INTERIM REMEDIAL MEASURES SUMMARY REPORT

HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK

PREPARED

BY

ESC ENGINEERING OF NEW YORK, P.C.

August 6, 2004

Contents

Contents
(continued)

List of Figures:

List of Tables:

List of Appendices:

Acronym List

ACM	asbestos-containing material
AQES	Air Quality and Environmental Services, LLC
ATL	Atlantic Testing Laboratories, Limited
bgs	below the ground surface
cis-1,2-DCE	cis-1,2-dichloroethylene
EPA	U.S. Environmental Protection Agency
GAC	granular activated carbon
HASP	health and safety plan
Hg	mercury
HP	horsepower
ID	inside diameter
IRM	interim remedial measure
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O&M	operation and maintenance
PCE	tetrachloroethene
ppbv	parts per billion by volume
ppmv	parts per million by volume
PCBs	polychlorinated biphenyls
PCM	phase contrast microscopy
PID	photoionization detector
PVC	polyvinyl chloride
QAPP	quality assurance project plan
RSI	Remediation Services, Inc.
scfm	standard cubic feet per minute
SOP	standard operating procedure
SVE	soil vapor extraction
SVOCs	semi-volatile organic compounds
TAGM	Technical Assistance Guidance Memorandum
TCE	trichloroethene
TCLP	toxicity characteristic leaching procedure
TPH	total petroleum hydrocarbons
ug/kg	micrograms per kilogram
VOCs	volatile organic compounds

1.0 Introduction

1.1 General

ESC Engineering of New York, P.C. was retained by Federal-Mogul Corporation to prepare this Interim Remedial Measures (IRM) Summary Report for the recent activities performed at the Huck manufacturing facility in Kingston, New York (Figure 1). This report is being submitted to the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) to serve as documentation that the IRM activities were completed in substantial conformance with the requirements identified in the following documents and approved field changes detailed in this report:

- the February 6, 2002, Voluntary Cleanup Agreement (Index Number: A3-0372-9807) between Federal-Mogul Corporation and the NYSDEC
- the NYSDEC and NYSDOH-approved IRM Work Plan (ESC Engineering, 2003); the NYSDEC and NYSDOH approved the IRM Work Plan in a November 26, 2003, letter to ESC Engineering

The IRMs were conducted to address indoor air quality within the main building and within the attached office building, volatile organic compounds (VOCs) in shallow soils in the eastern parking lot, and VOCs in onsite and offsite soil gas. The November 7, 2003, work plan also discussed the presence of VOCs in soil above the water table in the former metal finishing and chemical storage area and the former degreaser area. However, additional investigation is required in these areas and, thus, no IRMs were proposed to address these soils. Therefore, these areas are not discussed in this report.

All construction and site work associated with the IRMs were completed in accordance with applicable federal, state, and local laws and regulations. All monitoring activities discussed herein were conducted in accordance with procedures outlined in ESC Engineering's standard operating procedures (SOPs) which are included in the Quality Assurance Project Plan (QAPP) prepared for the site (ESC, 2001). All work was performed in accordance with the site-specific Health and Safety Plan (HASP; ESC, 2001).

The purpose and organization of this IRM Summary Report is described below, followed by a discussion of general background information relating to the site and the IRM activities.

1.2 Purpose and Organization of Report

The purpose of this IRM Summary Report is to provide a detailed description of the activities associated with the IRMs. The report has been organized into the following sections:

- Section 1 – Introduction
- Section 2 – Description of IRM Activities
- Section 3 – Operation and Maintenance
- Section 4 – Engineering Certification
- Section 5 – References

1.3 Site Location and Description

The Huck manufacturing facility is located at 85 Grand Street in Kingston, New York and consists of two buildings occupying 105,000 square feet on 4.5 acres (Figures 1 and 2). The remainder of the site consists of asphalt parking areas, access roads, and a small grass-covered area near the southeast corner of the main manufacturing building. A chain-link fence controls access to the western portion of the facility. Currently, Allways Moving and Storage, which uses the facility for indoor self-storage, leases the site from Federal-Mogul (current site owner). Portions of the onsite buildings are subleased to local businesses.

The property is in a mixed light industrial, commercial, and residential area. Tenbroeck Avenue borders the site to the northeast. Northeast of Tenbroeck Avenue are mixed residential and commercial properties. Grand Street and residences border the site to the southeast. West of the site is CSX Transportation, Inc. railroad tracks, across which lie light industrial and commercial properties.

1.4 Previous Investigations

This section of the report summarizes the results of previous investigations performed by ESC Engineering that are relevant to the IRMs. Specifically, this section reviews the VOC results from soil investigations performed in the former metal finish area, eastern parking lot transformer area, and former degreaser area; onsite and offsite soil gas investigations; and the onsite indoor air investigations.

ESC Engineering performed soil and groundwater investigations at the site in March 2002 and August 2003. The results of the March 2002 investigations were presented to the NYSDEC in the Supplemental Investigative Report, dated November 2, 2002. ESC Engineering is currently preparing a report on the additional soil and groundwater investigations conducted in August 2003 and the report will be submitted to the NYSDEC in the near future. A table summarizing the soil VOC results from the relevant areas of concern at the site is presented in Table 1. Indoor air and soil gas sampling activities were conducted at the site in April and August 2003. The results of the April 2003 investigations were summarized in ESC Engineering's Indoor Air and Soil Gas Sampling Report, dated July 18, 2003. The results of the August 2003 indoor air and soil gas investigations are presented in the IRM Work Plan, dated November 7, 2003. Tables 2 and 3 presents the results of the soil gas and indoor air investigations, respectively.

1.4.1 Soil Investigations

Below is a summary of the soil investigation activities conducted in three areas of the site. This section addresses only the results of soil samples analyzed for VOCs. In accordance with ESC Engineering's Supplemental Investigative Work Plan, dated June 18, 2000, the VOC results have been compared to the recommended soil cleanup objectives provided in the NYSDEC's Technical and Administrative Guidance Memorandum (TAGM) 4046: Determination of Soil Cleanup Objectives and Cleanup Levels, dated January 24, 1994.

Eastern Parking Lot Transformer Area

ESC Engineering has advanced 16 soil borings in the eastern parking lot to delineate the horizontal and vertical extent of VOCs in soil (Figure 3). These borings include SB-4 through SB-7, SB-9 through SB-14, SB-35, SB-36, SB-47, SB-48, SB-64, and SB-65. Soil samples were collected from each boring at 1 to 3 feet below ground surface (bgs) and 6 to 8 feet bgs. Soil samples were also collected from the two-foot-thick interval directly above the water table (i.e., approximately 16 to 18 feet bgs) at borings SB-9 and SB-14. The soil samples collected from 1 to 3 feet and above the water table were analyzed for VOCs. Samples collected from 6 to 8 feet were analyzed only if constituents were detected in the 1 to 3 foot interval above the evaluation criteria.

The analytical results indicated the presence of trichloroethene (TCE; 890 micrograms per kilogram [ug/kg] to 370,000 ug/kg), tetrachloroethene (PCE; 2,500 ug/kg to 110,000 ug/kg), acetone (450 ug/kg to 8,300 ug/kg), and methylene chloride (2,800 ug/kg) at concentrations

above the evaluation criteria in the 1 to 3 foot interval of SB-6, SB-10, SB-14, SB-36, SB-64, and SB-65 (Figure 3). The evaluation criteria for these compounds are 700 ug/kg for TCE, 1,400 ug/kg for PCE, 110 ug/kg for acetone, and 100 ug/kg for methylene chloride (Table 1). No VOCs were detected above the evaluation criteria in samples collected from these borings at 6 to 8 feet bgs, or in the two-foot-thick interval directly above the groundwater table.

ESC Engineering anticipates conducting limited additional soil sampling to define the southern extent of VOCs in shallow soil in the eastern parking lot. The proposed investigations will be described in the upcoming report summarizing the August 2003 investigations.

Former Metal Finish Area

ESC Engineering has advanced nine soil borings in the former metal finish and chemical storage area (SB-1 though SB-3, SB-8, SB-34, SB-37, SB-38, SB-42, and SB-49) to evaluate the horizontal and vertical extent of VOCs in soil (Figure 3). Soil samples were collected from each boring for chemical analysis from 1 to 3 feet bgs and from directly above the water table from borings SB-1 (17.5 to 19.5 feet bgs) and SB-38 (13 to 15 feet bgs). No VOCs were detected above the evaluation criteria in these borings in the 1 to 3 foot interval or in the 13 to 15 foot interval of SB-38. The sample collected from SB-1 directly above the water table contained TCE at a concentration of 47,000 ug/kg, which is above the evaluation criterion of 700 ug/kg. Based on the absence of VOCs at concentrations above the evaluation criteria above the water table in soil borings SB-9, SB-14, and SB-38, the affected soil above the water table in this area appears to be limited in horizontal extent.

ESC Engineering anticipates conducting limited additional soil sampling above the water table in this area to determine the western and northern limits of VOCs detected at SB-1. The proposed investigations will be described in the upcoming report summarizing the August 2003 investigations.

Former Degreaser Area

ESC Engineering has advanced five soil borings (SB-29, SB-30, SB-33, SB-66, and SB-67) in the former degreaser area to evaluate the horizontal extent of VOCs in soil above the water table. Investigations in this area by a previous consultant indicated that VOC concentrations in the upper portion of the vadose zone are below the evaluation criteria. Soil samples were collected from each boring directly above the water table for VOC analysis. The

analytical results from SB-33 indicated 65,000 ug/kg of TCE and 93,000 ug/kg of PCE. No VOCs were detected above the water table in the remaining borings at concentrations above the evaluation criteria. Therefore, the horizontal extent of VOCs in soil above the water table in this area is limited.

1.4.2 Soil Gas Investigations

In April and August 2003, ESC Engineering collected 24 soil gas samples at the locations designated SG-1 through SG-24 on Figure 4. The soil gas samples were collected to determine the presence and horizontal extent of VOCs in soil gas onsite and offsite. The soil gas samples were collected at a depth of approximately 6 feet bgs using 6-liter Summa canisters and dedicated 6-inch-long, 0.5-inch-diameter stainless steel screens and Teflon tubing. The soil gas samples were collected in accordance with the procedures outlined in the NYSDEC and NYSDOH-approved work plan, dated April 2, 2003, and the proposed scope of work outlined in the July 18, 2003, Indoor Air and Soil Gas Sampling Report. The soil gas samples were analyzed for TCE, PCE, and cis-1,2-dichloroethene (cis-1,2-DCE) by U.S. Environmental Protection Agency (EPA) Method TO-15. The soil gas results indicated the presence of TCE in 22 samples at concentrations from 1.7 parts per billion by volume (ppbv) to 97,000 ppbv. PCE was detected in 22 samples at concentrations from 4.8 ppbv to 45,000 ppbv and cis-1,2,-DCE was detected in 10 samples at concentrations from 2.7 ppbv to 8,800 ppbv (Table 2).

The highest concentrations of the target VOCs were detected onsite along the eastern property line (Figure 4). These levels decreased abruptly toward the east at SG-1 through SG-3, to the west at SG-5, and to the north at SG-6. As described above, shallow soil in the northern portion of the eastern parking lot contains elevated concentrations of TCE and PCE from 1 to 3 feet bgs. These soils are believed to be the primary source for VOCs in soil gas. The majority of the property is covered with buildings, concrete sidewalks, or asphalt, with the exception of a small grassy area around the office building and the narrow landscaped areas in the eastern and southern parking lots. Furthermore, the pavement of Grand Street and Tenbroeck Avenue directly abuts the paved portions of the site. Therefore, given the shallow depth of VOCs in soil in the eastern parking lot, and the fact that the majority of the site is covered with an impervious surface, the VOCs appeared to have volatilized and migrated horizontally under this cap and into the utility corridors of the adjacent streets.

1.4.3 Indoor Air Investigations

On April 29, 2003, ESC Engineering collected indoor air samples inside the main building in the office complex and in the space formerly leased by Scheffel Furniture. The soil gas samples were analyzed for TCE, PCE, and cis-1,2-DCE by EPA Method TO-15. The indoor air sample locations are designated IA-1 and IA-2 on Figure 5. These sample locations were selected to evaluate indoor air quality in the two areas of the main building that were routinely occupied. The Scheffel Furniture space was being used for furniture refinishing during the sampling activities, but has since been vacated. ESC Engineering completed the NYSDOH's indoor air quality questionnaire for each sample location and inventoried the VOC-containing products stored in each space. Products containing VOCs were recorded on the NYSDOH's Household Products Inventory Form along with the VOC ingredients and the concentration of organic vapors detected near the lid of the containers, which were measured with a photoionization detector (PID). Copies of the completed indoor air quality questionnaires are provided in the July 18, 2003, Indoor Air and Soil Gas Sampling Report.

The analytical results indicated the presence of TCE in sample IA-1 at a concentration of 1.7 ppbv and in sample IA-2 at a concentration of 10 ppbv. Low levels of PCE and cis-1,2-DCE were also detected in the office complex (Table 3).

In accordance with the proposed scope of work in ESC Engineering's Indoor Air and Soil Gas Sampling Report, dated July 18, 2003, ESC Engineering collected 12 additional indoor air samples inside the main building and one outdoor air sample in August 2003. The purpose of the additional sampling activities was to confirm the results from IA-1 and IA-2 and to evaluate the indoor air quality in the remainder of the main building. In addition, indoor air samples were collected on the first floor (IA-6) and basement (IA-7) levels of the attached office building. The additional indoor air sample locations are designated IA-3 through IA-16 on Figure 5. ESC Engineering completed the NYSDOH's indoor air quality questionnaire and household products inventory form for each sample location and used a PID to measure the organic vapor concentration near the lid of containers with VOC ingredients (forms provided in Enclosure C of the November 7, 2003, IRM work plan).

The analytical results from the additional indoor air samples indicated low levels of TCE in each sample at concentrations ranging from 3.3 ppbv to 48 ppbv. PCE was detected in 13 samples at concentrations from 1.3 ppbv to 9.7 ppbv and cis-1,2-DCE was detected in 11

samples at concentrations from 0.5 ppbv to 9.5 ppbv. TCE was detected in the attached office building at concentrations of 18 ppbv on the first floor and 31 ppbv in the basement. PCE was detected in the office building at 10 ppbv on the first floor and 6.9 ppbv in the basement. Cis-1,2-DCE was not detected in the office building. TCE was the only compound detected in outdoor air sample OA-2 at a concentration of 0.77 ppbv. A copy of the analytical results is presented in Enclosure D of the November 7, 2003, IRM work plan.

The concentration of TCE detected in the former Scheffel Furniture space (3.3 ppbv) and inside the main office complex (14 ppbv) in August 2003 were similar to the concentrations detected in these areas in April 2003. The concentration of TCE detected in sample IA-4 (11 ppbv), which was collected directly outside the office door, was similar to the concentration detected inside the office at sample IA-3 (14 ppbv). These data suggest that the repeated opening and closing of the office door may result in a TCE concentration inside the office that is similar to the TCE level in the surrounding indoor air. TCE was detected in the office bathroom at a concentration of 35 ppbv, which is higher than in the office area. These data suggest that the bathroom's isolated location may reduce mixing with the surrounding indoor air, or VOCs may be entering the bathroom along a potential seam between the floor slab and a below-grade sump in that room. The sump reportedly collects sanitary waste before it is pumped overhead and out to the sanitary sewer. The TCE concentrations detected in the remaining areas of the main building are relatively homogenous (Figure 5).

2.0 Description of IRM Activities

2.1 IRM Objectives and Components

The objectives of the IRMs at the site were identified in the IRM Work Plan and are summarized below:

- prevent the infiltration of soil gas containing VOCs into the attached office building
- remediate shallow soils (less than 6 feet bgs) in the eastern parking lot containing VOCs (primarily TCE and PCE) above the evaluation criteria
- collect and treat soil gas containing VOCs along the eastern and southern property lines and in the adjacent offsite areas
- address VOCs in soil gas under the former manufacturing building in the vicinity of the former metal finish and chemical storage area and the main office complex

Presented below are the main components of the IRM activities that were implemented at the Huck manufacturing facility to achieve the objectives specified above:

- installed subsurface conveyance piping along the former finish and chemical storage area of the main building, adjacent to Grand Street, and along the southwestern property line
- installed soil vapor extraction (SVE) treatment equipment in the main manufacturing building
- conducted system start-up and operation and maintenance activities
- removed asbestos containing material from the office building basement
- installed a sub-slab depressurization system in the basement of the office building
- managed and disposed of waste materials generated during implementation of the IRM activities in accordance with applicable rules and regulations

A detailed description of each of these IRM activities is presented below.

2.2 Soil Vapor Extraction System

This section presents a detailed description of the SVE system installation activities. During implementation of the SVE system, the NYSDEC provided a field representative during most of the IRM activities and ESC Engineering provided full-time, engineering services to observe the work performed by Remediation Services Inc. (RSI) for substantial conformance with the NYSDEC and NYSDOH-approved IRM Work Plan. RSI was the remedial contractor retained by ESC Engineering to implement the SVE IRM.

ESC Engineering conducted the following activities during the installation of the SVE system:

- reviewed contractor submittals for adequacy relative to the requirements presented in the NYSDEC and NYSDOH-approved IRM Work Plan and NYSDEC-approved field changes
- coordinated with Federal-Mogul, NYSDEC, and subcontractors, as detailed herein, regarding the IRM
- maintained detailed written records of the field activities performed by the contractor, including documentation of field conditions encountered
- observed the work performed by the contractor for the duration of the IRM for substantial conformance with the NYSDEC and NYSDOH-approved IRM Work Plan
- conducted air monitoring in accordance with the procedures and requirements set forth in ESC Engineering's HASP
- characterized for offsite disposal the waste material generated during implementation of the IRM
- signed manifests on behalf of Federal-Mogul

A description of the SVE IRM activities that were implemented at the site is detailed below.

2.2.1 SVE System Piping Installation

The piping layout for the SVE system was based on analytical results from previous soil gas, soil, and indoor air investigations, as well as best engineering judgement. The targeted

treatment zone extends from beneath the pavement to approximately 6 feet bgs. The unconsolidated sediments within the treatment zone consist of fine to medium grained sand. In order to effectively treat this shallow zone and remove soil vapor from the site boundary and adjacent offsite areas, ESC Engineering installed the vapor extraction piping in trenches. Figure 6 presents the SVE system piping layout and estimated radius of influence of the horizontal extraction pipes. The actual radius of influence observed during startup is discussed in Section 3.1.1.

The SVE system piping was divided into three horizontal extraction lines (i.e., Line 1, Line 2, and Line 3) with separate screened intervals. Line 1 consists of approximately 120 feet of 6-inch inside-diameter (ID) screened polyvinyl chloride (PVC) pipe along the former finish and chemical storage area of the main building. The purpose of Line 1 is to remediate shallow vadose zone soils in the eastern parking lot in excess of TAGM and collect and treat vapors containing VOCs that may be present beneath the former manufacturing building. Line 2 consists of approximately 200 feet of 6-inch ID screened PVC pipe installed along a portion of the eastern property line adjacent to Grand Street. A portion of the piping was installed on a 45 degree diagonal to avoid gas feed piping entering the property from Grand Street at the southern corner of the former finish and chemical storage area of the main manufacturing building. This line addresses shallow soils in the parking area (shown in blue on Figure 6) and soil gas containing VOCs along Grand Street (both onsite and offsite). Line 3 consists of approximately 490 feet of 6-inch ID screened PVC installed along Grand Street and the southwestern property line where soil gas samples indicated elevated levels of VOCs.

To provide flexibility in isolating portions of the extraction lines, valve boxes where installed at four locations as shown on Figure 6. The first valve is located approximately 90 feet from the start of Line 2 screened pipe. This valve allows the SVE system to extract more air along the first 90 feet of screened pipe, which corresponds to the area of shallow soil with VOC concentrations above TAGM. The remaining three valves were installed along the Line 3 screened pipe. The first valve along Line 3 is located at the beginning of the screened interval to shut off Line 3. The second valve along Line 3 was installed approximately 130 feet from the first valve. This valve allows soil vapor to be extracted only from the first 130 feet of screened piping. The third valve on Line 3 was installed at the 90 degree turn at the southeast corner of the property to isolate vapor extraction along Grand Street.

Figure 7 presents three as-built cross-sections of the extraction trench. The top of the extraction pipes were installed a minimum of 3.5 feet bgs in most instances. Some of the piping was locally installed at a shallower depth due to subsurface utilities. Screened pipe located in the same trench as solid pipe was offset by installing the pipe below the invert of the solid pipe. This was done to minimize any potential restriction in horizontal airflow that may occur if the pipes were installed at the same invert elevation. The slot size of the screen is 0.040-inch. Each section of PVC pipe was glued together and placed in the trench. A silica sand filter pack (U.S. Silica No. 2) was installed around the pipe in the trench to provide a secure bedding for the pipe and enhance air flow into the pipe. A 0.25-inch diameter washed stone was installed between the silica sand pack and PVC pipe to prevent the infiltration of fine particulates into the pipe. Excavated soil was then placed back into the trench on top of the filter pack for treatment. A geomembrane cover was placed above the backfill to provide a seal between the underlying soil backfill and the overlying flowable fill. Flowable fill (e.g., a mixture of cement, fly ash, and sand aggregate) was placed above the geomembrane as an additional low permeability layer to enhance the lateral vacuum influence of the trench, prevent short-circuiting to the atmosphere, and provide some structural integrity for vehicular traffic over the trenching. Approximately 6-inches of concrete was placed over the flowable fill to provide a restored surface.

2.2.2 SVE Treatment Equipment Installation

On completion of the pipe installation activities, the SVE treatment equipment was installed in a room of the main building (Figure 6). Larger doorways were installed in the treatment room to facilitate installation of the treatment equipment. Based on a hydraulic analysis detailed in the IRM Work Plan, two separate SVE systems were installed. One blower unit was installed to provide system vacuum to Lines 1 and 2. A second blower unit was installed for Line 3. These two blowers are operating in parallel. Further discussion of Lines 1 and 2 in this report will be referred to as Zone 1, and Line 3 as Zone 2.

To control the dynamic flow regime, various valving, filters, and treatment equipment were installed with each blower. Air flow from Zone 1 contains dedicated inlet valves for Lines 1 and 2. A separate inlet valve was installed for Zone 2. The process and instrumentation for both systems are essentially the same. The only main difference is the size of the blowers, as discussed later in this section. The extracted vapor stream is conveyed through an inlet air filter to remove particulates such as sand and grit. The vapor stream is then conveyed through a 120-

gallon separator to remove moisture. Water removed from the vapor stream is pumped to a 300-gallon polyethylene condensation tank by a set of float switches that actuate a water transfer pump. The vapor stream is then treated with a 2,000-pound vapor phase granular activated carbon (GAC) unit. The treated vapor stream is transferred through a second inlet air filter before entering a positive displacement blower. The blower for Zone 1 is a 25 horsepower (HP) unit capable of 550 standard cubic feet per minute (scfm) at 8.5 inches of mercury (Hg) vacuum. The blower for Zone 2 is a 40 HP unit capable of 750 scfm at 9.5 Hg. Both units are constructed with discharge silencers to reduce noise. The exhaust from both blowers are combined and discharged to the atmosphere through a common PVC stack. Both SVE systems include a dilution air filter/valve and vacuum relief valve in order to operate each blower at maximum efficiency.

