laboratory intact on 06/15/01.

B. Parameters
Tests requested on the Chain of Custody were Volatile Organics (Soil), Volatile Organics (Water), Semivolatile Organics, PCBs & Metals. This data package contains results for Semi-Volatile Organics.

C. Analytical Techniques:
The analysis of Semivolatile Organic is based Method 8270. The samples were analyzed on instrument MSBNA"L"4 using GC Column RTX-5 SILMS which is 30 meters, 0.25mm ID, 0.25mm DF (crossbond 5% diphenyl-95% dimethyl polysiloxane).

D. QA/ QC Samples:
Surrogate Recoveries were within QC limits. Sample S-13 0"-6" was diluted due to high concentration of target compounds. Blank Spike recoveries met QC criteria. MS/MSD recoveries met requirements. RPDs met requirements except for Acenaphthene. Holding Times were met. Tuning Checks met requirements. Internal Standard Areas met requirement except for S-19 0"-6" and S-20 0"-6". Retention Times were acceptable. Calibrations met requirements. Blank analyses did not indicate the presence of contamination.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V. Reyes Name: Mildred V. Reyes

Date: 8/2/01 Title: QA\QC

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENTAL

Project No.: L4823 Site: NEWBURG Location: LB14593 Group: S-13 0"-6"

Matrix Spike - Sample No.: S-16 7.0'-7.5' Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
n-Nitroso-di-n-propylamine	3800	0	1900	50	(41-126)
1,2,4-Trichlorobenzene	3800	0	2500	66	(38-107)
Acenaphthene	3800	0	2200	58	(31-137)
2,4-Dinitrotoluene	3800	0	2200	58	(28-89)
Pyrene	3800	0	2100	55	(35-142)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
n-Nitroso-di-n-propylamine	3800	2200	58	15	38	(41-126)
1,2,4-Trichlorobenzene	3800	2900	76	15	23	(38-107)
Acenaphthene	3800	2700	71	20 *	19	(31-137)
2,4-Dinitrotoluene	3800	2600	68	17	47	(28-89)
Pyrene	3800	2500	66	17	36	(35-142)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Comments: _____

_____

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYDOH Certification No. 11376
Laboratory Report #: L4823ASP Part IV Metals

Lab Sample #	FEI Sample #	Analysis (Method)
L4823-01	S-13 (0"-6")	6010, 7471
L4823-02	S-13 (12"-18")	6010, 7471
L4823-04	S-14 (12"-18")	6010, 7471
L4823-05	S-15 (0"-6")	6010, 7471
L4823-06	S-15 (18"-24")	6010, 7471
L4823-07	S-16 (0"-6")	6010, 7471
L4823-08	S-16 (18"-24")	6010, 7471
L4823-09	S-16 (7.0'-7.5')	6010, 7471
L4823-10	S-17 (0"-6")	6010, 7471
L4823-11	S-17 (18"-24")	6010, 7471
L4823-12	S-18	6010, 7471
L4823-13	S-19 (0"-6")	6010, 7471
L4823-14	S-19 (18"-24")	6010, 7471
L4823-15	S-19 (7.0'-7.5')	6010, 7471
L4823-16	S-20 (0"-6")	6010, 7471
L4823-17	S-20 (18"-24")	6010, 7471
L4823-18	S-21	6010, 7471
L4823-19	FIELDBLANK	6010, 7471
L4823-20	TRIPBLANK	6010, 7471

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on a review of the narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes except: Spike Sample recoveries for Mercury.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes based on a review of the narrative.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on the narrative.

6. Have the correct data qualifiers been used? Yes, based on the narrative.

7. Is any data rejected? If yes, specify. Based on the narrative, no data was rejected.

CHEMTECH 205 CAMPUS PLAZA I. RARITAN CENTER EDISON NEW JERSEY 08837

NEW JERSEY LAB ID#:12013 : NEW YORK LAB ID#: 11376

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: L4823 NJ MATRIX: SOIL

METHOD: SW846

	NA	NO	YES
1. Calibration Summary meet criteria.			✓
2. ICP Interference Check Sample Results Summary Submitted Meet criteria Blank Contamination			✓
3. Serial Dilution Summary Submitted (if applicable)meet criteria			✓
4. Laboratory Control Sample Summary Submitted (if applicable)			✓
5. Blank Contamination		✓	
If YES, list compounds and concentrations in each blank:			
6. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria		✓	
If not met, list those compounds and their recoveries which fall outside of the acceptance range: Hg 37.3 / 36.8%			
7. Sample Duplicate Analysis Meet QC Criteria:			✓
If not met, list those compounds and their % differences which fall outside of the acceptance range:			
8. Digestion Holding Time Met			✓
If not met, list number of days exceeded for each sample:			
9. Analysis Holding Time Met			✓
If not met, list number of days exceeded for each sample:			

ADDITIONAL COMMENTS: matrix interference

Dat Tran — Supervisor — 6/29/01 — Date

Mildred W Reyes — QA REVIEW — 8/2/01 — Date

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Cetification No. 11376
Laboratory Report #: L4823ASP Part V PCBs

Lab Sample #	FEI Sample #	Analysis (Method)
L4823-01	S-13 (0"-6")	8082
L4823-02	S-13 (12"-18")	8082
L4823-04	S-14 (12"-18")	8082
L4823-05	S-15 (0"-6")	8082
L4823-06	S-15 (18"-24")	8082
L4823-07	S-16 (0"-6")	8082
L4823-08	S-16 (18"-24")	8082
L4823-09	S-16 (7.0'-7.5')	8082
L4823-10	S-17 (0"-6")	8082
L4823-11	S-17 (18"-24")	8082
L4823-12	S-18	8082
L4823-13	S-19 (0"-6")	8082
L4823-14	S-19 (18"-24")	8082
L4823-15	S-19 (7.0'-7.5')	8082
L4823-16	S-20 (0"-6")	8082
L4823-17	S-20 (18"-24")	8082
L4823-18	S-21	8082
L4823-19	FIELDBLANK	8082
L4823-20	TRIPBLANK	8082

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on narrative.

6. Have the correct data qualifiers been used? Yes, based on narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certification No. 11376
Laboratory Report #: N4923ASP Part I VOCs (Water)

Lab Sample #	FEI Sample #	Analysis (Method)
N4923-01	S-22 (CATCHBASINSEDI	8021
N4923-02	S-23 (6.5'-7.0')	8021
N4923-03	S-24 (6.5'-7.0')	8021
N4923-04	S-25 (6.5'-7.0')	8021
N4923-05	S-26 (6.5'-7.0')	8021
N4923-06	S-27 (6.5'-7.0')	8021
N4923-07	S-28 (2.0'-2.5')	8021
N4923-08	S-29 (8"-12")	8021
N4923-09	S-30 (8"-12")	8021
N4923-10	S-31 (8"-12")	8021
N4923-11	FIELDBLANK	8021
N4923-12	S-32 (5.5-6.0)	8021
N4923-13	S-33 (5.5-6.0)	8021
N4923-14	TRIPBLANK	8021

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on the narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on the narrative.

