File 4840
Green & Sons, Inc

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12 October 2001

Mr. Philip G. Waite, P.E.
Region 6-Environmental Remediation
New York State Department of Environmental Conservation
317 Washington Street
Watertown, New York 13601

Re: Site Closure Report – Version 1.0
Former Green & Sons Fuel Oil Site
166 Central Avenue - Ilion, New York
NYSDEC Spill No. 9701402
VCP Identification No. V00426-6
InteGreyted Project No. 0012015P

Dear Mr. Waite:

On behalf of Ventura-Taylor Outparcel, LLC (Ventura), InteGreyted Consultants, LLC (InteGreyted) is presenting this Site Closure Report (Version 1.0) for remediation of petroleum residuals in soil at the subject site. While Ventura is not the responsible party; they have actively implemented remedial cleanup actions at the site under New York State's Voluntary Cleanup Program (VCP) in order to facilitate planned development of the site. This report describes the tasks performed, summarizes the analytical data, and provides recommendations for closure.

SITE BACKGROUND

Location

The subject site is located at 166 Central Avenue (Latitude 043° 01' 8.37" N, Longitude 075° 01' 55.91" W), in the Village of Ilion, Herkimer County, New York (Figure 1). The site consists of approximately 0.7 acres of partially developed commercial land owned by Ventura. No structures are located on the site and approximately thirty percent of property is covered by asphalt. Grass and a gravel access road cover the remainder of the property (Figure 2).

Site History

Information provided from previous site investigation reports that were prepared by others, in addition to available maps (Sanborn Fire Insurance Maps), aerial photos and city directories were used to develop the following history of the site. The list of documents utilized by InteGreyted to prepare this historical summary is provided in Attachment 1.

In 1925 the subject site consisted of undeveloped property. At some time between 1929 and 1936, Green and Sons Service Station began operations at the site and remained at the site until

between 1966 and 1968 when it became Green and Sons, Inc. Fuel Oil (a bulk petroleum distributor). Available maps for 1950 confirm the presence of a filling station and three associated petroleum storage tanks near the station (at the northwest and northeast building corners) along with at least three above ground storage tanks (ASTs) to the east of the station. In 1959, it appears that the size of the filling station doubled; however, the three tanks previously observed near the building were not present. The site remained listed as Green and Sons, Inc. Fuel Oil until 1992, when its listing became Agway Energy Products. Available directories for 1995 to 1996 listed the site as being vacant.

New York State (NYS) Petroleum Bulk Storage (PBS) reports indicated that Martin Green and Sons, Inc. located at the subject site's address had operated a bulk petroleum storage terminal and petroleum distributorship at the site prior to 1996. Five tanks including three 20,000-gallon fuel oil ASTs and two 10,000-gallon kerosene ASTs were formerly located on the eastern unpaved section of the site. Available information indicated these tanks were closed and removed from the site prior to 1996.

On 9 April 1997, following completion of a Phase II Site Investigation, Clough Harbour & Associates, LLP (CHA) reported a petroleum spill at the subject site. Subsequently, NYSDEC assigned Spill No. 9701402 to the site.

In December 2000, Ventura filed a Voluntary Cleanup Application (VCP), dated 20 December 2000, with NYSDEC. Subsequently, NYSDEC assigned Identification No. V00426-6 to the site. A Remedial Work Plan (dated 28 March 2001), prepared by InteGreyted on behalf of Ventura, was submitted to NYSDEC on 28 March 2001, and was later approved in May 2001.

In June 2001, Ventura purchased the subject site and the four adjoining properties, which are identified as, 168 to 178 Central Avenue from Projectrac Corp. (f/k/a Martin Green & Sons, Inc.).

Previous Investigations

A summary of the previous environmental assessments and site investigations performed at the subject site by CHA between 1997 and 1998, and by InteGreyted in November 2000 and March 2001, are described below. Information and data referenced in this section has previously been provided as attachments to the NYSDEC-approved Remedial Work Plan (dated 28 March 2001), and is not provided for reference in this site closure report.

Phase I ESA

In March of 1997, CHA, on behalf of Aldi, Inc. (Aldi) performed a Phase I Environmental Site Assessment (ESA) of the subject site and four adjoining parcels located at 168 to 178 Central Avenue. The ESA was conducted to support potential commercial development of the property by Aldi. Findings presented in the ESA confirmed the site history described above. In addition, the ESA indicated that, at the time of the ESA site visit, one 1,000-gallon fuel oil underground storage tank (UST) and one 275-gallon fuel oil AST were located onsite. The UST was located

near the northeast corner of the building and was reported to be 10 to 20 years old. The AST was located within the onsite building and was reportedly installed in approximately 1995. There were no records of spills and/or violations associated with any of the tanks located onsite.

Subsurface Investigation and Geotechnical Report

In March of 1997, CHA performed a Geotechnical Investigation at the site to evaluate subsurface conditions and provide recommendations for foundation design and construction of a proposed Aldi store. As part of the geotechnical investigation, nine soil borings were installed across the site and adjacent parcels. Findings presented in the Geotechnical Report (dated 18 March 1997) indicated that fuel oil odors were noted in four soil borings (B-2, 3, 4, and 6) at shallow depths (between 2 feet and 10 feet below grade). InteGreyted's review of the boring locations indicated that these borings were in areas where tanks were reported to have been previously located.

UST Removal

Information contained in a Phase II Environmental Site Investigation Report prepared by CHA (dated 18 April 1997) indicated that in March of 1997, the site owner (Martin Green & Sons, Inc.), had removed the 1,000-gallon fuel oil UST that was located near the northeast corner of the building. Based on available information and conversations with CHA and Aldi, it appeared that the site owner did not prepare an UST closure report.

Phase II Environmental Site Investigation

In March of 1997, CHA performed a limited Phase II Environmental Site Investigation (Phase II) at the subject site to determine the source of petroleum odors detected in soils during the geotechnical investigation, to delineate the extent of any petroleum impacted soils, and to determine if groundwater had been impacted. As part of the Phase II investigation, ten Geoprobe soil borings were advanced to depths of between 5 and 12 feet below grade across the area located near the former 1,000-gallon UST and to the east of the building in the area where the former ASTs were located. Soil samples were screened for volatile organic compounds (VOCs) with a photoionization detector (PID); however, soil samples were not collected for laboratory analysis. Upon completion of soil borings GP-1, 2 and 3, which were located near the former 1,000-gallon UST, a temporary monitoring well was installed in each soil boring. Following installation, groundwater samples from each well were submitted for laboratory analysis for VOC and semi-volatile organic compound (SVOC) parameters.

InteGreyted's review of the findings presented in the Phase II report dated 18 April 1997 indicated the following.

- Elevated soil gas readings (above 50 ppm) were detected in four soil borings (GP-1, 4, 6 and 9). The locations of these borings were found to corresponded with the known locations of the 1,000-gallon UST and the fuel oil and kerosene ASTs that were previously located onsite. **Note:** Soil samples were not collected for laboratory analysis; therefore, a determination of the nature and concentrations of any petroleum compounds detected (by PID screening) in

soils across the site could not be made at the time of CHA's Phase II. In addition, the available screening data was not sufficient to assess potential remedial alternatives and/or to assess the degree of impact in relation to applicable NYSDEC soil cleanup objectives.

- Groundwater data for samples collected from the temporary wells indicated that VOCs and SVOCs were detected in each of the wells, however, concentrations for most compounds were below or "minimally" above the applicable NYS Class GA groundwater standards. The highest concentrations of detected compounds were observed in the sample from boring TW-1, which was located immediately adjacent to the former 1,000-gallon UST. **Note:** Sampling results from these temporary wells were "suspect" because the wells were installed within soil borings without any provisions to prevent impacted materials from zones above the water table from dislodging and falling into the screened interval and affecting sample integrity. Based on available well sampling logs and field notes it appeared that sample integrity may have been compromised. In addition, the available well sampling logs indicated that the temporary wells were not purged or developed following installation and prior to sampling. Based on this information it did not appear that "representative" groundwater samples were collected from the temporary wells.

Remedial Action Plan

Following completion of the Phase II, CHA prepared a Remedial Action Plan (RAP), dated June 1997, to address petroleum-impacted media at the site. Information indicated that CHA, on behalf of Aldi, submitted the RAP to NYSDEC for review and approval pursuant to the completion of a voluntary cleanup agreement between Aldi (potential purchaser) and NYSDEC.

Subsequently, in a letter from NYSDEC to CHA (dated 1 August 1997), NYSDEC indicated that prior to approval of the RAP additional investigation work would be necessary to define the nature and extent of impacted media and to evaluate potential offsite migration pathways.

Site Investigation

In April of 1998, CHA performed a Supplemental Site Investigation at the subject site. The stated objectives of the supplemental site investigation were to investigate the extent of impacted soil onsite, to characterize groundwater at and near the site, and to determine if offsite migration was occurring and/or if utility lines were acting as conduits for migration. As part of the investigation, twelve Geoprobe soil borings, eight temporary monitoring wells, and three test pits were installed across the site and on adjacent parcels located at 168 to 178 Central Avenue. Wells installed during the investigation were installed through hollow-stem augers to prevent the collapse of soils around the screen. According to the CHA report, the wells were purged prior to sampling and samples were collected with dedicated bailers. Eight soil and eight groundwater samples were also collected and analyzed for VOC and SVOC parameters.

InteGreyted's review of the findings presented in the Supplemental Site Investigation report dated 4 May 1998 indicated the following.

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- VOCs and SVOCs were detected in soil samples collected from soil borings and test pits at concentrations in excess of the NYSDEC STARS Memo #1 guidance values. The sampling data from the soil borings confirmed that soils near the former UST and ASTs were impacted with petroleum compounds above STARS guidance values.

- The groundwater sampling data indicated that VOCs at concentrations above the NYS Class GA groundwater standards were detected in one well (GW-3). VOCs and SVOCs were not detected in any of the other wells located onsite or on adjacent parcels.

- CHA's data documented that groundwater at the site had not been affected with the exception of one localized "hot spot" near a former source area.

- Based on the available data, CHA concluded, "there did not appear to be a need for groundwater remediation or an offsite investigation of groundwater quality".

Off-site Investigation

In May of 1998, CHA performed an Off-Site Investigation on properties adjacent to the subject site. The objectives of the investigation were to evaluate groundwater quality in the area and potential off-site migration via utility trenches. As part of the investigation, three groundwater samples were collected from temporary offsite wells (GW-9, 10 and 11), three water samples (SS-1, 2 and 3) were collected from locations within the adjacent storm sewers, and two water samples (SAN-1 and 2) were collected from locations within the adjacent sanitary sewers. The samples were submitted for laboratory analysis of STARS VOC and SVOC parameters.

InteGreyted's review of the findings presented in the Off-Site Investigation report, dated 2 June 1998, indicated the following.

- VOCs and SVOCs were not detected in any groundwater, sanitary sewer, or storm sewer sample, with the exception of SS-1, which was located upgradient of the site and therefore was not site related. Based on the available data there was no evidence to suggest that there was offsite migration of a petroleum-impacted groundwater plume or offsite migration of impacted waters in the adjacent sanitary and storm sewers. It was also concluded that no further off-site investigation was warranted.

In addition to the findings presented in the Off-Site Investigation report, CHA recommended revisions to the RAP (dated June 1997). These revisions were based on the findings of the additional investigations completed in 1998. In a letter from NYSDEC to CHA, dated 23 June 1998, NYSDEC summarized their position on the project and proposed RAP. Of the items detailed in the letter from NYSDEC the most significant amendment to the RAP was focused on the cleanup goals for the site. As indicated by NYSDEC "Aldi's request to utilize TAGM 4046 cleanup goals where available for those constituents included on Tables 1 and 2 of Appendix B of the STARS Memo #1 Guidance Policy was acceptable". In addition, NYSDEC suggested that a "cleanup goal of 1,200 ppb be used for constituents not specifically listed in TAGM 4046".

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Phase II Site Investigation (InteGreyted)

Prior to purchasing the site from the former owner (Projectrac Corp.), Ventura contracted InteGreyted to assess available site information and conduct a Phase II Site Investigation. The purpose of the Phase II was to assess the current environmental conditions at the site and determine the nature and extent of petroleum compounds in soils at the site. As part of the Phase II, InteGreyted evaluated available investigation reports issued by CHA for Aldi and determined that the nature and extent of impacted soils at the site had not been adequately defined. InteGreyted then developed a scope of work designed to collect site-specific information required to determine the applicability and effectiveness of remedial options for the site.

The Phase II was conducted at the site by InteGreyted between 13 and 16 November 2000. As part of the investigation, InteGreyted installed 41 Geoprobe soil borings to depths of up to 12 feet below grade. Based on field observations and PID screening data, 15 soil samples were selected for laboratory analysis. The selected samples were analyzed for STARS VOC and SVOC parameters. Seven test pits were also installed across known areas of petroleum-impacted soils and areas where an UST was allegedly located to verify the extent of petroleum-impacted soils and to determine if an UST was present near the former building.

Results of InteGreyted's Site Investigation activities indicated the following.

- Soils at the site consisted of a mixture of sand and gravel along with some fill (ash, cinders, wood chips) mixed with or overlying a mixture of silt with some clays. Typically the sand, gravel and fill mixture was present across the upper 0 to 6 feet of the soil column. Silt and clay deposits were generally encountered at depths of between 5 feet and 7 feet below grade. However, soils at the site were extremely variable and soil composition changed rapidly. Groundwater was encountered at depths of approximately 7 feet to 8 feet below grade where the silt and clay confining interface was typically encountered.

- USTs were not encountered in test pits (TP-2 and TP-3) excavated along the northern wall and at the northwest corner of the former building. Field observations and available reports indicated that there were no USTs remaining on-site.

- Field observations and analytical data indicated that petroleum-impacted soils were isolated within a limited area and were typically encountered between depths of 2 feet to 7 feet below grade across this area. The thickness of impacted soils was variable, but on average was approximately 5 feet in vertical extent. Impacted soils were typically not detected at the silt and clay soil interface, which was present at depths of between 7 feet and 8 feet below grade, except for the presence of potentially affected soil to 10 feet at several locations.

- Soil analytical data indicated that VOCs and SVOCs were detected in the soils at concentrations in excess of NYSDEC STARS Memo #1 and TAGM 4046 soil cleanup objectives. However, it should be noted that the VOCs and SVOCs detected were not at concentrations that were "significantly" (i.e. an order of magnitude) above these objectives.

- A review of the analytical data also confirmed that soils within the affected area typically were "clean" at depths of 7 feet to 8 feet below grade, and all soils outside of the impacted area were "clean" (VOCs and SVOCs non detect or below cleanup objectives). Based on the analytical and field screening data, InteGreyted believed that the extent of petroleum-impacted soils at the site had been clearly defined.

- Impacted groundwater was not encountered during the site investigation. Soils within the saturated zone were typically clean and no sheens or petroleum product was detected.

