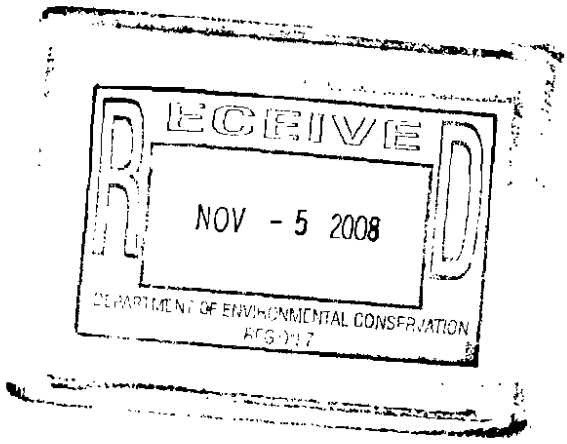
PETROLEUM INVESTIGATION REPORT

Roth Steel Facility, Syracuse, New York

October 2008



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BROWN AND CALDWELL

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ASP	Analytical Services Protocol
BC	Brown and Caldwell
bgs	Below Ground Surface
BTEX	Benxene, toluene, ethylbenzene and xylenes
cm/s	Centimeter per second
°C	Degrees Celcius
DER	Division of Environmental Remediation (NYSDEC)
Dup	Duplicate
DUSR	Data Usability Summary Report
ELAP	Environmental Laboratory Approval Program
HSA	Hollow-stem auger
mgd	Million gallons per day
MGP	Manufactured gas plant
mL	Milliliter
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MSTP	Metropolitan Sewerage Treatment Plant
MTBE	Methyl-t-butyl ether
NA	Not Applicable
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
PAHs	Polynuclear aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
PCDD	Polychlorinated dibenzo-p-dioxin
PCDF	Polychlorinated dibenzofuran
PID	Photoionization detector
RI	Remedial Investigation
SCO	Soil Cleanup Objective
TAL	Target Analyte List
TCL	Target Compound List
TICs	Tentatively Identified Compounds
QA/QC	Quality Assurance/Quality Control
SVOCs	Semi-Volatile Organic Compounds
USGS	U.S. Geological Survey
VOCs	Volatile Organic Compounds

1. INTRODUCTION

This Report was prepared to comply with Consent Order D7-1015-11-04 between Roth Steel Corporation and the New York State Department of Environmental Conservation (NYSDEC), dated December 28, 2007. Among the requirements of the Consent Order is a petroleum investigation at Roth Steel's Metal Recycling Facility located at 800 Hiawatha Boulevard, in the City of Syracuse, Onondaga County, New York (Figure 1).

This report documents the results of the completed petroleum investigation. Section 1 provides an overview of the Site including a description and history. Section 2 describes the work that was performed including the matrices sampled and analyzed. Section 3 describes the results that were obtained. Section 4 discusses the data quality review. Section 5 presents and evaluates the data and Section 6 provides a list of references cited in this document.

1.1 Site Description

The Roth Steel Recycling Facility is located in an industrial/commercial area on the southern end of Onondaga Lake in Onondaga County, in the City of Syracuse, New York (Figure 1). The Roth Steel Facility is a metal recycling facility which started circa 1967 and is still currently in operation. Various articles of scrap metal, primarily automobiles, are brought to the Facility for recovery of ferrous and non-ferrous metals. The primary scrap metal input is from discarded automobiles which are shredded and processed to recover the metals.

Nine soil borings advanced at the Roth Facility in 2004 to collect geotechnical data, confirmed that the Site lies on top of an area of significant fill. Both pink and gray Solvay process waste, coal slag, ash, bricks, glass, wood, ceramics and wire were among the components of the fill. The Solvay waste tends to be very impermeable and transmit very little water (NYSDEC, 2002). Additionally, a relatively shallow water table was encountered with saturated conditions observed as shallow as 6 inches below the ground surface.

Next door to the Roth Steel Facility is the Metropolitan Sewerage Treatment Plant (MSTP). The MSTP is permitted to discharge an average of 80 million gallons per day (mgd) and can provide tertiary treatment for flows up to 120 mgd. In addition to the MSTP, six tributaries also provide flows into Onondaga Lake. Total quantities of groundwater discharged to the Lake are small compared to discharges of surface water (NYSDEC, 2004). An elevated commercial rail line is located between the Site and Onondaga Lake.

The area climate is continental and moderately humid. Nearby Lake Ontario has a significant impact on the local weather systems through the moderating influence on local air temperatures. The Ontario Lowland area receives an average of 36 to 38 inches of precipitation annually, with precipitation rather evenly distributed throughout the year. During the winter months, Lake Ontario provides a ready supply of moisture that interacts with cold dry air from the northwest, resulting in lake-effect snow squalls and winter storms that deposit on average, 100 to 120 inches of snow in the area.

1.2 Site History

The southern shore of Onondaga Lake was a primary location for salt production from the late 1770s until the late 1880s, when the salt industry declined in the Syracuse area. Construction of the Erie Canal led to a lowering of the Lake Level and exposure of previously submerged land area. Onondaga Lake has received more than 100 years of industrial and municipal sewage discharges. From the late 1800s to approximately 1926, areas in and around Onondaga Lake were used as fill areas or waste beds for waste generated by the Solvay Process which was used in the manufacture of soda ash and other products.

Based on the level of contamination present, Onondaga Lake was designated a Superfund Site (NYSDEC, 2004) in December 1994. The Onondaga Lake Superfund Site includes approximately 2,000 acres of waste beds containing more than 90 million cubic meters (118 cubic yards) of industrial waste. The Roth Steel Facility was constructed on one of the waste beds which is currently designated Waste Bed F in documents related to the Onondaga Lake remedial investigation (RI). This location was also originally used as a City of Syracuse municipal solid waste landfill (NYSDEC 2002). The Roth Steel location (Waste Bed F) and MSTP location (Waste Bed G) are referred to as "other Honeywell Site" in Figure 4-15 of the 2002 RI Report for Onondaga Lake.

The 2002 RI Report states that...

> "...Honeywell wastes discharged to Onondaga Lake include mercury; benzene; toluene; ethylbenzene, and xylenes (BTEX); chlorinated benzenes; polycyclic aromatic hydrocarbons (PAHs) (primarily low molecular weight PAHs [LPAHs], but also some high molecular weight PAHs [HPAHs]; polychlorinated biphenyls (PCBs); polychlorinated dibenzo-*p*-dioxins and furans (PCDD/PCDFs); and Solvay waste (which was primarily composed of calcium carbonate, calcium silicate, and magnesium hydroxide, with lesser amounts of calcium oxide-calcium chloride complex, silicon dioxide, salt [NaCl], calcium chloride, aluminum or iron oxide, calcium hydroxide, calcium sulfate, ammonia, and metals [e.g., aluminum, arsenic, copper, lead, nickel, and zinc])..."

Concentrations of polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) as high as 6,760 parts per million (ppm) and 237.4 ppm, respectively, have been observed during the Onondaga Lake RI. The projected cost of lake-related remediation is over $451 million (Kates, 2006). Other environmental sites in the area include the Erie Boulevard Manufactured Gas Plant (MGP) Site, the Hiawatha Boulevard MGP Site and the American Bag and Metal Site.

1.3 Project Objectives

There are a number of parallel or subsequent efforts being addressed under the aforementioned Consent Order. These efforts include addressing solid waste and potential PCB issues, stormwater, air and implementing Best Management Practices. The purpose of this investigation was to determine whether automobile fluids (i.e. petroleum) have impacted soil and groundwater at the facility. These data are to be used to evaluate the need for, and select, an appropriate remedy (if any).