6. Have the correct data qualifiers been used? Yes, based on the narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certification No. 11376
Laboratory Report #: N4923ASP Part II Volatile Organics (Soil)

Lab Sample #	FEI Sample #	Analysis (Method)
N4923-01	S-22 (CATCHBASINSEDI	8260
N4923-02	S-23 (6.5'-7.0')	8260
N4923-03	S-24 (6.5'-7.0')	8260
N4923-04	S-25 (6.5'-7.0')	8260
N4923-05	S-26 (6.5'-7.0')	8260
N4923-06	S-27 (6.5'-7.0')	8260
N4923-07	S-28 (2.0'-2.5')	8260
N4923-08	S-29 (8"-12")	8260
N4923-09	S-30 (8"-12")	8260
N4923-10	S-31 (8"-12")	8260
N4923-11	FIELDBLANK	8260
N4923-12	S-32 (5.5-6.0)	8260
N4923-13	S-33 (5.5-6.0)	8260
N4923-14	TRIPBLANK	8260

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on a review of the case narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes except: System Monitoring Compound recoveries for N4942-01MS, MS/MSD recovery of Benzene, Trichloroethene, Toluene and Chlorobenzene, above limits, RPDs for 1,1-Dechlorothene and Trichloreothene below limits, and blank analyses indicated the presence of contamination for VBLK01 and VBLK01 with Methylene Chloride.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on the narrative.

6. Have the correct data qualifiers been used? Yes, based on the narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

CHEMTECH

CASE NARRATIVE-VOLATILE ORGANICS

First Environment
Project Name: Former Jonas Automotive
Chemtech Project # N4923ASP

A. Number of Samples and Date of Receipt
7 Aqueous Samples plus Field Blank were delivered to the laboratory intact on 06/22/01.

B. Parameters
Tests requested on the Chain of Custody were Volatile Organics (Water), Volatile Organics (Soil), GC Volatile Organics, Semivolatile Organics & Total Metals. This data package contains results for Volatile Organics (Soil).

C. Analytical Techniques:
Samples were analyzed for Volatile Organics (Soil) according to Method 8260. The analyses were performed on instruments MSVOA B, using GC column RTX624 which is 75 meters, 0.53mm ID, 3.0mm df (crossbond 6% cyanopropylphenyl-94% dimethylpolysiloxane). The Purge Trap was supplied by Supelco, VO CARB 3000, Tekmar 3000.

D. QA/ QC Samples:
System Monitoring Compound recoveries met requirements except for N4942-01MS. MS/MSD recovery of Benzene, Trichloroethene, Toluene and Chlorobenzene did not meet requirements. RPDs met requirements except for 1,1-Dichlorothene and Trichloreothene. Blank Spike recoveries met requirements. Tuning Checks met requirements. Internal Standard Areas and Retention Times met criteria. Calibrations met requirements. Blank analyses did indicate the presence of contamination except for VBLK01 and VBLK01 with Methylene Chloride.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature Mildred V. Reyes Name: Mildred V. Reyes

Date: 7/12/01 Title: QA/QC

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVRIONMENT

Project No.: N4923 Site: FORMER JONAS Auto Location: LB14824 Group: 5970-VOA

Level: (low/med) LOW

	SAMPLE NO.	SMC1 (DCE) #	SMC2 (DBFM) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT
01	VBLK01	84	94	92	90	
02	S-22 CATCHBA	87	93	86	75	
03	S-32 5.5-60	87	93	86	75	
04	S-33 5.5-60	95	101	96	91	
05	VBLK02	112	117	111	112	
06	N4942-01MS	122 *	118	113	114	1
07	N4942-01MSD	117	106	100	100	
08	BLKSPK	107	102	100	99	
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

	QC LIMITS
SMC1 (DCE) = 1,2-Dichloroethane-d4	(70-121)
SMC2 (DBFM) = Dibromofluoromethane	(80-120)
SMC3 (TOL) = Toluene-d8	(81-117)
SMC4 (BFB) = 4-Bromofluorobenzene	(74-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVRIONMENT

Project No.: N4923 Site: FORMER J Location: LB14824 Group: 5970-VOA

Matrix Spike - Sample No.: N4942-01 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	#	QC. LIMITS REC.
1,1-Dichloroethene	51	0	63	124		(59-172)
Benzene	51	0	98	192	*	(66-142)
Trichloroethene	51	0	130	255	*	(62-137)
Toluene	51	0	100	196	*	(59-139)
Chlorobenzene	51	0	100	196	*	(60-133)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	#	% RPD	#	QC LIMITS RPD	REC.
1,1-Dichloroethene	51	80	157		24	*	22	(59-172)
Benzene	51	92	180	*	6		21	(66-142)
Trichloroethene	51	91	178	*	35	*	24	(62-137)
Toluene	51	97	190	*	3		21	(59-139)
Chlorobenzene	51	99	194	*	1		21	(60-133)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 2 out of 5 outside limits
Spike Recovery: 8 out of 10 outside limits

Comments: _____

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certification No. 11376
Laboratory Report #: N4923ASP Part III GC Volatile Organics

Lab Sample #	FEI Sample #	Analysis (Method)
N4923-01	S-22 (CATCHBASINSEDI	8021
N4923-02	S-23 (6.5'-7.0')	8021
N4923-03	S-24 (6.5'-7.0')	8021
N4923-04	S-25 (6.5'-7.0')	8021
N4923-05	S-26 (6.5'-7.0')	8021
N4923-06	S-27 (6.5'-7.0')	8021
N4923-07	S-28 (2.0'-2.5')	8021
N4923-08	S-29 (8"-12")	8021
N4923-09	S-30 (8"-12")	8021
N4923-10	S-31 (8"-12")	8021
N4923-11	FIELDBLANK	8021
N4923-12	S-32 (5.5-6.0)	8021
N4923-13	S-33 (5.5-6.0)	8021
N4923-14	TRIPBLANK	8021

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on the narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes except: MS/MSD %rec outside QC limits for 1,2,4-trichlorobenzene and naphthalene.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on the narrative.