Both SVE systems have similar telemetry and instrumentation (vacuum gauges, air flow gauges, temperature gauges, air sample ports) that allow for automated operation (Figure 8). On/off sensors in the air/water separator automatically operate a water transfer pump that transfers collected condensate from the separator to the condensate storage tank. A high level switch will shutdown the system to prevent this unit from overflowing (in case of transfer pump failure). The condensate storage tank is also outfitted with a high level switch that will shut off both SVE systems if triggered (the volume of water in the tank hits the predetermined level of the high level switch). Each blower is equipped with an internal amperage/volt sensor that will shut down the blower if the amperage draw exceeds a pre-set limit. This device prevents motor overload on the blower. Each SVE system also has a vacuum transmitter in the inlet air line located between the air/water separator and the GAC unit that will shutdown the blower in case of a low vacuum (see Figure 8). A low vacuum would be indicative of a break in a pipe or connection causing loss of vacuum. In addition to these alarm conditions, each SVE system is equipped with air flow rate meters and transmitters, vacuum indicators, pressure indicators, temperature gauges and transmitters, flow control valves, sample ports, and vacuum relief valves at the blower inlet. Controls and inputs from the vacuum transmitters, air flow transmitters, water flow transmitter, and temperature transmitters interface with a EOS Research Ltd. Series 2 plus master control panel. Proview™ software is used to monitor the system operation remotely using a computer. Some features that can be conducted remotely include the following:

- monitor the system sensors

- control equipment that are outputs on the control panel
- change the way the system operates
- view and change the system setpoints and alarm levels

An as-built process and instrumentation diagram detailing the SVE system is provided as Figure 8.

2.2.3 Waste Material Management

281.38 tons of soil were generated from the trenching activities and stockpiled onsite. A composite soil sample was collected on December 18, 2003, to characterize the material for offsite disposal/treatment. The soil sample was submitted to Severn Trent Laboratories in Newburgh, New York, for analysis of VOCs, semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), metals, pesticides, and herbicides by the Toxicity Characteristic Leaching Procedure (TCLP), total petroleum hydrocarbons (TPH), PCBs, ignitability, reactivity, corrosivity, and pH. The analytical results from the characterization sample indicated non-detectable concentrations of VOCs, SVOCs, metals, PCBs, pesticides, herbicides, and TPH. The soil pH was 7.69 standard units. A copy of the analytical results are presented in Appendix A. Based on the analytical results, the excavated soil was managed as a non-hazardous waste. The excavated soil was transported to the City of Albany Landfill in Albany, New York for disposal as a non-hazardous waste. Approximately 48 cubic yards of asphalt removed to facilitate excavation of the piping trench was transported to Blacktop Maintenance Corporation in Poughkeepsie, New York as a recyclable material. Copies of non-hazardous waste bill of ladings are provided in Appendix B.

2.2.4 Site Restoration

The surface of the soil vapor extraction trenches were restored by placing concrete level with the surrounding pavement or sidewalk along Grand Street. Significant cracks that developed between the concrete and surrounding pavement/sidewalk were filled with asphalt material on June 1, 2004. Remediation support areas and equipment staging areas mobilized to the site during the construction activities were removed. Silica sand and washed stone was staged in front of the office building during the construction activities. This area has been graded and seeded.

2.2.5 Installation of Vapor and Vacuum Monitoring Points

ESC Engineering installed 12 vapor and vacuum monitoring points, designated VM-1 through VM-12 on Figure 9, to measure vacuum influence and to allow the collection of soil gas samples. The vacuum and vapor monitoring points were installed by advancing a soil boring to a depth of approximately 6 feet using a drill rig equipped with 4.25-inch ID hollow-stem augers. The augers were withdrawn from the ground and the monitoring point was constructed in the open borehole. The vapor monitoring points consist of a 6-inch-long, 0.5-inch diameter stainless steel wire mesh screen (0.0057 inch pore size) attached to a sufficient length of 0.25-inch ID Teflon tubing to reach the ground surface. The screen and tubing were lowered to the bottom of the borehole and approximately 1 foot of quartz sand was placed around the screen. An approximately one-foot-thick granular bentonite seal was placed on top of the sand pack and the bentonite was hydrated with potable water. A vacuum monitoring point was installed on top of the bentonite seal at a depth of 4 feet bgs. The vacuum monitoring point was constructed of one-inch ID schedule 40 PVC casing and consisted of 2.5 feet of 0.01-inch machine-slotted PVC screen and 1.5 feet of solid PVC riser. An approximately 1.75-foot-thick sand pack was placed around the well casing followed by a 0.75-foot-thick hydrated bentonite seal. Each monitoring point was completed with a sand drain and a flush-mounted protective steel cover set in a concrete pad. The construction details for the vacuum and vapor monitoring point is presented on Figure 7. Boring logs for offsite vapor monitoring points VP-7 through VP-12 are presented in Appendix C. Due to the large number of borings previously drilled onsite (i.e., over 70), no soil samples were collected for lithologic description during installation of vapor monitoring points VP-1 through VP-6 and, thus, no logs were prepared for these borings.

2.3 Office Building Sub-Slab Depressurization System

ESC Engineering contracted Air Quality and Environmental Services, LLC (AQES) to install a sub-slab depressurization system in the basement of the two-story brick office building to prevent the infiltration of soil gas. As discussed above, ESC Engineering previously collected an indoor air sample in the basement of the structure in August 2003 for analysis of TCE, PCE, and cis-1,2-DCE. The indoor air sample contained 31 ppbv of TCE and 6.9 ppbv of PCE.

During installation of the sub-slab system, the NYSDEC provided a field representative during a portion of the work and ESC Engineering provided part-time engineering services to observe the work performed by AQES for substantial conformance with the NYSDEC and

NYSDOH-approved IRM Work Plan. Services provided by ESC Engineering during the installation of the sub-slab depressurization system included the following:

- reviewed Contractor submittals for adequacy relative to the requirements presented in the NYSDEC and NYSDOH-approved IRM Work Plan and NYSDEC-approved field changes
- coordinated with Federal-Mogul, NYSDEC, and subcontractors, as detailed herein, regarding the IRM
- maintained detailed written records of the field activities performed by the Contractor, including documentation of field conditions encountered
- observed the work performed by the Contractor at key project milestones for substantial conformance with the NYSDEC and NYSDOH-approved IRM Work Plan
- conducted air monitoring in accordance with the procedures and requirements set forth in ESC Engineering's HASP
- coordinated and subcontracted the removal of asbestos-containing material (ACM) before construction activities were initiated

A description of the IRM activities associated with the installation of the sub-slab depressurization system at the site is detailed below.

2.3.1 Asbestos Removal

During a pre-construction reconnaissance visit with AQES, suspected ACM were observed in the basement of the office building. Before construction activities for the depressurization system could commence, the ACM was removed. On February 4, 2004, Atlantic Testing Laboratories, Limited (ATL) performed a visual survey to identify asbestos-containing building materials present on exposed surfaces (i.e., pipe insulation, floor tile and ceiling tile) within the office building. The visual examination was limited to the pipe insulation in the basement, ceiling tiles on the second floor, and floor tiles on the first and second floors. Based on this survey, approximately 31 linear feet of asbestos-containing pipe insulation was identified in the basement of the office building. This insulation exhibited localized damage from impact and/or excessive moisture. In addition, there was evidence of potential ACM debris

in the immediate areas surrounding the damaged insulation. Floor and ceiling tiles on the first and second floors were observed to be in good condition and no abatement of these materials was recommended or warranted.

Based on the results of this inspection, Lambert's Asbestos Removal Service, Inc., was subcontracted by ESC Engineering to remove the asbestos-containing pipe insulation in the basement. During the asbestos removal activities, ATL performed airborne sampling and analysis by phase contrast microscopy (PCM). Air samples were obtained in accordance with 12 New York Code of Rules and Regulations (NYCRR) 56-17. PCM samples were sent to Envirologic of New York, Inc., a NYSDOH-approved laboratory. The clearance criteria for all work areas was determined to be in compliance with 12 NYCRR 56-17. A copy of the PCM air sampling and analysis report is provided in Appendix D. Four hundred-twenty pounds of ACM were removed and disposed at Steuben County Landfill in Bath, New York, on March 15, 2004. A copy of the asbestos waste manifest is provided in Appendix B.

2.3.2 Sub-Slab Depressurization System Installation

On completion of the asbestos removal activities, AQES initiated construction of the sub-slab depressurization system. Nine below grade suction points were installed in the main basement area by removing the concrete slab, excavating sufficient soil to accommodate perforated sump basins, lining the excavation with filter fabric, installing the sump basin, backfilling around the basin with crushed stone, and restoring the concrete slab. Manometers were installed on all nine suction points and the sub-membrane suction line in the crawl space of the basement. A single blower fan (Spruce Environmental Technologies, Inc. RB400 inline fan) was installed on the single exhaust stack at the west side of the building. The exhaust stack extends at least 2 feet above the eave line of the building. At the completion of system installation, visible cracks and holes in the floor slab were sealed to improve the efficiency of the system. As-built construction drawings for this system are provided in Appendix E.

2.3.3 Waste Material Management

Concrete and soil excavated to install the suction points were removed from the basement with a conveyor and placed in 25 U.S. Department of Transportation-authorized 55-gallon steel drums and staged onsite for characterization and offsite disposal. ESC Engineering is currently coordinating the disposal of these materials with PSC Environmental Services and will include copies of the disposal documentation in a future bi-monthly progress report.

3.0 Operation and Maintenance

3.1 Soil Vapor Extraction System

After installing the SVE system, start-up and testing activities were performed on February 18 through 20, 2004, before initiating full-scale (normal) operations. A description of the start-up activities is presented below followed by a discussion of the operation and maintenance activities.

3.1.1 System Start-Up

Each piece of equipment was tested and operated to verify that it functioned in accordance with the manufacturer's design specifications. Once each piece of equipment was inspected and operated satisfactorily, SVE system start-up activities were conducted. Each blower was energized and set at a minimum vacuum by fully opening the air dilution valve on both systems. The air dilution valve was slowly closed, increasing the vacuum from the extraction trenches. The vacuum was increased incrementally to facilitate periodic inspection of the entire system to ensure proper operation. Once both SVE systems were running at, or close to, the designed flow rates of 400 scfm and 612.5 scfm for Zone 1 and 2, respectively, measurements were obtained from both systems for flow, pressure, vacuum, and temperature. Table 4 presents a start-up monitoring log (PID readings, vacuum measurements, vacuum monitoring point measurements) for the initial days of system start-up. After approximately one hour of operation, operating data (i.e., vacuums, flow rates) indicated that both SVE systems had nearly stabilized. Influent PID readings were collected periodically from both Zones to monitor the influent VOC loading to each SVE system. These samples were collected from sample ports located on the air/water separator before the GAC unit. The samples were collected on the vacuum side of the blower using a hand pump to fill a Tedlar bag. A PID reading was collected by inserting the PID probe tip into a tube connected to the Tedlar bag and opening the valve of the Tedlar bag.

Initial vapor flow rates were 560 cfm for Zone 1 and 640 cfm for Zone 2, exceeding the design operation point of both systems (400 cfm for Zone 1 and 612.5 cfm for Zone 2). Influent PID readings within the first hour of operation were 21.9 parts per million by volume (ppmv) and 21.4 ppmv from Zones 1 and 2, respectively. This VOC loading is less than the system design influent total VOC loading of approximately 60 ppmv. Influent vapor samples were

collected from Zones 1 and 2 to verify the PID readings. A result was not reported for the influent vapor sample collected from Zone 2 due to sampling equipment malfunction. The influent vapor sample results from Zone 1 indicated total VOCs of 11.91 ppmv. This result is approximately half the reading collected with the PID; however, the vapor sample was collected over an hour using a Summa canister as compared to an instantaneous reading from the PID. Average influent VOC concentrations most likely decreased over the span of that hour resulting in a lower total VOC concentration.

After approximately 3.5 hours, a round of vacuum measurements were collected from the vacuum monitoring locations shown on Figure 9. All vacuum monitoring points located onsite indicated a vacuum (Table 4). A slight vacuum was observed in only two of the six offsite vacuum monitoring points. However, the development of a vacuum response in these monitoring points was expected to take longer to attain steady-state operation than the aboveground system.

Influent and effluent vapor samples were collected again after approximately 24 hours of system operation. Total VOCs in the influent vapor sample collected from Zone 1 was 6 ppmv and 7.05 ppmv from Zone 2 (Table 5). PID measurements collected from the influent of Zone 1 and Zone 2 before collecting the Summa canister vapor samples were 8.6 ppmv and 8.7 ppmv, respectively, which represented a much better correlation between laboratory analytical data and PID field measurements than was observed earlier in the startup activities. Influent VOC concentrations typically show an initial spike, followed by a rapid decline to a sustained contaminant concentration. This condition is illustrated on Figure 10 presenting total influent VOC concentrations measured by a PID from Zones 1 and 2 over time.

The influent samples collected from both Zones 1 and 2 contained only cis-1,2-DCE, TCE, and PCE. The effluent vapor sample collected from Zone 1 contained 0.268 ppmv total VOCs including cis-1,2-DCE, TCE, PCE, toluene, xylenes, and 1,1,2,2-tetrachloroethane (Table 5). Toluene, xylenes, and 1,1,2,2-tetrachloroethane are VOC compounds found in the material that lines the interior of the GAC vessel. The VOC removal efficiency of the GAC vessel for Zone 1 was approximately 97 percent.

During start-up operations, no condensate water was generated from the vapor stream. However, approximately 250 gallons of water was removed from the vapor stream during the first month of full-scale operation. This was due to the infiltration of surface water into the

extraction trenches from large cracks/holes between the existing pavement and the restored concrete surface of the extraction trenches. As discussed in Section 2.2.4, these cracks/holes were sealed with asphalt material to prevent surface water infiltration into the extraction trenches.

Initial start-up operations were completed by February 20, 2004. Modifications to the SVE systems were conducted in March 2004 as discussed below.

3.1.2 System Operation and Performance Monitoring

On completing the start-up activities, both SVE systems were operated under full-scale conditions until March 5, 2004. Both SVE systems were shut down to change out the screened PVC internals of the GAC units because excessive headloss appeared to be occurring through each of the GAC units. On March 10, 2004, the SVE systems were turned back on after the screened PVC internals were replaced with larger screened internals. The system was shut down again on March 17, 2004, to replace the 4-inch ID PVC piping entering and exiting each GAC units with 6-inch diameter PVC pipe. Installation of a larger diameter pipe decreased the overall system headloss and allowed the blowers to operate more efficiently. The systems were turned on again on March 18, 2004, and have been operating continuously to date.

To verify that the system is operating satisfactorily, operation and maintenance (O&M) personnel will conduct monthly observations of the system. A system operation log sheet will be completed during each inspection event (Appendix F). The following activities will be conducted as part of the system monitoring.

- observe the blowers and listen for unusual sounds; also check to confirm that the blowers are properly secured to the floor
- observe the air flow meters for proper operation by checking the instantaneous flow measurements; if the flow meters appear to be inoperable, clean the flow meter in accordance with manufacturers recommendations
- record the vacuum readings for the following:
  - the influent before and after the inlet filters for both systems
  - the effluent of the air/water separator for both systems
  - the influent of each blower
- record the effluent temperature from both blower units
- collect influent and effluent PID readings from both systems

- record the total gallons of water recovered from the air/water separators
- observe the treatment building piping for signs of leaks.

If system repairs and/or replacement of system components are necessary, O&M personnel will perform the appropriate system maintenance/repair.

ESC Engineering will periodically collect influent and effluent air samples using Summa canisters to determine the influent loading on each system and the VOC removal efficiency of the GAC units. These air samples are scheduled to be collected on a semi-annual basis. In addition to collecting treatment system samples, air samples will be collected using Summa canisters from the vacuum monitoring points shown on Figure 9 on a semi-annual basis during the first year of operation. This data will be used to determine the effectiveness of the system operation at meeting the remedial objectives for the site. The sampling schedule after the first year of operation will be determined based on the results of the first year of system operation.

Figure 10 presents influent total VOC concentrations measured by a PID over time for each treatment Zone. As shown on this figure, a rapid decline in influent VOC concentrations was observed after the first few days of system operation. Both Zones appear to be reaching an asymptotic state within a couple weeks of operation. Figure 11 presents the cumulative PCE, TCE, and cis-1,2-DCE removal of both Zones over time. Based on the influent laboratory analytical data, by April 23, 2004, approximately 41 pounds of VOC mass has been removed from Zone 1 and approximately 31 pounds of VOC mass has been removed from Zone 2. Cumulative VOC mass removed from each Zone will be provided to the NYSDEC in future bi-monthly progress reports.

3.2 Office Building Sub-Slab Depressurization System

After installing the sub-slab depressurization system, start-up and testing activities were performed on March 26, 2004, before initiating full-scale (normal) operations. The start-up activities involved energizing the blower and then balancing the air flows and vacuums from each suction point using a portable flow meter and the manometers installed on the vertical pipes attached to each suction point. Each of the nine suction pumps were balanced to a vacuum of 0.013 inches of water at 39.9 cfm. The crawl space suction line was balanced to 0.06 inches of water at 85.5 cfm. The total system flow at startup was 443.7 cfm.

To verify that the sub-slab system operates satisfactorily, O&M personnel will periodically conduct observations of the system. The following activities will be conducted as part of the system monitoring.

- observe the blower and verify that it is operational.
- record the vacuum from each manometer to ensure that similar vacuums are being applied to each suction point.
- observe the system piping for signs of leaks.

If system repairs and/or replacement of system components are necessary, O&M personnel will perform the appropriate system maintenance/repair.

ESC Engineering collected indoor air samples from the basement and first floor of the office building on April 23, 2004, to confirm that the sub-slab depressurization system is operating satisfactorily. In addition, two concurrent outdoor air samples were collected to establish VOC concentrations in the ambient air. The indoor air samples collected from the basement and first floor of the office building contained TCE at concentrations of 0.91 ppbv and 0.73 ppbv, respectively. The TCE levels in both samples are below the New York State Department of Health's 75th percentile value for background indoor air of <1 ppbv. The two concurrent outdoor air contained 1.7 ppbv and 3 ppbv of TCE. The results from the office building indicate that the sub-slab system is effectively controlling vapor intrusion. The analytical results for the indoor and outdoor air samples were submitted to the NYSDEC in the June 2004 bi-monthly report.

4.0 Engineering Certification

ENGINEER'S CERTIFICATION

HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK
INTERIM REMEDIAL MEASURES

I, Todd M. Musterait, P.E., hereby certify, as a Professional Engineer registered in the State of New York, that based on ESC Engineering of New York, P.C.'s observation of the IRM activities conducted by the remedial contractors, Remediation Services, Inc. and Air Quality and Environmental Services, LLC, the IRM activities were completed in substantial conformance with the requirements presented in the following documents and/or approved field changes detailed in this IRM Summary Report:

- Voluntary Cleanup Agreement (VCA), Index Number: A3-0372-9807, February 6, 2002
- NYSDEC and NYSDOH-approved IRM Work Plan (ESC Engineering, 2003).

_____ _____

Todd M. Musterait, P.E. Date

New York State P.E. No. 076923

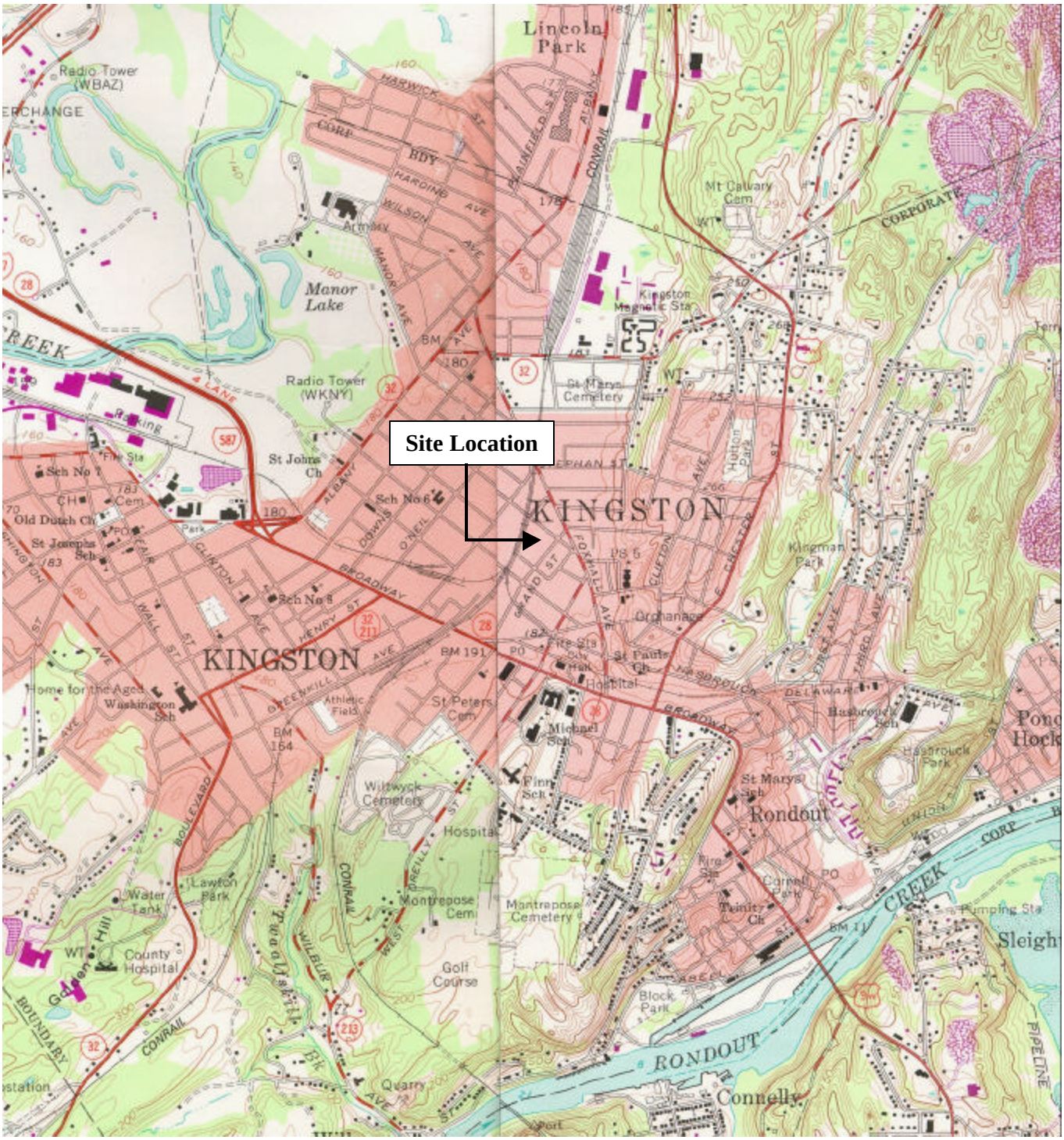
ESC Engineering of New York, P.C.
9 Albany Street
Cazenovia, New York 13035
(315) 655-3900

5.0 References

Environmental Strategies Corporation. 2001. Supplemental Investigative Work Plan, Federal-Mogul Corporation, Kingston, New York. June 18.

ESC Engineering of New York, P.C. 2003. Interim Remedial Measures Work Plan, Huck manufacturing facility, Kingston, New York. November 7.