2. INVESTIGATION ACTIVITIES

2.1 Overview

This section describes the activities that were performed to comply with the requirements of the Consent Order. These activities involved a targeted field investigation program to collect soil and groundwater samples for analysis. The purpose of the investigation was to determine whether automobile fluids such as petroleum have impacted soil and groundwater at the facility. Although it is required that all automobiles brought on site be drained of fluids (e.g. gasoline, engine oil, transmission fluid, coolant), the investigation targeted any residual fluids that may have remained and dripped from the automobiles. The focus of the investigation was two main storage locations used for incoming automobiles. Soil samples were examined in the field and a subset of samples submitted for laboratory analysis. As requested by NYSDEC, groundwater monitoring wells were also installed in the vicinity of the vehicle storage areas. Groundwater samples were collected from each of these wells and submitted for analysis. In addition, hydraulic conductivity testing and field tests on the groundwater were performed and documented. These activities are discussed further below.

2.2 Soil Investigation

Samples were collected along a grid with approximate 25-foot centers (as feasible), from within accessible portions of the automobile storage area that had been previously cleared of scrap vehicles to facilitate the sampling. At each of 30 locations (referred to as B-01 through B-30) soil samples were collected using a split spoon in combination with direct push and/or auger drilling techniques. Samples were retrieved from depths ranging from 2 to 7 feet, depending on the depth of split spoon refusal. Samples were observed in the field and screened with a photoionization detector (PID). A total of 15 samples (primarily those with the higher PID readings or other evidence of impacts) were submitted for laboratory analysis for the parameters listed below.

Parameter	Analytical Method
Volatile Organic Compounds on the Target Compound List (TCL), Methyl-t-butyl ether and Tentatively identified compounds (TICs)	SW846-8260
Semi-Volatile Organic Compounds on the TCL, TICs	SW846-8270
Polychlorinated Biphenyls	SW846-8082
Ethylene and Propylene Glycol	SW846-8015
Metals on the Target Analyte List (TAL)	SW846-6020
Mercury	SW846-7471A

2.3 Groundwater Investigation

A total of six soil borings were advanced by hollow stem auger (HSA) techniques through the fill to native material, which was typically noted at approximately 15 feet below ground surface (bgs). The

borings were converted into monitoring wells to be used to investigate groundwater quality in the car storage area as well as upgradient. The wells were screened between 3.5 and 8.5 feet bgs. The wells were developed following installation to remove sediment that may have accumulated in the well and sand pack during installation. Following development and stabilization of the wells, depth to groundwater measurements were made, followed by collection of groundwater samples by low flow techniques. During sample collection, measurements of groundwater level, turbidity, temperature, pH, dissolved oxygen and specific conductivity were conducted to ensure appropriate low-flow sampling conditions. One round of groundwater samples were collected from each well on September 2 and 3, 2008 and submitted for analysis as summarized below.

Parameter	Analytical Method
Volatile Organic Compounds on the TCL, Methyl-t-butyl ether	SW846-8260
Semi-Volatile Organic Compounds on the TCL	SW846-8270
Polychlorinated Biphenyls	SW846-8082
Ethylene and Propylene Glycol	SW846-8015
Metals on the TAL	SW846-6020

Following collection of groundwater samples in-situ hydraulic conductivity tests (i.e., slug tests) were also performed on each monitoring well installed during the investigation to further evaluate the horizontal hydraulic conductivity of the adjacent formation. Rising head slug tests were conducted and the data were input into AQTESOLV® software for hydraulic conductivity calculations.

3. INVESTIGATION RESULTS

3.1 Overview

Soil from a total of 30 locations were collected and observed in the field. Fifteen soil samples from among these locations were submitted for laboratory analysis. A total of six groundwater monitoring wells were installed and developed. Field parameters were noted for groundwater in these wells and samples were collected for laboratory analysis. The results of these investigation activities are presented below.

3.2 Field Observations

Field observations of the soil samples are summarized in Table 3-1 and associated boring logs are provided as Appendix A. Shallow borings advanced in the automobile storage areas typically encountered fill, often overlying a layer of concrete that had been placed to stabilize the areas. The deeper borings advanced for monitoring well installation indicate an upper layer of anthropogenic fill material followed by a layer of Solvay waste overlying native material. There were no visible impacts in the top two feet at all locations. However, staining was noted in the 2- to 4-foot interval at location B-17 and in the 4- to 6-foot interval at locations B-13 and B-18.

Well construction details for the groundwater monitoring wells (MW-1 through MW-6) are provided in Appendix B and the field data are summarized in Table 3-2. The horizontal hydraulic conductivity measured for the fill material ranged from 5.45×10^{-4} to 3.95×10^{-3} centmeters/second (cm/s). These values may slightly understate the hydraulic conductivity because they were calculated using the full length of the monitoring well screen, whereas a significant portion of the screen's total length was positioned within the relatively impermeable Solvay waste. The pH is significantly alkaline due to the prevalence of the Solvay waste. Water table elevation contours (Figure 3) indicate that shallow groundwater in the immediate study area is flowing toward the east, possibly towards a subsurface feature (Figure 3) in the vicinity of the truck scale, and warrants further evaluation.

3.3 Soil Chemical Concentrations

Soil samples were analyzed for VOCs, SVOCs, PCBs, glycols and metals. The analytical data for these samples are presented in Tables 3-3 through 3-6 and select data for the soil location (B-13) with the highest chemical concentrations are presented in Figure 3. In addition, the laboratory reported the potential presence of tentatively identified compounds (TICs). This category of compounds was primarily below the quantitation limit and therefore qualified with a "J." The analytical results for VOCs in soil (Table 3-3) indicated that they were not detected, detected but not at quantifiable concentrations (indicated by a "J" flag) or measured at relatively low concentrations. The highest concentration for any VOC in soil was 15 mg/kg for total xylenes in sample B-13 (0.5-1.0). This is significantly lower than the SCO of 1000 mg/kg for total xylenes in soil in an industrial setting as contained in the New York State Brownfield Cleanup Program industrial soil cleanup

objectives or SCOs (6 NYCRR Subpart 375-6, Table 375-6.8(b)). Overall, no VOC industrial SCOs for soil were exceeded.

The analytical results for SVOCs in soil (Table 3-4) indicated that they were not detected, detected but not at quantifiable concentrations (indicated by a "J" flag) or measured at relatively low concentrations. The highest concentration for any SVOC in soil was 20 mg/kg for bis (2-ethylhexyl) phthalate (a common component of plastics) in sample B-01 (0.5-1.0). There is no SCO for bis(2-ethylhexyl) phthalate in the New York State Brownfield Cleanup Program (Table 375-6.8(b)). Overall no SVOC industrial SCOs for soil were exceeded.

The analytical results for glycols and PCBs are provided in Table 3-5. The polyethylene glycol ranged from not detected to 160 mg/kg with an average of approximately 25 mg/kg. The two highest concentrations were 160 and 142.5 mg/kg at locations B-19 and B-13, respectively. There are no SCOs for glycols in Table 375-6.8(b). Propylene glycol was not detected in any of the samples. Concentrations of total PCBs in soil ranged from 0.179 to 2.73 mg/kg which are significantly lower than the applicable SCO for soil of 25 mg/kg. All individual PCB Aroclors were below 1 mg/kg except for one sample with 1.3 mg/kg.

The results for metals in soils are presented in Table 3-6. Overall, a number of metals were detected at various concentrations. The highest concentrations were noted for aluminum, calcium, iron and manganese which are also associated with Solvay waste. Only manganese exceeded the New York State Brownfield Cleanup Program industrial SCOs (Table 375-6.8(b)) which is capped at 10,000 mg/kg.