UST Evaluation (InteGreyted)

On 20 March 2001, a test pit was excavated to a depth of 10 feet below grade in the area of the former 1,000-gallon fuel oil UST to determine if the UST had been removed as was reported by CHA. NYSDEC's representatives (Mr. Philip Waite and Mr. Darrell Sweredoski) were onsite to observe the excavation activities. Field observations indicated that an UST was not present. Petroleum-impacted soils were observed at depths of 1.5 to 6.5 feet below grade and were underlain by silt and clay deposits, which appeared to be "clean" (no staining or odors). Groundwater and/or petroleum free product was not encountered in the excavation, however, a limited quantity of trapped water which had a "light" petroleum odor was present along the frost wall of the former building.

REMEDIAL SCOPE AND REMEDIAL SYSTEM INSTALLATION

In situ ozone remedial technologies, in the form of enhanced ozone sparging with soil vapor extraction (SVE), were used to mitigate residual adsorbed-phase hydrocarbon impacts in soils at the site. The objective of this remedial approach was to effectively destroy adsorbed-phase hydrocarbons in soils *in situ* through chemical oxidation by ozone until the applicable NYSDEC TAGM 4046 soil cleanup objectives were met.

Remedial Point Installations

On 23 and 24 May 2001, ten ozone sparge points (OZ-1 to OZ-10) and seventeen soil vapor extraction points (VE-1 to VE-17) were installed at the site across known areas of petroleum-impacted soils (Figure 3). On 29 August 2001, twelve additional ozone sparge points (OZ-3A, OZ-4A, and OZ-12 to OZ-20) were installed to enhance remediation in the vicinity of several "hot spots", which were identified by closure soil sampling analytical data (Figure 3).

Ozone injection and soil vapor extraction points were installed at the site to total depths of between 5 feet and 8.5 feet below grade by direct-push drilling techniques (Table 1). Final completion depths for each injection or vapor extraction point was determined based on the known thickness of petroleum-impacted soils in the area of each point as determined from InteGreyted's November 2000 site investigation data. Ozone injection and soil vapor extraction points were installed as per the specifications detailed in the NYSDEC-approved Work Plan.

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Process Equipment Installation

On 18 June 2001, the remediation equipment utilized to apply sparging, vapor extraction, and ozone production were mobilized to the site. The ozone generator utilized during remediation was a 50 lb/day unit that produced approximately 7 scfm total flow. Additional motive flow, which could produce a total maximum sparge flow of 30 scfm was provided by a supplemental air sparge blower. The vapor extraction blower was capable of providing an extraction rate of at least twice the maximum sparge flow, and up to a maximum of 250 scfm, at a maximum vacuum of 60 inches of water. A catalytic ozone destruct unit and two granular activated carbon (GAC) vessels treated extracted vapor. The ozone remediation system was also equipped with continuous ozone detection monitors for health and safety compliance monitoring, leak detection, and system fail-safe controls. All system piping between the well heads and remedial system were installed as per the specifications detailed in the NYSDEC-approved Work Plan.

Temporary Monitoring Well Installation and Development

On 23 May 2001, one temporary monitoring well (TW-1) was installed to a depth of 12 feet below grade by direct push drilling techniques (Figure 3). The monitoring well was constructed of one-inch diameter PVC riser and 5 feet of 0.01-inch slot PVC well screen. A sand pack was installed around the well screen and extended two feet above the top of the well screen. A bentonite pellet seal was placed above the sand pack and extended to grade.

Following installation, the temporary monitoring well was developed by bailing using dedicated disposable polyethylene bailers and rope. A minimum of five well volumes was bailed from the well during development. Development water was checked periodically for the presence of a sheen or free product (none was detected).Development water was discharged directly to the ground surface.

SYSTEM OPERATION, MAINTENANCE & MONITORING

The ozone remedial system was mobilized to the site on 18 June 2001. Following mobilization, the remedial system was connected to the ozone injection and soil vapor extraction points and tested to assure that the system was operating properly. Remedial system startup and active remediation via ozone injection was initiated on 26 June 2001. Following startup, weekly system monitoring and optimization was conducted until 12 September 2001, when the system was shutdown. Remedial system demobilization and well abandonment occurred during the week of 8 October 2001. Remedial system startup, monitoring, and operational data are presented in Attachment 2.

Field Monitoring and System Optimization

Ozone generator output, system flow rates, along with pressures and vacuums were monitored and optimized during all site monitoring tasks. In addition, ozone monitoring points, which had been established within the site perimeter, were monitored continuously throughout the duration of the

project to provide health and safety compliance monitoring, leak detection, and system fail-safe controls.

Field monitoring with a PID and ozone detector was conducted during each weekly site visit to determine if fugitive emissions (ozone and/or VOCs) were present at established monitoring points. Sampling points were located within the site perimeter, at offsite sanitary manhole locations, at offsite storm sewer locations, and at the post carbon treatment effluent discharge point (Figure 4). Field monitoring data are presented in Attachment 2.

PERFORMANCE SAMPLING PROCEDURES

Remedial system performance monitoring, closure sampling, and groundwater evaluation tasks were conducted as part of the site remedial tasks. The purpose of these tasks was as follows.

- Soil samples were collected as part of system performance monitoring to confirm that the remedial system was effectively treating the petroleum-impacted soils and to document that the applicable soil cleanup objectives were being met.

- Soil samples were collected as part of site closure sampling tasks to provide verification that remediation to the applicable soil cleanup objectives was completed.

- Groundwater samples were collected to assess baseline and post remediation groundwater quality in the "limited" area around former temporary monitoring well GW-3.

Sampling and analytical procedures utilized during implementation of these tasks are detailed in the following sections.

Analytical Procedures

All soil and groundwater samples were analyzed for STARS VOCs (EPA Method 8021) and SVOCs (EPA Method 8270 base/neutrals) by Phoenix Environmental Laboratories, Inc. (NY Lab Registration #11301) located in Manchester, Connecticut.

Soil Boring Installations and Soil Sample Collection Procedures

Soil sampling was conducted utilizing direct push sampling techniques. Soil samples were collected continuously at each boring location from grade to the specified completion depth detailed in the NYSDEC-approved Work Plan. InteGreyted's on-site geologist visually inspected and screened all soil samples in the field with a PID to assess the potential presence of VOCs. Soils from selected sampling intervals were then placed in sealed sampling containers and submitted to Phoenix for analysis. Upon completion, the soil borings were backfilled to grade with concrete.

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Groundwater Sampling Procedures

Prior to sample collection the temporary monitoring well was purged of a minimum of three well volumes. Purge water was checked for the presence of a sheen or free product (none was detected). Following purging, a groundwater sample was collected from the monitoring well using dedicated disposable polyethylene bailers and rope.

PERFORMANCE EVALUATIONS AND RESULTS

Performance Monitoring

Performance monitoring samples were collected on 31 July 2001, to evaluate the effectiveness of the remedial system after 18 days of active ozone sparging. Calculations indicated that approximately 530 pounds of ozone had been applied to the remedial area since the initiation of ozone sparging on 26 June 2001.

Performance monitoring soil samples were collected from five soil boring locations (B-4, B-6, B-7, B-11, and B-15) at the depths specified in the NYSDEC-approved Work Plan (Figure 3). Analytical data and soil sampling depths are presented in Table 2. **Note:** performance monitoring samples are denoted with a **P** on the referenced data table. Analytical data summary sheets are presented in Attachment 3.

A review of the analytical data indicated that VOCs were detected in four soil samples (B-4P, B-7P, B-11P and B-15P) at concentrations below the NYSDEC TAGM 4046 soil cleanup objectives. VOCs were not detected in soil sample B-6P. A comparison of the performance monitoring data and InteGreyted's site investigation analytical data indicated that concentrations of VOCs detected in the performance monitoring samples were generally significantly lower than those detected in the site investigation samples.

SVOCs were detected in three soil samples (B-6P, B-7P and B-15P) at concentrations that were minimally above the NYSDEC TAGM 4046 soil cleanup objectives. In the remaining two soil samples SVOCs were either not detected (B-11P) or were detected at concentrations below the soil cleanup objectives (B-4P). A comparison of the performance monitoring data and InteGreyted's site investigation analytical data indicated that, with the exception of sample B-6P, concentrations of SVOCs detected in the performance monitoring samples were significantly lower than those detected in the site investigation samples.

An evaluation of the performance monitoring analytical data indicated that application of ozone at the site had effectively reduced concentrations of VOCs and SVOCs in the majority of soil borings sampled across the remedial area. Based on the data and an evaluation of the sampling criteria presented in the Work Plan, a determination was made to conduct closure soil sampling tasks to determine if remediation was completed.

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Closure Sampling

Closure samples were collected on 9 August 2001, to determine if remediation had been completed at the site. Calculations indicated that approximately 304 pounds of additional ozone (834 total pounds) had been applied to the remedial area since the completion of performance monitoring on 31 July 2001.

Closure soil samples were collected from eight soil boring locations (B-3, B-9, B-13, B-14, B-22, B-25, B-39 and TPC, which was located between test pits 4 and 5) at the depths specified in the NYSDEC-approved Work Plan (Figure 3). Closure soil samples were also collected from boring locations B-6 and B-7 to evaluate reductions in SVOC concentrations where previous performance monitoring data (B-6P and B-7P) had indicated that concentrations of SVOCs were above the NYSDEC TAGM 4046 soil cleanup objectives. Analytical data and soil sampling depths are presented in Table 3. **Note:** closure samples are denoted with a **C** on the referenced table. Analytical data summary sheets are presented in Attachment 3.

A review of the analytical data indicated that VOCs were detected in four soil samples (B-13C, B-14C, B-25C and B-39C) at concentrations below the NYSDEC TAGM 4046 soil cleanup objectives. VOCs were not detected in soil samples B-3C, B-9C, B-22C and TPC. A comparison of the closure sampling data and InteGreyted's site investigation analytical data (for boring locations B-14, B-25 and B-39) indicated that concentrations of VOCs detected in the closure samples were generally lower than those detected in the site investigation samples.

SVOCs were detected in five soil samples (B-6C, B-7C, B-22C, B-25C and B-39C) at concentrations that were minimally above the NYSDEC TAGM 4046 soil cleanup objectives. In the remaining five soil samples SVOCs were either, not detected (B-3C, B-9C, B-13C and B-14C) or were detected at concentrations below the applicable soil cleanup objectives (TPC). A comparison of the closure sampling data and InteGreyted's site investigation analytical data (for boring locations B-14, B-25 and B-39) indicated that, with the exception of sample B-25C, concentrations of SVOCs detected in the closure samples were lower than those detected in the site investigation samples.

Evaluation of the closure sampling analytical data indicated that application of ozone at the site had effectively reduced concentrations of VOCs in all specified sampling locations across the site to the applicable soil cleanup objectives. The data also indicated that concentrations of SVOCs had been reduced to applicable soil cleanup objectives at numerous sampling locations. However, concentrations of SVOCs remained in excess of the soil cleanup objectives in several hotspots, which were located near five soil borings (B-6C, B-7C, B-22C, B-25C and B-39C). Based on an evaluation of the analytical data and the remedial cleanup goals presented in the Work Plan, a determination was made to continue operation of the remedial system with a focus on the areas of the site ("hotspots") where SVOCs were present above soil cleanup objectives.

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Closure Sampling – Re-sampling Round 1

Additional closure samples were collected on 29 August 2001, to determine if remediation had been completed in hotspots, which were identified during initial closure sampling activities conducted on 9 August 2001. Calculations indicated that approximately 780 pounds of additional ozone (1,614 total pounds) had been applied to the remedial area since the completion of closure sampling on 9 August 2001.

Closure soil samples (re-sampling round 1) were collected from four soil boring locations (B-6, B-7, B-22, and B-25), at the depths specified in the NYSDEC-approved Work Plan (Figure 3). Samples were collected at these locations to evaluate reductions in SVOC concentrations at locations where closure sampling data (9 August 2001) indicated that concentrations of SVOCs were above the NYSDEC TAGM 4046 soil cleanup objectives (Figure 3). Analytical data and soil sampling depths are presented in Table 3. **Note:** Re-sampling round 1 closure samples are denoted with a **R1** on the referenced table. Analytical data summary sheets are presented in Attachment 3.

A review of the analytical data indicated that SVOCs were detected in three soil samples (B-6R1, B-7R1, and B-25R1) at concentrations that were minimally above the NYSDEC TAGM 4046 soil cleanup objectives. SVOCs were not detected in soil sample B-22R1.

A comparison of the analytical data collected during the 9 August and 29 August 2001, closure sampling events indicated that concentrations of SVOCs in soils at boring locations B-6, B-7, B-22 and B-25 had decreased by a factor of between 3x and 10x between sampling events. The significant reduction of SVOCs at these locations between sampling events indicated that the application of ozone was effectively remediating soils at these hotspots. Based on an evaluation of the analytical data and remedial cleanup goals presented in the Work Plan, a determination was made to continue operation of the remedial system with a focus on the areas of the site ("hotspots") where SVOCs were present above soil cleanup objectives.

Closure Sampling – Re-sampling Round 2

Additional closure samples were collected on 10 September 2001, to determine if remediation had been completed in hotspots, which were identified during closure sampling conducted on 9 and 29 August 2001. Calculations indicated that approximately 308 pounds of additional ozone (1,922 total pounds) had been applied to the remedial area since the completion of closure sampling on 29 August 2001.

Closure soil samples (re-sampling round 2) were collected from four soil boring locations (B-6, B-7, B-25, and B-39), at the depths specified in the NYSDEC-approved Work Plan (Figure 3). Samples were collected at these locations to evaluate reductions in SVOC concentrations at locations where previous closure sampling data (9 and 29 August 2001) indicated that concentrations of SVOCs were above the NYSDEC TAGM 4046 soil cleanup objectives (Figure 3). Analytical data and soil sampling depths are presented in Table 3. **Note:** Re-sampling round 2

closure samples are denoted with a **R2** on the referenced table. Analytical data summary sheets are presented are Attachment 3.

A review of the analytical data indicated that SVOCs were not detected in any of the soil samples (B-6R2, B-7R2, B-25R2 and B-39R2).

Based on an evaluation of the closure sampling analytical data, collected between 9 August and 10 September 2001, and the remedial cleanup goals presented in the Work Plan, InteGreyted concluded that the remedial objectives outlined in the Work Plan were met and that remediation at the site was complete.

Performance Evaluation

Performance monitoring and closure sampling analytical data indicated that concentrations of VOCs and SVOCs in soils across the remedial area were reduced to levels that were below the applicable NYSDEC TAGM 4046 soil cleanup objectives.

Calculations indicate that 1,922 pounds of ozone were applied to the remedial area of the site. Calculations also indicated that 19.89 pounds of hydrocarbons were removed from soils via soil venting and 112.60 pounds were removed via application of ozone. The ratio of the amount of ozone applied to hydrocarbons reduced was 17 to 1.