6. Have the correct data qualifiers been used? Yes, based on the narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

CHEMTECH 205 CAMPUS PLAZA I. RARITAN CENTER EDISON NEW JERSEY 08837
NEW JERSEY LAB ID#: 12013 : NEW YORK LAB ID#: 11376

GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT LAB NUMBER: N4923 MATRIX: Soil

METHOD: 8021.Stev

	NA	NO	YES
1. Chromatograms Labeled/Compounds Identified. (Field samples and Method Blanks)	___	___	✓
2. Standards Summary Submitted	___	___	✓
3. Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis, 12 HOURS IF 8000 SERIES METHOD	___	___	✓
4. Blank Contamination - If yes, list compounds and concentrations in each blank:	___	✓	___
VOA Fraction ___			
Pesticides/PCB's ___			
Other ___			
5. Surrogate Recoveries Meet Criteria	___	___	✓
If not met, list those compounds and their recoveries which fall outside the acceptable ranges			
VOA Fraction ___			
Pesticides/PCB's ___			
Other ___			
6. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria.	___	✓	___
If not met, list those compounds and their recoveries which fall outside the acceptable range.			
VOA Fraction please check MS/MSD Table			
Pesticides/PCB's ___			
Other ___			

Chemtech.

GC Volatiles
DETECTOR: PID

SW846 8021

QC MS/MSD 50PPB Spike

Sample spiked: N4992-1 5 GM
Date: 7/1/01

Filename MS: 063014.RAW
Filename MSD: 063015.RAW
Sample ID: 063008.RAW

Batch:QCV167S
Matrix:SOLID

		Spike	Sample	MS Conc			MSD Conc		MSD		RPD			RPD
CAS #	Analyte	Added	Conc (ppb)	ppb	% Rec	Flag	ppb	% Rec	Flag	RPD	Flag	Limits	Limits	Limits
75-35-4	1,1 DICHLOROETHENE	50	0	41	81		41	83		2		50	150	<20%
1634-04-4	MTBE	50	0	46	91		47	94		3		50	150	<20%
71-43-2	BENZENE	50	0	44	88		44	88		1		50	150	<20%
108-88-3	TOLUENE	50	0	44	87		44	87		0		50	150	<20%
100-41-4	ETHYLBENZENE	50	0	42	85		42	84		1		50	150	<20%
136777-61-	M&P XYLENES	100	0	85	85		83	83		2		50	150	<20%
95-47-6	O-XYLENE	50	0	46	92		44	87		5		50	150	<20%
100-42-5	STYRENE	50	0	38	76		37	74		3		50	150	<20%
98-82-8	ISOPROPYLBENZENE	50	0	42	83		42	83		0		50	150	<20%
103-65-1	n-PROPYLBENZENE	50	0	67	133		38	76		55	*	50	150	<20%
	2-CHLORTOL+PETHYLTOLUE	100	0	83	83		83	83		1		50	150	<20%
	4CHLORTOL+135TRIMETHBE	100	0	78	78		74	74		5		50	150	<20%
98-06-6	TERT-BUTYLBENZENE	50	0	37	74		37	74		0		50	150	<20%
95-63-6	1,2,4-TRIMETHYLBENZENE	50	0	41	83		42	83		0		50	150	<20%
135-98-8	SEC-BUTYLBENZENE	50	0	38	76		40	79		5		50	150	<20%
541-73-1	1,3 DICHLOROBENZENE	50	0	38	76		36	72		4		50	150	<20%
99-87-6	ISOPROPYLTOLUENE	50	0	36	72		36	72		0		50	150	<20%
106-46-7	1,4 DICHLOROBENZENE	50	0	35	71		33	65		8		50	150	<20%
104-51-8	n-BUTYLBENZENE	50	0	27	54		33	65		19		50	150	<20%
95-50-1	1,2 DICHLOROBENZENE	50	0	36	73		34	68		8		50	150	<20%
120-82-1	1,2,4 TRICHLOROBENZENE	50	0	22	44	*	28	55		23	*	50	150	<20%
87-68-3	HEXACHLOROBUTADIENE	50	0	29	58		33	66		13		50	150	<20%
91-20-3	NAPHTHALENE	50	0	15	31	*	24	48	*	44	*	50	150	<20%

* Denotes analyte outside control limits

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certification No. 11376
Laboratory Report #: N4923ASP Part IV SVOCs

Lab Sample #	FEI Sample #	Analysis (Method)
N4923-01	S-22 (CATCHBASINSEDI	8270
N4923-02	S-23 (6.5'-7.0')	8270
N4923-03	S-24 (6.5'-7.0')	8270
N4923-04	S-25 (6.5'-7.0')	8270
N4923-05	S-26 (6.5'-7.0')	8270
N4923-06	S-27 (6.5'-7.0')	8270
N4923-07	S-28 (2.0'-2.5')	8270
N4923-08	S-29 (8"-12")	8270
N4923-09	S-30 (8"-12")	8270
N4923-10	S-31 (8"-12")	8270
N4923-11	FIELDBLANK	8270
N4923-12	S-32 (5.5-6.0)	8270
N4923-13	S-33 (5.5-6.0)	8270
N4923-14	TRIPBLANK	8270

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes except: Surrogate recoveries did not meet requirements for Samples S-22 and S-29 which were diluted due to high concentration of target compounds; S-22, S-29, and S-31 did not meet requirements for Internal Standard Areas.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes, based on narrative.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on narrative.

6. Have the correct data qualifiers been used? Yes, based on narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENTAL

Project No.: N4923 Site: FORMER JONAS Addition: Group: S-22

Lab File ID (Standard): BB070210.D Date Analyzed: 7/2/01

Instrument ID: 5971-B Time Analyzed: 2044

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	2322388		20.13		2529289		27.56		2687263		31.26	
	UPPER LIMIT	4644776		20.63		5058578		28.06		5374526		31.76	
	LOWER LIMIT	1161194		19.63		1264645		27.06		1343632		30.76	
	SAMPLE NO.												
01	S-30 8"-12"	1967010		20.11		2199150		27.55		1936819		31.25	
02	S-32 5.5-6.0	1982070		20.12		2112257		27.54		2204605		31.24	
03	S-22	1990431		20.25		1100959	*	27.97		926513	*	31.57	
04	S-29 8"-12"	2350586		20.23		1028441	*	28.04		752567	*	31.56	
05	S-33 5.5-6.0	2528544		20.13		2452584		27.54		1667938		31.25	
06	S-31 8"-12"	2332049		20.14		1333282		27.72		696654	*	31.48	
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENTAL

Project No.: N4923 Site: FORMER JONAS AUTO Location: LB14702 Group: S-22

	SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	#	#	#	#	#	TOT OUT
01	SBLK01	89	72	70						
02	L4934-01MS	70	55	60						
03	L4934-01MSD	73	57	57						
04	SBLK02	65	59	52						
05	BLKSPK-2	59	53	51						
06	FIELDBLANK	36	35 *	32 *						2
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(35-114)
S2 (FBP) = 2-Fluorobiphenyl	(43-116)
S3 (TPH) = Terphenyl-d14	(33-141)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENTAL

Project No.: N4923 Site: FORMER JONAS AUTO Location: LB14625 Group: S-22

Level: (low/med) LOW

	SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	#	#	#	#	#	TOT OUT
01	SBLK01	79	65	69						
02	L4991-02MS	61	62	73						
03	L4991-02MSD	64	58	70						
04	SBLK02	40	36	41						
05	BLKSPK	84	71	75						
06	S-30 8"-12"	37	34	38						
07	S-32 5.5-6.0	37	34	38						
08	S-22	38	41	56						
09	S-29 8"-12"	36	32	58						
10	S-33 5.5-6.0	34	34	41						
11	S-31 8"-12"	35	34	57						
12	S-22DL	37 D	36 D	46 D						
13	S-29 8"-12"DL	34 D	35 D	46 D						
14	S-31 8"-12"RE	32	33	38						
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

CHEMTECH

CASE NARRATIVE

First Environment
Project Name: Former Jonas Automotive
Chemtech Project # N4923ASP

A. Number of Samples and Date of Receipt
7 Aqueous Samples plus Field Blank were delivered to the laboratory intact on 06/22/01.