3.4 Groundwater Chemical Concentrations

Groundwater samples also were analyzed for VOCs, SVOCs, PCBs, glycols and metals. The analytical data for these samples are presented in Tables 3-7 through 3-10. The analytical results for VOCs in groundwater are presented in Table 3-7. These results indicate that VOCs were not detected, detected but not at quantifiable concentrations (indicated by a "J" flag) or measured at relatively low concentrations. The five highest VOC concentrations observed in groundwater were acetone at 160 and 80 µg/L in MW-1 and MW-3, respectively, Methyl-t-butyl ether (MTBE) at 110 and 80 µg/L in MW-1 and MW-3, respectively and total xylenes at 56 µg/L in MW-3. Some of these higher concentration data are also included in Figure 3.

The analytical results for SVOCs in groundwater are presented in Table 3-8. These results indicated that SVOCs were not detected, detected but not at quantifiable concentrations (indicated by a "J" flag) or measured at relatively low concentrations. The five highest SVOC concentrations observed in groundwater were 4-methylphenol at 60, 53 and 30.5 µg/L in MW-2, MW-3 and MW-5, respectively, 2-methylphenol at 27 µg/L in MW-3, and 2,4-dimethylphenol at 37 µg/L in MW-3.

The analytical results for glycols and PCBs are provided in Table 3-9. Polyethylene glycol was detected in one sample near the detection limit while propylene glycol was not detected in the samples. PCBs were not detected in the samples with one exception. Aroclor 1248 was reported in one sample at an estimated concentration of 0.3 µg/L (below the quantitation limit, as indicated by the "J" qualifier).

The analytical results for metals in groundwater are presented in Table 3-10. These results indicated that metals were not detected, detected but not at quantifiable concentrations (indicated by a "J" flag) or measured at significant concentrations. The highest metal concentrations observed in groundwater are for calcium, potassium and sodium. The next four highest metal concentrations observed in groundwater are at least two orders of magnitude lower and include aluminum, barium, iron and magnesium. These ubiquitous metals are associated with Solvay waste and may also be reflective of past disposal activities at this site when it served as a municipal dump.

4. DATA QUALITY REVIEW

This investigation was performed by qualified companies, including Brown and Caldwell Associates, on behalf of Roth Steel Corporation. Subcontractors included Parratt-Wolff which is a drilling contractor, Test America which is a New York State certified analytical laboratory (located in Amherst, New York) and D. W. Hannig, who is a New York State licensed surveyor who was hired to document monitoring well locations and casing elevations.

Quality assurance procedures detailed in the Work Plan were followed. In addition, a Data Usability Summary Report (DUSR) was prepared by Brown and Caldwell personnel and is attached as Appendix C. The DUSR provides an evaluation of the analytical data to determine whether or not the data, as presented, meets the project-specific criteria for data quality and data use. The DUSR was developed by reviewing and evaluating the analytical data package for data deficiencies, analytical protocol deviations and quality control problems. Although a few issues were identified in the review, the data were deemed, in general, to be usable for its intended purpose.

5. CONCLUSIONS

Consistent with the current site use and zoning, the soil sampling data were compared to the New York State Brownfield Cleanup Program industrial Soil Cleanup Objectives (SCOs, Table 375-6.8(b)). The industrial SCOs apply to sites involved in manufacture, production, fabrication or assembly processes and ancillary services. Only one constituent in soil (manganese) exceeded its SCO, which is actually a preset cap. Organic chemical concentrations in soil were relatively low. Metals were significantly elevated and reflect the components of Solvay waste, upon which the Site was constructed. Overall, concentrations of site-related constituents in shallow soil were found to be acceptable for industrial use.

Overall, organic chemical concentrations in groundwater were also relatively low (and substantially lower than the soil) but some metals were elevated which is likely due to the presence of the Solvay waste. Relatively low chemical concentrations in the groundwater are consistent with the presence in shallow soil of some petroleum-related constituents, and may also be associated with past land use activities including the disposal of Solvay waste and municipal refuse.

Based on the groundwater elevation contours on one date, the groundwater appears to flow towards an underground feature near the truck scale. In order to better understand groundwater flow at the facility, additional comprehensive rounds of groundwater levels would be taken at the six wells from the petroleum investigation (MW-1 through MW-6) together with the three wells that were installed as part of a solid waste investigation (MW-7 through MW-9). This information would be integrated in the revised draft of this report with a view to better understanding site conditions.

6. REFERENCES

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TABLES

TABLE 3-1. Soil Field Observations.

DRAFT

Location	Total Depth (ft, bgs)	PID Reading (ppm)	Observed Impacts	Interval Sampled
B-01	7	75	No visible impact	B-01-0-0.5
B-02	5	12	No visible impact	None
B-03	5	16	No visible impact	None
B-04	6	12	No visible impact	None
B-05	6	39	No visible impact	None
B-06	6	23	No visible impact	B-06-0.5-1
B-07	3	2.1	No visible impact	None
B-08	2	NA	No visible impact	B-08-0-0.5
B-09	6	45	No visible impact	B-09-4.5-5
B-10	6	97	No visible impact	B-10-0.5-1
B-11	2.5	4.5	No visible impact	None
B-12	3	2.5	No visible impact	B-12-0-0.5
B-13	6	103	Staining in 4.0-6.0' interval	B-13-0.5-1
B-14	3	15	No visible impact	None
B-15	2.5	27	No visible impact	B-15-0-0.5
B-16	4.5	16	No visible impact	B-16-0.5-1
B-17	4	1.4	Staining in 2.0-4.0' interval	None
B-18	6	43	Staining in 4.4-5.4' interval	B-18-0.5-1
B-19	5	119	No visible impact	B-19-0-0.5
B-20	6	18	No visible impact	None
B-21	6	59	No visible impact	None
B-22	5	44	No visible impact	B-22-0-0.5
B-23	6	18	No visible impact	None
B-24	6	138	No visible impact	B-24-1.5-2
B-25	6	101	No visible impact	None
B-26	6	6.6	No visible impact	None
B-27	6	18	No visible impact	B-27-0-0.5
B-28	6	12	No visible impact	None
B-29	6	196	No visible impact	B-29-0-0.5
B-30	6	85	No visible impact	None

NOTES:

Bgs Below ground surface
PID Photoionization detector
ppm Parts per million
Field observations were made on July 21 through 24, 2008.

TABLE 3-2. Groundwater Field Data.

Parameter	Unit	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
pH		11.8	11.4	12.6	12.7	7.6	12.6
Temperature	°C	16.6	14.2	15.2	12.5	16.5	13.4
Specific Conductivity	mS/cm	3.8	1.6	11	9.8	2.6	7.5
Turbidity	NTU	106	140	61	31	50	220
Dissolved oxygen	mg/L	7.8	8.3	5.3	7.5	11	14
Groundwater Elevation	ft	369.60	369.65	369.71	369.75	369.63	369.64
Hydraulic Conductivity*	cm/s	5.45×10^{-4}	2.54×10^{-3}	6.38×10^{-4}	1.45×10^{-3}	2.50×10^{-3}	3.95×10^{-3}

NOTES:

°C Degrees Celsius
mS Milli-Siemen
cm Centimeter
NTU Nephelometric turbidity units
mg/L Milligram per liter
ft Feet
* Refers to horizontal hydraulic conductivity in the generic fill

Data collected on 9/2-3, 2008.

TABLE 3-3. Volatile Organic Compounds (VOCs) in Soil (mg/kg).