Groundwater Evaluation

Groundwater samples were collected from the temporary well on 26 June 2001 (prior to system startup) and on 9 August 2001 (following closure sampling). The samples were collected to determine baseline groundwater quality (Well-1 / pre-remediation sample) in the area immediately surrounding former temporary well GW-3 and to evaluate any changes that may have occurred during the implementation of the remedial option (GW-C / post remediation sample).

A review of the analytical data indicated that VOCs and SVOCs were not detected in groundwater at concentrations above NYSDEC Class GA groundwater standards.

A comparison of the sampling data indicated that six VOCs and one SVOC were detected in the pre-remediation sample (Well-1) at low concentrations, and that following application of ozone only one VOC was detected at a low concentration in the post remedial sample (GW-C).

Analytical data summary sheets are presented in Attachment 3.

SUMMARY

Performance monitoring and closure soil sampling analytical data indicated that concentrations of VOCs and SVOCs at the specified sample locations across the remedial area were reduced through the application of ozone and soil vapor extraction to levels which met and/or were below

the applicable NYSDEC TAGM 4046 soil cleanup objectives. Based on the soil analytical data, the goals presented in the Remedial Work Plan have been met for the cleanup of soils at the site.

Groundwater analytical data indicated that groundwater at the site was not impacted with VOCs or SVOCs at concentrations above applicable NYSDEC groundwater standards. Data also indicated that application of ozone at the site effectively reduced the concentrations of VOCs and SVOCs detected in groundwater between the start and end of remediation.

RECOMMENDATIONS

Analytical data indicated that the remedial method effectively reduced the concentrations of VOCs and SVOCs in soils at the site to levels, which met NYSDEC TAGM 4046 soil cleanup objectives. As per the NYSDEC-approved Work Plan, cleanup at the site is considered complete. Therefore, InteGreyted requests that NYSDEC indicate that site closure is complete and provide Ventura (Volunteer) with a *Release and Covenant Not to Sue.* In addition, InteGreyted requests closure of Spill No. 9701402.

InteGreyted appreciates the opportunity to present this Closure Report. If you have any questions or comments concerning this submittal, feel free to contact the undersigned at (315) 445-0224 or by e-mail (mschumacher@integreyted.com). Upon acceptance, please provide Ventura with the appropriate releases and closure documentation.

Sincerely,
INTEGREYTED CONSULTANTS, LLC

Mark J. Schumacher
Project Manager

Brian J. Jacot
Engineer-in-Charge

Attachments

cc: William A. Feinstein, Ventura
Greg Rys, NYSDOH, Herkimer

Engineering Certification

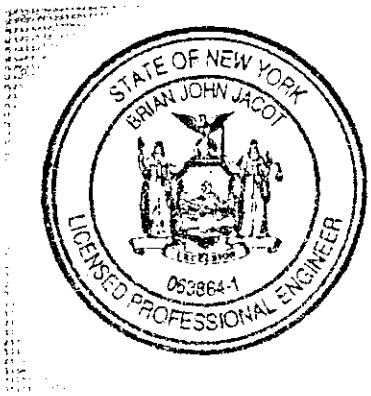
Engineering work performed as part of this InteGreyted Consultants project was provided by Greystone Engineering, PLLC (Greystone). Greystone certifies that this site Closure Report has been prepared in accordance with and represents sound engineering practices and principles.

Brian J. Jacot, P.E.

Signature

10/11/01
Date

063864-1
Registration No.



ATTACHMENT 1

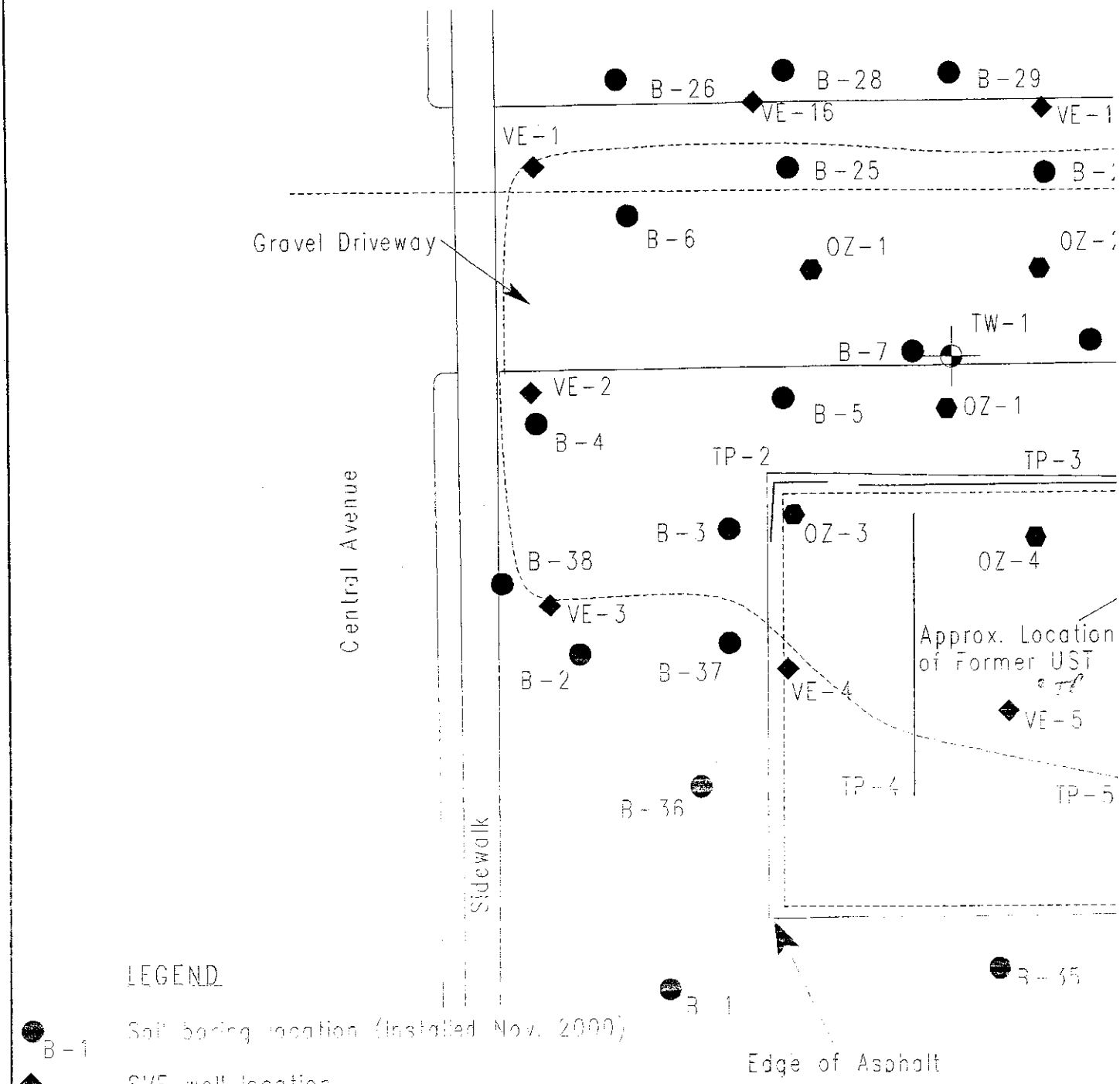
LIST OF DOCUMENTS

ATTACHMENT 2

OPERATIONAL DATA

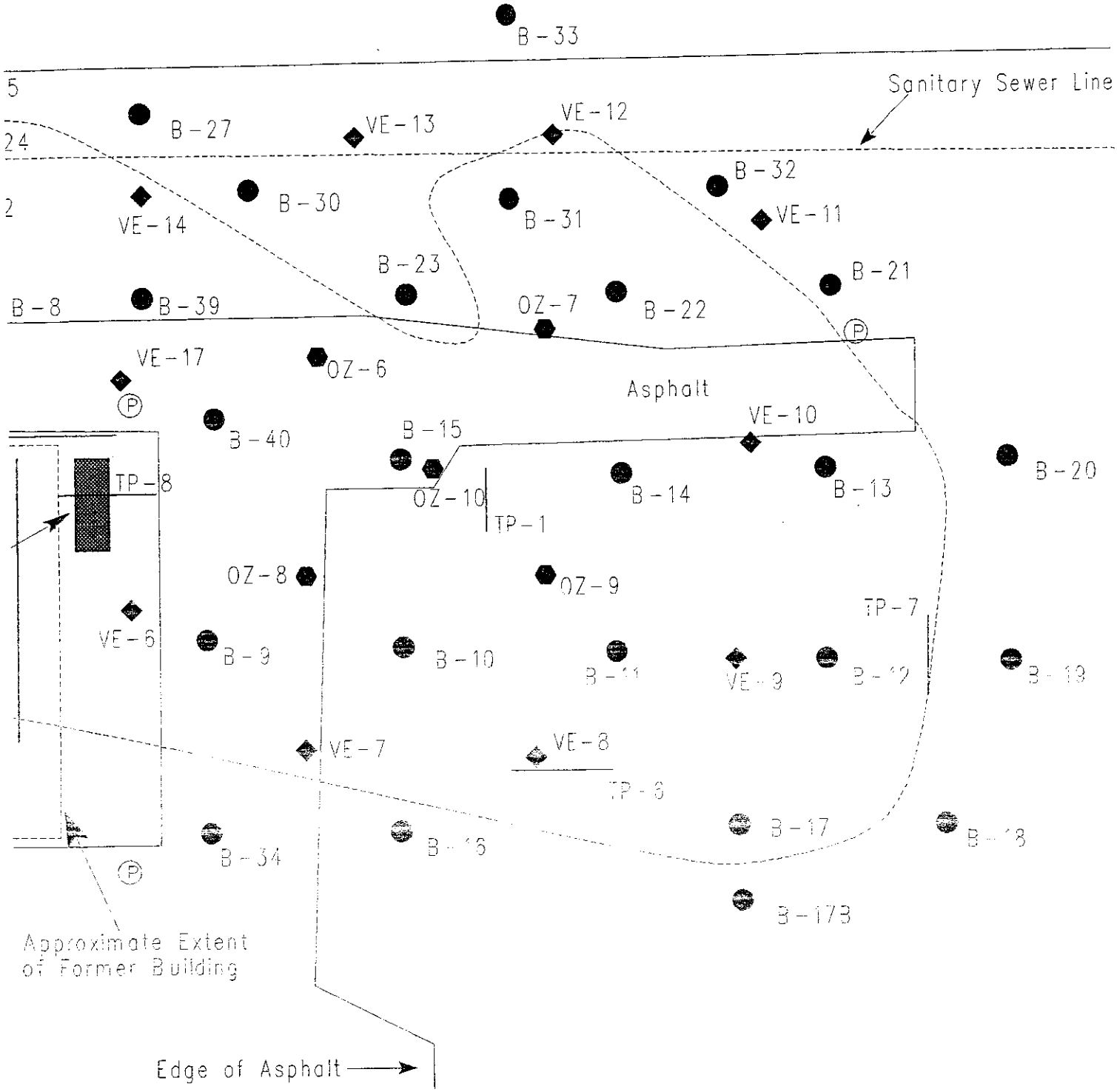
ATTACHMENT 3

ANALYTICAL DATA



InteGreyted
consultants
104 JAMESVILLE ROAD
SYRACUSE, NY 13214
PHONE: (315) 445-0224
FAX: (315) 445-0793

Note: Performance monitoring and closure samples were collected from various soil boring locations between July and September 2001.



DRAWN BY: MJS	Soil Boring Locations & SVE and Ozone Well Locations	
CAD FILE: ilionsp		
DATE: 10/01	166 Central Avenue Ilion, New York	
SCALE (approx): 1"=20'	PREPARED FOR: TIME WARNER CABLE	FIGURE: 2 3

Table 1
Remedial Point Specifications
166 Central Avenue, Ilion, New York

Well ID	Approx depth of dirty soils near well (ft bg)	Well depth (bottom of well ft bg)	Screen depth (ft bg)
Sparge			
OZ-1	2-6	6	5-6
OZ-2	3-6	6	5-6
OZ-3	2-7	6	5-6
OZ-4	3-6	6.5	5.5-6.5
OZ-5	3-10	8.5	7.4-8.4
OZ-6	3-7	6.5	5.5-6.5
OZ-7	3-6	6.5	5.5-6.5
OZ-8	2-7	6	5-6
OZ-9	2-7.5	7	6-7
OZ-10	3-7	6.5	5.5-6.5
OZ-3A	2-6	6	5-6
OZ-4A	2-7	8.5	7.5-8.5
OZ-11	2-6	6	5-6
OZ-12	2-7	7	6-7
OZ-13	2-7	7	6-7
OZ-14	3-7	7	6-7
OZ-15	2-6.5	7	6-7
OZ-16	2-6.5	7	6-7
OZ-17	3-6	7	6-7
OZ-18	4-9	8.5	7.5-8.5
OZ-19	4-7	7	6-7
OZ-20	2-8.5	8.5	7.5-8.5
SVE			
VE-1	2-5	5	3-5
VE-2	3-10	7	5-7
VE-3	Not Dirty	6	4-6
VE-4	4-7	6	4-6
VE-5	3-6.5	6	4-6
VE-6	2-7	6	4-6
VE-7	Not Dirty	6	4-6
VE-8	2-6	5	3-5
VE-9	2-6	5	3-5
VE-10	2-10	7	5-7
VE-11	Not Dirty	6	4-6
VE-12	4-7	6	4-6
VE-13	Not Dirty	6	4-6
VE-14	Not Dirty	6	4-6
VE-15	Not Dirty	6	4-6
VE-16	Not Dirty	6	4-6
VE-17	3-8	6.5	4.5-6.5