Figures



ESC ENGINEERING OF NEW YORK, P.C.
9 ALBANY STREET
CAZENOVIA, NEW YORK 13035
315-655-3900

Figure 1
Site Location
Huck Manufacturing Facility
Kingston, New York

Legend

- Storm Sewer Grate
- Manhole Cover
- Property Line
- Fence Line

CSX Transportation, Inc. Tracks

Suspected Disposal Area

Former Heating Oil Underground Storage Tank

Covered Storage Area

Former Underground Storage Tank

Former 8,000-gal AST

Covered Storage Area

Former Heat Treat Area

Manufacturing Building

Former Degreaser Location

Landscaped Area

Warehouse

Parking

Landscaped Area

Office Building

Former Transformer Location

Former Finish and Chemical Storage Area

Parking

Landscaped Area

Vacant

Tenbroeck Avenue

Grand Street

SCALE IN FEET

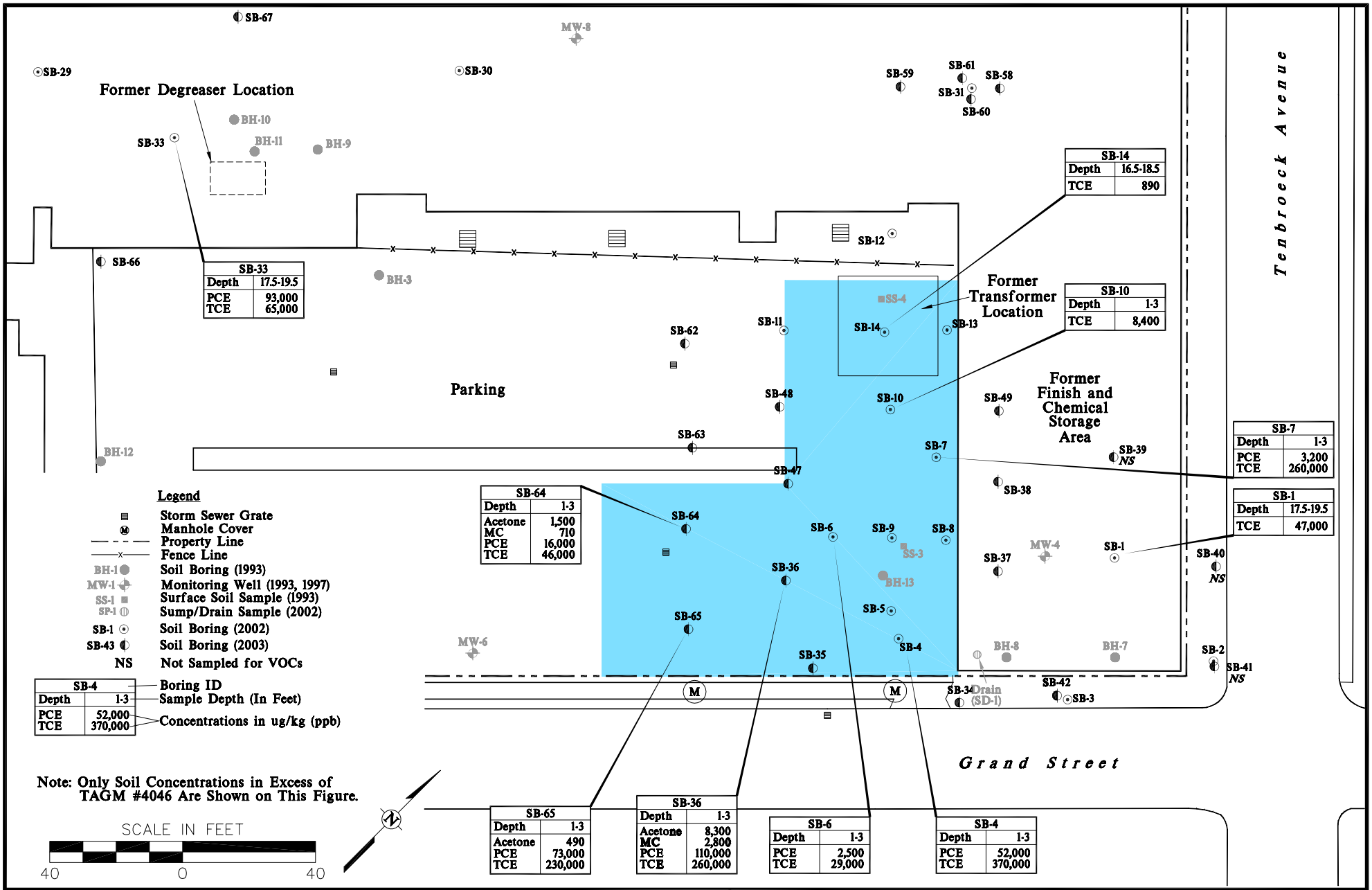
50 0 50

Drawn By: EGC
Checked: TMM
Approved: BES
DWG Name: 13800852

HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK
PREPARED FOR
FEDERAL-MOGUL CORPORATION

Figure 2
SITE LAYOUT

ESC ENGINEERING OF NEW YORK, P.C.



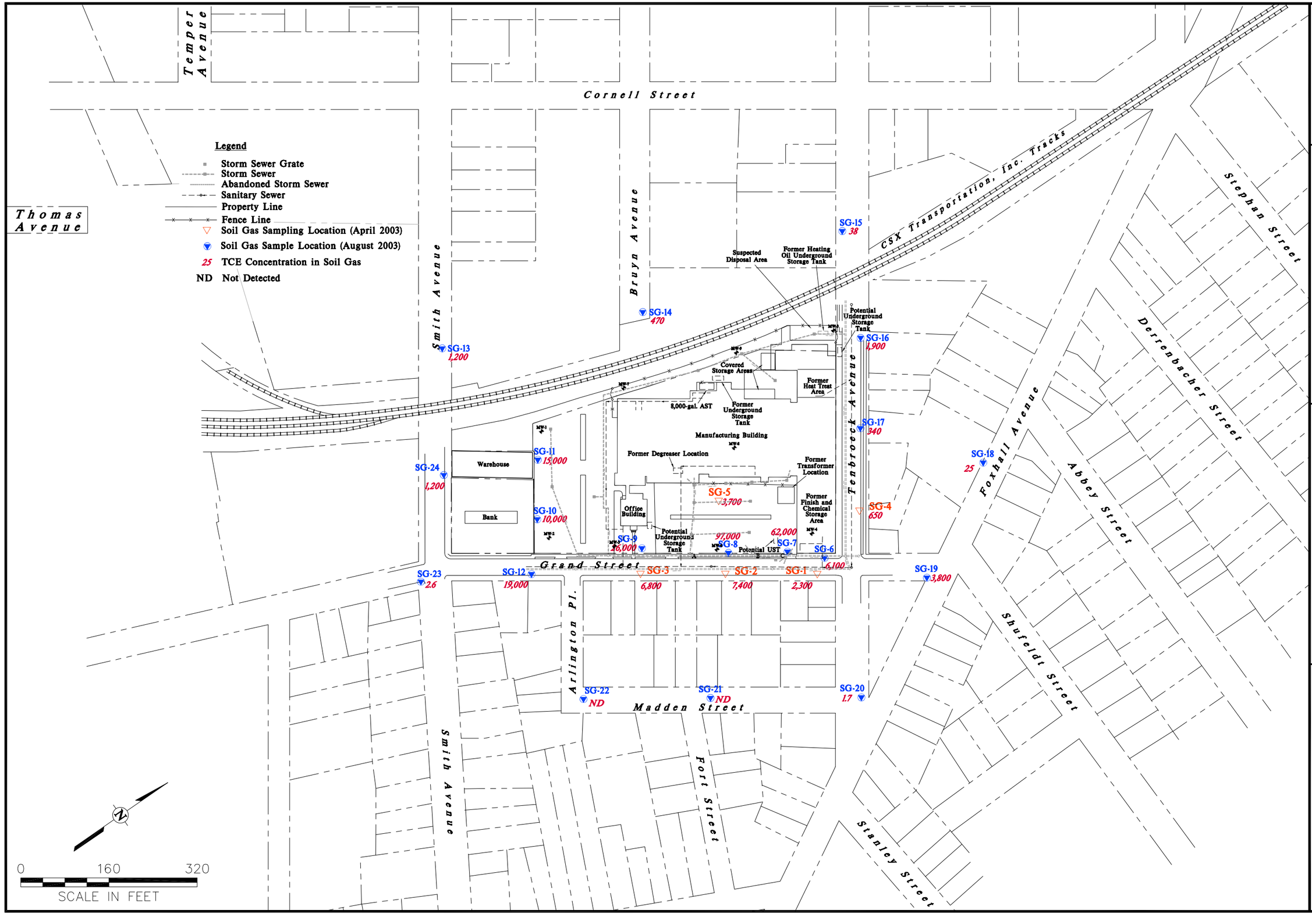
ESC Engineering of New York, P.C.

Figure 3

SUMMARY OF SOIL RESULTS ABOVE EVALUATION CRITERIA

HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK
PREPARED FOR
FEDERAL–MOGUL CORPORATION

Drawn By:	EGC
Checked:	TMM
Approved:	BES
DWG Name:	13800837



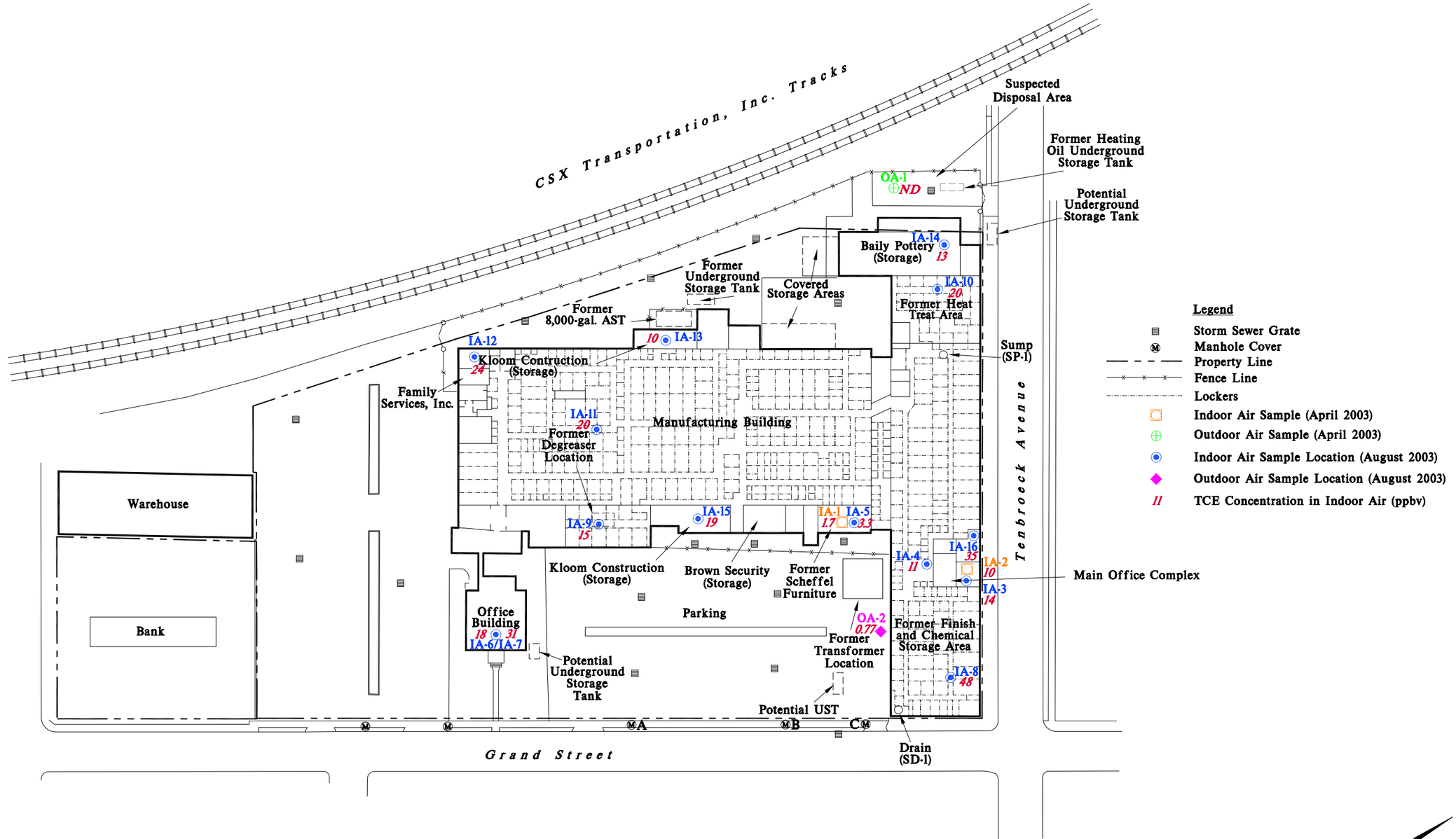
Drawn By: EGC
Checked:
Approved:
DWG Name: 13800829

HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK
PREPARED FOR FEDERAL–MOGUL

Figure 4

SOIL GAS SAMPLE LOCATION PLAN

ESC ENGINEERING OF NEW YORK, P.C.



Drawn By: EGC
Checked: TMM
Approved: BES
DWG Name: 13800853

HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK
PREPARED FOR
FEDERAL–MOGUL CORPORATION

Figure 5

INDOOR AIR SAMPLE LOCATION PLAN

ESC ENGINEERING OF NEW YORK, P.C.

Legend

- Storm Sewer Grate
- Manhole Cover
- Property Line
- Fence Line
- BH-1 Soil Boring (1993)
- MW-1 Monitoring Well (1993, 1997)
- SS-1 Surface Soil Sample (1993)
- SP-1 Sump/Drain Sample (2002)
- SB-1 Soil Boring (2002)
- SB-43 Soil Boring
- SG-19 Soil Gas
- VM-7 Vapor and Vacuum Monitoring Location
- Valve Box
- 6"ø Extraction Screen
- 6"ø Extraction Conveyance Piping
- Soil Remediation Area
- Soil Gas Remediation Area

Tenbroeck Avenue

Grand Street

Warehouse

Bank

Office Building

Manufacturing Building

Parking

Covered Storage Area

8,000-gal. AST

Former Heat Treat Area

Former Degreaser Location

Location of Treatment Equipment

Former Transformer Location

Former Finish and Chemical Storage Area

Line 1

Line 2

Line 3

Drain (SD-1)

Sump (SP-1)

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6 SB-7 SB-8 SB-9 SB-10 SB-11 SB-12 SB-13 SB-14 SB-15 SB-16 SB-17 SB-18 SB-19A SB-19B SB-20 SB-21 SB-29 SB-30 SB-31 SB-33 SB-35 SB-36 SB-37 SB-38 SB-39 SB-40 SB-41 SB-42 SB-43 SB-44 SB-46 SB-47 SB-48 SB-49 SB-50 SB-54 SB-55 SB-56 SB-58 SB-59 SB-60 SB-61 SB-62 SB-63 SB-64 SB-65 SB-66 SB-67

BH-1 BH-3 BH-4 BH-5 BH-6 BH-7 BH-8 BH-9 BH-10 BH-11 BH-12 BH-13 BH-14

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8

SS-1 SS-2 SS-3 SS-4 SS-5

SG-1 SG-2 SG-3 SG-4 SG-5 SG-6 SG-7 SG-8 SG-9 SG-10 SG-11 SG-12 SG-17

VM-1 VM-2 VM-3 VM-4 VM-5 VM-6 VM-8 VM-9 VM-10 VM-11

A A B B C C

SCALE IN FEET

50 0 50

Notes:

1. Conveyance Piping, Valve Boxes, and Vapor and Vacuum Monitoring Locations have not been Surveyed. All Locations are Approximate.
2. Not All Vapor and Vacuum Monitoring Locations are shown on this Figure. See Figure XX for Complete Location Plan.

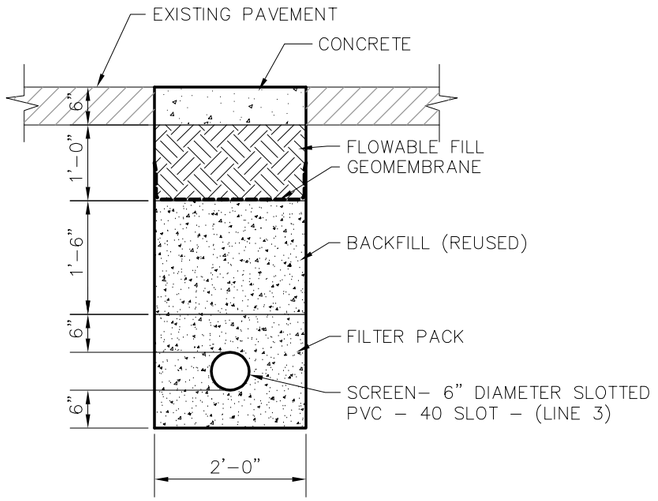
Drawn By: EGC
Checked: TMM
Approved: BES
DWG Name: 13800848

HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK
PREPARED FOR
FEDERAL–MOGUL CORPORATION

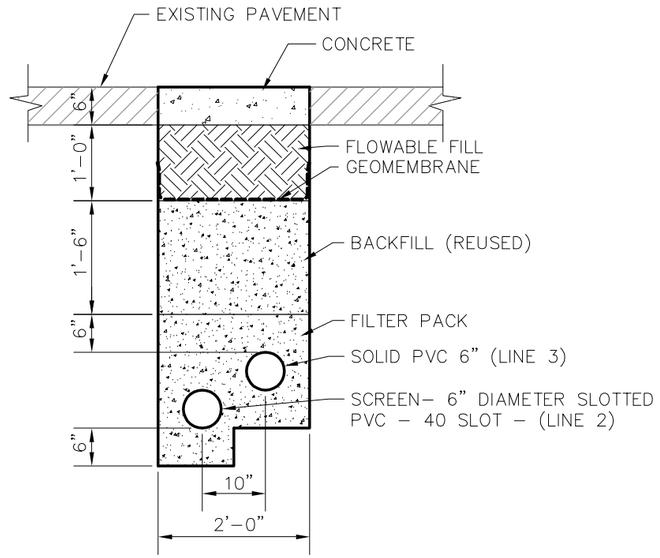
Figure 6

SOIL VAPOR EXTRACTION SYSTEM LAYOUT

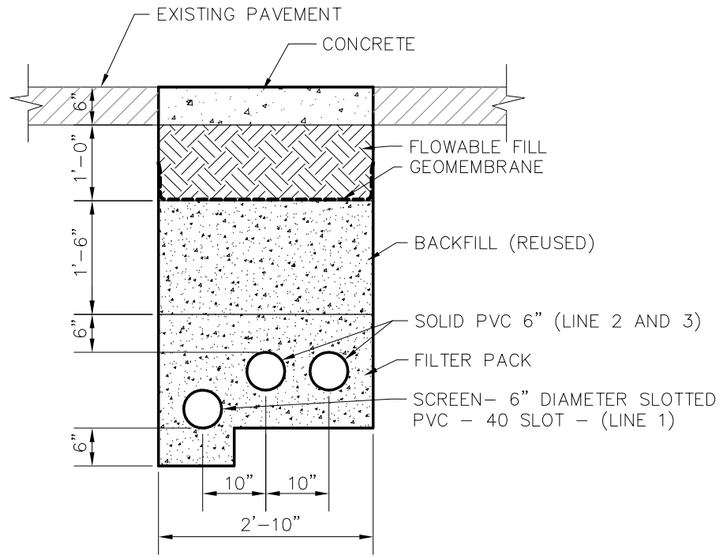
ESC ENGINEERING OF NEW YORK, P.C.



SECTION A-A



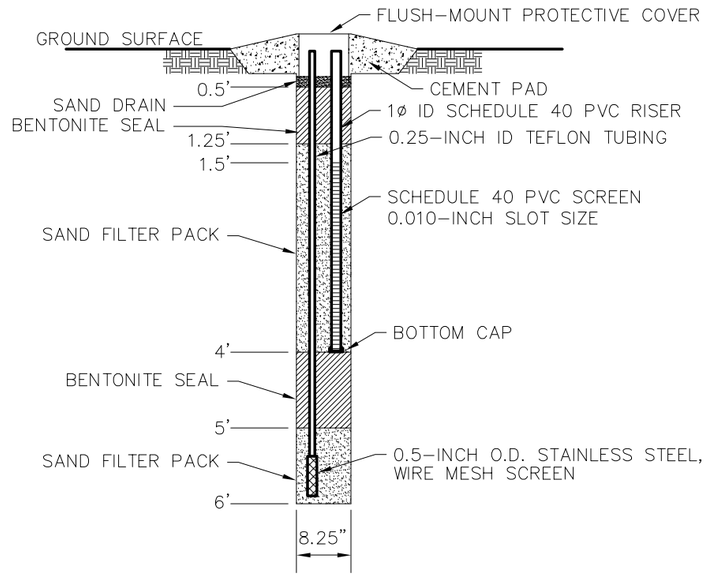
SECTION B-B



SECTION C-C

NOTE:

SECTION DETAILS SHOW APPROXIMATE DIMENSIONS. DIMENSIONS VARY ALONG THE LENGTH OF THE TRENCH.



VAPOR AND VACUUM MONITORING WELL AS-BUILT DIAGRAM

Drawn By: EGC
Checked: TMM
Approved: BES
DWG Name: 13800847

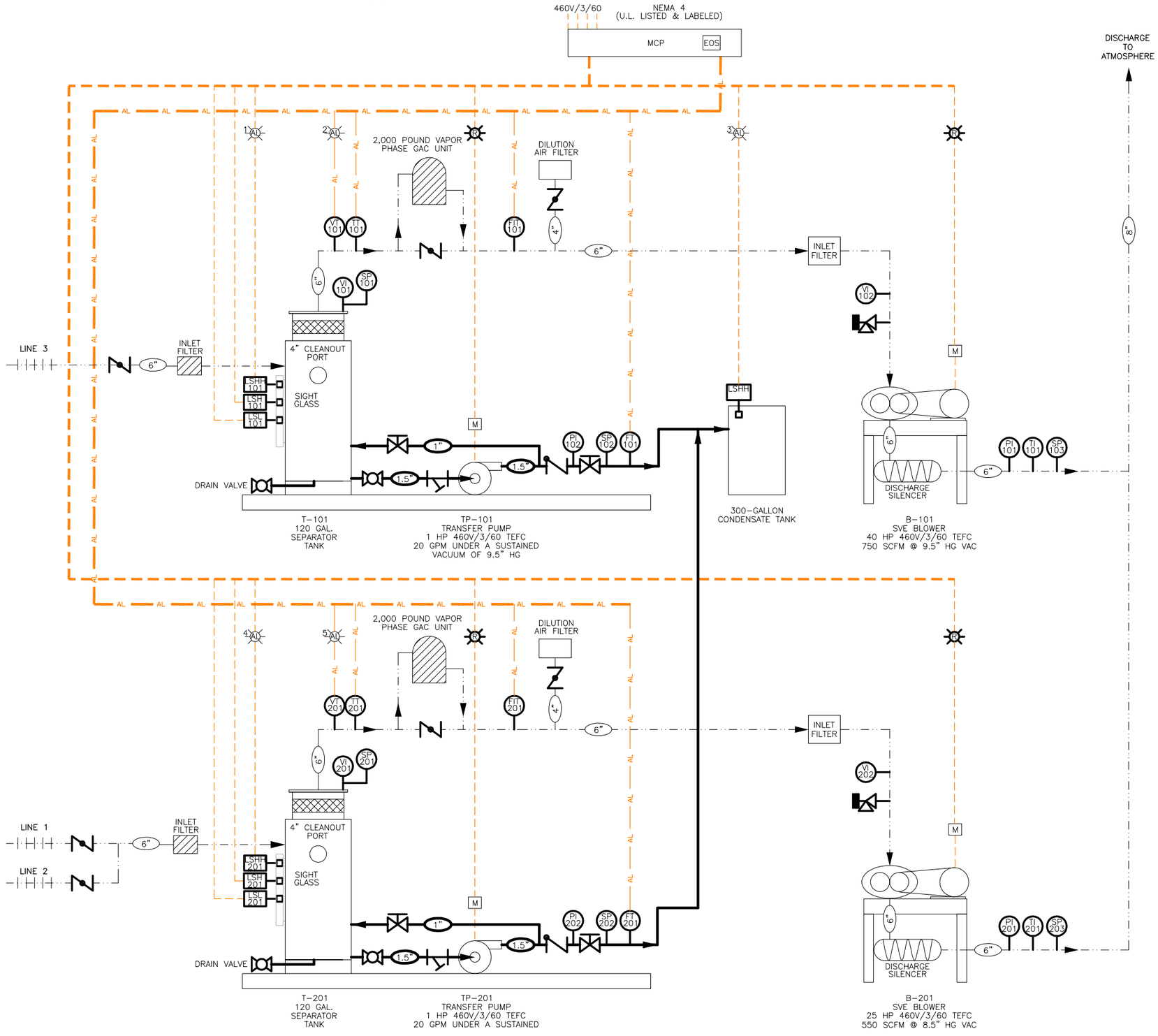
HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK
PREPARED FOR
FEDERAL-MOGUL CORPORATION

Figure 7

SITE WORKS DETAILS AND VAPOR/VACUUM MONITORING WELL AS-BUILT DIAGRAM

ESC ENGINEERING OF NEW YORK, P.C.