DRAFT

COMPOUND	B01 (0-0.5)	B06 (0.5-1.0)	B08 (0-0.5)	B09 (4.5-5.0)	B10 (0.5-1.0)	SCO
Chloromethane	U	U	U	U	U	NA
Bromomethane	U	U	U	U	U	NA
Vinyl chloride	U	U	U	U	U	27
Chloroethane	U	U	U	U	U	NA
Methylene chloride	0.013	0.015	0.006	J 0.004	U	1000
Acetone	0.310	0.034	U	0.059	U	1000[c]
Carbon disulfide	J 0.001	J 0.001	U	0.006	J 0.002	NA
1,1-Dichloroethene	U	U	U	U	U	1000[c]
1,1-Dichloroethane	U	U	U	U	U	480
Chloroform	U	U	U	U	U	700
1,2-Dichloroethane	U	U	U	U	U	60
2-Butanone	0.150	U	U	J 0.010	U	NA
1,1,1-Trichloroethane	U	U	U	U	U	1000[c]
Carbon tetrachloride	U	U	U	U	U	44
Bromodichloromethane	U	U	U	U	U	NA
1,2-Dichloropropane	U	U	U	U	U	NA
cis-1,3-Dichloropropene	U	U	U	U	U	NA
Trichloroethene	U	U	U	U	U	400
Dibromochloromethane	U	U	U	U	U	NA
1,1,2-Trichloroethane	U	U	U	U	U	NA
Benzene	U	U	U	J 0.002	0.120	89
trans-1,3-Dichloropropene	U	U	U	U	U	NA
Bromoform	U	U	U	U	U	NA
4-methyl-2-pentanone	0.093	U	U	U	U	NA
2-Hexane	J 0.021	U	U	U	U	NA
Tetrachloroethene	J 0.002	U	U	U	J 0.004	300
Toluene	0.060	U	U	U	J 0.140	1000
1,1,2,2-Tetrachloroethane	U	U	U	U	U	NA
Chlorobenzene	U	U	U	U	U	1000[c]
Ethylbenzene	0.020	U	U	U	0.490	780
Styrene	0.005	U	U	U	U	NA
Total xylenes	0.140	U	U	U	1.800	1000
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	NA
cis-1,2-Dichloroethene	U	U	U	U	U	1000[c]
trans-1,2-Dichloroethene	U	U	U	U	U	1000[c]
Dichlorodifluoromethane	U	U	U	U	U	NA
Trichlorofluoromethane	J 0.001	U	U	U	U	NA
Methyl acetate	U	U	U	U	U	NA
Methyl-t-butyl ether	U	U	U	U	U	1000
Cyclohexane	J 0.002	U	U	J 0.005	0.150	NA
Methycyclohexane	J 0.001	U	U	0.022	0.057	NA
1,2-Dibromoethane	J 0.005	U	U	U	U	NA
Isopropylbenzene	U	U	U	0.003	0.021	NA
1,3-Dichlorobenzene	U	U	U	U	U	560
1,4-Dichlorobenzene	U	U	U	U	U	250
1,2-Dichlorobenzene	U	U	U	U	U	1000
1,2-Dibromo-3-chloropropane	U	U	U	U	U	NA
1,2,4-Trichlorobenzene	U	U	U	U	U	NA

See notes on page 4 of 4.

TABLE 3-3. Volatile Organic Compounds (VOCs) in Soil (mg/kg), cont'd.

DRAFT

COMPOUND	B12 (0-0.5)	B13 (0.5-1.0)*	B15 (0-0.5)	B16 (0.5-1.0)	B18 (0.5-1.0)	SCO
Chloromethane	U	U	U	U	U	NA
Bromomethane	U	U	U	U	U	NA
Vinyl chloride	U	U	U	J 0.001	U	27
Chloroethane	U	U	U	U	U	NA
Methylene chloride	0.007	J 0.028	0.008	J 0.002	0.007	1000
Acetone	J 0.018	0.190	BJ 0.019	U	J 0.007	1000[c]
Carbon disulfide	U	J 0.006	J 0.002	J 0.001	J 0.001	NA
1,1-Dichloroethene	U	U	J 0.002	U	U	1000[c]
1,1-Dichloroethane	U	U	U	U	U	480
Chloroform	U	U	U	U	U	700
1,2-Dichloroethane	U	U	U	U	U	60
2-Butanone	U	U	U	U	U	NA
1,1,1-Trichloroethane	U	U	U	U	U	1000[c]
Carbon tetrachloride	U	U	U	U	U	44
Bromodichloromethane	U	U	U	U	U	NA
1,2-Dichloropropane	U	U	U	U	U	NA
cis-1,3-Dichloropropene	U	U	U	U	U	NA
Trichloroethene	U	U	U	U	U	400
Dibromochloromethane	U	U	U	U	U	NA
1,1,2-Trichloroethane	U	U	U	U	U	NA
Benzene	U	U	J 0.002	U	U	89
trans-1,3-Dichloropropene	U	U	U	U	U	NA
Bromoform	U	U	U	U	U	NA
4-methyl-2-pentanone	U	U	J 0.021	U	U	NA
2-Hexane	U	U	U	U	U	NA
Tetrachloroethene	U	0.052	U	0.008	J 0.002	300
Toluene	J 0.002	0.097	B 0.300	BJ 0.002	U	1000
1,1,2,2-Tetrachloroethane	U	U	U	U	U	NA
Chlorobenzene	U	U	U	U	U	1000[c]
Ethylbenzene	U	0.112	0.018	J 0.001	U	780
Styrene	U	U	U	U	U	NA
Total xylenes	J 0.004	15	0.094	J 0.007	U	1000
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	NA
cis-1,2-Dichloroethene	U	U	U	J 0.003	U	1000[c]
trans-1,2-Dichloroethene	U	U	U	U	U	1000[c]
Dichlorodifluoromethane	U	U	U	U	U	NA
Trichlorofluoromethane	U	U	0.009	U	U	NA
Methyl acetate	U	U	U	U	U	NA
Methyl-t-butyl ether	U	U	U	U	U	1000
Cyclohexane	U	U	J 0.003	J 0.001	J 0.002	NA
Methycyclohexane	U	U	J 0.002	U	J 0.002	NA
1,2-Dibromoethane	U	U	U	U	U	NA
Isopropylbenzene	U	0.051	J 0.002	U	U	NA
1,3-Dichlorobenzene	U	U	U	U	U	560
1,4-Dichlorobenzene	U	U	U	U	U	250
1,2-Dichlorobenzene	U	J 0.014	U	U	U	1000
1,2-Dibromo-3-chloropropane	U	U	U	U	U	NA
1,2,4-Trichlorobenzene	U	U	U	U	U	NA

See notes on page 4 of 4.

TABLE 3-3. Volatile Organic Compounds (VOCs) in Soil (mg/kg), cont'd.