installed well depths

TABLE 2

Soil Sample Analytical Results

Performance Monitoring - 31 July 2001

166 Central Ave., Ilion, New York

Analyte	TAGM 4046 Soil Cleanup Objective (ppb)	SAMPLE ID B-4 (4.0' - 8.0')	B-4P (3.0'-5.0')	B-6 (2.0' -4.0')	B-6P (2.0' -4.0')	B-7 (4.0' - 10.0')	B-7P (4.0' - 10.0')	B-11 (2.0' -4.0')	B-11P (2.0' -4.0')	B-15 (2.9' - 6.7')	B-15P (3.0'-6.5')
Volatile Organic Compounds (ppb)											
1,2,4-Trimethylbenzene	10,000 (1)	80	ND	150	ND	1,100	30	5,100	ND	4,100	520
1,3,5-Trimethylbenzene	3,300 (1)	12	ND	110	ND	630	19	1,800	ND	3,200	1,000
Benzene	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl Benzene	2,300 (1)	30	ND	480	ND	1,300	82	350	ND	1,400	31
m-p-Xylenes	1,200	ND	280	220	ND	ND	ND	ND	ND	ND	ND
MTBE	120 (1)	15	ND	140	ND	820	ND	720	ND	1,800	ND
n-Butylbenzene	10,000 (1)	10	ND	190	ND	1,600	36	2,000	ND	7,400	ND
n-Propylbenzene	3,700 (1)	25	ND	340	ND	1,800	32	760	ND	3,200	27
Napithalene	13,000	28	890	160	ND	980	ND	650	ND	2,400	ND
o-Xylene	1,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-isopropyltoluene	10,000 (1)	ND	ND	ND	ND	ND	17	ND	ND	2,200	ND
sec-Butylbenzene	10,000 (1)	17	ND	420	ND	1,600	20	1,700	5.9	5,400	ND
t-Butylbenzene	10,000 (1)	ND	ND	81	ND	ND	ND	ND	ND	ND	ND
Toluene	1,500	20	ND	230	ND	1,100	ND	900	ND	3,300	ND
Total Xylenes	1,200	ND	280	220	ND	ND	ND	ND	ND	ND	ND
Semi Volatile Organic Compounds (ppb)											
Acenapthene	50,000	ND	ND	ND	ND	760	ND	490	ND	2,400	ND
Anthracene	50,000	330	ND	ND	1,100	1,200	ND	ND	ND	1,500	ND
Benzo (a) anthracene	224 or MDL (2)	530	ND	800	**1,600**	2,900	**372 (Est)**	ND	ND	ND	**340**
Benzo (a) pyrene	61 or MDL (2)	410	ND	ND	**1,100**	1,200	ND	ND	ND	ND	ND
Benzo (b) fluoranthene	224 or MDL (2)	410	ND	440	**1,700**	2,300	**415 (Est)**	ND	ND	ND	ND
Benzo (g,h,i) perylene	50,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo (k) fluoranthene	224 or MDL (2)	ND	ND	440	**1,200**	2,500	**331 (Est)**	ND	ND	ND	ND
Chrysene	400	390	ND	640	**1,400**	2,200	**443 (Est)**	ND	ND	ND	ND
Dibenz (a,h) anthracene	14 or MDL (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50,000	980	420	1,000	8,700	5,900	ND	ND	ND	650	570
Fluorene	50,000	ND	ND	ND	540	860	ND	440	ND	2,300	ND
Indeno (1,2,3-c,d) pyrene	3,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	13,000	ND	ND	ND	ND	ND	ND	ND	ND	980	500
Phenanthrene	50,000	770	ND	940	3,400	5,800	ND	500	ND	5,400	ND
Pyrene	50,000	820	410	1,000	3,300	6,900	ND	330	ND	940	790

Notes:

Results in parts per billion (ppb).

ND: Compound not detected.

MDL: Method detection limit.

B-6: InteGreyted's site investigation analytical data (November 2000).

B-6P: P denotes performance monitoring analytical data collected on 31 July 2001.

(1): Standard as indicated by NYSDEC in an Internal Memorandum dated 20 December 2000, regarding determination of soil cleanup levels.

(2): MDL for SVOCs by analytical method EPA 8270 is 330 ppb.

The MDL reported by the analytical laboratory for performance samples B-7P and B-11P was 3,300 ppb. Chromatograms for these samples were reviewed by the laboratory to verify the reported data.

(Est): Denotes an estimated value for an analyte. This value is based on a laboratory review of undiluted sample chromatograms for soil sample B-7P and B-11P. For analytes that were detected an estimated value is provided based on instrument response. A value of ND for performance samples B-7P and B-11P indicated the analyte was not detected at a concentration above a MDL of 330 ppb.

1,000 Analyte detected in performance sample at concentration in excess of NYSDEC TAGM 4046 soil cleanup objective

performance data

TABLE

Soil Sample Analytical Results
Closure Sampling Data Summary
166 Central Ave., Ilion, New York

Analyte	TAGM 4046 Soil Cleanup Objective (ppb)	SAMPLE ID B-3C (8.0' - 10.0')	B-6 (2.0' -4.0')	B-6P (2.0' -4.0')	B-6C (2.0' -4.0')	B-6R1 (2.0' -4.0')	B-6R2 (2.0' -4.0')	B-7 (4.0' - 10.0')	B-7P (4.0' - 10.0')	B-7C (4.0' - 10.0')	B-7R1 (4.0' - 10.0')	B-7R2 (4.0' - 10.0')	B-9C (4.0' -6.5')
Volatile Organic Compounds (ppb)													
1,2,4-Trimethylbenzene	10,000 (1)	ND	150	ND	NA	NA	NA	1,100	30	NA	NA	NA	ND
1,3,5-Trimethylbenzene	3,300 (1)	ND	110	ND	NA	NA	NA	630	19	NA	NA	NA	ND
Benzene	60	ND	ND	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
Ethylbenzene	5,500	ND	ND	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
Isopropyl Benzene	2,300 (1)	ND	480	ND	NA	NA	NA	1,300	82	NA	NA	NA	ND
m-p-Xylenes	1,200	ND	220	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
MTBE	120 (1)	ND	140	ND	NA	NA	NA	820	ND	NA	NA	NA	ND
n-Butylbenzene	10,000 (1)	ND	190	ND	NA	NA	NA	1,600	36	NA	NA	NA	ND
n-Propylbenzene	3,700 (1)	ND	340	ND	NA	NA	NA	1,800	32	NA	NA	NA	ND
Naphthalene	13,000	ND	160	ND	NA	NA	NA	980	ND	NA	NA	NA	ND
o-Xylene	1,200	ND	ND	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
p-Isopropyltoluene	10,000 (1)	ND	ND	ND	NA	NA	NA	ND	17	NA	NA	NA	ND
sec-Butylbenzene	10,000 (1)	ND	420	ND	NA	NA	NA	1,600	20	NA	NA	NA	ND
t-Butylbenzene	10,000 (1)	ND	81	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
Toluene	1,500	ND	230	ND	NA	NA	NA	1,100	ND	NA	NA	NA	ND
Total Xylenes	1,200	ND	220	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
Semi Volatile Organic Compounds (ppb)													
Acenapthene	50,000	ND	ND	ND	ND	ND	ND	760	ND	ND	ND	ND	ND
Anthracene	50,000	ND	ND	1,100	400	ND	ND	1,200	ND	1,100	ND	ND	ND
Benzo (a) anthracene	224 or MDL (2)	ND	800	1,600	1,500	560	ND	2,900	372 (Est)	3,300	ND	ND	ND
Benzo (a) pyrene	61 or MDL (2)	ND	ND	1,100	1,600	580	ND	1,200	ND	3,100	340	ND	ND
Benzo (b) fluoranthene	224 or MDL (2)	ND	440	1,700	2,100	620	ND	2,300	415 (Est)	3,300	370	ND	ND
Benzo (g,h,i) perylene	50,000	ND	ND	ND	550	ND	ND	ND	ND	1,400	ND	ND	ND
Benzo (k) fluoranthene	224 or MDL (2)	ND	440	1,200	1,500	470	ND	2,500	331 (Est)	2,000	ND	ND	ND
Chrysene	400	ND	640	1,400	1,400	440	ND	2,200	443 (Est)	3,000	ND	ND	ND
Dibenz (a,h) anthracene	14 or MDL (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50,000	ND	1,000	8,700	2,800	990	ND	5,900	ND	7,000	600	ND	ND
Fluorene	50,000	ND	ND	540	ND	ND	ND	860	ND	ND	ND	ND	ND
Indeno (1,2,3-c,d) pyrene	3,200	ND	ND	ND	510	ND	ND	ND	ND	1,800	ND	ND	ND
Naphthalene	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	50,000	ND	940	3,400	1,800	ND	ND	5,800	ND	4,800	420	ND	ND
Pyrene	50,000	ND	1,000	3,300	2,600	910	ND	6,900	ND	7,000	860	ND	ND

Notes:

Results in parts per billion (ppb).
ND: Compound not detected.
NA: Not analyzed.
MDL: Method detection limit.

B-6: InteGreyted's site investigation analytical data (November 2000).
B-6P: P denotes performance monitoring analytical data collected on 31 July 2001.
B-6C: C denotes closure sampling analytical data collected on 9 August 2001.
B-6R1: R1 denotes closure sampling analytical data collected from resampled locations on 29 August 2001.
B-6R2: R2 denotes closure sampling analytical data collected from resampled locations on 10 September 2001.

(1): Standard as indicated by NYSDEC in an Internal Memorandum dated 20 December 2000, regarding determination of soil cleanup levels.
(2): MDL for analytical method EPA 8270 is 330 ppb.

The MDL reported by the analytical laboratory for closure samples B-9C, B-13C, B-14C, and B-39C was 1,300 ppb. Chromatograms for these samples were reviewed by the laboratory to verify the reported data.

Est: Denotes an estimated value for an analyte. This value is based on a laboratory review of undiluted sample chromatograms for soil sample B-39C. For analytes that were detected an estimated value is provided based on instrument response. A value of ND for closure samples B-9C, B-13C, B-14C, B-22C and B-39C indicated the analyte was not detected at a concentration above a MDL of 330 ppb.

1,200 Analyte detected in performance or closure sample at concentration in excess of NYSDEC TAGM 4046 soil cleanup objective

3

TABLE 2 (continued)
Soil Sample Analytical Results
Closure Sampling Data Summary
166 Central Ave., Ilion, New York

Analyte	TAGM 4046 Soil Cleanup Objective (ppb)	SAMPLE ID B-13C (4.0' - 9.0')	B-14 (4.0' - 9.5')	B-14C (4.0' - 9.5')	B-22C (3.0' -6.0')	B-22R1 (3.0' -6.0')	B-25 (2.0' - 5.0')	B-25C (2.0' -5.0')	B-25R1 (2.0' -5.0')	B-25R2 (2.0' -5.0')	B-39 (2.0'-6.5')	B-39C (2.0' - 6.5')	B-39R2 (2.0' - 6.5')	TPC (3.0'-6.0')
Volatile Organic Compounds (ppb)														
1,2,4-Trimethylbenzene	10,000 (1)	1,400	6,000	4,300	ND	NA	16	ND	NA	NA	ND	ND	NA	ND
1,3,5-Trimethylbenzene	3,300 (1)	3,200	ND	1,800	ND	NA	6	ND	NA	NA	ND	ND	NA	ND
Benzene	60	ND	ND	ND	ND	NA	2.1	ND	NA	NA	ND	ND	NA	ND
Ethylbenzene	5,500	ND	ND	ND	ND	NA	1.9	ND	NA	NA	ND	ND	NA	ND
Isopropyl Benzene	2,300 (1)	ND	ND	ND	ND	NA	21	2.8	NA	NA	140	680	NA	ND
m-p-Xylenes	1,200	ND	ND	ND	ND	NA	6	2.9	NA	NA	ND	ND	NA	ND
MTBE	120 (1)	ND	950	ND	ND	NA	3.3	ND	NA	NA	240	ND	NA	ND
n-Butylbenzene	10,000 (1)	ND	820	550	ND	NA	19	ND	NA	NA	250	2,100	NA	ND
n-Propylbenzene	3,700 (1)	ND	ND	ND	ND	NA	9.5	ND	NA	NA	ND	530	NA	ND
Naphthalene	13,000	ND	570	1,600	ND	NA	32	ND	NA	NA	590	ND	NA	ND
o-Xylene	1,200	ND	ND	ND	ND	NA	ND	ND	NA	NA	ND	ND	NA	ND
p-Isopropyltoluene	10,000 (1)	ND	ND	450	ND	NA	ND	ND	NA	NA	ND	ND	NA	ND
sec-Butylbenzene	10,000 (1)	360	490	480	ND	NA	28	ND	NA	NA	1,600	2,300	NA	ND
t-Butylbenzene	10,000 (1)	ND	ND	ND	ND	NA	13	ND	NA	NA	800	ND	NA	ND
Toluene	1,500	ND	1,100	ND	ND	NA	7.9	2.6	NA	NA	290	ND	NA	ND
Total Xylenes	1,200	ND	ND	ND	ND	NA	6	2.9	NA	NA	ND	ND	NA	ND
Semi Volatile Organic Compounds (ppb)														
Acenapthene	50,000	ND	1,900	ND	ND	ND	ND	ND	ND	ND	2,600	ND	ND	ND
Anthracene	50,000	ND	ND	ND	ND	ND	ND	1,700	390	ND	3,400	ND	ND	ND
Benzo (a) anthracene	224 or MDL (2)	ND	ND	ND	7,700	ND	ND	5,400	990	ND	ND	397 (Est)	ND	ND
Benzo (a) pyrene	61 or MDL (2)	ND	ND	ND	4,000	ND	ND	4,800	840	ND	ND	400 (Est)	ND	ND
Benzo (b) fluoranthene	224 or MDL (2)	ND	ND	ND	6,700	ND	ND	4,500	1,000	ND	ND	520 (Est)	ND	ND
Benzo (g,h,i) perylene	50,000	ND	ND	ND	ND	ND	ND	1,800	ND	ND	ND	ND	ND	ND
Benzo (k) fluoranthene	224 or MDL (2)	ND	ND	ND	4,200	ND	ND	4,200	490	ND	ND	360 (Est)	ND	ND
Chrysene	400	ND	ND	ND	8,600	ND	ND	4,800	800	ND	ND	330 (Est)	ND	ND
Dibenz (a,h) anthracene	14 or MDL (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50,000	ND	ND	ND	13,000	ND	ND	11,000	1,700	ND	ND	ND	ND	530
Fluorene	50,000	ND	1,300	ND	ND	ND	ND	ND	470	ND	560	ND	ND	ND
Indeno (1,2,3-c,d) pyrene	3,200	ND	ND	ND	ND	ND	ND	2,100	ND	ND	ND	520 (Est)	ND	ND
Naphthalene	13,000	ND	450	ND	ND	ND	ND	ND	470	ND	2,500	ND	ND	ND
Phenanthrene	50,000	ND	2,500	ND	6,900	ND	ND	5,000	1,500	ND	3,500	ND	ND	460
Pyrene	50,000	ND	420	ND	14,000	ND	ND	10,000	1,500	ND	410	ND	ND	450

Notes:

Results in parts per billion (ppb).
ND: Compound not detected.
NA: Not analyzed.
MDL: Method detection limit.

B-6: InteGreyted's site investigation analytical data (November 2000).
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The MDL reported by the analytical laboratory for closure samples B-9C, B-13C, B-14C, and B-39C was 3,300 ppb. Chromatograms for these samples were reviewed by the laboratory to verify the reported data.