REFERENCE: MID-ATLANTIC ENVIRONMENTAL EQUIPMENT, INC. DRAWING, DRAWING NO. 11432RBP, TITLED VAPOR EXTRACTION SYSTEM PROCESS & INSTRUMENTATION DIAGRAM, DATED 12/11/03.



LEGEND

EOS	TELEMETRY UNIT
FIT	FLOW INDICATING TRANSMITTER
FT	FLOW TRANSMITTER
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH HIGH
LSL	LEVEL SWITCH LOW
M	MOTOR
MCP	MASTER CONTROL PANEL
PI	PRESSURE INDICATOR
SP	SAMPLE PORT
TI	TEMPERATURE INDICATOR
TT	TEMPERATURE TRANSMITTER
VI	VACUUM INDICATOR
VT	VACUUM TRANSMITTER
	GATE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	RELIEF VALVE
	BALL VALVE
	WYE STRAIN
A1	ALARM LIGHT
R	RUN LIGHT
	CONTROL LINE
	WATER LINE
	AIR LINE
AL	ANALOG LINE

ALARMS

1 AIR/WATER SEPARATOR T-101 HIGH HIGH LEVEL
2 CONDENSATE TANK HIGH LEVEL
3 AIR/WATER SEPARATOR T-201 HIGH HIGH LEVEL
4 SVE BOWER (B-101) LOW VACUUM
5 SVE BOWER (B-201) LOW VACUUM

Drawn By: EGC
Checked: TMM
Approved: BES
DWG Name: 13800849

HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK
PREPARED FOR
FEDERAL-MOGUL CORPORATION

Figure 8

SOIL VAPOR EXTRACTION SYSTEM AS-BUILT PROCESS AND INSTRUMENTATION DIAGRAM

ESC ENGINEERING OF NEW YORK, P.C.

Legend

- Storm Sewer Grate
- Storm Sewer
- Abandoned Storm Sewer
- Sanitary Sewer
- Property Line
- Fence Line
- Soil Gas Sampling Location (April 2003)
- Soil Gas Sample Location (August 2003)
- Vapor and Vacuum Monitoring Location
- 6"ø Extraction Screen
- 6"ø Extraction Conveyance Piping
- Soil Remediation Area
- Soil Gas Remediation Area

Bruyn Avenue

CSX Transportation, Inc. Tracks

Suspected Disposal Area

Former Heating Oil Underground Storage Tank

Potential Underground Storage Tank

SG-15 SG-14 SG-13 SG-16 SG-17 SG-18 SG-24 SG-11 SG-10 SG-9 SG-8 SG-7 SG-6 SG-12 SG-23 SG-5 SG-4 SG-3 SG-2 SG-1 SG-19

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9

VM-1 VM-2 VM-3 VM-4 VM-5 VM-6 VM-7 VM-8 VM-9 VM-10 VM-11 VM-12

Covered Storage Areas

Former Heat Treat Area

8,000-gal. AST

Former Underground Storage Tank

Manufacturing Building

Former Degreaser Location

Location of Treatment Equipment

Warehouse

Bank

Office Building

Former Finish and Chemical Storage Area

Potential Underground Storage Tank

Potential UST

A B C

Tenbroeck Avenue

Foxhall Avenue

Shufeldt Street

Smith Avenue

Grand Street

Arlington Pl.

N

0 80 160

SCALE IN FEET

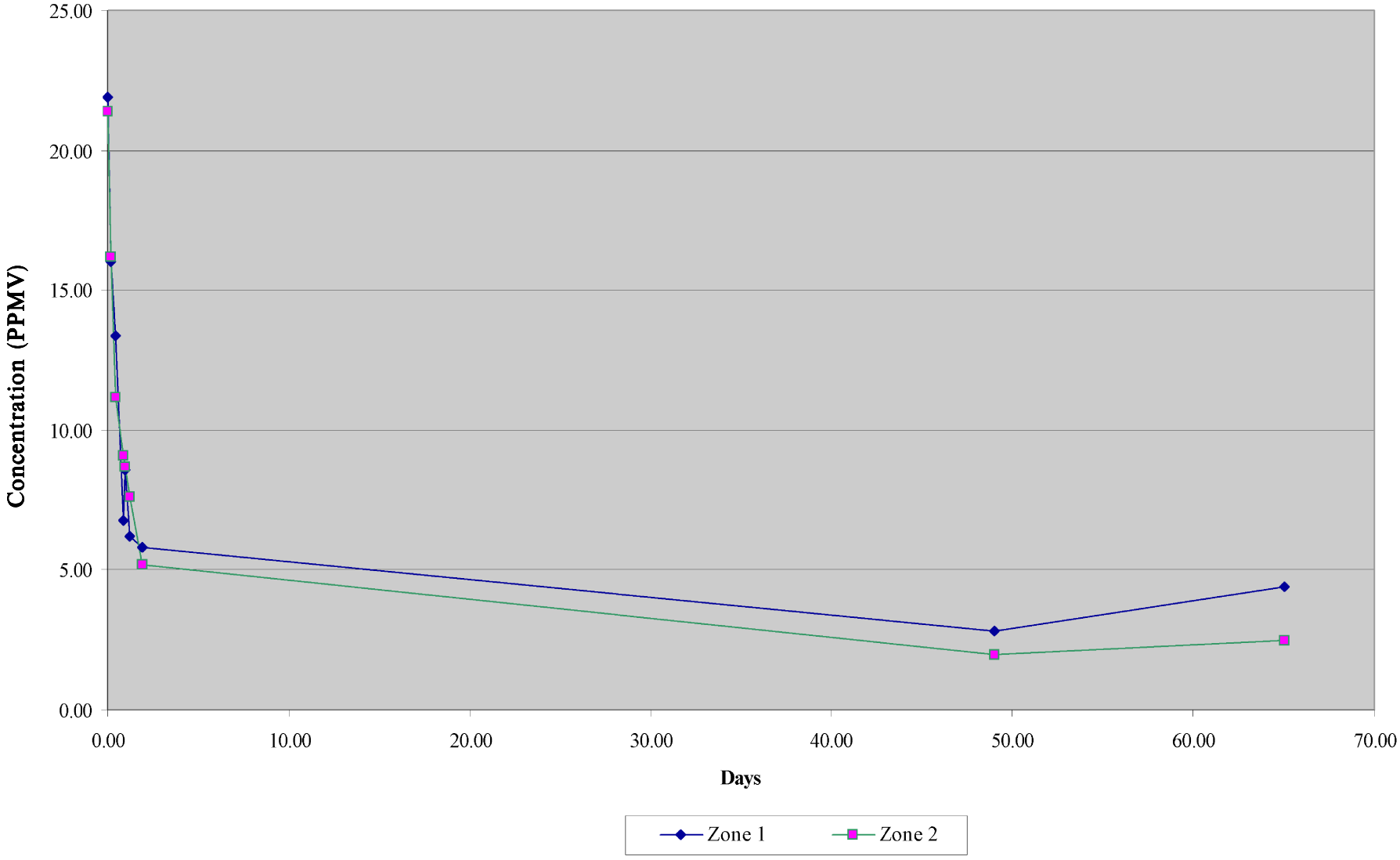
Drawn By: EGC
Checked: TMM
Approved: BES
DWG Name: 13800850

HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK
PREPARED FOR
FEDERAL–MOGUL CORPORATION

Figure 9

VAPOR AND VACUUM MONITORING LOCATIONS

ESC ENGINEERING OF NEW YORK, P.C.



ESC Engineering of New York, P.C.

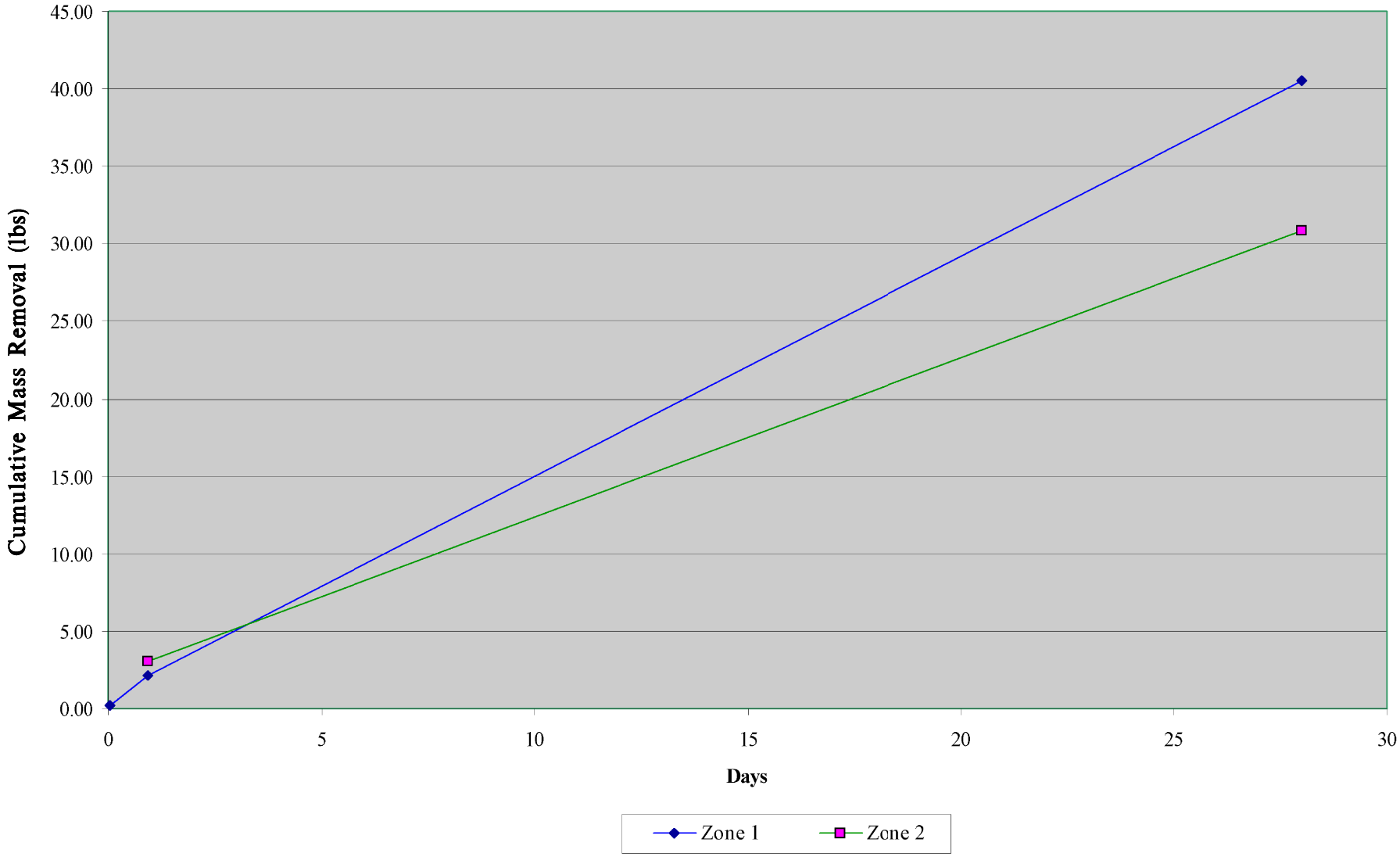
Figure 10

INFLUENT TOTAL VOCs
(PHOTOIONIZATION DETECTOR)

HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK

PREPARED FOR
FEDERAL–MOGUL CORPORATION

Drawn By:	EGC
Checked:	TMM
Approved:	BES
DWG Name:	13800854



ESC Engineering of New York, P.C.

Figure 11

CUMULATIVE PCE, TCE, AND cis-1,2-DCE REMOVAL

HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK

PREPARED FOR
FEDERAL-MOGUL CORPORATION

Drawn By:	EGC
Checked:	TMM
Approved:	BES
DWG Name:	13800854

Tables

Table 1

Summary of VOC Soil Results
Huck manufacturing facility, Kingston, New York
March 19 through 29, 2002, and August 11 through 15, 2003 (a)

Boring ID	**Evaluation**	**SB-1**			**SB-2**	**SB-3**	**SB-4**		**SB-5**
Sample ID	**Criteria (b)**	SB01010	SB91010 (c)	SB01175	SB02010	SB03010	SB04010	SB04060	SB05010
Depth (ft)		1-3	1-3	17.5-19.5	1-3	1-3	1-3	6-8	1-3
VOCs (ug/kg)									
Acetone	200	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	300	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	300	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	NVL	11	ND	1,700 J	ND	ND	8,200	ND	11
Methylene Chloride	100	ND	10 J	ND	ND	ND	ND	ND	6
Tetrachloroethene	1,400	ND	ND	ND	ND	ND	52,000 J	ND	43
Trichloroethene	700	83	23	47,000 J	ND	14	370,000 E	ND	290 E

Boring ID	**Evaluation**	**SB-6**		**SB-7**		**SB-8**	**SB-9**	
Sample ID	**Criteria (b)**	SB06010	SB06060	SB07010	SB07060	SB08010	SB09010	SB09160
Depth (ft)		1-3	6-8	1-3	6-8	1-3	1-3	16-18
VOCs (ug/kg)								
Acetone	200	ND	ND	ND	ND	ND	ND	ND
2-Butanone	300	ND	ND	ND	ND	ND	ND	ND
Chloroform	300	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	NVL	140 J	ND	670 J	ND	ND	ND	3 J
Methylene Chloride	100	ND	ND	ND	ND	ND	ND	11
Tetrachloroethene	1,400	2,500	ND	3,200	ND	16	ND J	7
Trichloroethene	700	29,000 E	ND	260,000 E	ND	170	11	300 E

Table 1 (continued)

Summary of VOC Soil Results
Huck manufacturing facility, Kingston, New York
March 19 through 29, 2002, and August 11 through 15, 2003 (a)

Boring ID	**Evaluation**	**SB-10**		**SB-11**	**SB-12**	**SB-13**	**SB-14**	
Sample ID	**Criteria (b)**	SB10010	SB92010 (d)	SB11010	SB12010	SB13010	SB14010	SB14165
Depth (ft)		1-3	1-3	1-3	1-3	1-3	1-3	16.5-18.5
VOCs (ug/kg)								
Acetone	200	ND	ND	ND	ND	ND	ND	ND
2-Butanone	300	ND	ND	ND	ND	ND	ND	ND
Chloroform	300	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	NVL	2 J	ND	ND	ND	6	ND	ND
Methylene Chloride	100	ND	ND	ND	5	ND	ND	ND
Tetrachloroethene	1,400	ND	ND	ND	ND	13	ND	1,000
Trichloroethene	700	130	8,400	13	24	88	120	890

Boring ID	**Evaluation**	**SB-29**		**SB-30**		**SB-33**	**SB-34**	**SB-35**
Sample ID	**Criteria (b)**	SB29010	SB29163	SB30010	SB30162	SB33175	SB34010	SB35010
Depth (ft)		1-3	16.3-18.3	1-3	16.2-18.2	17.5-19.5	1-3	1-3
VOCs (ug/kg)								
Acetone	200	ND	ND	ND	ND	ND	13	14
2-Butanone	300	ND	ND	ND	ND	ND	ND	ND
Chloroform	300	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	NVL	ND	ND	2 J	4 J	2,000	ND	2 J
Methylene Chloride	100	ND	8	ND	10	ND	ND	ND
Tetrachloroethene	1,400	40	ND	12	12	93,000	17	6
Trichloroethene	700	57	ND	43	210 E	65,000	150	27

Table 1 (continued)

Summary of VOC Soil Results
Huck manufacturing facility, Kingston, New York
March 19 through 29, 2002, and August 11 through 15, 2003 (a)

Boring ID	Evaluation	SB-36		SB-37	SB-38		SB-42	SB-47
Sample ID	Criteria (b)	SB36010	SB36060	SB37010	SB38010	SB38135	SB42010	SB47010
Depth (ft)		1-3	6-8	1-3	1-3	13.5-15.5	1-3	1-3
VOCs (ug/kg)								
Acetone	200	8,300 J	8 J	9 J	34 J	15	14	19
2-Butanone	300	ND	ND	3 J	11 J	ND	ND	ND
Chloroform	300	ND	ND	ND	ND	1 J	2 J	ND
cis-1,2-Dichloroethene	NVL	5,800 J	ND	ND	41	14	ND	1 J
Methylene Chloride	100	2,800 J	3 J	4 J	15 J	16	11	ND
Tetrachloroethene	1,400	110,000	ND	ND	6 J	2 J	ND	12
Trichloroethene	700	260,000	1 J	ND	480	150	9	100

Boring ID	Evaluation	SB-48	SB-49	SB-64	SB-65	SB-66		SB-67
Sample ID	Criteria (b)	SB48010	SB49010	SB64010	SB65010	SB66122	SB191122 (e)	SB67120
Depth (ft)		1-3	1-3	1-3	1-3	12.2-14.2	12.2-14.2	12-14
VOCs (ug/kg)								
Acetone	200	19 J	23 J	1500 J	490 J	11	5	8 J
2-Butanone	300	ND	ND	ND	ND	ND	ND	ND
Chloroform	300	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	NVL	ND	72	530 J	2000	ND	ND	ND
Methylene Chloride	100	ND	16	710 J	ND	3 J	ND	10
Tetrachloroethene	1,400	7	5 J	16,000	73,000	ND	ND	ND
Trichloroethene	700	100	490	46,000 E	230,000 E	1 J	ND	3 J

a\ J = estimated concentration below detection limit; ND = nondetect; E = estimated value; ug/kg = micrograms per kilogram; VOCs = volatile organic compounds; NVL = no value listed.
b\ Evaluation criteria are the New York State Technical and Administrative Guidance Memorandum (TAGM) #4046 Appendix A, Table 1, Recommended Soil Cleanup Objectives (January 1994).
c\ SB91010 is a duplicate sample of SB01010.
d\ SB92010 is a duplicate sample of SB10010.
e\ SB191122 is a duplicate sample of SB66122.
(Shaded concentrations are those that exceed evaluation criteria.)

Table 2

Soil Gas Results
Huck manufacturing facility
Kingston, New York
April and August 2003 (a)

Sample ID	**SG-1**	**SG-2**	**SG-3**	**SG-4**	**SG-5**	**SG-6**	**SG-7**	**SG-8**	**SG-9**
Parameter (ppbv)									
cis-1,2-Dichloroethene	ND	470	240	6.5	140	160	2,900	8,800	2,900
Tetrachloroethene	130	2,800	6,200	110	1,500	200	6,300	21,000	45,000
Trichloroethene	2,300	7,400	6,800	650	3,700	6,100	62,000	97,000	26,000

Sample ID	**SG-10**	**SG-11**	**SG-12**	**SG-13**	**SG-14**	**SG-15**	**SG-16**	**SG-17**	**SG-18**
Parameter (ppbv)									
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	2.7	ND	ND	ND
Tetrachloroethene	510	9,900	210	380	17	7.2	1,700	130	38
Trichloroethene	10,000	15,000	19,000	1,200	470	38	1,900	340	25

Sample ID	**SG-19**	**SG-20**	**SG-21**	**SG-22**	**SG-23**	**SG-24**
Parameter (ppbv)						
cis-1,2-Dichloroethene	47	ND	ND	ND	ND	ND
Tetrachloroethene	4,600	4.8	5.3	ND	ND	51
Trichloroethene	3,800	1.7	ND	ND	2.6	1,200

---

a/ Soil gas samples analyzed by U.S. Environmental Protection Agency Method TO-15; ND = compound not detected above laboratory detection limits.

Table 3

Indoor Air Results
Huck manufacturing facility
Kingston, New York
April 29 and August 13, 2003

Sample ID	**IA-1**	**IA-2**	**IA-3**	**IA-4**	**IA-5**	**IA-6**	**IA-7**	**IA-8**	**IA-9**
Parameter (ppbv)									
cis-1,2-Dichloroethene	ND	1	1.1	0.88	ND	ND	ND	9.5	0.86
Tetrachloroethene	ND	1.2	1.6	1.2	ND	10	6.9	3.5	5.8
Trichloroethene	1.7	10	14	11	3.3	18	31	48	15

Sample ID	**IA-10**	**IA-11**	**IA-12**	**IA-13**	**IA-14**	**IA-15**	**IA-16**
Parameter (ppbv)							
cis-1,2-Dichloroethene	1.3	1.2	0.5	0.59	0.88	2.5	1.3
Tetrachloroethene	4.3	7.5	3.9	2.6	2.8	9.7	1.3
Trichloroethene	20	20	24	10	13	19	35

a/ Indoor air samples analyzed by U.S. Environmental Protection Agency Method TO-15; ND = compound not detected above laboratory detection limits.