DRAFT

COMPOUND	B19 (0-0.5)	B22 (0-0.5)	B24 (1.5-2.0)	B27 (0-0.5)	B29 (0-0.5)	SCO
Chloromethane	U	U	U	U	U	NA
Bromomethane	U	U	U	U	U	NA
Vinyl chloride	U	U	U	U	U	27
Chloroethane	U	U	U	U	U	NA
Methylene chloride	0.008	0.015	0.015	0.010	0.019	1000
Acetone	B 0.140	B 0.480	B 0.310	BJ 0.008	B 0.250	1000[c]
Carbon disulfide	J 0.002	J 0.003	0.016	U	J 0.002	NA
1,1-Dichloroethene	U	U	U	U	U	1000[c]
1,1-Dichloroethane	U	U	U	U	U	480
Chloroform	U	U	U	U	U	700
1,2-Dichloroethane	U	U	U	U	U	60
2-Butanone	0.040	0.038	0.086	U	0.100	NA
1,1,1-Trichloroethane	U	U	U	U	U	1000[c]
Carbon tetrachloride	U	U	U	U	U	44
Bromodichloromethane	U	U	U	U	U	NA
1,2-Dichloropropane	U	U	U	U	U	NA
cis-1,3-Dichloropropene	U	U	U	U	U	NA
Trichloroethene	U	U	U	U	U	400
Dibromochloromethane	U	U	U	U	U	NA
1,1,2-Trichloroethane	U	U	U	U	U	NA
Benzene	0.015	J 0.066	0.190	U	0.031	89
trans-1,3-Dichloropropene	U	U	U	U	U	NA
Bromoform	U	U	U	U	U	NA
4-methyl-2-pentanone	J 0.018	0.056	J 0.010	U	J 0.020	NA
2-Hexanone	U	U	J 0.009	U	J 0.022	NA
Tetrachloroethene	J 0.002	0.005	J 0.001	J 0.001	U	300
Toluene	0.250	3.400	3.1	BJ 0.002	0.970	1000
1,1,2,2-Tetrachloroethane	U	U	U	U	U	NA
Chlorobenzene	U	U	U	U	U	1000[c]
Ethylbenzene	0.130	2.300	0.160	U	1.100	780
Styrene	U	U		U	U	NA
Total xylenes	1.900	1.700	3.6	J 0.004	7.500	1000
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	NA
cis-1,2-Dichloroethene	U	J 0.002	U	U	U	1000[c]
trans-1,2-Dichloroethene	U	U	U	U	U	1000[c]
Dichlorodifluoromethane	U	U	U	U	U	NA
Trichlorofluoromethane	U	U	U	U	U	NA
Methyl acetate	U	U	U	U	U	NA
Methyl-t-butyl ether	U	U	U	U	U	1000
Cyclohexane	J 0.004	0.049	0.023	U	0.011	NA
Methycyclohexane	J 0.003	0.026	0.013	U	0.014	NA
1,2-Dibromoethane	U	U	U	U	U	NA
Isopropylbenzene	0.012	0.028	0.009	U	0.026	NA
1,3-Dichlorobenzene	U	U	U	U	U	560
1,4-Dichlorobenzene	U	U	U	U	U	250
1,2-Dichlorobenzene	U	U	U	U	U	1000
1,2-Dibromo-3-chloropropane	U	U	U	U	U	NA
1,2,4-Trichlorobenzene	U	U	U	U	U	NA

See notes on page 4 of 4.

TABLE 3-3. Volatile Organic Compounds (VOCs) in Soil (mg/kg), cont'd.

DRAFT

NOTES:

U	Not detected
B	Analyte found in associated blank.
J	Below quantitation limit
SCO	Table 375-6.8(b) Soil Cleanup Objectives (Industrial).
c	SCO capped at maximum value of 1,000 mg/kg
*	Average of duplicate samples
NA	None available

Samples were collected on July 21 through 24, 2008.

TABLE 3-4. Semi-Volatile Organic Compounds (SVOCs) in Soil (mg/kg).

DRAFT

COMPOUND	B01 (0-0.5)	B06 (0.5-1.0)	B08 (0-0.5)	B09 (4.5-5.0)	B10 (0.5-1.0)	B12 (0-0.5)	B13 (0.5-1.0)*	B15 (0-0.5)	B16 (0.5-1.0)	B18 (0.5-1.0)	B19 (0-0.5)	B22 (0-0.5)	B24 (1.5-2.0)	B27 (0-0.5)	B29 (0-0.5)	SCO
Phenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	1000[c]
Bis (2-chloroethyl) ether	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
2-Chlorophenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
2-Methylphenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
2,2'-Oxybis (1-Chloropropane)	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
4-Methylphenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
n-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Hexachloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Nitrobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Isophorone	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
2-Nitrophenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
2,4-Dimethlyphenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Bis(2-chloroethoxy)methane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Naphthalene	J 0.72	J 0.170	U	J 0.450	J 0.110	U	2.650	J 0.093	J 0.160	U	J 0.630	U	J 0.180	J 0.130	J 1.100	1000[c]
4-Chloroaniline	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Hexachlorobutadiene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
2-Methlynaphthalene	J 1.2	J 0.230	U	J 1.700	J 0.180	U	5.550	J 0.200	J 0.330	U	J 1.000	U	J 0.280	J 0.210	J 1.500	NA
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
2-Chloronaphthalene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
2-Nitroaniline	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Dimethylphthalate	16	J 0.190	J 0.089	U	J 0.570	J 0.420	J 0.315	J 0.096	J 0.900	J 0.90	J 0.160	U	U	4.900	J 0.370	NA
Acenaphthylene	U	U	U	J 1.5	J 0.097	U	J 0.075	U	J 0.160	U	J 0.084	U	U	U	U	1000[c]
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
3-Nitroaniline	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Acenaphthene	J 0.350	U	U	U	U	U	U	U	J 0.170	U	U	U	U	U	U	1000[c]

See notes on page 3 of 3.

TABLE 3-4. Semi-Volatile Organic Compounds (SVOCs) in Soil (mg/kg), cont'd.

DRAFT

COMPOUND	B01 (0-0.5)	B06 (0.5-1.0)	B08 (0-0.5)	B09 (4.5-5.0)	B10 (0.5-1.0)	B12 (0-0.5)	B13 (0.5-1.0)*	B15 (0-0.5)	B16 (0.5-1.0)	B18 (0.5-1.0)	B19 (0-0.5)	B22 (0-0.5)	B24 (1.5-2.0)	B27 (0-0.5)	B29 (0-0.5)	SCO
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
4-Nitrophenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Dibenzofuran	J 0.019	U	U	J 1.600	U	U	J 0.101	U	J 0.170	U	U	U	U	U	U	NA
2,4-Dinitrotoluene	U	U	U	J 0.510	U	U	U	U	U	U	U	U	U	U	U	NA
Diethyl phthalate	U	U	U	U	U	U	U	U	U	U	U	J 0.290	U	U	J 1.400	NA
4-Chlorophenyl phenyl ether	U	U	U	U	U	U	J 0.150	U	U	U	U	U	U	U	U	NA
Fluorene	J 0.500	J 0.076	U	U	J 0.170	U	J 0.110	U	J 0.260	U	J 0.083	U	U	J 0.110	J 0.120	1000[c]
4-Nitroaniline	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
N-nitrosodiphenylamine	U	U	U	J 1.400	U	U	U	U	U	U	U	U	U	U	U	NA
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Hexachlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Pentachlorophenol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	55
Phenanthrene	4.000	J 0.410	J 0.150	U	J 1.000	J 0.190	J 0.700	J 0.180	2.000	J 0.210	J 0.640	U	J 0.350	J 1.000	J 0.710	1000[c]
Anthracene	J 1.1	J 0.110	U	U	J 0.240	J 0.081	J 0.405	U	J 0.330	U	J 0.140	U	J 0.100	J 0.210	J 0.130	1000[c]
Di-n-butylphthalate	U	U	U	U	U	U	U	U	U	U	U	U	U	U	J 0.990	
Fluoranthene	7.1	J 0.410	J 0.340	U	J 1.400	J 0.420	J 2.100	J 0.240	2.000	J 0.350	J 0.750	J 0.086	J 0.420	J 0.790	J 0.620	1000[c]
Pyrene	5.6	J 0.980	J 0.370	U	J 1.400	J 0.480	J 1.600	J 0.220	1.900	J 0.350	J 0.690	J 0.087	J 0.360	J 1.700	J 0.680	1000[c]
Butylbenzylphthalate	J 1.4	U	U	U	J 0.560	U	U	U	J 1.100	J 0.830	J 0.990	U	J 0.980	J 1.400	3.100	NA
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Benzo(a)anthracene	J 3.000	J 0.410	J 0.210	U	J 0.640	J 0.330	J 0.795	J 0.140	J 0.830	J 0.200	J 0.330	U	J 0.200	J 0.520	J 0.300	11
Chrysene	BJ 3.3	BJ 0.660	BJ 0.420	B 3.500	BJ 0.920	BJ 0.510	BJ 0.965	BJ 0.330	BJ 1.100	BJ 0.420	BJ 0.510	BJ 0.260	BJ 0.370	BJ 0.740	BJ 0.510	110
Bis(2-ethylhexyl)phthalate	20.000	U	U	J 1.400	U	10.000	13.00	5.400	6.400	4.200	14.000	2.100	9.700	9.900	5.500	NA
Di-n-octylphthalate	5.400	U	U	U	U	2.000	3.600	2.300	2.200	2.100	3.200	1.800	1.800	3.600	2.600	NA
Benzo(b)fluoranthene	5.300	J 0.690	J 0.320	U	J 1.100	J 0.920	J 1.300	J 0.140	J 1.100	J 0.320	J 0.420	U	J 0.300	J 0.510	J 0.250	11
Benzo(k)fluoranthene	U	U	BJ 0.230	U	U	U	U	J 0.180	J 0.430	J 0.260	J 0.290	U	J 0.230	J0.320	J 0.240	110
Benzo(a)pyrene	J 3.4	J 0.350	J 0.240	J 1.400	J 0.520	J 0.450	J 0.665	J 0.092	J 0.900	J 0.240	J 0.300	U	J 0.200	J 0.420	J 0.180	1.1
Indeno(1,2,3-cd)pyrene	J 1.8	J 0.210	J 0.140	J 0.530	J 0.240	J 0.240	J 0.270	U	J 0.570	J 0.220	J 0.230	U	J 0.160	J 0.240	J 0.086	11
Dibenz(a,h)anthracene	J 0.160	J 0.089	U	J 0.150	U	J 0.078	U	U	U	U	J 0.083	U	U	U	U	1.1
Benzo(g,h,i)perylene	J 1.900	J 0.220	J 0.180	J 0.500	J 0.270	J 0.250	J 0.310	J 0.099	J 0.700	J 0.290	J 0.290	U	J 0.170	J 0.290	J 0.110	1000[c]
Benzyl alcohol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
N-Nitrosodimethylamine	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA

See notes on page 3 of 3

TABLE 3-4. Semi-Volatile Organic Compounds (SVOCs) in Soil (mg/kg), cont'd.

NOTES:

U Not detected
B Analyte found in associated blank.
J Below quantitation limit
SCO Table 375-6.8(b) Soil Cleanup Objectives (Industrial).
c SCO capped at maximum value of 1,000 mg/kg
* Average of duplicate samples
NA None available
Samples were collected on July 21 through – 24, 2008.

TABLE 3-5. Polychlorinated Biphenyls (PCBs) and Glycols in Soil (mg/kg).

Parameter	B01 (0-0.5)	B06 (0.5-1.0)	B08 (0-0.5)	B09 (4.5-5.0)	B10 (0.5-1.0)	B12 (0-0.5)	B13 (0.5-1.0)*	B15 (0-0.5)	B09 (4.5-5.0)	B18 (0.5-1.0)	B19 (0-0.5)	B22 (0-0.5)	B24 (1.5-2.0)	B27 (0-0.5)	B29 (0-0.5)	SCO
Glycols																
Ethylene glycol	U	U	U	U	U	8.100	142.5	U	U	U	160.0	U	54.00	J 1.60	U	NA
Propylene glycol	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Polychlorinated Biphenyls																
Aroclor 1016	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Aroclor 1221	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Aroclor 1232	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Aroclor 1242	0.200	0.290	0.230	0.073	0.290	0.270	0.155	0.210	U	U	0.250	U	U	U	0.076	NA
Aroclor 1248	U	U	U	U	U	U	U	U	1.300	0.780	U	0.150	0.850	0.460	U	NA
Aroclor 1254	0.140	0.200	0.260		0.210	0.016	0.084	0.077	0.910	0.410	0.180	0.110	0.720	0.240	0.040	NA
Aroclor 1260	0.063	0.096	0.110	0.130	0.100	0.110	0.039	0.077	0.520	0.450	0.240	0.074	0.280	0.270	0.063	NA
Total PCBs	0.513	0.586	0.600	0.203	0.600	0.540	0.236	0.364	2.730	1.640	0.670	0.334	1.850	0.970	0.179	25

NOTES:

PCB Polychlorinated biphenyls
U Not detected
J Below quantitation limit
SCO Table 375-6.8(b) Soil Cleanup Objectives (Industrial).
* Average of duplicate samples
NA None available
Samples were collected on July 21 through 24, 2008.

TABLE 3-6. Metals in Soil (mg/kg).

Parameter	B01 (0-0.5)	B06 (0.5-1.0)	B08 (0-0.5)	B09 (4.5-5.0)	B10 (0.5-1.0)	B12 (0-0.5)	B13 (0.5-1.0)*	B15 (0-0.5)	B16 (0.5-1.0)	B18 (0.5-1.0)	B19 (0-0.5)	B22 (0-0.5)	B24 (1.5-2.0)	B27 (0-0.5)	B29 (0-0.5)	SCO
Aluminum	2140	3200	2620	2830	2520	1840	5835	1180	3080	2370	2190	1510	4340	961	1680	NA
Antimony	1.8	2.4	1.2	6.3	1.9	2.1	605	1.0	1.7	1.9	126	2.0	3.7	2.0	2.0	NA
Arsenic	2.9	3.2	3.0	26.1	5.0	3.7	7.15	1.9	8.3	3.1	5.4	3.0	3.9	1.3	2.7	16
Barium	112	76.2	112	3010	176	105	86	95.7	210	90.0	57.4	107	81.1	33.6	79.9	10000[d]
Beryllium	0.23	0.33	0.32	0.23	0.28	0.24	0.30	0.22	0.28	0.26	0.12	0.22	0.23	0.11	0.19	2700
Cadmium	3.4	1.5	1.6	23.6	2.1	2.4	2.05	1.1	11.0	2.2	2.0	2.3	3.1	1.5	3.5	60
Calcium	187000	237000	222000	109000	233000	261000	166500	260000	194000	226000	53600	217000	270000	82000	144000	NA
Chromium	30.9	34.7	25.6	208	32.3	27.7	185	13.7	62.6	60.7	35.6	36.3	32.3	17.8	33.7	800
Cobalt	3.8	3.6	3.9	11.6	5.3	3.2	8.6	2.2	6.2	4.3	4.1	3.8	5.0	7.2	4.6	NA
Copper	98.1	89.2	52.1	241	219	108	111	52.2	5460	241	77.9	78.2	150	48.0	96.8	10000[d]
Iron	30400	15400	13800	82300	21800	29300	40700	17500	40700	43900	38000	46200	25300	22300	55000	NA
Lead	169	119	72.6	1690	330	151	374	58.9	300	124	830	151	191	389	141	3900
Manganese	29000	43500	42200	10200	33000	26100	24000	33900	33200	27000	6780	25400	9030	11800	29000	10000[d]
Magnesium	234	219	218	3600	253	257	525	173	343	344	222	338	229	140	308	NA
Nickel	24.8	21.9	20.4	171	43.1	26.5	101	11.4	51.7	33.2	29.2	25.8	31.7	22.1	26.4	10000[d]
Potassium	647	947	1120	1310	829	558	700	486	673	621	336	533	474	347	498	NA
Selenium	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	6800
Silver	B 0.49	0.35	0.25	0.92	0.41	0.54	0.725	0.74	1.0	0.75	0.86	6.4	1.2	0.33	1.1	6800
Mercury	0.476	0.105	0.164	6.4	0.351	0.331	2.38	0.089	2.2	0.380	0.186	0.121	0.416	0.412	0.200	5.7[j]
Sodium	500	348	279	2120	402	332	495	298	413	286	275	345	386	184	382	NA
Thallium	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
Vanadium	8.5	47.1	11.9	19.1	9.1	8.3	25.5	6.4	36.6	44.8	11.8	9.4	10.9	4.4	8.0	NA
Zinc	1030	367	298	21400	469	636	466	586	1520	611	642	699	709	367	1260	10000[d]

NOTES:

U Not detected
B Below quantitation limit
SCO Table 375-6.8(b) Soil Cleanup Objectives (Industrial).
* Average of duplicate samples
NA None available
Samples were collected on July 21 through 24, 2008.

d SCO capped at maximum value of 10,000 mg/kg
j Lower of values for elemental or inorganic mercury.