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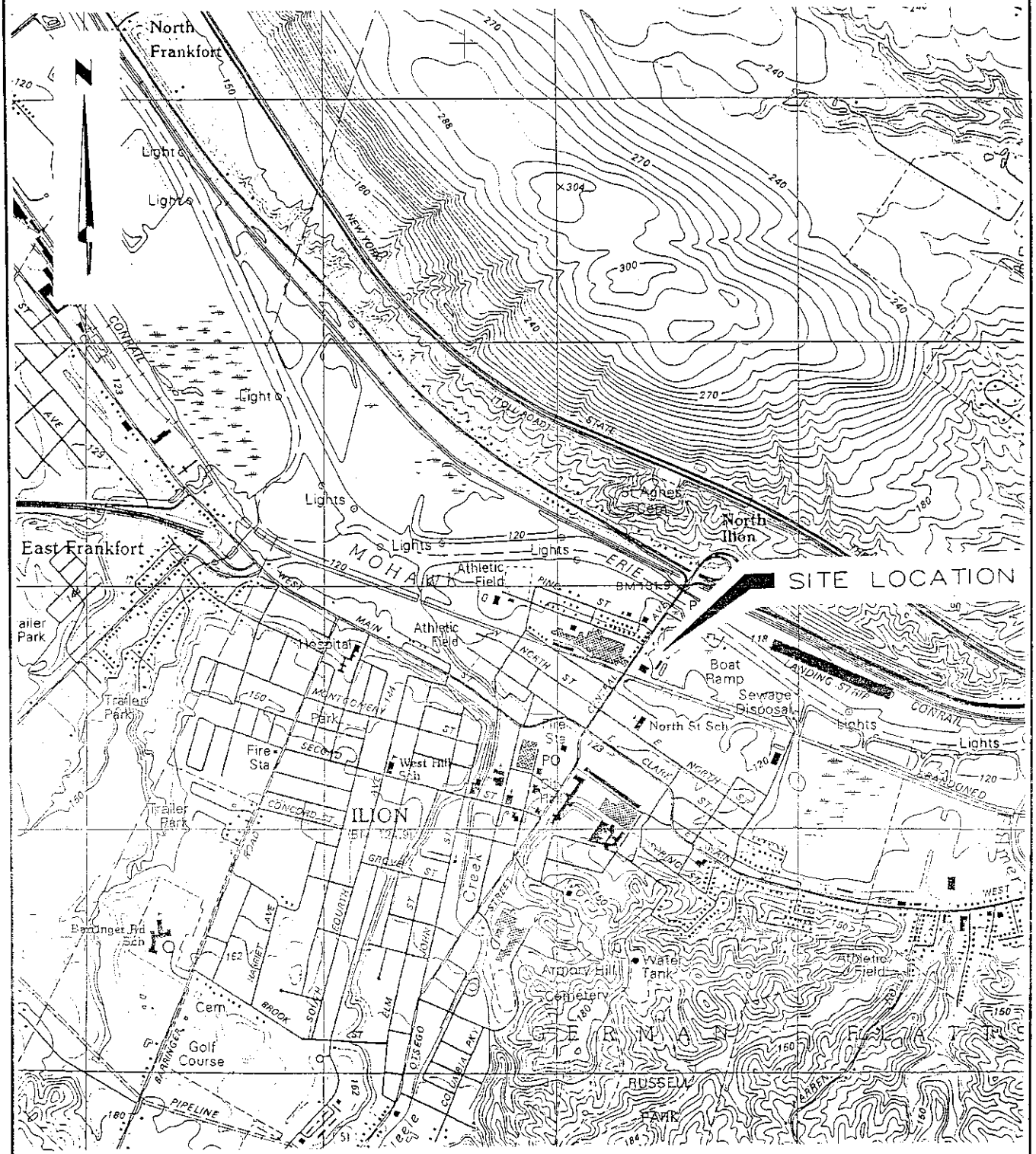
14C
25C
37C

1,200 Analyte detected in performance or closure sample at concentration in excess of NYSDEC TAGM 4046 soil cleanup objective



SOURCE: USGS ILION, N.Y. QUADRANGLE

InteGreyted consultants
104 Jamesville Road
Syracuse, New York 13214
Ph: 315-445-0224
Fx: 315-445-0793

DRAWN BY	---
CAD FILE	---
DATE	1-16-01
SCALE	1"=2,000'

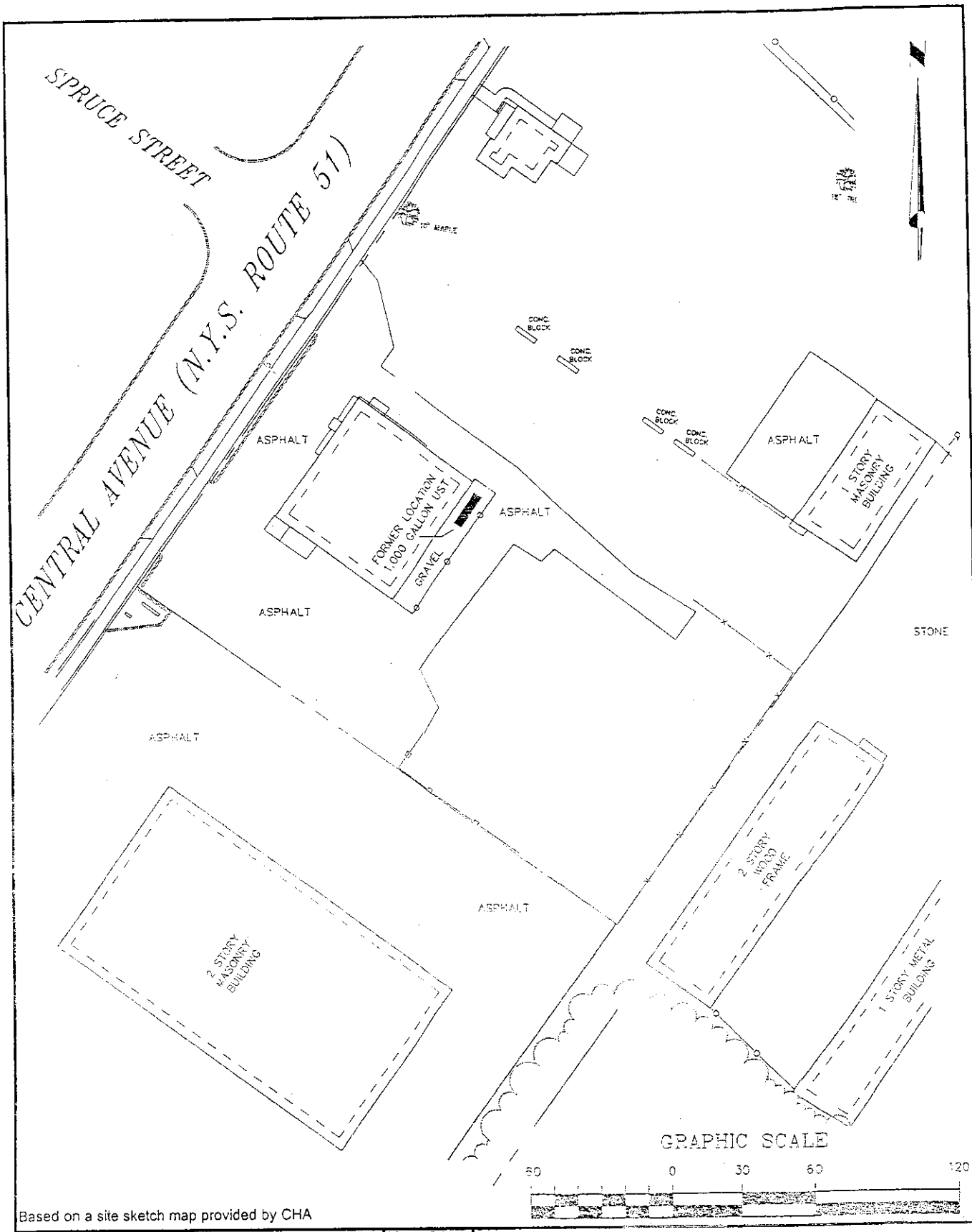
FIGURE 1

SITE LOCATION MAP

166 Central Avenue, Ilion, New York

PREPARED FOR: Ventura-Taylor Outparcel, LLC

FIGURE: 1



Based on a site sketch map provided by CHA

InteGreyted consultants
104 Jamesville Road
Syracuse, New York 13214
Ph: 315-445-0224
Fx: 315-445-0793

DRAWN BY	CHA
CAD FILE	---
DATE	1998
SCALE	as shown

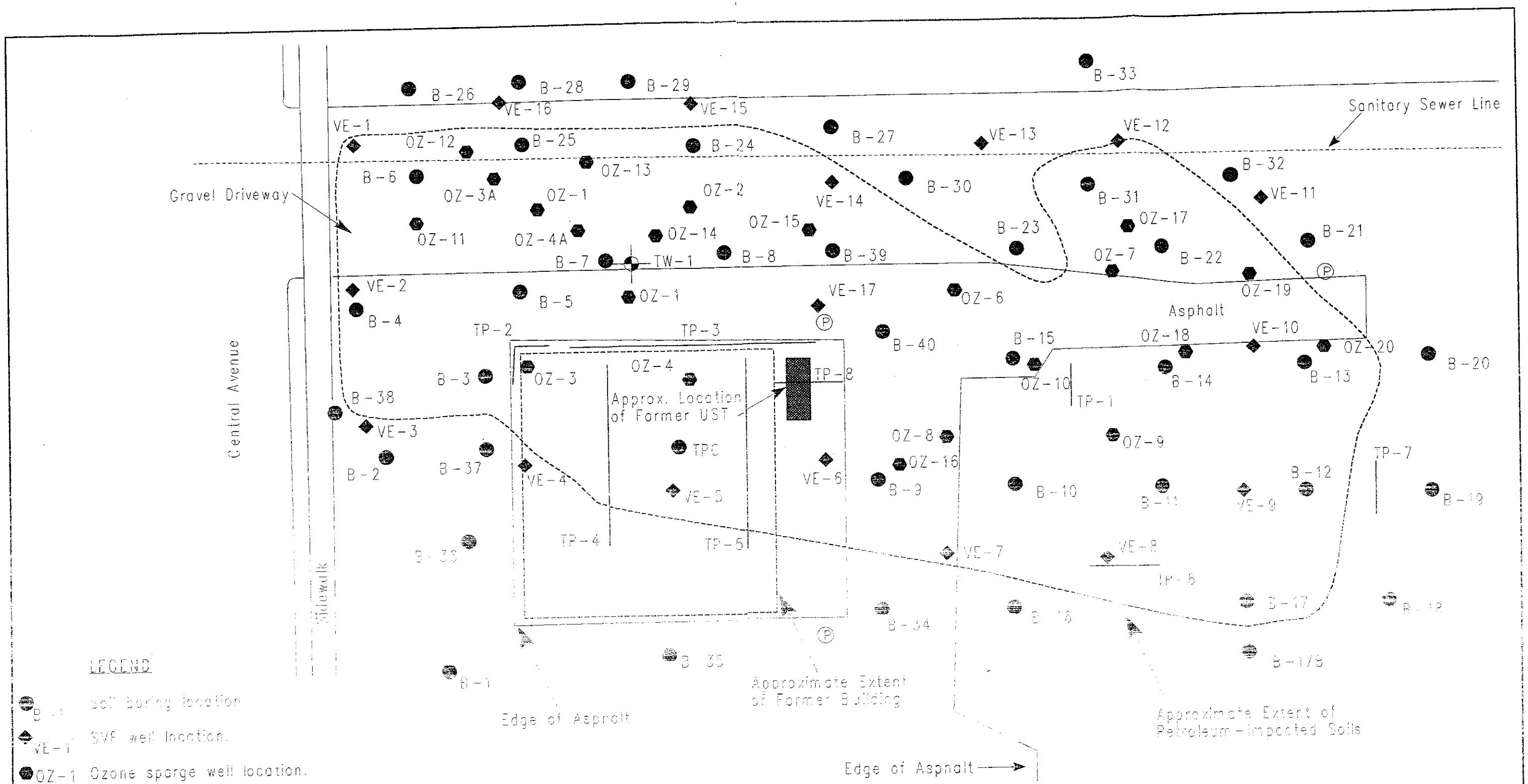
FIGURE 2

SITE MAP

166 Central Avenue, Ilion, New York

PREPARED FOR: **Ventura-Taylor Outparcel, LLC**

FIGURE: 2



LEGEND

- B-1 Soil boring location
- VE-1 SVE well location.
- OZ-1 Ozone sparge well location.
- TW-1 Temporary monitoring well location.

InteGreyted consultants
104 JAMESVILLE ROAD
SYRACUSE, NY 13214
PHONE: (315) 445-0224
FAX: (315) 445-0793

Note: Performance monitoring and closure samples were collected from various soil boring locations between July and September 2001.

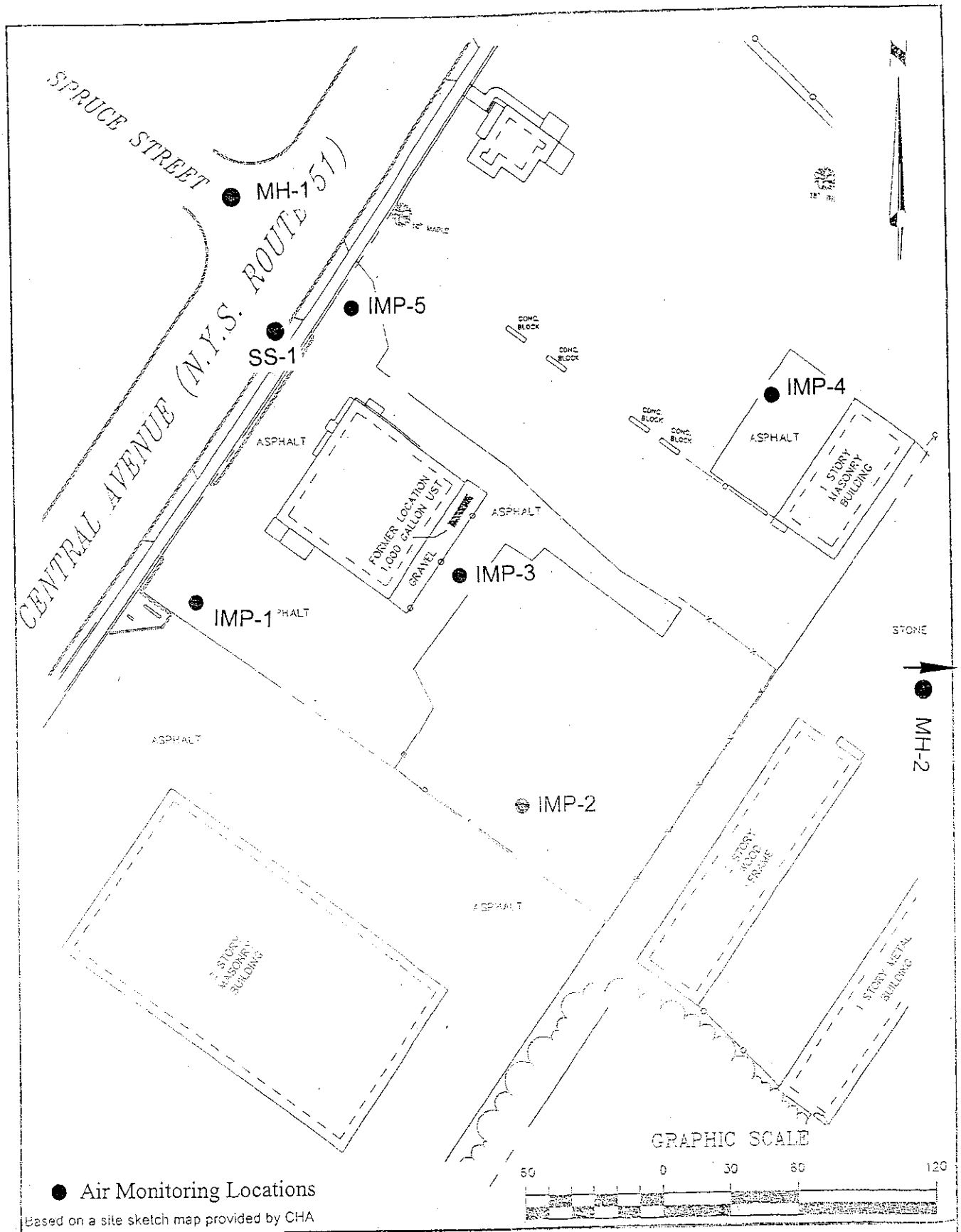
DRAWN BY	MJS
CAD FILE	ilionsp
DATE	10/01
SCALE (approx)	1"=20'