Table 4

SVE Startup Log
Huck Manufacturing Facility
Kingston, New York (a)

Date	Time	Comments	Zone 1 Vapor Flow (cfm)	Zone 1 Influent PID Reading (ppmv)	Zone 1 Effluent PID Reading (ppmv)	Zone 1 Inlet Vacuum (in. Hg)	Zone 1 Separator Outlet Vacuum (in. Hg)	Zone 1 Blower Inlet Vacuum (in. Hg)	Zone 2 Vapor Flow (cfm)	Zone 2 Influent PID Reading (ppmv)	Zone 2 Effluent PID Reading (ppmv)	Zone 2 Inlet Vacuum (in. Hg)	Zone 2 Separator Outlet Vacuum (in. Hg)	Zone 2 Blower Inlet Vacuum (in. Hg)
02/18/04	11:30	Start Zones 1 and 2 Blowers	--	--	--	--	--	--	--	--	--	--	--	--
02/18/04	11:45	Collect tedlar bag samples for PID readings	560.00	21.90	NM	0.60	NM	NM	640.00	NM	NM	2.30	NM	NM
02/18/04	12:30	Collect system readings	561.00	NM	NM	0.70	NM	NM	630.00	21.40	NM	2.30	NM	NM
02/18/04	12:40	Collect summa canister influent air samples	NM	NM	NM	NM	NM	NM	NM	NM		NM	NM	NM
02/18/04	13:00	Collect vacuum measurements	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/18/04	16:15	Collect system readings	526.90	16.00	0.00	0.70	NM	NM	630.50	16.20	0.00	2.40	NM	NM
02/18/04	17:00	Adjusted dilution valve on zone 2 by further opening valve	NM	NM	NM	0.00	0.00	10.00	630.00	NM	NM	1.00	5.00	13.00
02/18/04	21:30	Collect system readings after bypassing carbon	680.00	13.40	NM	0.00	0.00	2.50	800.00	11.20	NM	5.00	5.00	7.00
02/19/04	7:30	Collect system readings	680.00	6.80	NM	0.00	0.00	2.50	800.00	9.10	NM	5.00	5.00	7.00
02/19/04	8:30	Collect vacuum measurements	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/19/04	10:15	Collect system readings	680.00	8.60	NM	0.70	NM	NM	800.00	8.70	NM	2.40	NM	NM
02/19/04	10:28	Collect summa canister influent air samples	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/19/04	13:45	Collect system readings	646.50	NM	NM	1.40	NM	NM	789.20	NM	NM	4.90	NM	NM
02/19/04	14:00	Collect summa canister effluent air sample	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/19/04	15:00	Collect system readings	566.00	6.20	NM	0.80	NM	NM	789.50	7.60	NM	4.90	NM	NM
02/19/04	16:45	Collect system readings	639.00	NM	NM	0.00	0.50	2.50	788.00	NM	NM	4.50	5.50	7.00
02/19/04	16:55	Carbon vessels back online, collect system readings	573.80	NM	NM	0.00	0.00	6.00	628.00	NM	NM	2.00	3.50	10.50
02/20/04	7:40	Collect system readings	640.00	5.80	0.00	0.00	1.00	2.50	789.00	5.20	0.00	4.90	5.50	7.00
02/20/04	8:40	Collect vacuum measurements	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
03/05/04	10:30	Shut system down to changeout out perforated piping in carbon vessels. System left offline.	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
03/10/04	15:56	Piping in carbon vessels changed out, system operating.	610.00	NM	NM	1.00	0.00	6.25	510.00	NM	NM	1.80	2.50	7.25
03/17/04	7:00	System shut down to change 4" piping to 6" piping through carbon vessels on both systems	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
03/18/04	13:00	Systems operating	550 (est.)	NM	NM	0.00	0.50	6.00	600.00	NM	NM	4.50	6.50	9.00

Table 4

SVE Startup Log
Huck Manufacturing Facility
Kingston, New York (a)

Date	Time	Comments	Vacuum Monitoring Points(in. H_2O vacuum gaugee)																					
			VM-1		VM-2		VM-3		VM-4		VM-5		VM-6		VM-7		VM-8		VM-9		VM-10		VM-11		VM-12	
			Shallow	Deep	Shallow	Deep	Shallow	Deep	Shallow	Deep	Shallow	Deep	Shallow	Deep	Shallow	Deep	Shallow	Deep	Shallow	Deep	Shallow	Deep	Shallow	Deep	Shallow	Deep
02/18/04	11:30	Start Zones 1 and 2 Blowers	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/18/04	11:45	Collect tedlar bag samples for PID readings	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/18/04	12:30	Collect system readings	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/18/04	12:40	Collect summa canister influent air samples	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/18/04	13:00	Collect vacuum measurements	0.20	1.00	0.40	1.20	0.10	1.00	0.20	0.65	0.10	0.40	1.20	1.40	0.00	0.00	NM	NM	0.00	0.00	<0.1	0.10	0.10	0.15	0.00	0.00
02/18/04	16:15	Collect system readings	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/18/04	17:00	Adjusted dilution valve on zone 2 by further opening valve	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/18/04	21:30	Collect system readings after bypassing carbon	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/19/04	7:30	Collect system readings	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/19/04	8:30	Collect vacuum measurements	0.20	1.00	0.40	2.00	0.25	1.20	0.20	1.00	0.10	0.50	1.80	2.00	0.00	0.00	NM	NM	0.00	0.00	0.05	0.10	0.10	0.20	0.00	0.00
02/19/04	10:15	Collect system readings	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/19/04	10:28	Collect summa canister influent air samples	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/19/04	13:45	Collect system readings	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/19/04	14:00	Collect summa canister effluent air sample	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/19/04	15:00	Collect system readings	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/19/04	16:45	Collect system readings	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/19/04	16:55	Carbon vessels back online, collect system readings	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/20/04	7:40	Collect system readings	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02/20/04	8:40	Collect vacuum measurements	0.15	1.20	0.40	2.00	0.50	1.30	0.30	1.10	0.20	0.80	1.80	2.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
03/05/04	10:30	Shut system down to changeout out perforated piping in carbon vessels. System left offline.	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
03/10/04	15:56	Piping in carbon vessels changed out, system operating.	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
03/17/04	7:00	System shut down to change 4" piping to 6" piping through carbon vessels on both systems	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
03/18/04	13:00	Systems operating	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

(a) NM = not measured; ppmv = parts per million volume; shallow = PVC vacuum monitoring point screened from 2.5 to 4 feet bgs; deep = vapor monitoring point with 6-inch-long screen from 5.5 to 6 feet bgs.

Table 5

Vapor Sampling Results
Huck Manufacturing Facility
Kingston, New York (a)

Sample ID:	**Influent 12-1**	**Influent 12-2**	**Influent 3-2**	**Effluent 12-1**	**Zone 1 Influent**	**Zone 2 Influent**
Date:	**02/18/04**	**02/19/04**	**02/19/04**	**02/19/04**	**04/23/04**	**04/23/04**
Time:	**13:41**	**11:42**	**11:42**	**15:00**	**11:34**	**11:35**
VOCs (ppbv)						
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND
Vinyl Chloride	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND
Trichlorofluoroethane	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	810	510	250	9.8	170	52
Chloroform	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
Trichloroethene	8,400	4,500	3,500	160	3,300	1,800
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	7.2	ND	ND
Trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2,700	990	3,300	78	610	950
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	5	ND	ND
Styrene	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	8.1	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND
Benzyl Chloride	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND
Total VOCs	**11,910**	**6,000**	**7,050**	**268**	**4,080**	**2,802**

(a) ND = not detected

Sampling Key:
Influent 12-1: Influent sample collected from Lines 1 and 2 (Zone 1) system at 130 minutes into system startup.
Influent 12-2: Influent sample collected from Zone 1 at approximately one day into system startup.
Influent 3-2: Influent sample collected from Line 3 (Zone 2) approximately one day into system startup.
Effluent 12-1: Effluent sample collected from Zone 1 approximately 27.5 hours into system startup.
Zone 1 Influent: Influent sample collected from Zone 1.
Zone 2 Influent: Influent sample collected from Zone 2.

Appendix A – Waste Characterization Soil Results

ANALYTICAL REPORT

JOB NUMBER: 231758

Prepared For:

Environmental Strategies Corporation
11911 Freedom Drive
Suite 900
Reston, VA 20190

Attention: Jim Bowie

Date: 06/03/2004

Signature

Date 6/3/04

Name: Kelly A. Pryor

Title: Project Manager

E-Mail: kpryor@stl-inc.com

315 Fullerton Avenue
Newburgh, NY 12550

PHONE: (845) 562-0890
FAX..: (845) 562-0841

No. 023009

231758

CHAIN OF CUSTODY RECORD

Page 1 of 1

PROJECT NO.	PROJECT NAME AND LOCATION:
138008	FEDERAL MOGUL

SAMPLERS: (Signature)

PRINT NAME: JIM BOWIE

SAMPLE I.D.	SAMPLE LOCATION	DATE	TIME	MATRIX	NO. OF CONTAINERS	PH	FLASHPOINT	TCLP METALS (8 RCRA METALS)	TCLP SVOC	TCLP SVOC	TPH	REACTIVITY	REMARKS
EXCAVATED SOIL		12/18	13:00	SOIL	1	1							Add:
EXCAVATED SOIL					1		1						TCLP Pests
EXCAVATED SOIL					1			1					TCLP Herbs
EXCAVATED SOIL					1				1				Total PCBs.
EXCAVATED SOIL					1					1			per J. Bowie's
EXCAVATED SOIL					1						1		e-mail dated
EXCAVATED SOIL		↓	↓	↓	1							1	12/22/03
													PB 12/30/03

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	12/18 1500	12:00 12/19/03
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Received for Laboratory by: (Signature)	PRINT NAME:	Date/Time

LAB NAME: STL

CITY: NEWBURGH

COURIER: FEDEX

AIRBILL NO. 836908946760

CUSTODY SEAL NOS: 6611

COOLER NO: 1 of 1

Rec. Temp 9.8 on Ice

ATTENTION LAB: SEND ANALYTICAL RESULTS TO THE FOLLOWING ESC STAFF MEMBER: TODD MUSTEKAIT / JIM BOWIE

ENVIRONMENTAL STRATEGIES CORPORATION
11911 Freedom Drive
Reston, Virginia 20190
(703) 709-6500 • Fax (703) 318-3995
Fax (412) 787-8065

ESC

CA ____ MA ____ PA ____ MN ____

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT: COPY TO ESC FILES

SAMPLE INFORMATION
Date: 06/03/2004

Job Number.: 231758
Customer...: Environmental Strategies Corporation
Attn.....: Jim Bowie

Project Number.....: 20000988
Customer Project ID....: 138008
Project Description....: ESC

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
231758-1	Excavated Soil	Soil	12/18/2003	13:00	12/19/2003	12:00

STL Newburgh
315 Fullerton Avenue
Newburgh, NY 12550
Tel (845) 562-0890
Fax (845) 562-0841

LABORATORY TEST RESULTS

Job Number: 231758 Date: 06/03/2004

CUSTOMER: Environmental Strategies Corporation PROJECT: 138008 ATTN: Jim Bowie

Customer Sample ID: Excavated Soil
Date Sampled.....: 12/18/2003
Time Sampled.....: 13:00
Sample Matrix.....: Soil

Laboratory Sample ID: 231758-1
Date Received.....: 12/19/2003
Time Received.....: 12:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	REPORTING LIMIT	UNITS	ANALYZED	TECH
SW846 7740	Selenium (Se), TCLP	25.0	U		25.0	ug/L	01/06/03	mwh
SW846 7470A	Mercury (Hg), TCLP	0.50	U		0.50	ug/L	12/31/03	lms
SW846 1311	TCLP Extraction, TCLP	Complete					12/29/03	smo
SW846 1311	TCLP Extraction, TCLP	Complete					01/05/04	smo
SW846 3550B	Ultrasonic Extraction	Complete					12/31/03	smo
EPA 418.1	TPH, Recoverable*	24	U		24	mg/Kg	12/22/03	smo
EPA 160.3	% Moisture	11.4			0.10	%	12/28/03	lms
EPA 160.3	% Solids	88.6			0.10	%	12/28/03	lms
SW846 1311	TCLP Zero Head Space (ZHE) Extraction, TCLP	Complete						ljc
SW846 1010	Ignitability (Flashpoint)	>200			70.000	degrees F	12/30/03	lms
SW846 9045C	pH	7.69			0.20	pH Units	12/23/03	se
SW846 8151A	Herbicides							
	Subcontract, TCLP	Complete				* Text	01/14/04	smg
CH 7.3.2	Reactivity CH 7.3.2							
	Subcontract	Complete					01/09/04	smg
SW846 8081A	Organochlorine Pesticide Analysis							
	gamma-BHC (Lindane), TCLP	21	U		21	ug/L	01/09/04	smo
	Heptachlor, TCLP	1.0	U		1.0	ug/L	01/09/04	smo
	Heptachlor epoxide, TCLP	1.0	U		1.0	ug/L	01/09/04	smo
	Endrin, TCLP	1.0	U		1.0	ug/L	01/09/04	smo
	Methoxychlor, TCLP	210	U		210	ug/L	01/09/04	smo
	Toxaphene, TCLP	21	U		21	ug/L	01/09/04	smo
	Technical Chlordane, TCLP	21	U		21	ug/L	01/09/04	smo
SW846 8082	PCB Analysis							
	Aroclor 1016*	19	U		19	ug/Kg	01/07/04	smo
	Aroclor 1221*	19	U		19	ug/Kg	01/07/04	smo
	Aroclor 1232*	19	U		19	ug/Kg	01/07/04	smo
	Aroclor 1242*	19	U		19	ug/Kg	01/07/04	smo
	Aroclor 1248*	19	U		19	ug/Kg	01/07/04	smo
	Aroclor 1254*	38	U		38	ug/Kg	01/07/04	smo
	Aroclor 1260*	38	U		38	ug/Kg	01/07/04	smo
SW846 6010B	Metals Analysis (ICAP)							
	Arsenic (As), TCLP	200	U		200	ug/L	01/06/04	mad

* In Description = Dry Wgt.

STL Newburgh
315 Fullerton Avenue
Newburgh, NY 12550
Tel (845) 562-0890
Fax (845) 562-0841

LABORATORY TEST RESULTS

Job Number: 231758 Date: 06/03/2004

CUSTOMER: Environmental Strategies Corporation PROJECT: 138008 ATTN: Jim Bowie

Customer Sample ID: Excavated Soil
Date Sampled.....: 12/18/2003
Time Sampled.....: 13:00
Sample Matrix.....: Soil

Laboratory Sample ID: 231758-1
Date Received.....: 12/19/2003
Time Received.....: 12:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	REPORTING LIMIT	UNITS	ANALYZED	TECH
	Barium (Ba), TCLP	400	U		400	ug/L	01/06/04	mad
	Cadmium (Cd), TCLP	20.0	U		20.0	ug/L	01/06/04	mad
	Chromium (Cr), TCLP	20.0	U		20.0	ug/L	01/06/04	mad
	Lead (Pb), TCLP	200	U		200	ug/L	01/06/04	mad
	Silver (Ag), TCLP	20.0	U		20.0	ug/L	01/06/04	mad
SW846 8270C	Semivolatile Organics							
	Pyridine, TCLP	20	U		20	ug/L	12/31/03	caw
	1,4-Dichlorobenzene, TCLP	20	U		20	ug/L	12/31/03	caw
	2-Methylphenol (o-cresol), TCLP	20	U		20	ug/L	12/31/03	caw
	Hexachloroethane, TCLP	20	U		20	ug/L	12/31/03	caw
	4-Methylphenol (m/p-cresol), TCLP	20	U		20	ug/L	12/31/03	caw
	Nitrobenzene, TCLP	20	U		20	ug/L	12/31/03	caw
	Hexachlorobutadiene, TCLP	20	U		20	ug/L	12/31/03	caw
	2,4,6-Trichlorophenol, TCLP	20	U		20	ug/L	12/31/03	caw
	2,4,5-Trichlorophenol, TCLP	100	U		100	ug/L	12/31/03	caw
	2,4-Dinitrotoluene, TCLP	20	U		20	ug/L	12/31/03	caw
	Hexachlorobenzene, TCLP	20	U		20	ug/L	12/31/03	caw
	Pentachlorophenol, TCLP	51	U		51	ug/L	12/31/03	caw
SW846 8260B	Volatile Organics							
	Vinyl chloride, TCLP	100	U		100	ug/L	12/31/03	pcp
	1,1-Dichloroethene, TCLP	100	U		100	ug/L	12/31/03	pcp
	2-Butanone (MEK), TCLP	100	U		100	ug/L	12/31/03	pcp
	Chloroform, TCLP	100	U		100	ug/L	12/31/03	pcp
	Carbon tetrachloride, TCLP	100	U		100	ug/L	12/31/03	pcp
	Benzene, TCLP	100	U		100	ug/L	12/31/03	pcp
	1,2-Dichloroethane, TCLP	100	U		100	ug/L	12/31/03	pcp
	Trichloroethene, TCLP	26	J		100	ug/L	12/31/03	pcp
	Tetrachloroethene, TCLP	21	J		100	ug/L	12/31/03	pcp
	Chlorobenzene, TCLP	100	U		100	ug/L	12/31/03	pcp

* In Description = Dry Wgt.

STL Newburgh
315 Fullerton Avenue
Newburgh, NY 12550
Tel (845) 562-0890
Fax (845) 562-0841

Date: 01/07/2004
Time: 10:24:20

STL Newburgh
TCLP Herbicide & Reactivity
METHOD 8151 - TCLP HERBICIDES

Rept: AN0326

Client ID Job No Lab ID Sample Date		EXCAVATED SOIL A03-C505 A3C50501 12/18/2003							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
2,4-D	MG/L	ND	0.0020	NA		NA		NA	
2,4,5-TP (Silvex)	MG/L	ND	0.0020	NA		NA		NA	
SURROGATE(S)									
Dichlorophenyl Acetic Acid	%	34	17-133	NA		NA		NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

8\15

Date: 01/07/2004
Time: 10:24:24

STL Newburgh
TCLP Herbicide & Reactivity
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID		EXCAVATED SOIL							
Job No	Lab ID	A03-C505	A3C50501						
Sample Date		12/18/2003							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
H2S Released From Waste	MG/KG	20.0	10	NA		NA		NA	
HCN Released From Waste	MG/KG	ND	10	NA		NA		NA	

9\15

NA = Not Applicable ND = Not Detected

STL Buffalo

LABORATORY CHRONICLE

Job Number: 231758 Date: 06/03/2004

CUSTOMER: Environmental Strategies Corporation PROJECT: 138008 ATTN: Jim Bowie

Lab ID: 231758-1 Client ID: Excavated Soil Date Recvd: 12/19/2003 Sample Date: 12/18/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
EPA 200.7	Acid Digestion,Total Recoverable(ICAP)	1	59548		12/26/2003	1000	
SW846 3550B	Extraction Ultrasonic (PCBs)	1	60221		12/31/2003	1200	
SW846 8151A	Herbicides	1	60683		01/14/2004	0000	
SW846 1010	Ignitability (Pensky-Martens Closed-Cup)	1	59825		12/30/2003	0000	
SW846 7470A	Mercury (CVAA) Liquid Waste	1	59972		12/31/2003	1919	
SW846 6010B	Metals Analysis (ICAP)	1	60272	59548	01/06/2004	2237	2.000
SW846 8081A	Organochlorine Pesticide Analysis	1	60568		01/09/2004	0000	
SW846 8082	PCB Analysis	1	60569		01/07/2004	0000	
CH 7.3.2	Reactivity CH 7.3.2	1	60383		01/09/2004	0000	
SW846 7740	Selenium (GFAA)	1	60167	59548	01/06/2003	1102	5
SW846 8270C	Semivolatile Organics	1	60309		12/31/2003	0000	2.0408
EPA 160.3	Solids, Total	1	59758		12/28/2003	1400	
SW846 1311	TCLP Extraction BN/Acids	1	59784		12/29/2003	1200	
SW846 1311	TCLP Extraction Metals	1	59440		12/22/2003	1500	
SW846 1311	TCLP Extraction Pesticides	1	60219		01/05/2004	1200	
SW846 1311	TCLP Zero Headspace Extraction	1	60510				
EPA 418.1	Total Recoverable Petroleum Hydrocarbons	1	59537		12/22/2003	0000	
SW846 8260B	Volatile Organics	1	60141		12/31/2003	0000	10
SW846 9045C	pH (Soil)	1	59699		12/23/2003	1555	

STL Newburgh
315 Fullerton Avenue
Newburgh, NY 12550
Tel (845) 562-0890
Fax (845) 562-0841

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 06/03/2004

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements will be noted in a case narrative.
Report Comments

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

2) Soil, sediment and sludge sample results are reported on a "dry weight" basis.

3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

Glossary of flags and qualifiers.

Inorganic Qualifiers (Q-Column)

U	Indicates that the compound was analyzed for but not detected.
1	Result fails applicable drinking water standards.
*	Duplicate analysis not within control limits.
N	Spiked sample recovery not within control limits.
E	Indicates an estimated value because of the presence of interferences.
W	Post digestion spike for furnace AA analysis is out of the control limits (85-115%) while sample absorbance is less than 50% of spike absorbance.
+	Correlation coefficient for the MSA is less than 0.995
B	The reported value is less than the Contract Required Detection Limit (CRDL), but greater than the Instrument Detection Limit (IDL).

Organic Qualifiers (Q-Column)

U	Indicates that the compound was analyzed for but not detected.
J	Indicates an estimated value. This compound meets the identification criteria, but the result is less than the specified detection limit.
B	Indicates that the analyte was found in both the sample and its associated laboratory blank.
D	Indicates all compounds identified in an analysis at a secondary dilution factor.
E	Indicates that the analyte in an analysis has exceeded the linear calibration range.

Glossary of Terms

Surrogates (Surrogate Standards) - an organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process. For semi-volatiles, volatiles and pesticides/Arochlors, surrogate compounds are added to every blank, sample, matrix sample, matrix spike, matrix sample duplicate, matrix spike blank, and standard. These are used to evaluate analytical efficiency by measuring recovery. Poor surrogate recovery may indicate a problem with the sample composition.

Matrix Spike - an aliquot of a sample (water or soil) fortified (spiked) with known quantities of specific compounds (target analytes) and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for the matrix by measuring recovery. The spiking occurs prior to sample preparation and analysis. Poor spike recovery may indicate a problem with the sample composition.

Internal Standards - an organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process. For GC/MS semi-volatiles and volatiles, internal standards are added to every blank, sample, matrix spike, matrix spike duplicate, matrix spike blank, and standard. Internal standard responses outside of established limits will adversely affect the quantitation and final concentration of target compounds.

STL Newburgh
315 Fullerton Avenue
Newburgh, NY 12550
Tel (845) 562-0890
Fax (845) 562-0841

Appendix B – Waste Disposal Documentation

Bill #2176

Date 02/23/04 City of Albany, NY Page 1
Time 07:41:52 AM

Grid Summary Report

Detailed Report for For the Period 02/09/2004 - 02/10/2004
Sites 00 - 99 Grids - ZZZZZZZZZZ
Materials - ZZZZZZZZZZ Material Types - Z Accounts 6025 - 6025 Customer Types - Z

Date	Grid	Material	Customer	Tickets	Count	Volume	Net Wt.
02/09/04	P4 Phase II cells 10 & 11	PCS	Capitol Environmental	02-177018	0	0	28.34
02/09/04	P4 Phase II cells 10 & 11	PCS	Capitol Environmental	02-177019	0	0	32.28
02/09/04	P4 Phase II cells 10 & 11	PCS	Capitol Environmental	02-177047	0	0	34.32
02/09/04	P4 Phase II cells 10 & 11	PCS	Capitol Environmental	02-177052	0	0	33.89
02/09/04	P4 Phase II cells 10 & 11	PCS	Capitol Environmental	02-177098	0	0	37.28
02/09/04	P4 Phase II cells 10 & 11	PCS	Capitol Environmental	02-177099	0	0	34.68
02/09/04	P4 Phase II cells 10 & 11	PCS	Capitol Environmental	02-177110	0	0	38.24
02/10/04	P4 Phase II cells 10 & 11	PCS	Capitol Environmental	02-177264	0	0	42.35
			Total	**8**	**0**	**0**	**281.38**
			Report Total	**8**	**0**	**0**	**281.38**

This Memorandum is an acknowledgment that a Bill of Lading has been issued and is not the Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

MANGIARDI BROS. TRUCKING
1960 Pittsfield Road, Route 20
Castleton, New York 12033
(Name of Carrier)

Shipper No. 4A-209
Carrier No. B 26463
Date 2/9/04

TO:
Consignee Albany Landfill
Street Rapp Rd
Destination Albany NY
Route

FROM:
Shipper Environmental Strategies
Street 53 Grand St
Origin Kingston NY
Emergency Response Phone No.
Vehicle Number

No. Shipping Units	HM*	Kind of Packaging, Description of Articles, Special Marks and Exceptions	Weight (subject to correction)	Rate	CHARGES
1		Load Non Hazardous Soil			
		Lot #2176			

When transporting hazardous materials include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT Emergency Communication Standard (HM-126C). Provide emergency response phone number in case of incident or accident in box above.

REMIT C.O.D. TO:
ADDRESS:

COD Amt: $

C.O.D. FEE:
PREPAID ☐ $
COLLECT ☐ $

TOTAL CHARGES: $

FREIGHT CHARGES:
FREIGHT PREPAID except when box at right is checked
Check box if charges are to be collect ☐

NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ _____ per _____

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.
_____ Signature

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
_____ (Signature of Consignor)

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.
NOTICE: Freight moving under this Bill of Lading is subject to the classifications and lawfully filed tariffs in effect on the date of this Bill of Lading. This notice supersedes and negates any claimed, alleged or asserted oral or written contract, promise, representation or understanding between the parties with respect to this freight, except to the extent of any written contract which establishes lawful contract carriage and is signed by authorized representatives of both parties to the contract.

SHIPPER
PER

CARRIER MANGIARDI BROS. TRUCKING
PER
DATE 2/9/04

3

*HAZARDOUS MATERIALS MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIALS AS REFERENCED IN 49CFR § 172.202.

This Memorandum is an acknowledgment that a Bill of Lading has been issued and is not the Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

MANGIARDI BROS. TRUCKING
1960 Pittsfield Road, Route 20
Castleton, New York 12033

Shipper No. 4A-209
Carrier No. B 26473
Date 2/9/04

(Name of Carrier)

TO: Consignee ALBANY LANDFILL
Street Rapp Rd
Destination ALBANY NY
Route

FROM: Shipper Environmental Strategies
Street 65 Grand St
Origin Kingston NY
Emergency Response Phone No.
Vehicle Number

No. Shipping Units	HM*	Kind of Packaging, Description of Articles, Special Marks and Exceptions	Weight (subject to correction)	Rate	CHARGES
1		Loop Non-Hazardous Soil			
		Lot # 2176			

When transporting hazardous materials include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT Emergency Communication Standard (HM-126C). Provide emergency response phone number in case of incident or accident in box above.