B. Parameters
Tests requested on the Chain of Custody were Volatile Organics (Water), Volatile Organics (Soil), GC Volatile Organics, Semivolatile Organics & Total Metals. This data package contains results for Semivolatile Organics.

C. Analytical Techniques:
The analysis of Semivolatile Organics is based on Method 8270. The samples were analyzed on instrument MSBNA B, C and MSBNA using GC Column RTX-5 which is 30 meters, 0.25mm ID, 0.25mm df (crossbond 5% diphenyl-95% dimethyl polysiloxane).

D. QA/ QC Samples:
Surrogate recoveries met requirements except for Field Blank, Samples S-22 and S-29 8"-12" were diluted due to high concentration of target compounds. MS/MSD recoveries and RPDs met requirements. Blank Spike recoveries met requirements. Holding Times met requirements. Internal Standard Areas met requirements except for followings S-22, S-29 "8"-12" and S-31 8"-12". Calibrations met requirements. Blank analyses did not indicate the presence of contamination.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature Mildred V. Reyes Name: Mildred V. Reyes

Date: 7/12/01 Title: QA/QC

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYSDOH Certification No. 11376
Laboratory Report #: N4923ASP Part V Total Metals

Lab Sample #	FEI Sample #	Analysis (Method)
N4923-01	S-22 (CATCHBASINSEDI	6010, 7471
N4923-02	S-23 (6.5'-7.0')	6010, 7471
N4923-03	S-24 (6.5'-7.0')	6010, 7471
N4923-04	S-25 (6.5'-7.0')	6010, 7471
N4923-05	S-26 (6.5'-7.0')	6010, 7471
N4923-06	S-27 (6.5'-7.0')	6010, 7471
N4923-07	S-28 (2.0'-2.5')	6010, 7471
N4923-08	S-29 (8"-12")	6010, 7471
N4923-09	S-30 (8"-12")	6010, 7471
N4923-10	S-31 (8"-12")	6010, 7471
N4923-11	FIELDBLANK	6010, 7471
N4923-12	S-32 (5.5-6.0)	6010, 7471
N4923-13	S-33 (5.5-6.0)	6010, 7471

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on the narrative.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes except: Spike Sample recoveries for Mercury, Serial Dilutions for Calcium & Zinc, and Duplicate analyses for Arsenic.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on the narrative.

6. Have the correct data qualifiers been used? Yes, based on the narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

CHEMTECH 205 CAMPUS PLAZA I. RARITAN CENTER EDISON NEW JERSEY 08837

NEW JERSEY LAB ID#:12013 : NEW YORK LAB ID#: 11376

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: N4923 ASP MATRIX: SOIL

METHOD: SW846

	NA	NO	YES
1. Calibration Summary meet criteria.			✓
2. ICP Interference Check Sample Results Summary Submitted Meet criteria Blank Contamination			✓
3. Serial Dilution Summary Submitted (if applicable)meet criteria			✓
4. Laboratory Control Sample Summary Submitted (if applicable)			✓
5. Blank Contamination		✓	

If YES, list compounds and concentrations in each blank:

6. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria		✓	✓ (DR) 7/9/01

If not met, list those compounds and their recoveries which fall outside of the acceptance range:

Hg 64.9%

7. Sample Duplicate Analysis Meet QC Criteria:		✓	

If not met, list those compounds and their % differences which fall outside of the acceptance range:

As 30.6%

8. Digestion Holding Time Met			✓

If not met, list number of days exceeded for each sample:

9. Analysis Holding Time Met			✓

If not met, list number of days exceeded for each sample:

ADDITIONAL COMMENTS: matrix interference

Dick Rum
Supervisor

7/9/01
Date

QA REVIEW

Date

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYDOH Certification No. 11376
Laboratory Report #: N5718NJ Volatile Organics, Semi-Voaltile Organics & Metals

Lab Sample #	FEI Sample #	Analysis (Method)
N5718-01	MW-1	8260, 8270, 6010B, 7471A
N5718-02	MW-5	8260, 8270, 6010B, 7471A
N5718-03	MW-2	8260, 8270, 6010B, 7471A
N5718-04	MW-3	8260, 8270, 6010B, 7471A
N5718-05	MW-4	8260, 8270, 6010B, 7471A
N5718-06	DUPLICATE	8260, 8270, 6010B, 7471A
N5718-07	FIELDBLANK	8260, 8270, 6010B, 7471A
N5718-08	TRIPBLANK	8260

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Yes, based on the narrative, cursory review of report and certification by laboratory QC personnel.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? Yes except: MS/MS dup recovery for 1,1-DCE and chlorobenzene was outside of acceptable range, blank analyses did indicate the presence of acetone contamination.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes, based on the narrative.

6. Have the correct data qualifiers been used? Yes, based on a review of the data and the narrative.

7. Is any data rejected? If yes, specify. No data was rejected.

CHEMTECH 284 Sheffield Street. Mountainside New Jersey 07092

NEW JERSEY LAB ID#:12013 : NEW YORK LAB ID#: 11376

GC/MS VOA CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: N5718 MATRIX: WATER

METHOD: 8260

	NA	NO	YES
1. Chromatograms Labeled/Compounds Identified. (Field samples and Method Blanks)	___	___	✓
2. GC/MS Tuning Specifications BFB Meet Criteria (NOTE THAT THERE ARE DIFFERENT CRITERIA FOR NY ASP CLP, CLP AND NJ)	___	___	✓
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 Series	___	___	✓
4. GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series.	___	___	✓
5. GC/MS Calibration Requirements a. Calibration Check Compounds for 8260 and CLP	___	___	✓
b. System Performance Check Compounds for 8260 and CLP	___	___	✓

8260 CALIBRATION CRITERIA

SPCC Compounds	MIN RF	CCC Compounds
Chloromethane	0.1	1,1-Dichloroethene
1,1-Dichloroethane	0.1	Chloroform
Bromoform	0.1	1,2-Dichloropropane
Chlorobenzene	0.3	Toluene
1,1,2,2-Tetrachloroethane	0.3	Ethylbenzene
		Vinyl chloride

For CCC compounds Initial Calibration Criteria – RSD less than or equal to 30%
For CCC compounds Continuing Calibration Criteria - %D less than or equal to 20%

6. Blank Contamination - If yes, list compounds and concentrations in each blank: ___ ___ ✓

VB090603.D Acetone 7.49 ug/l

VB091003.D Acetone 16.75 ug/l

7. Surrogate Recoveries Meet Criteria ___ ___ ✓

If not met, list those compounds and their recoveries which fall outside the acceptable ranges.