Soil Boring Locations & SVE and Ozone Well Locations

166 Central Avenue
Ilion, New York

PREPARED FOR: VENTURA-TAYLOR OUTPARCEL, LLC

FIGURE: 3



● Air Monitoring Locations

Based on a site sketch map provided by CHA

InteGreyted consultants
104 Jamesville Road
Syracuse, New York 13214
Ph: 315-445-0224
Fx: 315-445-0793

DRAWN BY	CHA
CAD FILE	---
DATE	1998
SCALE	as shown

Air Monitoring Locations

166 Central Avenue, Ilion, New York

PREPARED FOR: Ventura-Taylor Outparcel, LLC

FIGURE: 4

Table 1
Remedial Point Specifications
166 Central Avenue, Ilion, New York

Well ID	Approx depth of dirty soils near well (ft bg)	Well depth (bottom of well ft bg)	Screen depth (ft bg)
Sparge			
OZ-1	2-6	6	5-6
OZ-2	3-6	6	5-6
OZ-3	2-7	6	5-6
OZ-4	3-6	6.5	5.5-6.5
OZ-5	3-10	8.5	7.4-8.4
OZ-6	3-7	6.5	5.5-6.5
OZ-7	3-6	6.5	5.5-6.5
OZ-8	2-7	6	5-6
OZ-9	2-7.5	7	6-7
OZ-10	3-7	6.5	5.5-6.5
OZ-3A	2-6	6	5-6
OZ-4A	2-7	8.5	7.5-8.5
OZ-11	2-6	6	5-6
OZ-12	2-7	7	6-7
OZ-13	2-7	7	6-7
OZ-14	3-7	7	6-7
OZ-15	2-6.5	7	6-7
OZ-16	2-6.5	7	6-7
OZ-17	3-6	7	6-7
OZ-18	4-9	8.5	7.5-8.5
OZ-19	4-7	7	6-7
OZ-20	2-8.5	8.5	7.5-8.5
SVE			
VE-1	2-5	5	3-5
VE-2	3-10	7	5-7
VE-3	Not Dirty	6	4-6
VE-4	4-7	6	4-6
VE-5	3-6.5	6	4-6
VE-6	2-7	6	4-6
VE-7	Not Dirty	6	4-6
VE-8	2-6	5	3-5
VE-9	2-6	5	3-5
VE-10	2-10	7	5-7
VE-11	Not Dirty	6	4-6
VE-12	4-7	6	4-6
VE-13	Not Dirty	6	4-6
VE-14	Not Dirty	6	4-6
VE-15	Not Dirty	6	4-6
VE-16	Not Dirty	6	4-6
VE-17	3-8	6.5	4.5-6.5

installed well depths

TABLE 2
Soil Sample Analytical Results
Performance Monitoring - 31 July 2001
166 Central Ave., Ilion, New York

Analyte	TAGM 4046 Soil Cleanup Objective (ppb)	SAMPLE ID B-4 (4.0' - 8.0')	B-4P (3.0'-5.0')	B-6 (2.0' -4.0')	B-6P (2.0' -4.0')	B-7 (4.0' - 10.0')	B-7P (4.0' - 10.0')	B-11 (2.0' -4.0')	B-11P (2.0' -4.0')	B-15 (2.9' - 6.7')	B-15P (3.0'-6.5')
Volatile Organic Compounds (ppb)											
1,2,4-Trimethylbenzene	10,000 (1)	80	ND	150	ND	1,100	30	5,100	ND	4,100	520
1,3,5-Trimethylbenzene	3,300 (1)	12	ND	110	ND	630	19	1,800	ND	3,200	1,000
Benzene	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl Benzene	2,300 (1)	30	ND	480	ND	1,300	82	350	ND	1,400	31
m-p-Xylenes	1,200	ND	280	220	ND	ND	ND	ND	ND	ND	ND
MTBE	120 (1)	15	ND	140	ND	820	ND	720	ND	1,800	ND
n-Butylbenzene	10,000 (1)	10	ND	190	ND	1,600	36	2,000	ND	7,400	ND
n-Propylbenzene	3,700 (1)	25	ND	340	ND	1,800	32	760	ND	3,200	27
Naphthalene	13,000	28	890	160	ND	980	ND	650	ND	2,400	ND
o-Xylene	1,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	10,000 (1)	ND	ND	ND	ND	ND	17	ND	ND	2,200	ND
sec-Butylbenzene	10,000 (1)	17	ND	420	ND	1,600	20	1,700	5.9	5,400	ND
t-Butylbenzene	10,000 (1)	ND	ND	81	ND	ND	ND	ND	ND	ND	ND
Toluene	1,500	20	ND	230	ND	1,100	ND	900	ND	3,300	ND
Total Xylenes	1,200	ND	280	220	ND	ND	ND	ND	ND	ND	ND
Semi Volatile Organic Compounds (ppb)											
Acenapthene	50,000	ND	ND	ND	ND	760	ND	490	ND	2,400	ND
Anthracene	50,000	330	ND	ND	1,100	1,200	ND	ND	ND	1,500	ND
Benzo (a) anthracene	224 or MDL (2)	530	ND	800	**1,600**	2,900	**372 (Est)**	ND	ND	ND	**340**
Benzo (a) pyrene	61 or MDL (2)	410	ND	ND	**1,100**	1,200	ND	ND	ND	ND	ND
Benzo (b) fluoranthene	224 or MDL (2)	410	ND	440	**1,700**	2,300	**415 (Est)**	ND	ND	ND	ND
Benzo (g,h,i) perylene	50,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo (k) fluoranthene	224 or MDL (2)	ND	ND	440	**1,200**	2,500	**331 (Est)**	ND	ND	ND	ND
Chrysene	400	390	ND	640	**1,400**	2,200	**443 (Est)**	ND	ND	ND	ND
Dibenz (a,h) anthracene	14 or MDL (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50,000	980	420	1,000	8,700	5,900	ND	ND	ND	650	570
Fluorene	50,000	ND	ND	ND	540	860	ND	440	ND	2,300	ND
Indeno (1,2,3-c,d) pyrene	3,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	13,000	ND	ND	ND	ND	ND	ND	ND	ND	980	500
Phenanthrene	50,000	770	ND	940	3,400	5,800	ND	500	ND	5,400	ND
Pyrene	50,000	820	410	1,000	3,300	6,900	ND	330	ND	940	790

Notes:

Results in parts per billion (ppb).

ND: Compound not detected.

MDL: Method detection limit.

B-6: IntelCrevted's site investigation analytical data (November 2000).

B-6P: P denotes performance monitoring analytical data collected on 31 July 2001.

(1): Standard as indicated by NYSDEC in an Internal Memorandum dated 20 December 2000, regarding determination of soil cleanup levels.

(2): MDL for SVOCs by analytical method EPA 8270 is 330 ppb.

The MDL reported by the analytical laboratory for performance samples B-7P and B-11P was 3,300 ppb. Chromatograms for these samples were reviewed by the laboratory to verify the reported data.

(Est): Denotes an estimated value for an analyte. This value is based on a laboratory review of undiluted sample chromatograms for soil sample B-7P and B-11P. For analytes that were detected an estimated value is provided based on instrument response. A value of ND for performance samples B-7P and B-11P indicated the analyte was not detected at a concentration above a MDL of 330 ppb.

1,000 Analyte detected in performance sample at concentration in excess of NYSDEC TAGM 4046 soil cleanup objective

performance data

TABLE 3
Soil Sample Analytical Results
Closure Sampling Data Summary
166 Central Ave., Ilion, New York

Analyte	TAGM 4046 Soil Cleanup Objective (ppb)	SAMPLE ID B-3C (8.0' - 10.0')	B-6 (2.0' -4.0')	B-6P (2.0' -4.0')	B-6C (2.0' -4.0')	B-6R1 (2.0' -4.0')	B-6R2 (2.0' -4.0')	B-7 (4.0' - 10.0')	B-7P (4.0' - 10.0')	B-7C (4.0' - 10.0')	B-7R1 (4.0' - 10.0')	B-7R2 (4.0' - 10.0')	B-9C (4.0' -6.5')
Volatile Organic Compounds (ppb)													
1,2,4-Trimethylbenzene	10,000 (1)	ND	150	ND	NA	NA	NA	1,100	30	NA	NA	NA	ND
1,3,5-Trimethylbenzene	3,300 (1)	ND	110	ND	NA	NA	NA	630	19	NA	NA	NA	ND
Benzene	60	ND	ND	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
Ethylbenzene	5,500	ND	ND	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
Isopropyl Benzene	2,300 (1)	ND	480	ND	NA	NA	NA	1,300	82	NA	NA	NA	ND
m-p-Xylenes	1,200	ND	220	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
MTBE	120 (1)	ND	140	ND	NA	NA	NA	820	ND	NA	NA	NA	ND
n-Butylbenzene	10,000 (1)	ND	190	ND	NA	NA	NA	1,600	36	NA	NA	NA	ND
n-Propylbenzene	3,700 (1)	ND	340	ND	NA	NA	NA	1,800	32	NA	NA	NA	ND
Naphthalene	13,000	ND	160	ND	NA	NA	NA	980	ND	NA	NA	NA	ND
o-Xylene	1,200	ND	ND	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
p-Isopropyltoluene	10,000 (1)	ND	ND	ND	NA	NA	NA	ND	17	NA	NA	NA	ND
sec-Butylbenzene	10,000 (1)	ND	420	ND	NA	NA	NA	1,600	20	NA	NA	NA	ND
t-Butylbenzene	10,000 (1)	ND	81	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
Toluene	1,500	ND	230	ND	NA	NA	NA	1,100	ND	NA	NA	NA	ND
Total Xylenes	1,200	ND	220	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND
Semi Volatile Organic Compounds (ppb)													
Acenapthene	50,000	ND	ND	ND	ND	ND	ND	760	ND	ND	ND	ND	ND
Anthracene	50,000	ND	ND	1,100	400	ND	ND	1,200	ND	1,100	ND	ND	ND
Benzo (a) anthracene	224 or MDL (2)	ND	800	1,600	1,500	560	ND	2,900	372 (Est)	3,300	ND	ND	ND
Benzo (a) pyrene	61 or MDL (2)	ND	ND	1,100	1,600	580	ND	1,200	ND	3,100	340	ND	ND
Benzo (b) fluoranthene	224 or MDL (2)	ND	440	1,700	2,100	620	ND	2,300	415 (Est)	3,300	370	ND	ND
Benzo (g,h,i) perylene	50,000	ND	ND	ND	550	ND	ND	ND	ND	1,400	ND	ND	ND
Benzo (k) fluoranthene	224 or MDL (2)	ND	440	1,200	1,500	470	ND	2,500	331 (Est)	2,000	ND	ND	ND
Chrysene	400	ND	640	1,400	1,400	440	ND	2,200	443 (Est)	3,000	ND	ND	ND
Dibenz (a,h) anthracene	14 or MDL (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50,000	ND	1,000	8,700	2,800	990	ND	5,900	ND	7,000	600	ND	ND
Fluorene	50,000	ND	ND	540	ND	ND	ND	860	ND	ND	ND	ND	ND
Indeno (1,2,3-c,d) pyrene	3,200	ND	ND	ND	510	ND	ND	ND	ND	1,800	ND	ND	ND
Naphthalene	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	50,000	ND	940	3,400	1,800	ND	ND	5,800	ND	4,800	420	ND	ND
Pyrene	50,000	ND	1,000	3,300	2,600	910	ND	6,900	ND	7,000	860	ND	ND

Notes:

Results in parts per billion (ppb).

ND: Compound not detected.

NA: Not analyzed.

MDL: Method detection limit.

B-6: InteGreyted's site investigation analytical data (November 2000).

B-6P: P denotes performance monitoring analytical data collected on 31 July 2001.

B-6C: C denotes closure sampling analytical data collected on 9 August 2001.

B-6R1: R1 denotes closure sampling analytical data collected from resampled locations on 29 August 2001.

B-6R2: R2 denotes closure sampling analytical data collected from resampled locations on 10 September 2001.

(1): Standard as indicated by NYSDEC in an Internal Memorandum dated 20 December 2000, regarding determination of soil cleanup levels.

(2): MDL for analytical method EPA 8270 is 330 ppb.

The MDL reported by the analytical laboratory for closure samples B-9C, B-13C, B-14C, and B-39C was 3,300 ppb. Chromatograms for these samples were reviewed by the laboratory to verify the reported data.

Est: Denotes an estimated value for an analyte. This value is based on a laboratory review of undiluted sample chromatograms for soil sample B-39C. For analytes that were detected an estimated value is provided based on instrument response. A value of ND for closure samples B-9C, B-13C, B-14C, B-22C and B-39C indicated the analyte was not detected at a concentration above a MDL of 330 ppb.