REMIT C.O.D. TO:
ADDRESS:

COD Amt: $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES: $

FREIGHT CHARGES: FREIGHT PREPAID (except when box at right is checked) ☐ Check box if charges are to be collect

NOTE – Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ _____ per _____

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.
_____ Signature

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
_____ Signature of Consignor

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

NOTICE: Freight moving under this Bill of Lading is subject to the classifications and lawfully filed tariffs in effect on the date of this Bill of Lading. This notice supersedes and negates any claimed, alleged or asserted oral or written contract, promise, representation or understanding between the parties with respect to this freight, except to the extent of any written contract which establishes lawful contract carriage and is signed by authorized representatives of both parties to the contract.

SHIPPER
PER Agent For Environmental Strategies

CARRIER MANGIARDI BROS. TRUCKING
PER
DATE 2/9/04

3

*HAZARDOUS MATERIALS MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIALS AS REFERENCED IN 49CFR § 172.202.

This Shipping Order must be legibly filled in, in ink, in Indelible Pencil, or in Carbon, and retained by the Agent.

MANGIARDI BROS. TRUCKING
1960 Pittsfield Road, Route 20
Castleton, New York 12033
(Name of Carrier)

Shipper No. 4A-204
Carrier No. B 27305
Date 2/10

TO: Consignee: Albany Landfill	FROM: Shipper: Environmental Strategies
Street: Rapp Rd.	Street: 85 Grand St.
Destination: Albany NY	Origin: Kingston NY
Route:	Emergency Response Phone No.:
	Vehicle Number: M-45

No. Shipping Units	HM*	Kind of Packaging, Description of Articles, Special Marks and Exceptions	Weight (subject to correction)	Rate	CHARGES
1		Load NON-Hazardous Contaminated Soil			

When transporting hazardous materials include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT Emergency Communication Standard (HM-126C). Provide emergency response phone number in case of incident or accident in box above.

REMIT C.O.D. TO:
ADDRESS:

COD Amt: $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

NOTE — Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ ______ per ______

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.

______ Signature

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

______ (Signature of Consignor)

TOTAL CHARGES: $

FREIGHT CHARGES:
FREIGHT PREPAID except when box at right is checked
Check box if charges are to be collect ☐

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

NOTICE: Freight moving under this Bill of Lading is subject to the classifications and lawfully filed tariffs in effect on the date of this Bill of Lading. This notice supersedes and negates any claimed, alleged or asserted oral or written contract, promise, representation or understanding between the parties with respect to this freight, except to the extent of any written contract which establishes lawful contract carriage and is signed by authorized representatives of both parties to the contract.

SHIPPER [signature]
PER Agent for Foderaro-Moore

CARRIER MANGIARDI BROS. TRUCKING
PER [signature]
DATE 2/10

2

*HAZARDOUS MATERIALS MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIALS AS REFERENCED IN 49CFR 172.202

Agent must detach and retain this Shipping Order and must sign the Original Bill of Lading.

in Carbon, and retained by the Agent.

MANGIARDI BROS. TRUCKING
1960 Pittsfield Road, Route 20
Castleton, New York 12033

Shipper No. 4A-209
Carrier No. B 27306
Date 2/9

(Name of Carrier)

TO: Consignee Albany Landfill
Street Rapp Rd.
Destination Albany NY
Route

FROM: Shipper Environmental Strategies
Street 85 Grand St.
Origin Kingston NY
Emergency Response Phone No.
Vehicle Number M-45

No. Shipping Units	HM*	Kind of Packaging, Description of Articles, Special Marks and Exceptions	Weight (subject to correction)	Rate	CHARGES
1		Lead NON-Hazardous Contaminated Soil			
		Lot # 2176			

When transporting hazardous materials include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of materials with appropriate UN or NA number as defined in US DOT Emergency Communication Standard (HM-126C). Provide emergency response phone number in case of incident or accident in box above.

REMIT
C.O.D. TO:
ADDRESS:

COD Amt: $

C.O.D. FEE:
PREPAID ☐ $
COLLECT ☐

TOTAL CHARGES: $

FREIGHT CHARGES:
FREIGHT PREPAID except when box at right is checked ☐
Check box if charges are to be collect

NOTE — Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ _____ per _____

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.

_____ Signature

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

NOTICE: Freight moving under this Bill of Lading is subject to the classifications and lawfully filed tariffs in effect on the date of this Bill of Lading. This notice supersedes and negates any claimed, alleged or asserted oral or written contract, promise, representation or understanding between the parties with respect to this freight, except to the extent of any written contract which establishes lawful contract carriage and is signed by authorized representatives of both parties to the contract.

SHIPPER 2nd Agent for Federal Mogul
PER

CARRIER MANGIARDI BROS. TRUCKING
PER
DATE 2/9

2

*HAZARDOUS MATERIALS MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIALS AS REFERENCED IN 49CFR/172.202.

Agent must detach and retain this Shipping Order and must sign the Original Bill of Lading.

This Shipping Order must be legibly filled in, in ink, in indelible Pencil, or in Carbon, and retained by the Agent.

MANGIARDI BROS. TRUCKING
1960 Pittsfield Road, Route 20
Castleton, New York 12033

Shipper No. 4A-209
Carrier No. B 27307
Date 2/9

(Name of Carrier)

TO: Consignee	Albany Landfill
Street	Rapp Rd.
Destination	Albany NY
Route	
FROM: Shipper	[redacted]
Street	
Origin	
Emergency Response Phone No.	
Vehicle Number	M-45

No. Shipping Units	HM*	Kind of Packaging, Description of Articles, Special Marks and Exceptions	Weight (subject to correction)	Rate	CHARGES
1		Lead Non-Hazardous Contaminated Soil			

When transporting hazardous materials include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT Emergency Communication Standard (HM-126C). Provide emergency response phone number in case of incident or accident in box above.

REMIT
C.O.D. TO:
ADDRESS: [redacted]

NOTE — Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ _____ per _____

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.

_____ Signature

COD Amt: $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

C.O.D. FEE:
PREPAID ☐ $
COLLECT ☐ $

TOTAL CHARGES: $

FREIGHT CHARGES:
FREIGHT PREPAID except when box at right is checked ☐
Check box if charges are to be collect

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

NOTICE: Freight moving under this Bill of Lading is subject to the classifications and lawfully filed tariffs in effect on the date of this Bill of Lading. This notice supersedes and negates any claimed, alleged or asserted oral or written contract, promise, representation or understanding between the parties with respect to this freight, except to the extent of any written contract which establishes lawful contract carriage and is signed by authorized representatives of both parties to the contract.

SHIPPER [redacted] Agent for Federal Mogul
PER

CARRIER **MANGIARDI BROS. TRUCKING**
PER [redacted]
DATE 2/9

2

*HAZARDOUS MATERIALS MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIALS AS REFERENCED IN 49CFR/172.202.

Agent must detach and retain this Shipping Order and must sign the Original Bill of Lading.

a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

MANGIARDI BROS. TRUCKING
1960 Pittsfield Road, Route 20
Castleton, New York 12033

Shipper No. 11775
Carrier No. B 26464
Date 2-9-04

(Name of Carrier)

TO:
Consignee [illegible]
Street [illegible]
Destination [illegible]
Route

FROM:
Shipper [illegible]
Street [illegible]
Origin [illegible]
Emergency Response Phone No.
Vehicle Number [illegible]

No. Shipping Units	HM*	Kind of Packaging, Description of Articles, Special Marks and Exceptions	Weight (subject to correction)	Rate	CHARGES
1		NON HAZ Contaminated Soil			
		1 CY NO 2176			

When transporting hazardous materials include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT Emergency Communication Standard (HM-126C). Provide emergency response phone number in case of incident or accident in box above.

REMIT C.O.D. TO:
ADDRESS:

COD Amt: $

C.O.D. FEE:
PREPAID ☐ $
COLLECT ☐

TOTAL CHARGES: $

FREIGHT CHARGES:
FREIGHT PREPAID except when box at right is checked
Check box if charges are to be collect ☐

NOTE – Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ _____ per _____

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.
Signature

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
(Signature of Consignor)

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

NOTICE: Freight moving under this Bill of Lading is subject to the classifications and lawfully filed tariffs in effect on the date of this Bill of Lading. This notice supersedes and negates any claimed, alleged or asserted oral or written contract, promise, representation or understanding between the parties with respect to this freight, except to the extent of any written contract which establishes lawful contract carriage and is signed by authorized representatives of both parties to the contract.

SHIPPER
PER [signature]

CARRIER MANGIARDI BROS. TRUCKING
PER [signature]
DATE 2-9-04

4

*HAZARDOUS MATERIALS MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIALS AS REFERENCED IN 49CFR § 172.202.

This Memorandum a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

MANGIARDI BROS. TRUCKING
1960 Pittsfield Road, Route 20
Castleton, New York 12033

Shipper No. 4827-09
Carrier No. B 26467
Date 2-9-04

(Name of Carrier)

TO:
Consignee Albany Landfill
Street Rapp Rd
Destination Albany NY
Route

FROM:
Shipper Environmental Strategies
Street 90 Strong St
Origin Kingston NY
Emergency Response Phone No.
Vehicle Number 1132

No. Shipping Units	HM*	Kind of Packaging, Description of Articles, Special Marks and Exceptions	Weight (subject to correction)	Rate	CHARGES
1		Non Haz contaminated soil			

When transporting hazardous materials include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT Emergency Communication Standard (HM-126C). Provide emergency response phone number in case of incident or accident in box above.

REMIT C.O.D. TO:
ADDRESS:

COD Amt: $

C.O.D. FEE: PREPAID ☐ $ COLLECT ☐

TOTAL CHARGES: $

FREIGHT CHARGES: FREIGHT PREPAID (Check box if charges are to be collect) except when box at right is checked ☐

NOTE – Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ _____ per _____

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.
Signature

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
(Signature of Consignor)

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

NOTICE: Freight moving under this Bill of Lading is subject to the classifications and lawfully filed tariffs in effect on the date of this Bill of Lading. This notice supersedes and negates any claimed, alleged or asserted oral or written contract, promise, representation or understanding between the parties with respect to this freight, except to the extent of any written contract which establishes lawful contract carriage and is signed by authorized representatives of both parties to the contract.

SHIPPER Steve Ryan for Federal Mogul
PER

CARRIER MANGIARDI BROS. TRUCKING
PER
DATE 2-9-04

4

*HAZARDOUS MATERIALS MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIALS DESCRIBED IN 49CFR § 172.202.

MANGIARDI BROS. TRUCKING
1960 Pittsfield Road, Route 20
Castleton, New York 12033
(Name of Carrier)

Shipper No. 4A-209
Carrier No. B 26654
Date 2/9/04

TO:
Consignee Albany Landfill
Street 525 Rapp Rd
Destination Albany N.Y.
Route

FROM:
Shipper Environmental Soil
Street 85 [illegible]
Origin
Emergency Response Phone No.
Vehicle Number 41

No. Shipping Units	HM*	Kind of Packaging, Description of Articles, Special Marks and Exceptions	Weight (subject to correction)	Rate	CHARGES
1		Load cont. soil (non-haz.)			
		LOT # 2176			

When transporting hazardous materials include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT Emergency Communication Standard (HM-126C). Provide emergency response phone number in case of incident or accident in box above.

REMIT C.O.D. TO:
ADDRESS:

COD Amt: $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

NOTE – Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ _____ per _____

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.

Signature

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

TOTAL CHARGES: $

FREIGHT CHARGES:
FREIGHT PREPAID except when box at right is checked
Check box if charges are to be collect ☐

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

NOTICE: Freight moving under this Bill of Lading is subject to the classifications and lawfully filed tariffs in effect on the date of this Bill of Lading. This notice supersedes and negates any claimed, alleged or asserted oral or written contract, promise, representation or understanding between the parties with respect to this freight, except to the extent of any written contract which establishes lawful contract carriage and is signed by authorized representatives of both parties to the contract.

SHIPPER [illegible]
PER

CARRIER MANGIARDI BROS. TRUCKING
PER Tom Vial
DATE 2/9/04

4

*HAZARDOUS MATERIALS MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIALS AS REFERENCED IN 49CFR § 172.202.

Original – Not Negotiable

STRAIGHT BILL OF LADING

SHORT FORM

Carrier's Pro No.
Shipper's Bill of Lading No. 20347-1
Consignee's Reference/PO No.
Carrier's Code (SCAC)

(Name of Carrier)

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request;

at 2004 From Hedgen Mobil 85 Grand Kingston, NY

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract), agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Consigned to Blacktop Maint. Corp / RCT Route 82 Sand & Gravel, Inc

Destination 27 Commerce St. State NY Zip 12603 County

(Mail or street address of consignee – For purposes of notification only)

Delivery Address ★

★ To be filled in only when shipper desires and governing tariffs provide for delivery thereat.

Route

Delivering Carrier Blacktop Maint. Corp

Car or Vehicle Initials No.

No. Packages	Kind of Package, Description of Articles, Special Marks, and Exceptions	*Weight (Subject to Correction)	Class or Rate	Check Column
16	Cubic Yards of Asphalt Debris			

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

Freight charges are PREPAID unless marked collect. CHECK BOX IF COLLECT ☐

Received $
to apply in prepayment of the charges on the property described hereon.

Agent or Cashier

Per
(The signature here acknowledges only the amount prepaid.)

Charges Advanced:
$

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight.
NOTE – Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
per

Liability Limitation for loss or damage on this shipment may be applicable. See 49 U.S.C. § 14706(c)(1)(A) and (B).

†The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of the Consolidated Freight Classification.

†Shipper's imprint in lieu of stamp; not a part of bill of Lading approved by the Interstate Commerce Commission.

Shipper, Per [signature] Agent, Per Hedgen-Mobil

Permanent post-office address of shipper [signature]

1

REDIFORM

Redi-Forms Specified Forms
Rediform, Inc. Made in U.S.A.

44-301 Triplicate
44-302 Quadruplicate

Original - Not Negotiable

STRAIGHT BILL OF LADING

SHORT FORM

Carrier's Pro No.
Shipper's Bill of Lading No. 203109-2
Consignee's Reference/PO No.
Carrier's Code (SCAC)

(Name of Carrier)

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request;

at 2004 From Federal ... 95 Glenwood ... Houston ... NY

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract), agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Consigned to Blacktop Maint. Comp / Act Route 82 Sand - Gravel, Inc

(Mail or street address of consignee — For purposes of notification only.)

Destination 22 Commerce St State NY Zip 12203 County

Delivery Address ★

Route

★ To be filled in only when shipper desires and governing tariffs provide for delivery thereat.

Delivering Carrier Blacktop Maint. Corp. Car or Vehicle Initials No.

No. Packages	Kind of Package, Description of Articles, Special Marks, and Exceptions	Weight (Subject to Correction)	Class or Rate	Check Column
16	Cubic yards of Asphalt D....			

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement. The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

Freight charges are PREPAID unless marked collect. CHECK BOX IF COLLECT ☐

Received $ to apply in prepayment of the charges on the property described hereon.

Agent or Cashier

Per (The signature here acknowledges only the amount prepaid.)

Charges Advanced:

$

† Shipper's imprint in lieu of stamp; not a part of Bill of Lading approved by the Interstate Commerce Commission.

* If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight.

NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding per

Liability Limitation for loss or damage on this shipment may be applicable. See 49 U.S.C. § 14706(c)(1)(A) and (B).

†The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of the Consolidated Freight Classification.

[signature] Shipper, Per [signature] Agent, Per [signature]

Permanent post-office address of shipper

1

REDIFORM

Continuous Specialized® Forms Mossburg, Inc. Made in U.S.A.

44-301 • Triplicate
44-302 • Quadruplicate

Original – Not Negotiable

STRAIGHT BILL OF LADING — SHORT FORM

Carrier's Pro No. ______
Shipper's Bill of Lading No. ______
Consignee's Reference/PO No. ______
Carrier's Code (SCAC) ______

(Name of Carrier)

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request;

at ______ 2004 From Sebree ... 85 gravel Kingston ky

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract), agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Consigned to Blacktop maint. corp act Bath 62 sand & gravel, inc

(Mail or street address of consignee – For purposes of notification only.)

Destination 87 Commerce St State Ky Zip 42603 County ______

Delivery Address ★ ______

★ To be filled in only when shipper desires and governing tariffs provide for delivery thereat.

Route ______

Delivering Carrier Blacktop maint. corp. Car or Vehicle Initials ______ No. ______

No. Packages	Kind of Package, Description of Articles, Special Marks, and Exceptions	*Weight (Subject to Correction)	Class or Rate	Check Column
16	cubic yards of asphalt borings			

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

______ (Signature of Consignor)

Freight charges are PREPAID unless marked collect. CHECK BOX IF COLLECT ☐

Received $ ______ to apply in prepayment of the charges on the property described hereon.

______ Agent or Cashier

Per ______
(The signature here acknowledges only the amount prepaid.)

Charges Advanced:

$ ______

†Shipper's imprint in lieu of stamp; not a part of Bill of Lading approved by the Interstate Commerce Commission.

* If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight.

NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding ______ per ______

Liability Limitation for loss or damage on this shipment may be applicable. See 49 U.S.C. § 14706(c)(1)(A) and (B).

†The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of the Consolidated Freight Classification.

______ Shipper, Per [signature] Agent, Per [signature]

Permanent post-office address of shipper ______

1

REDIFORM

Continuous Speediset® Forms, Rediform, Inc. Made in U.S.A.

44-301 Triplicate
44-302 Quadruplicate

TOTAL P.12

3986
14.34

STEUBEN COUNTY D.P.W.
BATH LANDFILL

Bill Acct: **LAMBASBE**
Company: LAMBERTS ASBESTOS 290
Vehicle# : I1021
TT = 100 - Commercial BY WEIGH
PT = 1 - Charge
OT = 1 - Not Specified

Haul Acct: LAMBASBE
Company: LAMBERTS ASBESTOS 290

Tran#: **287421**

	---In---	---Out--
Date	03/15/04	03/15/04
Time	08:00	08:13

Material Types	Rate/UM	Vol/QY	lbs	Tip
1060 - Asbestos	$250.00/TN	0	420	$52.50

	Lbs	Tons
Gross	8940	4.47
Tare	8520	4.26
NET	**420**	**0.21**

In/Out: I

Tip Fee	52.50 @ $250.00/tn
Spec Fee	0.00
Total	**$52.50**

VOL/QY/CYD = 0

Driver: Adam Weiss

Weighmaster: Anna Martin-Miller 460266

Lambert's Asbestos Removal Service Inc.

68 Kahler Road, S., Elmira, NY 14903
607 562-8426

ASBESTOS WASTE MANIFEST

Job 3986

GENERATOR

Project Name Allways Moving

Address 85 Grand ST. **City** Kings Ten **State** N.Y. **Zip**

Building Owner

Address **City** **State** **Zip**

WASTE

Description of Waste	# Containers	Total Quantity
Friable Asbestos (31 LF)	3 bags	

Name and address of responsible agency administering NESHAP program:
EPA, Region 2, 290 Broadway, #1539, New York, NY 10007-1823

OPERATOR'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 government regulations

Chris Rozell, Chris Rozell, Supervisor — 3-11-04

Printed/Typed Name & Title — Signature — Date

TRANSPORTER #1

Name Lambert's Asbestos Removal inc., **Telephone** (607)562-8426

Address 68 South Kahler Road **City** Elmira **State** N.Y. **Zip** 14903

I certify that the above material was picked up from and delivered to the place listed upon this manifest.
Driver Signature [signature] **Date** 3-12-04

TRANSPORTER #2

Name **Telephone**

Address **City** **State** **Zip**

I certify that the above material was picked up from and delivered to the place listed upon this manifest.
Driver Signature **Date**

DESTINATION

Landfill Name Stoughton County Landfill **Telephone** 776-9245

Address Turnpike RD. **City** Rath **State** N.Y. **Zip**

I certify that the material described above was received and that the landfill has been approved for the disposal of asbestos.
The delivered material will be covered with 6 inches of non-asbestos material within 24 hours.

Landfill Owner/Operator Signature [signature] **Date** 3/15/04

WHITE – Lambert's YELLOW – Owner's Copy PINK – Transporter's Copy GOLDENROD – Disposal Facility Copy

Appendix C – Boring Logs

Boring Log: VM-8

Project: Federal-Mogul

Project No.: 138008

Location: Kingston, NY

Completion Date: February 12, 2004

Surface Elevation (feet AMSL*): Not determined

Total Depth (feet): 6

Borehole Diameter (inches): 8.25

Sample Data					Subsurface Profile	
Depth	Sample Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
0						Ground Surface
	1	-	-	-		*Asphalt* / *Not Sampled*
2	2	0.0	7,4,2,2	75		*Sand (SP)* Strong brown (7.5 YR 4/6) fine to medium-grained sand, little silt; loose; dry.
4	3	0.0	4,5,4,5	50		
6						Boring Terminated
8						
10						
12						
14						
16						
18						

Geologist(s): David P. Bouchard

Subcontractor: Parratt Wolff, Inc.

Driller/ Operator: Jim Lansing

Method: HSA

ID(inches): 4.25

**AMSL = Above mean sea level*

Boring Log: VM-9

Project: Federal-Mogul

Project No.: 138008

Location: Kingston, NY

Completion Date: February 11, 2004

Surface Elevation (feet AMSL*): Not determined

Total Depth (feet): 6

Borehole Diameter (inches): 8.25

Sample Data					Subsurface Profile	
Depth	Sample Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
0						Ground Surface
						Asphalt
	1	-	-	-		*Not Sampled*
2						
	2	0.0	9,6,3,2	100		*Sand (SP)* Strong brown (7.5 YR 4/6) fine to medium-grained sand, little silt; medium dense; dry.
4						
	3	0.0	4,5,5,4	100		
6						Boring Terminated
8						
10						
12						
14						
16						
18						

Geologist(s): David P. Bouchard

Subcontractor: Parratt Wolff, Inc.

Driller/ Operator: Jim Lansing

Method: HSA **ID(inches):** 4.25

**AMSL= Above mean sea level*

Boring Log: VM-10

Project: Federal-Mogul

Project No.: 138008

Location: Kingston, NY

Completion Date: February 12, 2004

Surface Elevation (feet AMSL*): Not determined

Total Depth (feet): 6

Borehole Diameter (inches): 8.25

Sample Data					Subsurface Profile	
Depth	Sample Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
0						Ground Surface
	1	-	-	-		*Asphalt* *Not Sampled*
2	2	0.0	5,4,3,4	100		*Sand (SP)* Strong brown (7.5 YR 4/6) fine to medium-grained sand, trace to little fine gravel; loose to medium dense; dry.
4	3	0.0	4,3,3,3	100		*Sand (SP)* Dark brown (7.5 YR 3/4) fine to medium-grained sand, little silt; medium dense; moist.
6						Boring Terminated
8						
10						
12						
14						
16						
18						

Geologist(s): David P. Bouchard

Subcontractor: Parratt Wolff, Inc.

Driller/ Operator: Jim Lansing

Method: HSA **ID(inches):** 4.25

**AMSL= Above mean sea level*

Boring Log: VM-11

Project: Federal-Mogul

Project No.: 138008

Location: Kingston, NY

Completion Date: February 12, 2004

Surface Elevation (feet AMSL*): Not determined

Total Depth (feet): 6

Borehole Diameter (inches): 8.25

Sample Data					Subsurface Profile	
Depth	Sample Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
0						Ground Surface
						Asphalt
	1	0.0	-	0		*Not Sampled*
2						
	2	0.0	7,3,3,2	50		*Sand (SP)* Strong brown (7.5 YR 4/6) fine to medium-grained sand, trace gravel; loose; dry.
4						
	3	0.0	3,2,2,2	75		
6						Boring Terminated
8						
10						
12						
14						
16						
18						

Geologist(s): David P. Bouchard

Subcontractor: Parratt Wolff, Inc.