GC/MS VOA CONFORMANCE/NON-CONFORMANCE SUMMARY(CONTINUED)

	NA	NO	YES
8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria		✓	

If not met, list those compounds and their recoveries which fall outside the acceptable range.

See the Summery page

9. Internal Standard Area/Retention Time Shift Meet Criteria			✓

Comments: _____

10. Analysis Holding Time Met			✓

If not met, list number of days exceeded for each sample:

ADDITIONAL COMMENTS: _____

Ankit
Analyst

9/12/01
Date

Carole Collins
QA REVIEW

9/18/01
Date

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Contract: FIRST ENVIRONMENT

Project No. N5718 Site: FORMER J Location: LB16071 Group: 5971-VOA

Matrix Spike - Sample No.: MW-3

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	#	QC. LIMITS REC.
1,1-Dichloroethene	50	0	26	52	*	(61-145)
Benzene	50	0	49	98		(76-127)
Trichloroethene	50	0	45	90		(71-120)
Toluene	50	0	50	100		(76-125)
Chlorobenzene	50	0	39	78		(75-130)

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	#	% RPD	#	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	49	98		61	*	14	(61-145)
Benzene	50	50	100		2		11	(76-127)
Trichloroethene	50	51	102		13		14	(71-120)
Toluene	50	53	106		6		13	(76-125)
Chlorobenzene	50	45	90		14	*	13	(75-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 2 out of 5 outside limits
Spike Recovery: 1 out of 10 outside limits

Comments: _____

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Veritech: NYDOH Certification No. 11408
Laboratory Report #: 08132152 SVOCs, Metals

Lab Sample #	FEI Sample #	Analysis (Method)
AB64960	SS-1	8270, 6010, 7471A
AB64961	SS-2	8270, 6010, 7471A
AB64962	SS-3	8270, 6010, 7471A
AB64963	SS-4	8270, 6010, 7471A
AB64964	SS-5	8270, 6010, 7471A
AB64965	SS-6	8270, 6010, 7471A
AB64966	SS-7	6010
AB64967	SS-8	6010
AB64968	SS-9	6010
AB64969	SS-10-1	6010
AB64970	SS-10-2	6010
AB64971	SS-11	6010
AB64972	SS-12	6010
AB64973	SS-13	6010
AB64974	Duplicate	8270, 6010, 7471A

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Report is not in 100% concurrence with ASP requirements as the QC was completed to NYDOH-R deliverables. However, based on a review of the QC data provided, analytical data appears to have received sufficient QC and is accepted.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications: Serial dilution for Ba, Cd. Cr, Co, Pb, Ni and V outside criteria. MS/MSD for SB outside criteria. Ba blank contamination found, but at less than 5% of regulatory limit.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes.

6. Have the correct data qualifiers been used? Yes.

7. Is any data rejected? If yes, specify. Data was not rejected.

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Veritech: NYDOH Certification No. 11408
Laboratory Report #: P5587 Volatile Organics

Lab Sample #	FEI Sample #	Analysis (Method)
AB67366	MW-1	8260, 418.1, 200.7, 245.1
AB67368	MW-2	8260, 418.1, 200.7, 245.1
AB67370	MW-3	8260, 200.7, 245.1
AB67372	MW-4	8260, 418.1, 200.7, 245.1
AB67374	MW-5	8260, 200.7, 245.1
AB67376	MW-6	8260, 418.1, 200.7, 245.1
AB67378	Field Blank	8260
AB67379	Trip Blank	8260

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Report is not in 100% concurrence with ASP requirements as the QC was completed to requirements of NYDOH-R deliverables. However, based on a review of the QC data provided, analytical data appears to have received sufficient QC and is accepted.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications: Serial dilution for Hg did not meet criteria, matrix spike for Ca outside of range, chlorobenzene spike recovery above limit.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes.

6. Have the correct data qualifiers been used? Yes.

7. Is any data rejected? If yes, specify. Data was not rejected.

Project Name: Former Jonas Automotive
Project #: JONAS001
Laboratory: Chemtech: NYDOH Certification No. 11376
Laboratory Report #: P5587 Volatile Organics

Lab Sample #	FEI Sample #	Analysis (Method)
P5587-01	MW-3	8260 (w/MTBE and TBA)

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables? Report is not in 100% concurrence with ASP requirements as the single sample was analyzed to evaluate suspected results. However, based on a review of the QC data provided, analytical data appears to have received sufficient QC and is accepted.

2. Have all holding times been met? Yes.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? MS/MS dup recovery for 1,1-DCE above acceptable range.

4. Have all of the data been generated using established and agreed upon analytical protocols? Yes.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? Yes.

6. Have the correct data qualifiers been used? Yes.

7. Is any data rejected? If yes, specify. No data was rejected.

NYG 2508759

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please type or print. Do not staple

(Hazardous Waste Manifest 1/5/99)

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the NYS Department of Environmental Conservation (518) 457-7362

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NY2000091090 | Manifest Doc. No. 45025 | 2. Page 1 of | Information within heavy bold line is not required by Federal Law.

3. Generator's Name and Mailing Address
The City of Newburg
"The former Jonas Aptomotive"
86 Weimer Avenue
Newburg, NY

4. Generator's Telephone Number ( )

A. NYG 2508759
B. Generator's ID

5. Transporter 1 (Company Name): Radiac Research Corp.
6. US EPA ID Number: NYD049178296
C. State Transporter's ID: NY686TRAN
D. Transporter's Telephone: (718) 963-2233

7. Transporter 2 (Company Name)
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Telephone ( )

9. Designated Facility Name and Site Address
Radiac Research Corp.
261 Kent Avenue
Brooklyn, NY 11211
10. US EPA ID Number: NYD049178296
G. State Facility ID: 33 So. 1st St., Bklyn, NY
H. Facility Telephone: 718 963-2233

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers Number	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. ( ) Waste Flammable Liquid,NOS,3,UN1993,II	XX	DM	XX1DO	P	EPA D001 / STATE
b. (RQ) Waste Flammable Liquid,NOS,3,UN1993,II	XX	DM	X X 4 0 0	P	EPA D001 / STATE
c. ( )					EPA / STATE
d.					EPA / STATE

J. Additional Descriptions for Materials listed Above		K. Handling Codes for Wastes Listed Above	
a Lab Pack	c	a	c
b Bulk	d	b	d

15. Special Handling Instructions and Additional Information IN AN EMERGENCY CONTACT: CHEMTREC 1-800-424-9300
A) ERG# 128
B) ERG# 128

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Mo.	Day	Year
		11	09	00

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Mo.	Day	Year
MARIO ALONSO		11	09	00

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Mo.	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Mo.	Day	Year
LOUIS CAMACHO		11	10	00

GENERAL BILL OF LADING

CHEMICAL WASTE DISPOSAL RECORD

No. C 4502

DATE 11-9-00

BLDG. NO.