1,200 Analyte detected in performance or closure sample at concentration in excess of NYSDEC TAGM 4046 soil cleanup objective

TABLE 3 (continued)
Soil Sample Analytical Results
Closure Sampling Data Summary
166 Central Ave., Ilion, New York

Analyte	TAGM 4046 Soil Cleanup Objective (ppb)	SAMPLE ID B-13C (4.0' - 9.0')	B-14 (4.0' - 9.5')	B-14C (4.0' - 9.5')	B-22C (3.0' -6.0')	B-22R1 (3.0' -6.0')	B-25 (2.0' - 5.0')	B-25C (2.0' -5.0')	B-25R1 (2.0' -5.0')	B-25R2 (2.0' -5.0')	B-39 (2.0'-6.5')	B-39C (2.0' - 6.5')	B-39R2 (2.0' - 6.5')	TPC (3.0'-6.0')
Volatile Organic Compounds (ppb)														
1,2,4-Trimethylbenzene	10,000 (1)	1,400	6,000	4,300	ND	NA	16	ND	NA	NA	ND	ND	NA	ND
1,3,5-Trimethylbenzene	3,300 (1)	3,200	ND	1,800	ND	NA	6	ND	NA	NA	ND	ND	NA	ND
Benzene	60	ND	ND	ND	ND	NA	2.1	ND	NA	NA	ND	ND	NA	ND
Ethylbenzene	5,500	ND	ND	ND	ND	NA	1.9	ND	NA	NA	ND	ND	NA	ND
Isopropyl Benzene	2,300 (1)	ND	ND	ND	ND	NA	21	2.8	NA	NA	140	680	NA	ND
m-p-Xylenes	1,200	ND	ND	ND	ND	NA	6	2.9	NA	NA	ND	ND	NA	ND
MTBE	120 (1)	ND	950	ND	ND	NA	3.3	ND	NA	NA	240	ND	NA	ND
n-Butylbenzene	10,000 (1)	ND	820	550	ND	NA	19	ND	NA	NA	250	2,100	NA	ND
n-Propylbenzene	3,700 (1)	ND	ND	ND	ND	NA	9.5	ND	NA	NA	ND	530	NA	ND
Naphthalene	13,000	ND	570	1,600	ND	NA	32	ND	NA	NA	590	ND	NA	ND
o-Xylene	1,200	ND	ND	ND	ND	NA	ND	ND	NA	NA	ND	ND	NA	ND
p-Isopropyltoluene	10,000 (1)	ND	ND	450	ND	NA	ND	ND	NA	NA	ND	ND	NA	ND
sec-Butylbenzene	10,000 (1)	360	490	480	ND	NA	28	ND	NA	NA	1,600	2,300	NA	ND
t-Butylbenzene	10,000 (1)	ND	ND	ND	ND	NA	13	ND	NA	NA	800	ND	NA	ND
Toluene	1,500	ND	1,100	ND	ND	NA	7.9	2.6	NA	NA	290	ND	NA	ND
Total Xylenes	1,200	ND	ND	ND	ND	NA	6	2.9	NA	NA	ND	ND	NA	ND
Semi Volatile Organic Compounds (ppb)														
Acenapthene	50,000	ND	1,900	ND	ND	ND	ND	ND	ND	ND	2,600	ND	ND	ND
Anthracene	50,000	ND	ND	ND	ND	ND	ND	1,700	390	ND	3,400	ND	ND	ND
Benzo (a) anthracene	224 or MDL (2)	ND	ND	ND	7,700	ND	ND	5,400	990	ND	ND	397 (Est)	ND	ND
Benzo (a) pyrene	61 or MDL (2)	ND	ND	ND	4,000	ND	ND	4,800	840	ND	ND	400 (Est)	ND	ND
Benzo (b) fluoranthene	224 or MDL (2)	ND	ND	ND	6,700	ND	ND	4,500	1,000	ND	ND	520 (Est)	ND	ND
Benzo (g,h,i) perylene	50,000	ND	ND	ND	ND	ND	ND	1,800	ND	ND	ND	ND	ND	ND
Benzo (k) fluoranthene	224 or MDL (2)	ND	ND	ND	4,200	ND	ND	4,200	490	ND	ND	360 (Est)	ND	ND
Chrysene	400	ND	ND	ND	8,600	ND	ND	4,800	800	ND	ND	330 (Est)	ND	ND
Dibenz (a,h) anthracene	14 or MDL (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50,000	ND	ND	ND	13,000	ND	ND	11,000	1,700	ND	ND	ND	ND	530
Fluorene	50,000	ND	1,300	ND	ND	ND	ND	ND	470	ND	560	ND	ND	ND
Indeno (1,2,3-c,d) pyrene	3,200	ND	ND	ND	ND	ND	ND	2,100	ND	ND	ND	520 (Est)	ND	ND
Naphthalene	13,000	ND	450	ND	ND	ND	ND	ND	470	ND	2,500	ND	ND	ND
Phenanthrene	50,000	ND	2,500	ND	6,900	ND	ND	5,000	1,500	ND	3,500	ND	ND	460
Pyrene	50,000	ND	420	ND	14,000	ND	ND	10,000	1,500	ND	410	ND	ND	450

Notes:

Results in parts per billion (ppb).

ND: Compound not detected.

NA: Not analyzed.

MDL: Method detection limit.

B-6: InteGreyted's site investigation analytical data (November 2000).

B-6P: **P** denotes performance monitoring analytical data collected on 31 July 2001.

B-6C: C denotes closure sampling analytical data collected on 9 August 2001.

B-6R1: **R1** denotes closure sampling analytical data collected from resampled locations on 29 August 2001.

B-6R2: **R2** denotes closure sampling analytical data collected from resampled locations on 10 September 2001.

(1): Standard as indicated by NYSDEC in an Internal Memorandum dated 20 December 2000, regarding determination of soil cleanup levels.

(2): MDL for analytical method EPA 8270 is 330 ppb.

The MDL reported by the analytical laboratory for closure samples B-9C, B-13C, B-14C, and B-39C was 3,300 ppb. Chromatograms for these samples were reviewed by the laboratory to verify the reported data.

Est: Denotes an estimated value for an analyte. This value is based on a laboratory review of undiluted sample chromatograms for soil sample B-39C. For analytes that were detected an estimated value is provided based on instrument response. A value of ND for closure samples B-9C, B-13C, B-14C, B-22C and B-39C indicated the analyte was not detected at a concentration above a MDL of 330 ppb.

1,200 Analyte detected in performance or closure sample at concentration in excess of NYSDEC TAGM 4046 soil cleanup objective

ATTACHMENT 1

LIST OF DOCUMENTS

List of Documents

166-178 Central Avenue
Town of Ilion, New York

Phase I Environmental Site Assessment Report, 5 March 1996, Clough, Harbour & Associates. **Note:** The cover page of this report is incorrectly dated and should be 5 March 1997.

Subsurface Investigation and Geotechnical Report, 18 March 1997, Clough, Harbour & Associates.

Phase II Environmental Site Assessment Report, 18 April 1997, Clough, Harbour & Associates.

Remedial Action Plan, June 1997, Clough, Harbour & Associates.

NYSDEC Comments on Remedial Action Plan, 1 August 1997, NYSDEC.

Response to NYSDEC Comments on Remedial Action Plan, 7 August 1997, Clough, Harbour & Associates.

Site Investigation Report, 4 May 1998, Clough, Harbour & Associates.

Response to NYSDEC Comments on Proposed Additional Investigation, 22 May 1998, Clough, Harbour & Associates.

Additional Off-Site Investigation Results & Amendments to RAP, 2 June 1998, Clough, Harbour & Associates.

NYSDEC Response to Additional Off-Site Investigation Results & Amendments to RAP, 23 June 1998, NYSDEC.

ATTACHMENT 2

OPERATIONAL DATA

166 Central Avenue, Ilion, NY
Remedial O&M Log

				FUGITIVE EMISSIONS MONITORING															
				IMP-1		IMP-2		IMP-3		IMP-4		IMP-5		SS-1		MH-1		MH-2	
date	system up on arrival?	system up at departure ?	alarms	ozone concentration	VOC concentration	ozone concentration	VOC concentration	ozone concentration	VOC concentration	ozone concentration	VOC concentration	ozone concentration	VOC concentration	ozone concentration	VOC concentration	ozone concentration	VOC concentration	ozone concentration	VOC concentration
mm/dd/yy	yes / no	yes / no	descibe if applicable	ppmv or %	ppmv	ppmv or %	ppmv	ppmv or %	ppmv	ppmv or %	ppmv	ppmv or %	ppmv	ppmv or %	ppmv	ppmv or %	ppmv	ppmv or %	ppmv
6/26/01	KC and CMD onsite for Start-up (1% ozone 11:00 to 14:30hrs - 3% ozone until 23:00hrs)																		
6/26/01	no	yes		0	0.7	0	0.1	0	0.2	0	0.2	0	0	0	0.7	0	3.7	overgrown - NR	
6/26/01	KC and CMD onsite at 11:30AM due to fire onsite - system down until next day.																		
6/27/01	KC and CMD onsite: investigate fire - test and restart system. System running at 3.00% at 11:00, running at 6% after 14:00 hrs. Shut down after 18:00hrs (will not run unsupervised until AC reconfigures latching alarm on 6/28/01)																		
6/27/01	no	no	test ozone level high alarm - power off																
6/27/01																			
6/28/01	KC, CMD and AC onsite. System running at 6% 8:00 to 18:00hrs. System restated after control mods at 23:00hrs at 6% - left operational.																		
6/28/01	no	yes		0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6/29/01	KC, CMD and AC onsite. System running at 6% at arrival. Departed at 10:30hrs, system operational at 6%.																		
6/29/01	yes	yes																	
6/29/01	SM onsite at 15:00hrs system down on ambient ozaone alarm. Alarm seems to be a false positive. SM reset bulb in LC400 - cleared out. Left system operational.																		
6/29/01	no	yes	ambient ozone level high alarm																
7/3/01	AG onsite. System down upon arrival, ozone gen alarm, high PSU cabnet temp - sensaphone didn't detect it. Air Conditioner fuse blown - fuse replaced. AC, CMD talked AG through procedure to rewire sensaphone.																		
	According to hourmeter ozone went down at 5:00hrs on 7/1/01. System operational at departure.																		
7/3/01	no	yes	ozone gen high PSU cabnet temp	0	1	0	2	0	5.5	0	8	0	64	0	4.6	0	681	0	11
7/3/01																0	69		
7/5/01	InteGreyted onsite. System down upon arrival ozone gen high PSU cabinet temp alarm. Air conditioner not working fuse blown - replaced - still no power to control panel. System restarted without air conditioner running.																		
	Departed site with system operational (system went down again - high PSU cab temp before 9:15 on 7/6/01).																		
7/9/01	AG and CMD onsite. Restarted system @ 16:00hrs - replaced AC 20 Amp fuse with 30 Amp as per AC. System operational.																		
7/9/01	no	yes	high psu cab temp																
7/10/01	AG and CMD onsite. Reinstalled OZ-2, installed grounding cable in sparge tubing.																		
7/10/01	yes	yes																	
7/11/01	AG and CMD onsite. Performed system O&M departed site @10:00 (PID not working). Readjusted flow rates to achieve 50+ lbs/day.																		
7/11/01	yes	yes		0.09		0.09		0.08		0.05		0		0.04		0.12		0.04	
7/16/01	InteGreyted onsite. System down upon arival ozone gen high PSU cabinet temp alarm. Air conditioner not working - power supply ok. System ran until Sunday 7/15/01 @ 18:00hrs according to hrourmeter.																		
7/19/01	SM onsite, system down upon arrival - high psu cabinet temp alarm. Air conditioner repaired by Benoit Controls of Utica earlier the same day. Restarted system. Ozone leak found in point OZ-6. Shut point off pending repair.																		
7/19/01	no	yes	high psu cab temp																
7/19/01																			
7/19/01																			
7/24/01	KC onsite 7/23-7/26. System down on high temp alarm upon arrival. Shut off alarm latch on ozone gen. Reduced ozone concentration to 4% - chiller not keeping up at 6%.																		
7/24/01	no	yes	high cell temp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/25/01	yes	yes		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/25/01																			
8/1/01	KC onsite. System operational. Chiller function normal. Ozone sparge at 4.2%.																		
8/1/01	yes	yes		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/1/01																			
8/9/01	DJ onsite. System down for soil sample collection prior to visit. System optimized to concentrate on specific target areas: OZ-2, 3, & 5 shut off, VE-1, 3 & 4 are throttled back to balance VE flow rates. Ozone at 3.69%.																		
8/9/01	yes	yes		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/10/01				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/16/01	BL onsite. System operational ozone sparging at 4.5%.																		
8/16/01	yes	yes		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/28/01	BL onsite with JM. System operational upon arrival, ozone sparging at 4.27%, drained entrained water from VE lines - improved VE flow. Shut down system before departure for new well installation.																		
8/28/01	yes	no		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/30/01	BL onsite with JM. System restarted with new sparge points. Monitored, left run overnight.																		
8/31/01	BL onsite with JM. System operational sparging ozone into points: OZ-1,2,3A,4A,5,7,10,11,12,13,14,17,19 at 4.55%.																		
8/31/01	yes	yes		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 - 9/4/20	Fires occurred at well heads onsite - system down.																		
9/6/01	PR onsite to investigate fire and run system while manned only - sparging @ 4.5% for 6 hours.																		
9/6/01	no	no	<--manned operation only																
9/7/01	PR onsite to investigate fire excavated OZ-11 and reported findings.																		
9/10/01	KH onsite repaired sparge points.																		
9/11/01	KH onsite - finished reconnecting system, restarted, operated manned for 4 hours @ 6% sparging into points OZ-1, 3A, 11, 12, 13.																		
9/11/01	no	no	<--manned operation only																
9/12/01	KH onsite - Operated points OZ-2, 4A, 5, 14, 15 manned for 3.5 hours @ 5.42%. Fire at wellheads OZ-14 and 15. System shut off - left down.																		
9/12/01	no	no	<--manned operation only																

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SPARGE POINTS MONITORING (at SS manifold header)

	manifold header	OZ- 1		OZ- 2		OZ- 3		OZ-3A		OZ- 4		OZ-4A		OZ- 5		OZ- 6		OZ- 7		OZ- 8		OZ- 9	
date	pressure (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)
mm/dd/yy	psig	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm
6/26/01																							
6/26/01	15	o	0.7	o	0.7	o	0.7			o	0.7			o	0.7	o	0.7	o	0.7	o	0.7	o	0.7
6/26/01																							
6/27/01																							
6/27/01	15	o		C		o				o				o		o		o		o		o	
6/27/01																							
6/28/01																							
6/28/01	18	o		c		o				o				o		o		o		o		o	
6/29/01																							
6/29/01																							
6/29/01																							
6/29/01																							
7/3/01																							
7/3/01		0		C		0				0				0		0		0		0		0	
7/3/01																							
7/5/01																							
7/9/01																							
7/9/01																							
7/10/01																							
7/10/01																							
7/11/01																							
7/11/01		0		0		0				0				0		0		0		0		0	
7/16/01																							
7/19/01																							
7/19/01		o		o		o				o				o		o		o		o		o	
7/19/01		o		o		o				o				o		c	leaking	o		o		o	
7/19/01																							
7/24/01																							
7/24/01		o	valve bent	o	1.7	o	0.4			o	0.66			o	0.7	o	0.99	o	2.04	o	1.24	o	3.14
7/25/01		o	valve bent	o	1.55	o	1.2			o	1.2			o	1.28	o	1.26	o	1.3	o	1.47	o	1.3
7/25/01		o	valve bent	o	1.5	o	1.2			o	1.25			o	1.3	o	1.3	o	1.25	o	1.45	o	1.3
8/1/01																							
8/1/01		o	valve bent	o	1.7	o	1.05			o	1.04			o	1.4	o	1.33	o	0.4	o	1.28	o	1.25
8/1/01																			1.03				
8/9/01																							
8/9/01		o	valve bent	c		c				o	452 fpm			c		o	334 fpm	o	452 fpm	o	341 fpm	o	450 fpm
8/10/01																							
8/16/01																							
8/16/01		o		c		c				o				o		o		o		o		o	
8/28/01																							
8/28/01		c		c		c				o	5.25			c		o	3.44	o	4.33	o	3.31	o	4.93
8/30/01																							
8/31/01																							
8/31/01		o	1.66	o	1.45	c		o	1.46	c		o	2.31	o	0.545	c		o	1.57	c		c	
1 - 9/4/20																							
9/6/01																							
9/6/01																							
9/7/01																							
9/10/01																							
9/11/01																							
9/11/01																							
9/12/01																							
9/12/01																							