Driller/ Operator: Jim Lansing

Method: HSA **ID(inches):** 4.25

**AMSL= Above mean sea level*

Boring Log: VM-12

Project: Federal-Mogul

Project No.: 138008

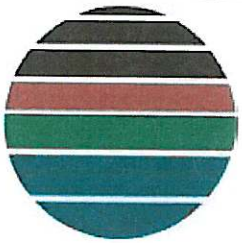
Location: Kingston, NY

Completion Date: February 12, 2004

Surface Elevation (feet AMSL*): Not determined

Total Depth (feet): 6

Borehole Diameter (inches): 8.25



Sample Data					Subsurface Profile	
Depth	Sample Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description
0						Ground Surface
						Asphalt
	1	-	-	-		*Not Sampled*
2						
	2	0.0	8,3,3,3	100		*Sand (SP)* Strong brown (7.5 YR 4/6) fine to medium-grained sand, trace gravel; loose; dry.
4						
	3	0.0	4,3,3,3	75		
6						Boring Terminated
8						
10						
12						
14						
16						
18						

Geologist(s): David P. Bouchard

Subcontractor: Parratt Wolff, Inc.

Driller/ Operator: Jim Lansing

Method: HSA **ID(inches):** 4.25

**AMSL= Above mean sea level*

Appendix D - PCM Air Sampling Analysis Report

ATLANTIC TESTING LABORATORIES, Limited

Syracuse
5866 State Route 31
Cicero, NY 13039
315/699-5281 (T)
315/699-3374 (F)

March 18, 2004

Environmental Strategies Corporation
9 Albany Street
Cazenovia, New York 13035

Attn.: Mr. Brian Silfer

Re: Air Sampling and Analysis
Former Huck Manufacturing Facility
Always Moving and Storage-The Mansion
Kingston, New York
ATL No. ST5266-2-03-04

Ladies/Gentlemen:

In accordance with our proposal dated February 6, 2004, (ATL No. ST5998-006-02-04), Atlantic Testing Laboratories, Limited (ATL) performed airborne sampling and analysis by phase contrast microscopy (PCM), for thermal system insulation abatement, on March 10 through 12, 2004.

Air samples were obtained in accordance with 12 NYCRR 56-17 regulations. PCM air samples collected were sent to a New York State Department of Health approved laboratory (ELAP # 11555). The clearance criteria for all work areas was determined to be in compliance with 12 NYCRR 56-17. The abatement within the work area has been completed. The laboratory reports and sample custody documentation are enclosed.

Please contact our office should you have any questions, or if we may be of further assistance.

Respectfully submitted,
ATLANTIC TESTING LABORATORIES, Limited

Kevin W. Samolis
Project Manager

/kws

Enclosures

envirologic of New York, Inc.

PCM AIR SAMPLING ANALYSIS REPORT
NYS DOH ELAP # 11577

Client:	Project Number:	Client Project Number:
Atlantic Testing Laboratories, Limited	*ELE04A-166*	*ST5266*
Project Description:	**Report Number:**	**Sampling Phase:**
Former Huck Manufacturing Building	*3665*	*Background Air Sampling*
Project Location:	**Date Sampled:**	**Date Received:**
Kingston, New York	*Wednesday, March 10, 2004*	*Friday, March 12, 2004*
Client Contact:	**Date Analyzed:**	**Date Reported:**
Mr. Joe Grabowski	*Friday, March 12, 2004*	*Friday, March 12, 2004*

Summary:

On Friday, March 12, 2004, Envirologic of New York, Inc. received samples for PCM Analysis. Envirologic of New York, Inc. is solely responsible for fiber counts.

Sample Number	Lab ID Number	Sample Description	Sample Location	Sample Type	Volume (liters)	Result (f/cc)	Result (f/mm^2)
310-001	136581	Inside Work Area	North	BA	1200	**0.004**	**13.004**
310-002	136582	Inside Work Area	Center	BA	1200	**0.006**	**17.555**
310-003	136583	Inside Work Area	South	BA	1200	**0.006**	**18.856**
310-004	136584	Outside Work Area	North	BA	1200	**0.007**	**20.806**
310-005	136585	Outside Work Area	Center	BA	1200	**0.006**	**18.205**
310-006	136586	Outside Work Area	South	BA	1200	**0.004**	**13.004**
310-007	136587	Field Blank	Field Blank	FB	NA	NC	NC
310-008	136588	Field Blank	Field Blank	FB	NA	NC	NC

Abbreviations:

BA	=	Background Air Sample	FB	=	Field Blank Sample
PA	=	Pre-Abatement Air Sample	NC	=	Non-Contaminated Sample
A	=	Abatement Air Sample	MD	=	Mineral Dust (Unable to Analyze)
F	=	Final Air Clearance Air Sample	SD	=	Sample Damaged (Unable to Analyze)
AMB	=	Ambient Air Sample	NA	=	Not Applicable
f/cc	=	Fibers per Cubic Centimeter	<	=	Below Detection Limit
f/mm^2	=	Fibers per Square Millimeter			

Analyzed by:	Date:	Approved By:	Date:
	3/12/2004		3/12/2004
Mr. Jack Kunicki - Analyst Envirologic of New York, Inc.		Mr. Jack Kunicki - Technical Laboratory Director Envirologic of New York, Inc.	

Disclaimers:

Disclaimer: NIOSH Method 7400 - Phase Contrast Microscopy

PCM analysis using NIOSH Method 7400 is a means of analysis for fiber counting. However, this method is not specific for the analysis of airborne asbestos fibers. The analytical results presented in this report, and the laboratory procedures used, are considered to be accurate and reliable for the samples analyzed. This report may not be reproduced without the approval of Envirologic of New York, Inc., and then only in full. PCM analysis is performed using an Olympus CH30 (model # CH30RF100).

Shaded sample results indicate an air sample results that is equal or greater than 0.1 f/cc or the Background Level. Bolded sample results indicate an air sample that is unreadable due to mineral dust overloading.

envirologic of New York, Inc.

PCM AIR SAMPLING ANALYSIS REPORT
NYS DOH ELAP # 11577

Client:	Project Number:	Client Project Number:
Atlantic Testing Laboratories, Limited	*ELE04A-166*	*ST5266*
Project Description:	**Report Number:**	**Sampling Phase:**
Former Huck Manufacturing Building	*3665*	*Pre-Abatement Air Sampling*
Project Location:	**Date Sampled:**	**Date Received:**
Kingston, New York	*Wednesday, March 10, 2004*	*Friday, March 12, 2004*
Client Contact:	**Date Analyzed:**	**Date Reported:**
Mr. Joe Grabowski	*Friday, March 12, 2004*	*Friday, March 12, 2004*

Summary:

On Friday, March 12, 2004, Envirologic of New York, Inc. received samples for PCM Analysis. Envirologic of New York, Inc. is solely responsible for fiber counts.

Sample Number	Lab ID Number	Sample Description	Sample Location	Sample Type	Volume (liters)	Result (f/cc)	Result (f/mm^2)
310-009	*136589*	*Inside Work Area*	*North*	*PA*	*1150*	*MD*	*MD*
310-010	*136590*	*Inside Work Area*	*Center*	*PA*	*1150*	*MD*	*MD*
310-011	*136591*	*Inside Work Area*	*South*	*PA*	*1150*	*MD*	*MD*
310-012	136592	Outside Work Area	North	PA	1150	0.003	10.403
310-013	*136593*	*Outside Work Area*	*Center*	*PA*	*1150*	*MD*	*MD*
310-014	*136594*	*Outside Work Area*	*South*	*PA*	*1150*	*MD*	*MD*
310-015	136595	Field Blank	Field Blank	FB	NA	NC	NC
310-016	136596	Field Blank	Field Blank	FB	NA	NC	NC

Abbreviations:

BA	=	Background Air Sample	FB	=	Field Blank Sample
PA	=	Pre-Abatement Air Sample	NC	=	Non-Contaminated Sample
A	=	Abatement Air Sample	MD	=	Mineral Dust (Unable to Analyze)
F	=	Final Air Clearance Air Sample	SD	=	Sample Damaged (Unable to Analyze)
AMB	=	Ambient Air Sample	NA	=	Not Applicable
f/cc	=	Fibers per Cubic Centimeter	<	=	Below Detection Limit
f/mm^2	=	Fibers per Square Millimeter			

Analyzed by:	Date:	Approved By:	Date:
	3/12/2004		3/12/2004
Mr. Jack Kunicki - Analyst Envirologic of New York, Inc.		Mr. Jack Kunicki - Technical Laboratory Director Envirologic of New York, Inc.	

Disclaimers:

Disclaimer: NIOSH Method 7400 - Phase Contrast Microscopy

PCM analysis using NIOSH Method 7400 is a means of analysis for fiber counting. However, this method is not specific for the analysis of airborne asbestos fibers. The analytical results presented in this report, and the laboratory procedures used, are considered to be accurate and reliable for the samples analyzed. This report may not be reproduced without the approval of Envirologic of New York, Inc., and then only in full. PCM analysis is performed using an Olympus CH30 (model # CH30RF100).

Shaded sample results indicate an air sample results that is equal or greater than 0.1 f/cc or the Background Level. Bolded sample results indicate an air sample that is unreadable due to mineral dust overloading.

envirologic of New York, Inc.

PCM AIR SAMPLING ANALYSIS REPORT
NYS DOH ELAP # 11577

Client:	Project Number:	Client Project Number:
Atlantic Testing Laboratories, Limited	*ELE04A-166*	*ST5266*
Project Description:	**Report Number:**	**Sampling Phase:**
Former Huck Manufacturing Building	*3665*	*Abatement Air Sampling*
Project Location:	**Date Sampled:**	**Date Received:**
Kingston, New York	*Thursday, March 11, 2004*	*Friday, March 12, 2004*
Client Contact:	**Date Analyzed:**	**Date Reported:**
Mr. Joe Grabowski	*Friday, March 12, 2004*	*Friday, March 12, 2004*

Summary:

On Friday, March 12, 2004, Envirologic of New York, Inc. received samples for PCM Analysis. Envirologic of New York, Inc. is solely responsible for fiber counts.

Sample Number	Lab ID Number	Sample Description	Sample Location	Sample Type	Volume (liters)	Result (f/cc)	Result (f/mm^2)
311-017	*136597*	*Inside Work Area*	*North*	*A*	*190*	*Insufficient Volume*	
311-018	*136598*	*Outside Work Area*	*Center*	*A*	*178*	*Insufficient Volume*	
311-019	136599	Field Blank	Field Blank	FB	NA	NC	NC
311-020	136600	Field Blank	Field Blank	FB	NA	NC	NC

Abbreviations:

BA	=	Background Air Sample	FB	=	Field Blank Sample
PA	=	Pre-Abatement Air Sample	NC	=	Non-Contaminated Sample
A	=	Abatement Air Sample	MD	=	Mineral Dust (Unable to Analyze)
F	=	Final Air Clearance Air Sample	SD	=	Sample Damaged (Unable to Analyze)
AMB	=	Ambient Air Sample	NA	=	Not Applicable
f/cc	=	Fibers per Cubic Centimeter	<	=	Below Detection Limit
f/mm^2	=	Fibers per Square Millimeter			

Analyzed by:	Date:	Approved By:	Date:
	3/12/2004		3/12/2004
Mr. Jack Kunicki - Analyst Envirologic of New York, Inc.		Mr. Jack Kunicki - Technical Laboratory Director Envirologic of New York, Inc.	

Disclaimers:

Disclaimer: NIOSH Method 7400 - Phase Contrast Microscopy

PCM analysis using NIOSH Method 7400 is a means of analysis for fiber counting. However, this method is not specific for the analysis of airborne asbestos fibers. The analytical results presented in this report, and the laboratory procedures used, are considered to be accurate and reliable for the samples analyzed. This report may not be reproduced without the approval of Envirologic of New York, Inc., and then only in full. PCM analysis is performed using an Olympus CH30 (model# CH30RF100).

Shaded sample results indicate an air sample results that is equal or greater than 0.1 f/cc or the Background Level. Bolded sample results indicate an air sample that is unreadable due to mineral dust overloading.

envirologic of New York, Inc.

PCM AIR SAMPLING ANALYSIS REPORT
NYS DOH ELAP # 11577

Client:	Project Number:	Client Project Number:
Atlantic Testing Laboratories, Limited	*ELE04A-166*	*ST5266*
Project Description:	**Report Number:**	**Sampling Phase:**
Former Huck Manufacturing Building	*3665*	*Clearance Air Sampling*
Project Location:	**Date Sampled:**	**Date Received:**
Kingston, New York	*Thursday, March 11, 2004*	*Friday, March 12, 2004*
Client Contact:	**Date Analyzed:**	**Date Reported:**
Mr. Joe Grabowski	*Friday, March 12, 2004*	*Friday, March 12, 2004*

Summary:

On Friday, March 12, 2004, Envirologic of New York, Inc. received samples for PCM Analysis. Envirologic of New York, Inc. is solely responsible for fiber counts.

Sample Number	Lab ID Number	Sample Description	Sample Location	Sample Type	Volume (liters)	Result (f/cc)	Result (f/mm^2)
311-021	136601	Inside Work Area	North	F	1200	<0.002	<7.152
311-022	136602	Inside Work Area	Center	F	1200	<0.002	<7.152
311-023	136603	Inside Work Area	South	F	1200	<0.002	<7.152
311-024	136604	Outside Work Area	North	F	1200	<0.002	<7.152
311-025	136605	Outside Work Area	Center	F	1200	<0.002	<7.152
311-026	136606	Outside Work Area	South	F	1200	<0.002	<7.152
311-027	136607	Field Blank	Field Blank	FB	NA	NC	NC
311-028	136608	Field Blank	Field Blank	FB	NA	NC	NC

Abbreviations:

BA	=	Background Air Sample	FB	=	Field Blank Sample
PA	=	Pre-Abatement Air Sample	NC	=	Non-Contaminated Sample
A	=	Abatement Air Sample	MD	=	Mineral Dust (Unable to Analyze)
F	=	Final Air Clearance Air Sample	SD	=	Sample Damaged (Unable to Analyze)
AMB	=	Ambient Air Sample	NA	=	Not Applicable
f/cc	=	Fibers per Cubic Centimeter	<	=	Below Detection Limit
f/mm^2	=	Fibers per Square Millimeter			

Analyzed by:	Date:	Approved By:	Date:
	3/12/2004		3/12/2004
Mr. Jack Kunicki - Analyst Envirologic of New York, Inc.		Mr. Jack Kunicki - Technical Laboratory Director Envirologic of New York, Inc.	

Disclaimers:

Disclaimer: NIOSH Method 7400 - Phase Contrast Microscopy

PCM analysis using NIOSH Method 7400 is a means of analysis for fiber counting. However, this method is not specific for the analysis of airborne asbestos fibers. The analytical results presented in this report, and the laboratory procedures used, are considered to be accurate and reliable for the samples analyzed. This report may not be reproduced without the approval of Envirologic of New York, Inc., and then only in full. PCM analysis is performed using an Olympus CH30 (model # CH30RF100).

Upon analysis, Final Air Clearance Air Samples were found to be within acceptable limits as defined by NYSDOL Industrial Code Rule 56-17.8. Based upon these results, the abatement work area meets applicable re-entry requirements.

04A166/3665

ATLANTIC TESTING LABORATORIES, Limited

ASBESTOS SAMPLE - CHAIN OF CUSTODY

Albany 12 Arrowhead Lane Cohoes, NY 12047 518/783-9073 (T) 518/783-6987 (F)

Binghamton 406 North Street Endicott, NY 13670 607/757-9326 (T) 607/757-9252 (F)

Canton P.O. Box 29 Canton, NY 13617 315/386-4578 (T) 315/386-1012 (F)

Ithaca 758 Cascadilla Street Ithaca, NY 14850 607/272-1723 (T) 607/272-1723 (F)

Plattsburgh 1080 Military Trpk. Plattsburgh, NY 12901 518/563-5878 (T) 518/562-1321 (F)

Poughkeepsie 1601 Route 376 Wappingers Falls, NY 12590 845/463-1126 (T) 845/426-1127 (F)

Syracuse 5858 State Rt 31 Cicero, NY 13039 315/699-5291 (T) 315/699-3374 (F)

Utica 301 St. Andrews St. Utica, NY 13502 315/738-3309 (T) 315/736-0742 (F)

Watertown P.O. Box 91 Felts Mills, NY 13638 315/773-5390 (T) 315/773-0334 (F)

Project No.	Client Name	Chain of Custody No.	Sample Information		Report Distribution	
STS266	ESC	001	Cassette Type:	Backgrounds	Data Reduction:	24hr TAT
Project Contact:	Kevin Samelis	Date Collected: 3/10/04	Analysis Requested:	P.C.M.	Send Report To:	Kevin Samelis
Project Name:	Former Huck Manuf. Bldg Always Moving Storage	Page 1 of 1	Analyzed By:		Copy Sent To:	315-699-3374
		Project Location: Kingston, NY	Analyzed By (SIG):		Fax Results:	☒ YES ☐ NO

Field Sample No.	Sample Location	Pump No.	Start (Hr:Min)	Stop (Hr:Min)	Total Minutes (Min)	Start Flow (LPM)	Final Flow (LPM)	Volume (LITRS)	Laboratory Identific. No.	Fibers/100 Fields	Fibers/ cc	Fibers/ Fields Blank	Fibers/ cc	Date Analz.	Checked By
310 001	Inside North	9	7:50	9:50	120	10	10	1200	136581	10					
310 002	Inside center	8	7:50	9:50	120	10	10	1200	136582	13.5					
310 003	Inside South	8	7:50	9:50	120	10	10	1200	136583	14.5					
310 004	outside North	6	7:51	9:51	120	10	10	1200	136584	16					
310 005	outside center	7	7:51	9:51	120	10	10	1200	136585	14					
310 006	outside South	50	7:51	9:51	120	10	10	1200	136586	10					
310 007	Blank1	—	—	—	—	—	—	—	136587	0					
310 008	Blank2	—	—	—	—	—	—	—	136588	0					

Samplers Name:	Joseph Gracowski	Date:	3/10/04	Received For Name:		Date:	Shipment Received Intact:
Samplers Signature:	Joseph Gracowski	Time:	8:15	Laboratory Signature:		Time:	☐ YES ☐ NO

Samples Relinquished By:				Samples Received By:				Filed and Laboratory Remarks:
Name:	Joe Gracowski	Date:	3/11/04	Name:	Jack Kunicki	Date:	3/12/04	
Signature:	Joseph Gracowski	Time:	10:15	Signature:		Time:	1715	
Name:		Date:		Name:		Date:		
Signature:		Time:		Signature:		Time:		

Think Quality

Distribution: White with Samples
Yellow to Laboratory
Pink to A.T.L. Files

QF-7A
Revised: 2/03

04A166 / 3665

ATLANTIC TESTING LABORATORIES, Limited

ASBESTOS SAMPLE - CHAIN OF CUSTODY

Albany 12 Arrowhead Lane Cohoes, NY 12047 518/783-9073 (T) 518/783-6567 (F)
Binghamton 406 North Street Endicott, NY 13670 607/757-9326 (T) 607/757-9252 (F)
Canton P.O. Box 29 Canton, NY 13617 315/386-4578 (T) 315/386-1012 (F)
Ithaca 798 Cascadilla Street Ithaca, NY 14850 607/272-1723 (T) 607/272-1723 (F)
Plattsburgh 1080 Military Tpk. Plattsburgh, NY 12901 518/563-6878 (T) 518/562-1321 (F)
Poughkeepsie 1601 Route 376 Wappingers Falls, NY 12590 845/463-1128 (T) 845/426-1127 (F)
Syracuse 5866 State Rt. 31 Cicero, NY 13039 315/699-5281 (T) 315/699-3374 (F)
Utica 301 St. Andrews St. Utica, NY 13502 315/738-3309 (T) 315/735-0742 (F)
Watertown P.O. Box 91 Falls Mills, NY 13638 315/773-5390 (T) 315/773-0334 (F)

Project No.	Client Name	Chain of Custody No.	Sample Information		Report Distribution	
STS266	E.B.L.	002	Cassette Type:	Pre-Abatement	Dates Required:	☒ 24hr TAT
Project Contact:	Kevin Samolis	Date Collected: 3/10/04	Analysis Requested:		Send Report To:	Kevin Samolis
Project Name:	Former Huck Manuf. Bldg Allways Moving & Storage	Page 1 of 1	Analyzed By:		Copy Sent To:	315-699-3374
		Project Location: Kingston, NY	Analyzed By: (SIG)		Fax Results:	☒ YES ☐ NO

Field Sample No.	Sample Location	Pump No.	Start (Hr:Min)	Stop (Hr:Min)	Total Minutes (Min)	Start Flow (LPM)	Final Flow (LPM)	Volume (LTRS)	Laboratory Identific. No.	Fibers 100 Fields	Fibers/100 Fields Blank	Fibers/CC	Date Analz.	Checked By
310 009	Inside North	8	10:15	12:10	115	10	10	1150	136589	MD				
310 010	Inside center	9	10:15	12:10	115	10	10	1150	136590	MD				
310 011	Inside South	9	10:15	12:10	115	10	10	1150	136591	MD				
310 012	outside North	8	10:16	12:11	115	10	10	1150	136592	8				
310 013	outside center	7	10:16	12:11	115	10	10	1150	136593	MD				
310 014	outside South	50	10:16	12:11	115	10	10	1150	136594	MD				
310 015	Blank 1	–	–	–	–	–	–	–	136595	0				
310 016	Blank 2	–	–	–	–	–	–	–	136596	0				

Samplers Name:	Joseph Grabowski	Date:	3/10/04	Received for Name:	Jack Kumicki	Date:	3/12/04
Samplers Signature:	[signature]	Time:	10:25	Laboratory Signature:	[signature]	Time:	1716

Shipment Rec'd Intact? ☐ YES ☐ NO

Samples Relinquished By:				Samples Received By:				Field and Laboratory Remarks
Name:	Joe Grabowski	Date:	3/11/04	Name:		Date:		
Signature:	[signature]	Time:	10:15	Signature:		Time:		
Name:		Date:		Name:		Date:		
Signature:		Time:		Signature:		Time:		

Think Quality

Distribution: White with Samples
Yellow to Laboratory
Pink to ATL Files

QF-7A
Revised: 2/03

04A166 / 3665

ATLANTIC TESTING LABORATORIES, Limited

ASBESTOS SAMPLE - CHAIN OF CUSTODY

Albany 12 Arrowhead Lane, Cohoes, NY 12047, 518/783-9073 (T), 518/783-6587 (F)
Binghamton 406 North Street, Endicott, NY 13670, 607/757-9326 (T), 607/757-9252 (F)
Canton P.O. Box 29, Canton, NY 13617, 315/386-4578 (T), 315/386-1012 (F)
Ithaca 798 Cascadilla Street, Ithaca, NY 14850, 607/272-1723 (T), 607/272-1723 (F)
Plattsburgh 1080 Military Trpk, Plattsburgh, NY 12901, 518/563-5878 (T), 518/562-1321 (F)
Poughkeepsie 1601 Route 376, Wappingers Falls, NY 12590, 845/463-1128 (T), 845/426-1127 (F)
Syracuse 5886 State Rt. 31, Cicero, NY 13039, 315/699-5281 (T), 315/699-3374 (F)
Utica 301 St. Andrews St., Utica, NY 13502, 315/738-3309 (T), 315/735-0742 (F)
Watertown P.O. Box 91, Falls Mills, NY 13638, 315/773-5390 (T), 315/773-0334 (F)

Project No.	Client Name	Chain of Custody No.
575266	E.S.C.	003
Project Contact:	Kevin Samollis	Date Collected: 3/11/04
		Page 1 of 1
Project Name:	Former duck manufacturing bldg, Alums Building and storage	Project Location: Kingston, NY

Sample Information

Cassette Type:	Abatement
Analysis Requested:	PCM
Analyzed By:	
Analyzed By: (SIG)	