ROOM NO.

DEPT. NO.

COMPANY/INSTITUTION Waste Mgt- The City of Newburg-Jonas

(CONTAINER CLASSIFICATION)

		TYPE	P/U
1- 1X55 NR. (LP)	5-	5 - Gallon	
2- 1X30 ~~30~~ Flam. (LP)	6-	30 - Gallon	
3- 1X55 Flam Bulk	7-	55 - Gallon	
4-	8-	Other	

Certification (49 C.F.R. 172.204) signed by shipper on bill of lading: "This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation."

CUSTOMER REP.

RRC REP.

REMARKS:

RADIAC ENVIRONMENTAL SVCS.
261 KENT AVENUE
BROOKLYN, NY 11211
TELEPHONE: (718) 963-2233

MANIFEST NUMBER(S) NYG2508759

CONTROL CARD NUMBER(S)

LABELS APPLIED 49 C.F.R. 172.400	☐ YES ☐ NO	PLACARDING APPLIED IF REQUIRED 49 C.F.R. 172.500	☐ YES ☐ NO

MT. Hope Recycling

A Division of MT. Hope Rock Products Corp.

625 Mt. Hope Rd. • Wharton, NJ 07885 • Tel (973) 366-7741 Fax (973) 328-8490

Job #: 9910073

Ticket #: 33999

Customer: First Environment

Date: 12/06/99

Time: 11:12

Generator:
City of Newburgh
83 Broadway
NEWBURGH, NY 12550

Spill Location:
Former Jonas Automotive
86 Wisner Avenue
NEWBURGH, NY 12550

Fuel Type: Unleaded Gasoline

Waste Type: ID-27

Contamination Method: Leaking Under Ground Storage

Trucking Company:
MT. Hope Rock Products
625 Mt. Hope Road
Wharton, NJ 07885

Hauler ID: MHR100

Lic. Plate: AE833G

Tel #: (973) 366-7741

Contact: Ron Callahan

Driver's Name: GARCIA, FREDDY

License #: X6055426800D64Z

Operator's ID: SCAL

Operator's Name: Scale House

Gross Weight: 35.87

Tare Weight: 13.19

Net Weight: 22.68

The undersigned certifies that the information provided on the waste manifest documentation is true, and that all DOT, EPA, and state environmental regulations have been complied with in the handling of this non-hazardous hydrocarbon contaminated soil. The undersigned further certifies that the material delivered is as represented by the laboratory analysis and material profile presented to the recycling facility during the application process.

Driver's Signature: Freddy Garcia

MT. Hope Recycling
A Division of MT. Hope Rock Products Corp.

625 Mt. Hope Rd. • Wharton, NJ 07885 • Tel (973) 366-7741 Fax (973) 328-8490

Job #: 9910073

Ticket #: 34002

Customer:
First Environment

Date: 12/06/99

Time: 11:52

Generator:
City of Newburgh
83 Broadway
NEWBURGH, NY 12550

Spill Location:
Former Jonas Automotive
86 Wisner Avenue
NEWBURGH, NY 12550

Fuel Type: Unleaded Gasoline

Waste Type: ID-27

Contamination Method: Leaking Under Ground Storage

Trucking Company:
MT. Hope Rock Products
625 Mt. Hope Road
Wharton, NJ 07885

Hauler ID: MHR100

Lic. Plate: AB511Y

Tel #:
(973) 366-7741

Contact: Ron Callahan

Driver's Name: SOTO, JORGE

License #: 567734506107692

Operator's ID: SCAL
Operator's Name: Scale House

Gross Weight: 36.88

Tare Weight: 12.39

Net Weight: 24.49

The undersigned certifies that the information provided on the waste manifest documentation is true, and that all DOT, EPA, and state environmental regulations have been complied with in the handling of this non-hazardous hydrocarbon contaminated soil. The undersigned further certifies that the material delivered is as represented by the laboratory analysis and material profile presented to the recycling facility during the application process.

Driver's Signature: Jorge Soto

MT. Hope Recycling
A Division of MT. Hope Rock Products Corp.

625 Mt. Hope Rd. • Wharton, NJ 07885 • Tel (973) 366-7741 Fax (973) 328-8490

Job #: 9910073

Ticket #: 34003

Customer: First Environment

Date: 12/06/99

Time: 11:53

Generator:
City of Newburgh
83 Broadway
NEWBURGH, NY 12550

Spill Location:
Former Jonas Automotive
86 Wisner Avenue
NEWBURGH, NY 12550

Fuel Type: Unleaded Gasoline

Waste Type: ID-27

Contamination Method: Leaking Under Ground Storage

Trucking Company:
MT. Hope Rock Products
625 Mt. Hope Road
Wharton, NJ 07885

Hauler ID: MHR100

Lic. Plate: AC986J

Tel #: (973) 366-7741

Contact: Ron Callahan

Driver's Name: HARRIS, SIDNEY

License #: H06707107312702

Operator's ID: SCAL

Operator's Name: Scale House

Gross Weight: 41.42

Tare Weight: 13.67

Net Weight: 27.75

The undersigned certifies that the information provided on the waste manifest documentation is true, and that all DOT, EPA, and state environmental regulations have been complied with in the handling of this non-hazardous hydrocarbon contaminated soil. The undersigned further certifies that the material delivered is as represented by the laboratory analysis and material profile presented to the recycling facility during the application process.

Driver's Signature: Sidney L. Harris

MT. Hope Recycling
A Division of MT. Hope Rock Products Corp.