TABLE 3-7. Volatile Organic Compounds (VOCs) in Groundwater (μg/L).

DRAFT

Parameters	MW-1	MW-2	MW-3	MW-4	MW-5*	MW-6
Acetone	47	20	80	160	19.5	25
Benzene	3.9	1.7	12	J 2.6	J 0.68	U
Bromodichloromethane	U	U	U	U	U	U
Bromoform	U	U	U	U	U	U
Bromomethane	U	U	U	U	U	U
2-Butanone	8.0	J 3.3	16	28	J 3.65	J 4.6
Carbon disulfide	U	U	U	U	U	U
Carbon tetrachloride	U	U	U	U	U	U
Chlorobenzene	U	U	U	U	U	U
Chloroethane	U	U	U	U	U	U
Chloroform	U	U	U	U	U	U
Chloromethane	U	U	U	U	U	U
Cyclohexane	1.0	2.8	2.3	U	1.25	3.7
1,2-Dibromoethane	U	U	U	U	U	U
Dibromochloromethane	U	U	U	U	U	U
1,2-Dibromo-3-Chloropropane	U	U	U	U	U	U
1,2-Dichlorobenzene	U	U	U	U	U	U
1,3-Dichlorobenzene	U	U	U	U	U	U
1,4-Dichlorobenzene	U	U	U	U	U	U
Dichlorodifluoromethane	U	U	U	U	U	U
1,1-Dichloroethane	U	U	U	U	U	U
1,2-Dichloroethane	U	U	J 0.94	U	U	U
1,1-Dichloroethene	U	U	U	U	U	U
Cis-1,2-Dichloroethene	U	U	U	U	U	U
Trans-1,2-Dichloroethene	U	U	U	U	U	U
1,2-Dichloropropane	U	U	U	U	U	U
Cis-1,3-dichloropropene	U	U	U	U	U	U
Trans-1,3-dichloropropene	U	U	U	U	U	U
Ethylbenzene	J 0.92	U	12	6.0	J 0.57	1.8
2-Hexanone	U	U	U	U	U	U
Isopropylbenzene	U	U	U	U	U	U
Methyl Acetate	U	U	U	U	U	U
Methylcyclohexane	J 0.56	1.0	1.1	U	2.3	U
Methylene chloride	U	U	U	U	U	U
4-Methyl-2-pentanone	U	U	U	U	U	U
Methyl Tert-Butyl Ether	110	24	80	24	25	32
Styrene	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U
Tetrachloroethene	U	U	U	U	U	U
Toluene	1.2	U	7.3	16	J 0.10	4.7
1,2,4-Trichlorobenzene	U	U	U	U	U	U
1,1,1-Trichloroethane	U	U	U	U	U	U
1,1,2-Trichloroethane	U	U	U	U	U	U
1,1,2-Trichloro-1,2,2-Trifluorethane	U	U	U	U	U	U
Trichlorofluoromethane	U	U	U	U	U	U
Trichloroethene	U	U	U	U	U	U
Vinyl chloride	1.1	U	2.7	10	U	J 0.98
Total Xylenes	4.9	U	56	33	3.7	7.4

U Not detected

J Below quantitation limit

* Average of duplicate samples

Samples were collected on 9/2-3, 2008

TABLE 3-8. Semi-Volatile Organic Compounds (SVOCs) in Groundwater (μg/L).

DRAFT

COMPOUND	MW-1	MW-2	MW-3	MW-4	MW-5*	MW-6
Benzaldehyde	J 0.4	U	U	U	U	U
Phenol	J 4	J 2	25	J4	9.5	8
Bis (2-chloroethyl) ether	U	U	U	U	U	U
2-Chlorophenol	U	U	U	U	U	U
2-Methylphenol	J 0.9	U	27	J 4	J 3	11
2,2'-Oxybis (1-Chloropropane)	U	U	U	U	U	U
Acetophenone	U	U	U	J 2	U	U
4-Methylphenol	6	J 0.6	60	53	30.5	22
n-Nitroso-di-n-propylamine	U	U	U	U	U	U
Hexachloroethane	U	U	U	U	U	U
Nitrobenzene	U	U	U	U	U	U
Isophorone	U	U	U	U	U	U
2-Nitrophenol	U	U	U	U	U	U
2,4-Dimethlyphenol	J 1	U	37	8	6	13
Bis(2-chloroethoxy)methane	U	U	U	U	U	U
2,4-Dichlorophenol	U	U	U	U	U	U
Naphthalene	8	J 0.2	18	5	8	12
4-Chloroaniline	U	U	U	U	U	U
Hexachlorobutadiene	U	U	U	U	U	U
Caprolactam	U	U	U	U	U	U
4-Chloro-3-methylphenol	U	U	U	U	U	U
2-Methlynaphthalene	J 1	U	J 3	U	J 4	J 1
Hexachlorocyclopentadiene	U	U	U	U	U	U
2,4,6-Trichlorophenol	U	U	U	U	U	U
2,4,5-Trichlorophenol	U	U	U	U	U	U
Biphenyl	J 0.3	U	J 0.4	J 0.4	J 0.45	J 0.3
2-Chloronaphthalene	U	U	U	U	U	U
2-Nitroaniline	U	U	U	U	U	U
Dimethylphthalate	U	U	U	U	U	U
Acenaphthylene	U	U	J 0.2	J 0.2	U	J 0.4
2,6-Dinitrotoluene	U	U	U	U	U	U
3-Nitroaniline	U	U	U	U	U	U
Acenaphthene	J 1	U	J 1	J 1	J 2	J 0.5
2,4-Dinitrophenol	U	U	U	U	U	U
4-Nitrophenol	U	U	U	U	U	U
Dibenzofuran	J 0.7	U	J 1	J 1	J 1	J 0.3
2,4-Dinitrotoluene	U	U	U	U	U	U
Diethyl phthalate	U	U	U	U	U	U
4-Chlorophenyl phenyl ether	U	U	U	U	U	U
Fluorene	U	U	J 2	J 2	J 3	J 0.4
4-Nitroaniline	U	U	U	U	U	U
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U
N-nitrosodiphenylamine	U	U	U	U	U	U
4-Bromophenyl-phenylether	U	U	U	U	U	U
Hexachlorobenzene	U	U	U	U	U	U
Atrazine	U	U	U	U	U	U
Pentachlorophenol	U	U	U	U	U	U
Phenanthrene	J 2	J 0.5	J 4	J 3	J 4	J 2
Anthracene	J 0.7	J 0.2	J 1	J 1	J 0.9	J 0.3
Carbazole	J 1	J 0.2	J 2	J 2	J 2	J 0.7
Di-n-butylphthalate	J 0.5	U	J 0.4	J 0.7	U	J 0.3
Fluoranthene	J 0.4	J 0.3	J 1	J 0.6	J 0.7	J 0.6

TABLE 3-8. Semi-Volatile Organic Compounds (SVOCs) in Groundwater (μg/L).

DRAFT

COMPOUND	MW-1	MW-2	MW-3	MW-4	MW-5*	MW-6
Pyrene	J 0.3	U	J 0.8	J 0.6	J 0.4	J 0.2
Butylbenzylphthalate	U	U	U	U	U	U
3,3'-Dichlorobenzidine	U	U	U	U	U	U
Benzo(a)anthracene	U	U	J 0.2	J 0.2	J 0.55	J 0.2
Chrysene	BJ 0.6	U	BJ 0.7	BJ 0.6	BJ 0.65	BJ 0.6
Bis(2-ethylhexyl)phthalate	U	U	U	U	U	U
Di-n-octylphthalate	U	U	U	U	U	U
Benzo(b)fluoranthene	U	U	U	U	U	U
Benzo(k)fluoranthene	U	U	U	U	U	U
Benzo(a)pyrene	U	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U
Dibenz(a,h)anthracene	U	U	U	U	U	U
Benzo(g,h,i)perylene	U	U	U	U	U	U

NOTES:

U Not detected

B Analyte found in associated blank.