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	OZ- 10		OZ-11		OZ-12		OZ-13		OZ-14		OZ-15		OZ-16		OZ-17		OZ-18		OZ-19		OZ-20	
date	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)	open / closed	flow rate (with ozone OFF !!)
mm/dd/yy	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm
6/26/01																						
6/26/01	o	0.7																				
6/26/01																						
6/27/01																						
6/27/01	o																					
6/27/01																						
6/28/01																						
6/28/01	o																					
6/29/01																						
6/29/01																						
6/29/01																						
6/29/01																						
7/3/01																						
7/3/01	0																					
7/3/01																						
7/5/01																						
7/9/01																						
7/9/01																						
7/10/01																						
7/10/01																						
7/11/01																						
7/11/01	0																					
7/16/01																						
7/19/01																						
7/19/01	o																					
7/19/01	o																					
7/19/01																						
7/24/01																						
7/24/01	o	0.475																				
7/25/01	o	0.985																				
7/25/01	o	1																				
8/1/01																						
8/1/01	o	1.09																				
8/1/01																						
8/9/01																						
8/9/01	o	454 fpm																				
8/10/01																						
8/16/01																						
8/16/01	o																					
8/28/01																						
8/28/01	o	4.55																				
8/30/01																						
8/31/01																						
8/31/01	o	0.585	o	2	o	1	o	0.905	o	2.05	c		c		o	0.0125	c		o	0.0255	c	
1 - 9/4/20																						
9/6/01																						
9/6/01																						
9/7/01																						
9/10/01																						
9/11/01																						
9/11/01																						
9/12/01																						
9/12/01																						

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	VAPOR EXTRACTION POINTS																							
	Main Manifold	VE- 1		VE- 2		VE- 3		VE- 4		VE- 5		VE- 6		VE- 7		VE- 8		VE- 9		VE- 10		VE-1 1	
date	vacuum	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate
mm/dd/yy	in wtr	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm
6/26/01																							
6/26/01	16	All VE points are open - can't get flow data because of water in pipes.																					
6/26/01																							
6/27/01																							
6/27/01		o		o		o		o		o		o		o		o		o		o		o	
6/27/01																							
6/28/01																							
6/28/01																							
6/29/01																							
6/29/01																							
6/29/01																							
7/3/01																							
7/3/01	10.9	0		0		0		0		0		0		0		0		0		0		0	
7/3/01																							
7/5/01																							
7/9/01																							
7/9/01																							
7/10/01																							
7/10/01																							
7/11/01																							
7/11/01		0		0		0		0		0		0		0		0		0		0		0	
7/16/01																							
7/19/01	SVE Vacuum, VOC & O3 data collected.																						
7/19/01		o	8.1iw vac	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac
7/19/01			10.0 VOC		0.0 VOC		13.0 VOC		0.00 VOC		20.0 VOC		0.0 VOC		0.0 VOC		0.0 VOC		0.0 VOC		10.0 VOC		0.0 VOC
7/19/01			0.18 O3		0.00 O3		0.31 O3		0.05 O3		0.09 O3		0.0 O3		0.15 O3		0.0 O3		0.28 O3		0.18 O3		0.0 O3
7/24/01																							
7/24/01		o		o		o		o		o		o		o		o		o		o		o	
7/25/01																							
7/25/01		o		o		o		o		o		o		o		o		o		o		o	
8/1/01	SVE VOC / O3 data collected																						
8/1/01		o	16.4 VOC	o	11.9 VOC	o	23.3 VOC	o	25.0 VOC	o	13.4 VOC	o	37.2 VOC	o	29.0 VOC	o	27.6 VOC	o	24.2 VOC	o	16.7 VOC	o	21.0 VOC
8/1/01			0.21 O3		0.09 O3		0.23 O3		0.16 O3		0.17 O3		0.20 O3		0.31 O3		0.11 O3		0.19 O3		0.14 O3		0.19 O3
8/9/01																							
8/9/01		o	84 fpm	o	0	90%	404 fpm	90%	595 fpm	o	0	o	0	o	0	o	0	o	0	o	0	90%	910 fpm
8/10/01																							
8/16/01																							
8/16/01	Flow Rates! -->	o	5.9	o	2.42	50%	9.2	50%	4.15	o	3.78	o	2.62	o	3.27	o	2.61	o	2.45	o	2.63	50%	2.4
8/28/01																							
8/28/01	Flow Rates-->	o	1.5	o	0.98	o	1.53	o	1.17	o	0.565	o	2.46	o	1.98	o	1.41	o	1.77	o	2.89	o	0.82
8/30/01	Vaccum iw-->		19.6		14.7		4.6		1.5		14.2		13.9		14.1		14.2		13.6		13.6		3.4
8/31/01																							
8/31/01																							
1 - 9/4/20																							
9/6/01																							
9/6/01																							
9/7/01																							
9/10/01																							
9/11/01																							
9/11/01																							
9/12/01																							
9/12/01																							

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	VE-1 2		VE-1 3		VE-1 4		VE-1 5		VE-1 6		VE-1 7		OZONE GENERATOR SYSTEM (OGS)									
													air compressor		chiller					oxygen generat	oxygen tank	
date	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	open / closed	flow rate	tank pressure	apparent normal operation ??	Circulatio n pump pressure	Low side refrigerant pressure	High side refrigerant pressure	outlet temperatu re	apparent normal operation ??	apparent normal operation ??	tank pressure	apparent normal operation ??
mm/dd/yy	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	O / C	scfm or fpm	psig	y / n	psig	psig	psig	deg F	y / n	y / n	psig	y / n
6/26/01																						
6/26/01													110	y	25	40	375	40	Y	Y	40	Y
6/26/01																						
6/27/01																						
6/27/01	o		o		o		o		o		o		90	y	25	25	360	52	y	y	40	y
6/27/01																						
6/28/01																						
6/28/01													85	y	25			51	y	y	40	y
6/29/01																						
6/29/01																						
6/29/01																						
6/29/01																						
7/3/01																						
7/3/01	0		0		0		0		0		0		77	y				51	y	y	50	y
7/3/01																						
7/5/01																						
7/9/01																						
7/9/01																						
7/10/01																						
7/10/01																						
7/11/01																						
7/11/01	0		0		0		0		0		0		100	y	26	21	370	54	y	y	46	y
7/16/01																						
7/19/01																						
7/19/01	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac	o	8.1iw vac		y	25	60	290	45	y	y	50	y
7/19/01		0.0 VOC		10.0 VOC		0.0 VOC		0.0 VOC		0.0 VOC		0.0 VOC										
7/19/01		0.29 O3		0.25 O3		0.19 O3		0.04 O3		0.22 O3		0.15 O3										
7/24/01																						
7/24/01	o		o		o		o		o		o		110	y	25	50	310	46	y	y	40	y
7/25/01													110	y	25	45	310	46	y	y	40	y
7/25/01	o		o		o		o		o		o											
8/1/01																						
8/1/01	o	69.0 VOC	o	41.2 VOC	o	20.0 VOC	o	33.4 VOC	o	29.7 VOC	o	43.6 VOC	110	y	25	45	340	45	y	y	40	y
8/1/01		0.20 O3		0.15 O3		0.12 O3		0.19 O3		0.17 O3		0.19 O3										
8/9/01																						
8/9/01	o	0	o	0	o	0	o	0	o	0	o	0	115	y	25	50	325	46	y	y	40	y
8/10/01																						
8/16/01																						
8/16/01	o	9.1	o	water	o	5.05	o	2.14	o	3.35	o	water	110	y	25	52	315	66	y	y		y
8/28/01																						
8/28/01	o	1.28	o	0.565	o	0.81	o	0.315	o	0.978	o	0.615	108	y	26	50	250	46	y	y	36	y
8/30/01		3.9		9.9		14.1		14.2		14.1		12.4										
8/31/01																						
8/31/01													98	y	26	75	278		y	y		y
1 - 9/4/20																						
9/6/01																						
9/6/01																						
9/7/01																						
9/10/01																						
9/11/01																						
9/11/01																						
9/12/01																						
9/12/01																						

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	VAPOR EXTRACTION (VE)																			
	ozone generator						ozone destruct cell		knock out tank		K-O transfer pu	nline filter		dilution valve		vacuum relief val	VE blower			
date	ozone concentration	final flow rate	final pressure	Calculated corrected flow rate	Calculated ozone production rate	apparent normal operation ??	up stream ozone concentration	down stream ozone concentration	liquid level normal ??	tank vacuum	volume pumped	inlet vacuum	outlet vacuum	percent open (estimate)	flow rate (use air velocity meter)	open or closed ??	inlet vacuum	Flow Rate	outlet pressure	
mm/dd/yy	percent	scfm	psig	scfh	lbs/day	y / n	ppmv or %	ppmv	y / n	in Hg	gallons	in Hg	in Hg	%	scfm or fpm	O / C	in Hg	scfm	psig	
6/26/01																				
6/26/01	1.09	270	20	394.63	8.53	Y	0	0	y		NA	no ports		c	NA	c	1.6		0.06	
6/26/01	3.03	270	20	394.63	23.72	Y														
6/27/01																				
6/27/01	3.13	275	20	401.94	24.96	Y	0	0	y					c		c				
6/27/01	6.27	278	20	406.32	50.55	Y														
6/28/01																				
6/28/01	6.14	282	20	412.17	50.21	Y														
6/29/01																				
6/29/01																				
6/29/01																				
6/29/01																				
7/3/01																				
7/3/01	6.25	260	18.5	371.71	46.09	Y	0	0	y					0		c			2.2 iw	
7/3/01																				
7/5/01																				
7/9/01																				
7/9/01	6.25	275	20	401.94	49.84	Y														
7/10/01																				
7/10/01																				
7/11/01																				
7/11/01	5.52	320	20	467.71	51.22	Y	0	0.25	y					0		c	9.2 iw		1.4 iw	
7/16/01																				
7/19/01																				
7/19/01	6.72	300	16	412.43	54.99	y	0.18	0	y					0	0	c	8.4 iw		0.5 iw	
7/19/01																				
7/19/01																				
7/24/01																				
7/24/01	4.10	320	20	467.71	38.05	Y	0	0	y	0.5		0.6	0.6	0		c	0.6		0.05	
7/25/01	4.15	320	20	467.71	38.51	Y	0	0	y	0.5		0.6	0.6	0		c	0.6		0.05	
7/25/01																				
8/1/01																				
8/1/01	4.20	320	20	467.71	38.97	Y	0	0	y	0.6		0.6	0.6	0		c	0.6	28.8	0.05	
8/1/01																				
8/9/01																				
8/9/01	3.59	325	18	461.12	32.84	y	0.2	0.21	y	6.5 iw				o		c	6.5 iw	595 fpm	0.07	
8/10/01																				
8/16/01																				
8/16/01	4.46	330	21	489.22	43.31	y	0	0	y	0.94		0.94	0.94	0		c	15.6 iw		0.04	
8/28/01																				
8/28/01	4.27	330	20.5	485.79	41.15	y	0	0	y					0		c				
8/30/01																				
8/31/01																				
8/31/01	4.55	330	20	482.32	43.54	y	0	0	y											
1 - 9/4/20																				
9/6/01																				
9/6/01																				
9/7/01																				
9/10/01																				
9/11/01																				
9/11/01																				
9/12/01																				
9/12/01																				

166 Centr
Remedial

	VGAC TRAIN 1						VGAC TRAIN 2						AMBIENT MONITORING SYSTEM					
	Primary VGAC				Secondary VGAC		Primary VGAC				Secondary VGAC		alarm conditio	blower	olenoid valve	LC-400 monitor		
date	inlet VOC concentration	inlet ozone concentration	outlet VOC concentration	outlet ozone concentration	outlet VOC concentration	outlet ozone concentration	inlet VOC concentration	inlet ozone concentration	outlet VOC concentration	outlet ozone concentration	outlet VOC concentration	outlet ozone concentration	yes / no	apparent normal operation ??	valve switching apparently normal ??	current readout	VOC recovery rate	VOCs recovered
mm/dd/yy	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	y / n	y / n	y / n	<display> ppmv	lbs/day	lbs
6/26/01																		
6/26/01	5	0	2.2	0	0.6	0	5	0	2.2	0	0.6	0	n	y	y	0.018	0.05	0.05
6/26/01																		
6/27/01																		
6/27/01													n	y	y	0.009	0.00	0.05
6/27/01																		
6/28/01																		
6/28/01																		
6/29/01																		
6/29/01																		
6/29/01																		
6/29/01																		
7/3/01																		
7/3/01	39.1	0	31	0	3.1	0	39.1	0	30	0	2.2	0	n	y	y	0.000	0.42	2.53
7/3/01																		
7/5/01																		
7/9/01																		
7/9/01																		
7/10/01																		
7/10/01																		
7/11/01																		
7/11/01		0.43		0.1		0.04		0.4		0.1		0.04	n	y	y	0.010		
7/16/01																		
7/19/01	This data is as reported but seems high. PID may not have been functioning properly																	
7/19/01	60	0	50	0	50	0	60	0	50	0	50	0	n	y	y	0.013	0.65	12.88
7/19/01																		
7/19/01																		
7/24/01																		
7/24/01	19.5	0	11.6	0	0	0	19.5	0	9.9	0	0	0	n	y	y	0.009	0.21	13.93
7/25/01	18	0	12	0	0	0	18	0	10.6	0	0	0	n	y	y	0.000	0.19	14.13
7/25/01																		
8/1/01																		
8/1/01	31.3	0	19.4	0	17.1	0	31.3	0	24.9	0	11.6	0	n	y	y	0.000	0.34	16.49
8/1/01																		
8/9/01																		
8/9/01	0.9	0.033	0.9		1	0.019	0.9	0.021	0.9		2.4	0.028	n	y	y	0.000	0.01	16.57
8/10/01																		
8/16/01																		
8/16/01	45.2	0	4.7	0	0	0	45.2	0	5.1	0	0	0	n	y	y	0.000	0.49	19.98
8/28/01																		
8/28/01		0		0		0		0		0		0	n	y	y	0.000		
8/30/01																		
8/31/01																		
8/31/01																		
1 - 9/4/20																		
9/6/01																		
9/6/01																		
9/7/01																		
9/10/01																		
9/11/01																		
9/11/01																		
9/12/01																		
9/12/01																		

ATTACHMENT 3

ANALYTICAL DATA