625 Mt. Hope Rd. • Wharton, NJ 07885 • Tel (973) 366-7741 Fax (973) 328-8490

Job #: 9910073

Ticket #: 34014

Customer:
First Environment

Date: 12/06/99

Time: 15:17

Generator:
City of Newburgh
83 Broadway
NEWBURGH, NY 12550

Spill Location:
Former Jonas Automotive
86 Wisner Avenue
NEWBURGH, NY 12550

Fuel Type: Unleaded Gasoline

Waste Type: ID-27

Contamination Method: Leaking Under Ground Storage

Trucking Company:
MT. Hope Rock Products
625 Mt. Hope Road
Wharton, NJ 07885

Hauler ID: MHR100

Lic. Plate: AD148G

Tel #: (973) 366-7741

Contact: Ron Callahan

Driver's Name: Culleny, Daniel

License #: C9218 15383 08644

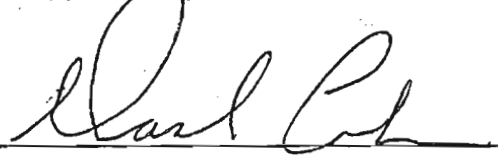
Operator's ID: SCAL
Operator's Name: Scale House

Gross Weight: 38.64

Tare Weight: 13.43

Net Weight: 25.21

The undersigned certifies that the information provided on the waste manifest documentation is true, and that all DOT, EPA, and state environmental regulations have been complied with in the handling of this non-hazardous hydrocarbon contaminated soil. The undersigned further certifies that the material delivered is as represented by the laboratory analysis and material profile presented to the recycling facility during the application process.

Driver's Signature: 

MT. Hope Recycling

A Division of MT. Hope Rock Products Corp.

625 Mt. Hope Rd. • Wharton, NJ 07885 • Tel (973) 366-7741 Fax (973) 328-8490

Job #: 9910073

Ticket #: 34015

Customer:
First Environment

Date: 12/06/99

Time: 15:18

Generator:
City of Newburgh
83 Broadway
NEWBURGH, NY 12550

Spill Location:
Former Jonas Automotive
86 Wisner Avenue
NEWBURGH, NY 12550

Fuel Type: Unleaded Gasoline

Waste Type: ID-27

Contamination Method: Leaking Under Ground Storage

Trucking Company:
MT. Hope Rock Products
625 Mt. Hope Road
Wharton, NJ 07885

Hauler ID: MHR100

Lic. Plate: AC986J

Tel #: (973) 366-7741

Contact: Ron Callahan

Driver's Name: HARRIS, SIDNEY

License #: H06707107312702

Operator's ID: SCAL
Operator's Name: Scale House

Gross Weight: 36.33

Tare Weight: 13.67

Net Weight: 22.66

The undersigned certifies that the information provided on the waste manifest documentation is true, and that all DOT, EPA, and state environmental regulations have been complied with in the handling of this non-hazardous hydrocarbon contaminated soil. The undersigned further certifies that the material delivered is as represented by the laboratory analysis and material profile presented to the recycling facility during the application process.

Driver's Signature: Sidney L. Harris

Water Resources skip navigation

Data Category: Site Information | Geographic Area: New York | GO

Site Inventory for New York

USGS 412920074014601 O1175

Available data for this site | Station home page | GO

#1

LOCATION
Latitude 41°29'20", Longitude 74°01'46" NAD27,
Orange County, New York , Hydrologic Unit 02020008

WELL DESCRIPTION
The depth of the well is 29.0 feet below land surface. Altitude of land surface datum 140.00 feet above sea level NGVD29. This well is completed in SAND AND GRAVEL (112SDGV)

STATION DATA:

Data Type	Begin Date	End Date	Count
Ground-water levels	1965-08-12	1965-08-12	1

~ 18.1' BGS
No water level

SITE OPERATION:
Record for this site is maintained by the USGS office in New York

CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412920074014701 O2267

Available data for this site | Station home page | GO

LOCATION
Latitude 41°29'20", Longitude 74°01'47" NAD27,
Orange County, New York , Hydrologic Unit 02020008

#2

WELL DESCRIPTION
The depth of the well is 37.0 feet below land surface. Altitude of land surface datum 140.00 feet above sea level NGVD29.

STATION DATA:

Data Type	Begin Date	End Date	Count
Ground-water levels	1965-09-02	1965-09-02	1

~ 6.7' BGS

SITE OPERATION:
Record for this site is maintained by the USGS office in New York

CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412920074014801 O1176

Available data for this site Station home page GO

LOCATION
Latitude 41°29'20", Longitude 74°01'48" NAD27,
Orange County, New York , Hydrologic Unit 02020008

WELL DESCRIPTION
The depth of the well is 32.0 feet below land surface. Altitude of land surface datum 110.00 feet above sea level NGVD29.

STATION DATA:

Data Type	Begin Date	End Date	Count
Ground-water levels	1965-01-01	1965-01-01	1

~ 2.8' BGS

SITE OPERATION:
Record for this site is maintained by the USGS office in New York

CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412920074014901 O1177

Available data for this site Station home page GO

LOCATION
Latitude 41°29'20", Longitude 74°01'49" NAD27,
Orange County, New York , Hydrologic Unit 02020008

WELL DESCRIPTION
The depth of the well is 24.0 feet below land surface. Altitude of land surface datum 110.00 feet above sea level NGVD29. This well is completed in SAND AND GRAVEL (112SDGV)

STATION DATA:

Data Type	Begin Date	End Date	Count
Ground-water levels	1965-01-01	1965-01-01	1

~ 1.0 BGS

SITE OPERATION:
Record for this site is maintained by the USGS office in New York

CONTACT INFORMATION
Email questions about this station to gs-w-

ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412920074015001 O1178

Available data for this site Station home page GO

LOCATION
Latitude 41°29'20", Longitude 74°01'50" NAD27,
Orange County, New York , Hydrologic Unit 02020008

WELL DESCRIPTION
The depth of the well is 33.0 feet below land surface. Altitude of land surface datum 125.00 feet above sea level NGVD29. This well is completed in SAND AND GRAVEL (112SDGV)

STATION DATA:

Data Type	Begin Date	End Date	Count
Ground-water levels	1965-01-01	1965-01-01	1

~6.6' BGS

SITE OPERATION:
Record for this site is maintained by the USGS office in New York

CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412921074014501 O1179

Available data for this site Station home page GO

LOCATION
Latitude 41°29'21", Longitude 74°01'45" NAD27,
Orange County, New York , Hydrologic Unit 02020008

WELL DESCRIPTION
The depth of the well is 38.0 feet below land surface. Altitude of land surface datum 135.00 feet above sea level NGVD29. This well is completed in SAND AND GRAVEL (112SDGV)

STATION DATA:

Data Type	Begin Date	End Date	Count
Ground-water levels	1965-01-01	1965-01-01	1

~8.0' BGS

SITE OPERATION:
Record for this site is maintained by the USGS office in New York

CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412921074014601 O1180

Available data for this site Station home page GO

LOCATION
Latitude 41°29'21", Longitude 74°01'46" NAD27,
Orange County, New York , Hydrologic Unit 02020008
WELL DESCRIPTION
The depth of the well is 54.0 feet below land surface. Altitude of land surface datum 130.00 feet above sea level NGVD29. This well is completed in LAKE DEPOSITS (112LAKE)
STATION DATA:
There is no data available for this site. WL Not Available
SITE OPERATION:
Record for this site is maintained by the USGS office in New York
CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412921074014701 O1174