Report Distribution

Dates Required:	24hr TAT
Send Report To:	Kevin Samollis
Copy Sent To:	315-699-3374
Fax Results:	☒ YES ☐ NO

Field Sample No.	Sample Location	Pump No.	Start (Hr:Min)	Stop (Hr:Min)	Total Minutes (Min)	Start Flow (LPM)	Final Flow (LPM)	Volume (LTRS)	Laboratory Identific. No.	Fibers 100 Fields	Fibers/100 Fields Blank	Fibers/CC	Date Anal.	Checked By
311 017	Inside Tent	6389	1:30	3:05	95	2	2	190	136597	18.5				
311 018	1st Floor Bldg	52	1:31	3:00	89	2	2	178	136598	6				
311 019	Blank 1	–	–	–	–	–	–	–	136599	0				
311 020	Blank 2	–	–	–	–	–	–	–	136600	0				

Samplers Name:	Joseph Grabowski	Date:	3/11/04
Samplers Signature:	[signature]	Time:	1:40

Received for Name:
Laboratory Signature:
Date:
Time:
Shipment Rec'd Intact? ☐ YES ☐ NO

Samples Relinquished By:				Samples Received By:			
Name:	Joe Grabowski	Date:	3/11/04	Name:	Jack Kunicki	Date:	3/12/04
Signature:	[signature]	Time:	10:15	Signature:	[signature]	Time:	1717
Name:		Date:		Name:		Date:	
Signature:		Time:		Signature:		Time:	

Field and Laboratory Remarks:

Think Quality

Distribution: White with Samples
Yellow to Laboratory
Pink to ATL Files

QF-7A
Revised: 2/03

04A166/3655

ATLANTIC TESTING LABORATORIES, Limited

ASBESTOS SAMPLE - CHAIN OF CUSTODY

Albany 12 Arrowhead Lane, Cohoes, NY 12047, 518/783-8073 (T), 518/783-6987 (F)
Binghamton 406 North Street, Endicott, NY 13870, 607/757-9326 (T), 607/757-9252 (F)
Canton P.O. Box 29, Canton, NY 13617, 315/386-4578 (T), 315/386-1012 (F)
Ithaca 798 Cascadilla Street, Ithaca, NY 14850, 607/272-1723 (T), 607/272-1723 (F)
Plattsburgh 1080 Military Tpk, Plattsburgh, NY 12901, 518/563-6878 (T), 518/562-1321 (F)
Poughkeepsie 1601 Route 376, Wappingers Falls, NY 12590, 845/463-1126 (T), 845/426-1127 (F)
Syracuse 5896 State Rt. 31, Cicero, NY 13039, 315/699-5281 (T), 315/699-3374 (F)
Utica 301 St. Andrews St., Utica, NY 13502, 315/735-3309 (T), 315/735-0742 (F)
Watertown P.O. Box 91, Felts Mills, NY 13638, 315/773-5390 (T), 315/773-0334 (F)

Project No.	Client Name	Chain of Custody No.
STS266	E.S.C.	604
		Date Collected: 3/11/04
Project Contact:	Kevin Samolis	Page 1 of 1
Project Name:	Former Hockmann(?) Blds / Always Moving and Storage	Project Location: Kingston, NY

Sample Information

Cassette Type:	Finals
Analysis Requested:	P.C.M.
Analyzed By:	
Analyzed By (SIG):	

Report Distribution

Date Required:	Same Day "Rush"
Send Report To:	Kevin Samolis
Copy Sent To:	Fax 315-699-3377
Fax Results:	☑ YES ☐ NO

Field Sample No.	Sample Location	Pump No.	Start (Hr:Min)	Stop (Hr:Min)	Total Minutes (Min)	Start Flow (LPM)	Final Flow (LPM)	Volume (LTRS)	Laboratory Identific. No.	Fibers 100 Fields	Fibers/100 Fields Blank	Fibers/CC	Date Analz.	Checked By
311 021	Inside North	50	7:00	9:00	120	10	10	1200	136601	3				
311 022	Inside Center	6	7:00	9:00	120	10	10	1200	136602	2				
311 023	Inside South	6	7:00	9:00	120	10	10	1200	136603	1.5				
311 024	Outside North	52	6:55	8:55	120	10	10	1200	136604	4				
311 025	Outside Center	9	6:55	8:55	120	10	10	1200	136605	2				
311 026	Outside South	8	6:55	8:55	120	10	10	1200	136606	0.5				
311 027	Blank 1	–	–	–	–	–	–	–	136607	3				
311 028	Blank 2	–	–	–	–	–	–	–	136608	0				

Samplers Name:	Joseph Grabowski	Date:	3/11/04
Samplers Signature:	[signature]	Time:	7:10

Received by Name:	Jack Kowalski(?)	Date:	3/10/04	Shipment Rec'd Intact?
Laboratory Signature:	[signature]	Time:	0803	☐ YES ☐ NO

Samples Relinquished By:

Name:	Joe Grabowski	Date:	3/11/04
Signature:	[signature]	Time:	10:15
Name:		Date:	
Signature:		Time:	

Samples Received By:

Name:		Date:	
Signature:		Time:	
Name:		Date:	
Signature:		Time:	

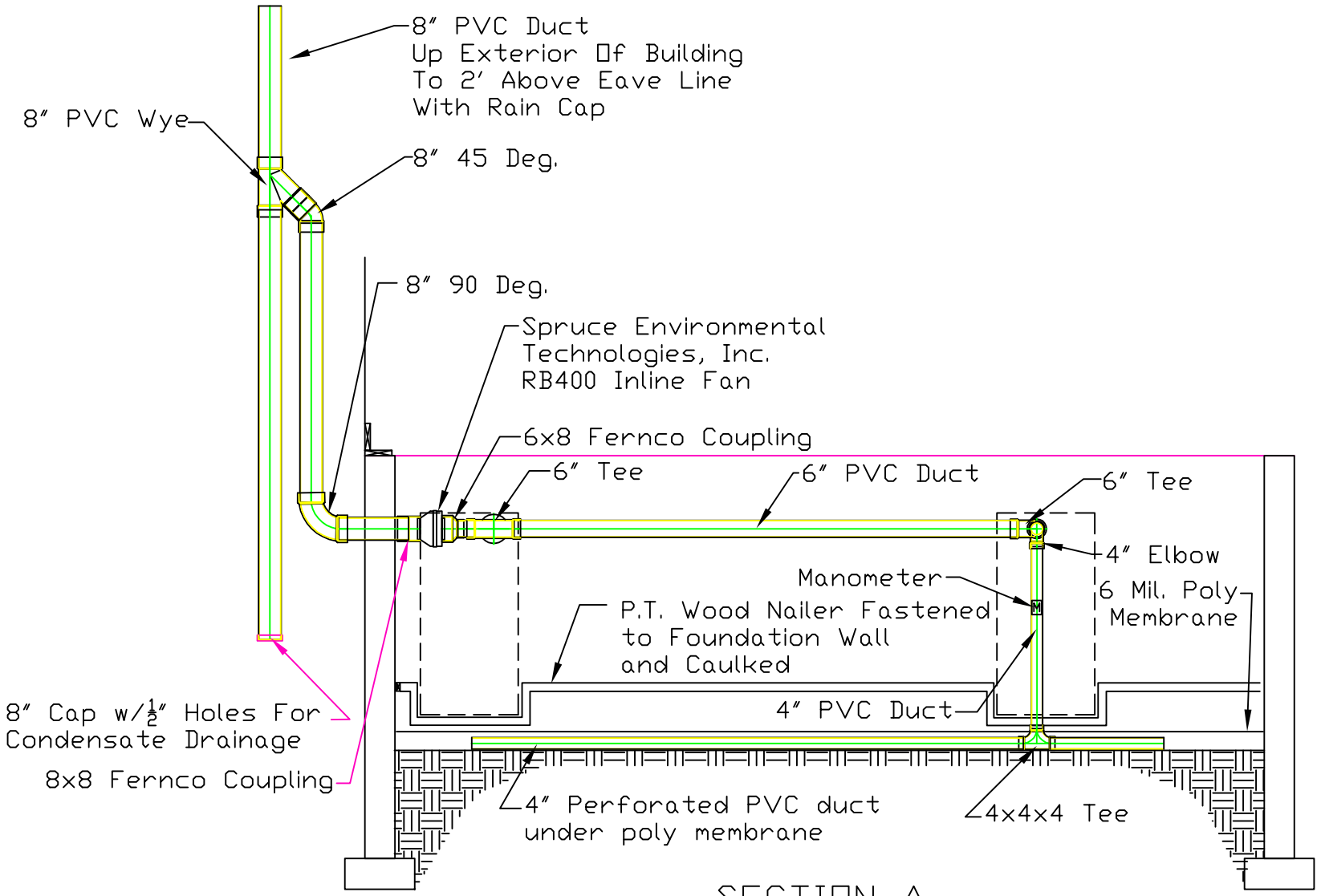
Field and Laboratory Remarks:

Think Quality

Distribution: White with Samples
Yellow to Laboratory
Pink to ATL Files

QF-7A
Revised: 2/03

Appendix E – As-Built Diagrams for the Sub-Slab Depressurization System



SECTION A

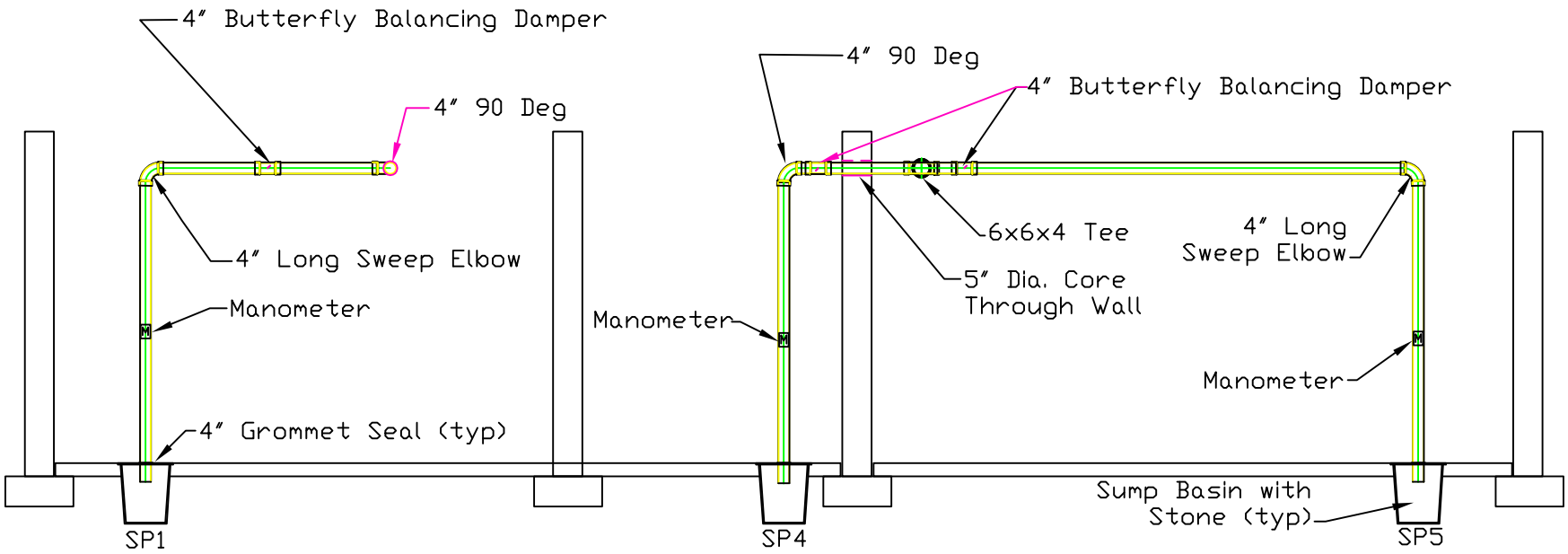
AS BUILT

AQES
Air Quality and Environmental Services, LLC
425 Eastline Road
Ballston Spa, NY 12020
(518) 885-3488Fax: (518) 885-3548

85 GRAND STREET
KINGSTON, NEW YORK

DRAWN BY: Eric L. Dingeman, P.E.

SCALE: Not To Scale



SECTION B

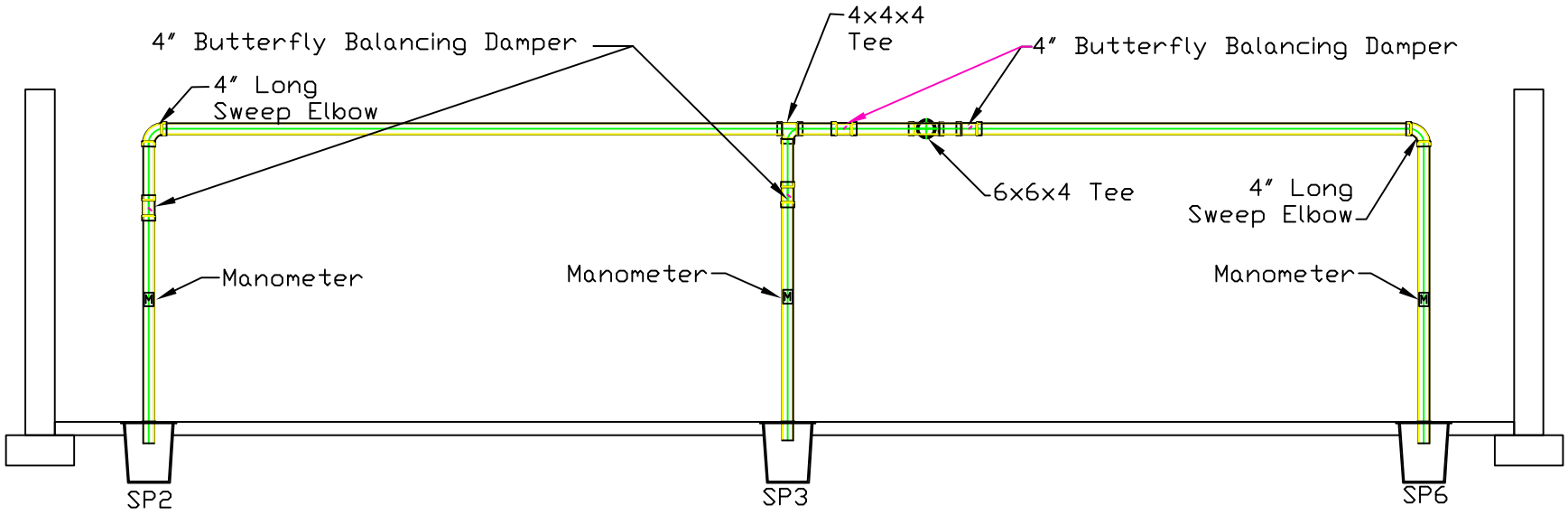
AS BUILT

AQES
Air Quality and Environmental Services, LLC
425 Eastline Road
Ballston Spa, NY 12020
(518) 885-3488Fax: (518) 885-3548

85 GRAND STREET
KINGSTON, NEW YORK

DRAWN BY: Eric L. Dingeman, P.E.

SCALE: Not To Scale



SECTION C

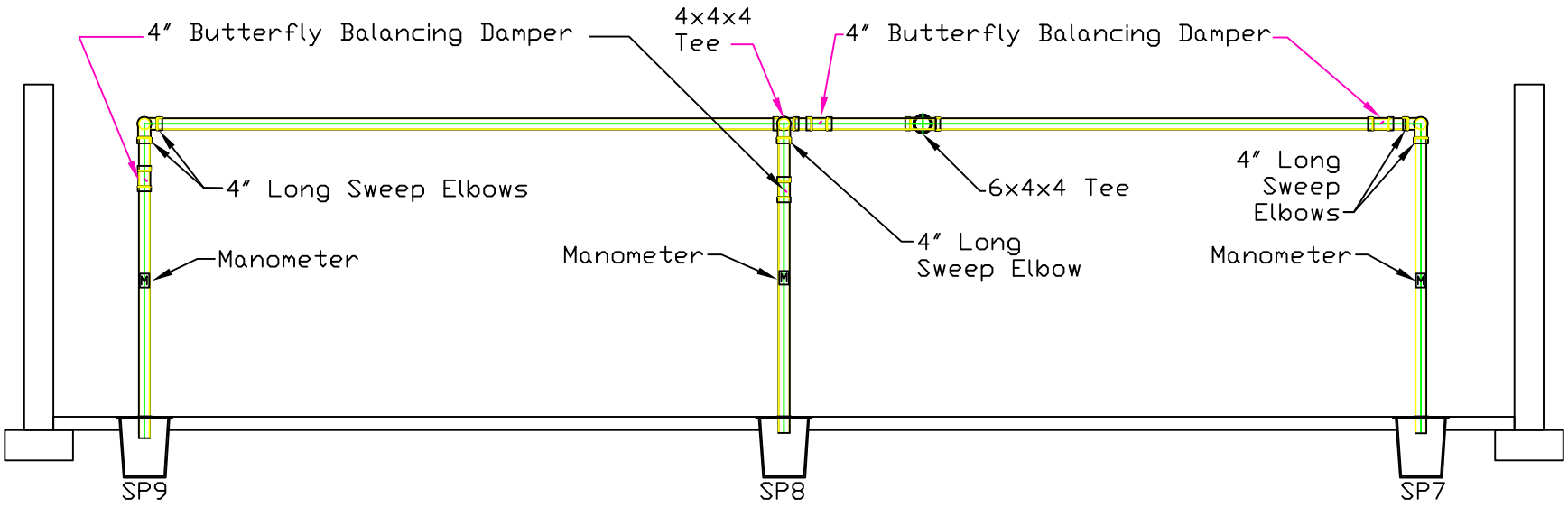
AS BUILT

AQES
Air Quality and Environmental Services, LLC
425 Eastline Road
Ballston Spa, NY 12020
(518) 885-3488Fax: (518) 885-3548

85 GRAND STREET
KINGSTON, NEW YORK

DRAWN BY: Eric L. Dingeman, P.E.

SCALE: Not To Scale



SECTION D

AS BUILT

AQES

Air Quality and Environmental Services, LLC

425 Eastline Road
Ballston Spa, NY 12020

(518) 885-3488Fax: (518) 885-3548

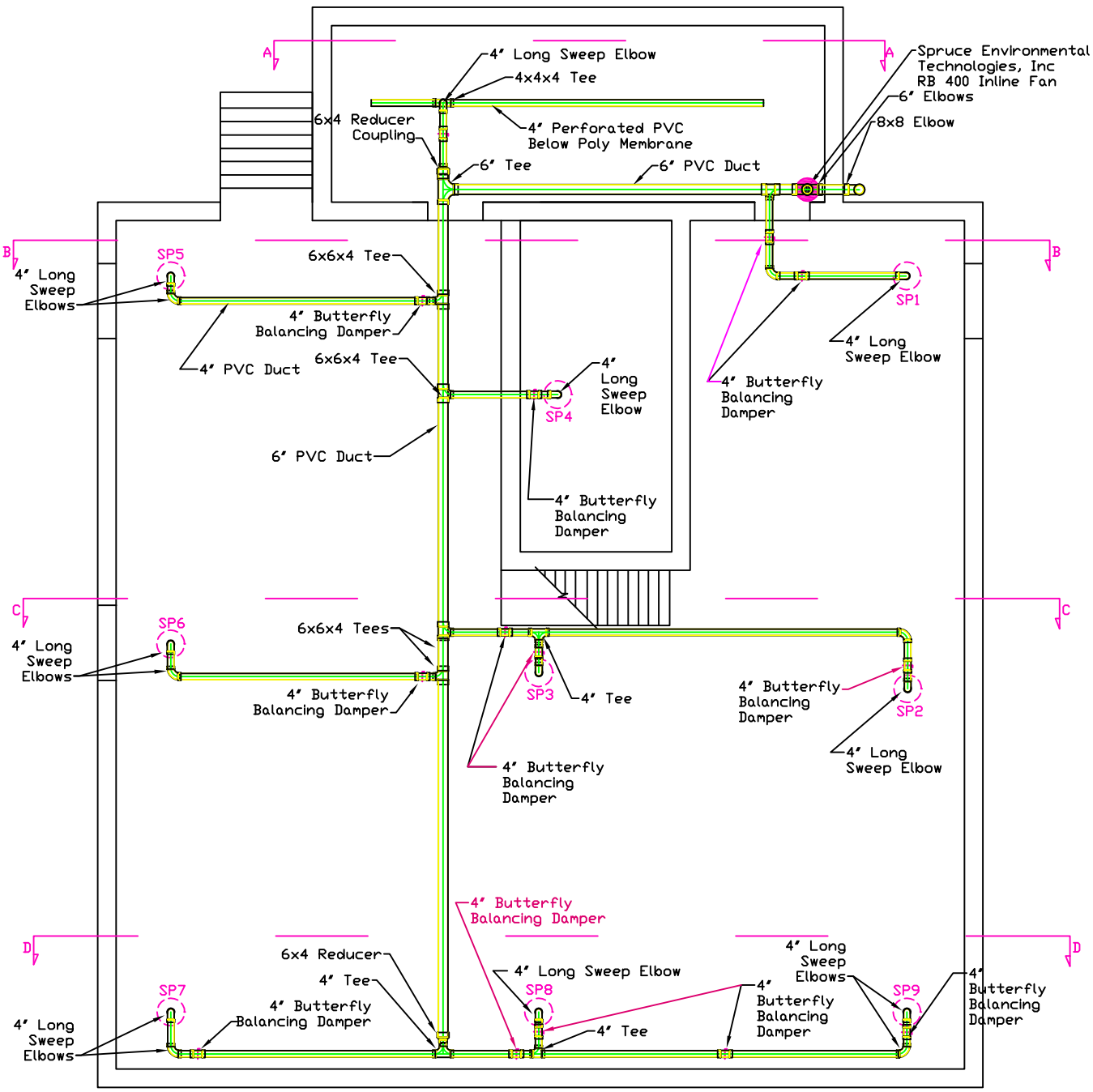
85 GRAND STREET
KINGSTON, NEW YORK

DRAWN BY: Eric L. Dingeman, P.E.

SCALE: Not To Scale

SHEET 5 of 5

NOTE: A U-tube manometer shall be installed on the vertical duct at each suction point.



SUB-SLAB / SUB-MEMBRANE SUCTION SYSTEM #1

AS BUILT

AQES

Air Quality and Environmental Services, LLC

425 Eastline Road
Ballston Spa, NY 12020

(518) 885-3488Fax: (518) 885-3548

85 GRAND STREET
KINGSTON, NEW YORK

DRAWN BY: Eric L. Dingeman, P.E.

SCALE: Not To Scale

Appendix F - Operation and Maintenance Manual (Under Separate Cover)

Operational Checklist
Huck Manufacturing Facility
Kingston, NY

Date: _____ **Inspector (print):** _____
Arrival Time: _____ **Inspector (sign):** _____
Departure Time: _____ **Weather Conditions:** _____

Reason for Visit (check all that apply):

Weekly O&M _____ Collect influent/effluent samples _____
Monthly O&M _____ Response to alarm _____
Other _____

TREATMENT SYSTEM OPERATIONAL CHECKLIST

Location

Zone 1	**Reading**	**Units**
Inlet Vacuum - Before Inlet Filter		"Hg
Inlet Vacuum - After Inlet Filter		"Hg
Vacuum - Effluent Separator		"Hg
Vacuum - Inlet Blower		"Hg
Flow Rate		cfm
Influent PID Reading		ppm
Effluent PID Reading		ppm
Effluent Temperature		F

Zone 2	**Reading**	**Units**
Inlet Vacuum - Before Inlet Filter		"Hg
Inlet Vacuum - After Inlet Filter		"Hg
Vacuum - Effluent Separator		"Hg
Vacuum - Inlet Blower		"Hg
Flow Rate		cfm
Influent PID Reading		ppm
Effluent PID Reading		ppm
Effluent Temperature		F

Total Gallons in Poly Storage Tank = _____ gallons

Notable Observations:

System Maintenance
Equipment _____

Reason for Maintenance _____

Description of Maintenance Action _____