Available data for this site Station home page GO

LOCATION
Latitude 41°29'21", Longitude 74°01'47" NAD27,
Orange County, New York , Hydrologic Unit 02020008
WELL DESCRIPTION
The depth of the well is 25.0 feet below land surface. Altitude of land surface datum 110.00 feet above sea level NGVD29.
STATION DATA:
There is no data available for this site. WL Not Available
SITE OPERATION:
Record for this site is maintained by the USGS office in New York
CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412922074014601 O1173

Available data for this site Station home page GO

LOCATION
Latitude 41°29'22", Longitude 74°01'46" NAD27,
Orange County, New York , Hydrologic Unit 02020008 # 9
WELL DESCRIPTION
The depth of the well is 50.0 feet below land surface. Altitude of land surface datum 130.00 feet above sea level NGVD29.
STATION DATA:
There is no data available for this site. WL Not Available
SITE OPERATION:
Record for this site is maintained by the USGS office in New York
CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412928074014501 O1172

Available data for this site Station home page GO

LOCATION
Latitude 41°29'28", Longitude 74°01'45" NAD27,
Orange County, New York , Hydrologic Unit 02020008 # 10
WELL DESCRIPTION
The depth of the well is 33.0 feet below land surface. Altitude of land surface datum 120.00 feet above sea level NGVD29. This well is completed in SAND AND GRAVEL (112SDGV)
STATION DATA:

Data Type	Begin Date	End Date	Count
Ground-water levels	1965-08-12	1965-08-12	1

WL = 7.5' BGS
SITE OPERATION:
Record for this site is maintained by the USGS office in New York
CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412955074023001 O1104

Available data for this site Station home page GO

LOCATION
Latitude 41°29'55", Longitude 74°02'30" NAD27,
Orange County, New York , Hydrologic Unit 02020008

WELL DESCRIPTION
The depth of the well is 285 feet below land surface. Altitude of land surface datum 200.00 feet above sea level NGVD29. This well is completed in ONONDAGA LIMESTONE (344ONDG)

STATION DATA:
There is no data available for this site. No WL Available

SITE OPERATION:
Record for this site is maintained by the USGS office in New York

CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412955074030501 O1182

Available data for this site Station home page GO

LOCATION
Latitude 41°29'55", Longitude 74°03'05" NAD27,
Orange County, New York , Hydrologic Unit 02020008

WELL DESCRIPTION
The depth of the well is 92.0 feet below land surface. Altitude of land surface datum 250.00 feet above sea level NGVD29. This well is completed in ONONDAGA LIMESTONE (344ONDG)

STATION DATA:

Data Type	Begin Date	End Date	Count
Ground-water levels	1963-05-01	1963-05-01	1

WL = 20.01305

SITE OPERATION:
Record for this site is maintained by the USGS office in New York

CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 412955074030601 O1105

Available data for this site Station home page GO

LOCATION
Latitude 41°29'55", Longitude 74°03'06" NAD27,
Orange County, New York , Hydrologic Unit 02020008

#13

WELL DESCRIPTION
The depth of the well is 57.0 feet below land surface. Altitude of land surface datum 260.00 feet above sea level NGVD29. This well is completed in ONONDAGA LIMESTONE (344ONDG)

STATION DATA:

Data Type	Begin Date	End Date	Count
Ground-water levels	1965-08-03	1965-08-03	1

WL = 38.0'

SITE OPERATION:
Record for this site is maintained by the USGS office in New York

CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

USGS 413025074022501 O1208

Available data for this site Station home page GO

LOCATION
Latitude 41°30'25", Longitude 74°02'25" NAD27,
Orange County, New York , Hydrologic Unit 02020008

#14

WELL DESCRIPTION
The depth of the well is 409 feet below land surface. Altitude of land surface datum 200.00 feet above sea level NGVD29. This well is completed in ONONDAGA LIMESTONE (344ONDG)

STATION DATA:

Data Type	Begin Date	End Date	Count
Ground-water levels	1965-06-01	1965-06-01	1

WL = 6.0'

SITE OPERATION:
Record for this site is maintained by the USGS office in New York

CONTACT INFORMATION
Email questions about this station to gs-w-ny_NWISWeb_Data_Inquiries@usgs.gov

1.47 1.01

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **North** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**413025074022501**

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Orange
Altitude:	200.00 ft.	State:	New York
Well Depth:	409.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	6.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	06011965	Prim. Use of Water:	Institution

---

2 **South** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**412955074023001**

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Orange
Altitude:	200.00 ft.	State:	New York
Well Depth:	285.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	Not Reported	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Commercial

---

3 **ESE** **1/4 - 1/2 Mile** **Lower**	**FED USGS**	**413000074020001**

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Orange
Altitude:	.00 ft.	State:	New York
Well Depth:	409.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	2.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	01011958	Prim. Use of Water:	Institution

A4 **WSW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**412955074030501**

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Orange
Altitude:	250.00 ft.	State:	New York
Well Depth:	92.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	20.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	05011963	Prim. Use of Water:	Domestic

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
A5 **WSW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**412955074030601**

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Orange
Altitude:	260.00 ft.	State:	New York
Well Depth:	57.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	38.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	08031965	Prim. Use of Water:	Domestic

FIRST ENVIRONMENT

Certified to ISO 14001

CORPORATE HEADQUARTERS
91 Fulton Street
Boonton, NJ 07005
Tel: 973-334-0003
Fax: 973-334-0928

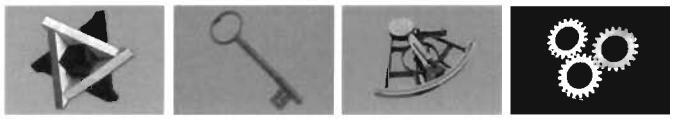
CARIBBEAN
P.O. Box 195365
San Juan, Puerto Rico 00919
Tel: 787-767-0838
Fax: 787-763-9597

GEORGIA
1200 Chastain Road
Suite 304
Kennesaw, GA 30144
Tel: 770-424-3344
Fax: 770-424-3399

ILLINOIS
10 South Riverside Plaza
Suite 1800
Chicago, IL 60606
Tel: 312-474-6104
Fax: 312-474-6099

MISSISSIPPI
119 Marketridge Drive
Suite D/Box 6
Ridgeland, MS 39157
Tel: 601-957-8967
Fax: 601-956-2441

NEW YORK
19 Willowbrook Lane
Mountainville, NY 10953
Tel: 845-534-9285
Fax: 845-534-7044



contactus@firstenvironment.com
www.firstenvironment.com