J Below quantitation limit

* Average of duplicate samples

Samples were collected on 9/2-3, 2008.

TABLE 3-9. Polychlorinated Biphenyls (PCBs) and Glycols in Groundwater ($\mu g/L$).

Parameter	MW-1	MW-2	MW-3	MW-4	MW-5*	MW-6
Glycols						
Ethylene glycol	U	U	U	J 2600	J 1200	U
Propylene glycol	U	U	U	U	U	U
Polychlorinated Biphenyls						
Aroclor 1016	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	U	U
Aroclor 1232	U	U	U	U	U	U
Aroclor 1242	U	U	U	U	U	U
Aroclor 1248	U	U	U	J 0.30	U	U
Aroclor 1254	U	U	U	U	U	U
Aroclor 1260	U	U	U	U	U	U
Total PCBs	U	U	U	J 0.30	U	U

NOTES:

PCBs Polychlorinated biphenyls
U Not detected
J Below quantitation limit
* Average of duplicate samples
Samples were collected on 9/2-3, 2008.

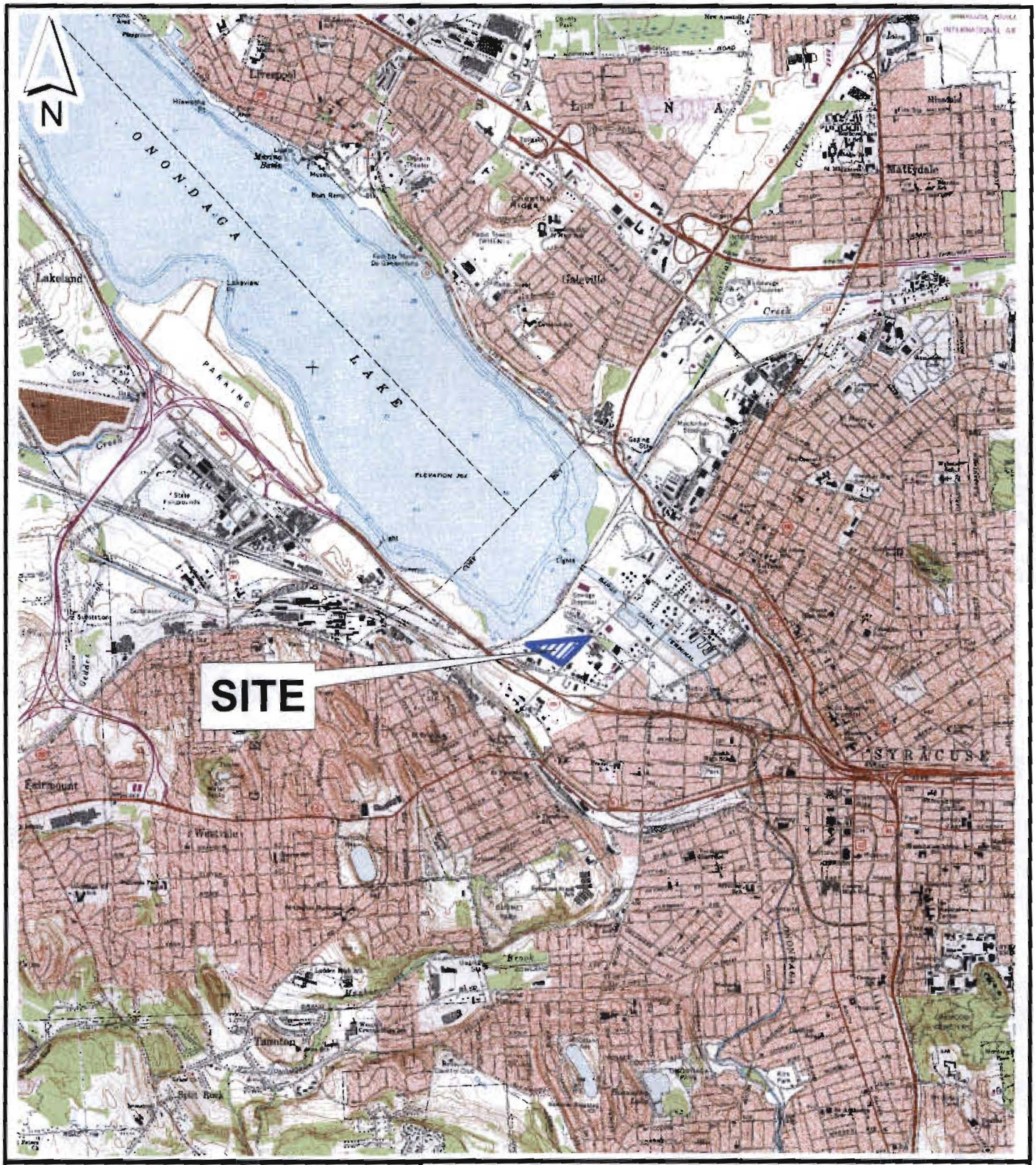
TABLE 3-10. Metals in Groundwater (µg/L).

Parameter	MW-1	MW-2	MW-3	MW-4	MW-5*	MW-6
Aluminum	218	826	214	284	B 121	290
Antimony	U	U	U	U	U	U
Arsenic	B 8	U	B 4.1	B 4.9	U	U
Barium	1980	616	2390	1290	1700	169
Beryllium	U	U	B 0.47	0.38	U	U
Cadmium	U	U	U	U	U	U
Calcium	307000	111000	112000	941000	119000	615000
Chromium	U	B 2.0	B 1.2	B 1.5	U	U
Cobalt	U	U	U	U	U	U
Copper	17.5	B 5.0	B 7.9	13.6	B 3.65	B 2.0
Iron	1190	1640	333	355	16500	190
Lead	5.2	8.4	18	5.1	7.4	U
Magnesium	9910	6670	455	607	28500	632
Manganese	26.2	20.4	7.6	8.6	139	11.5
Nickel	29.6	B 6.4	10.2	29.6	10.9	B 1.7
Potassium	64800	44400	45300	32600	64950	34000
Selenium	U	U	U	U	U	U
Silver	U	U	U	U	U	U
Mercury	U	U	1.7	U	U	1.0
Sodium	432000	189000	328000	174000	306000	262000
Thallium	U	U	U	U	U	U
Vanadium	U	B 4.0	U	U	U	U
Zinc	136	19.8	30.7	40.0	19.2	U

NOTES:

U Not detected
B Below quantitation limit
* Average of duplicate samples
Samples were collected on 9/2-3, 2008.

FIGURES



0 2,400 4,800 9,600

SCALE IN FEET

SOURCE:

USGS 7.5 MIN. TOPOGRAPHIC MAP
SYRACUSE EAST QUAD, 1978

FIGURE 1

SITE LOCATION MAP
PETROLEUM INVESTIGATION REPORT

PROJECT LOCATION	DATE	PROJECT NUMBER
ROTH STEEL CORPORATION SYRACUSE, NEW YORK	OCT 2008	131364.040

BROWN AND CALDWELL
SYRACUSE, NEW YORK

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P:\ES Clients\Roth Steel\CAD Files\ Soil_Sample_Locations_Map_old.mxd csomerlot

Legend

B-27 SOIL SAMPLING LOCATIONS

NOTE:
BASE MAP PREPARED BY D. W. HANNING, L.S.
DATED 6/29/2004

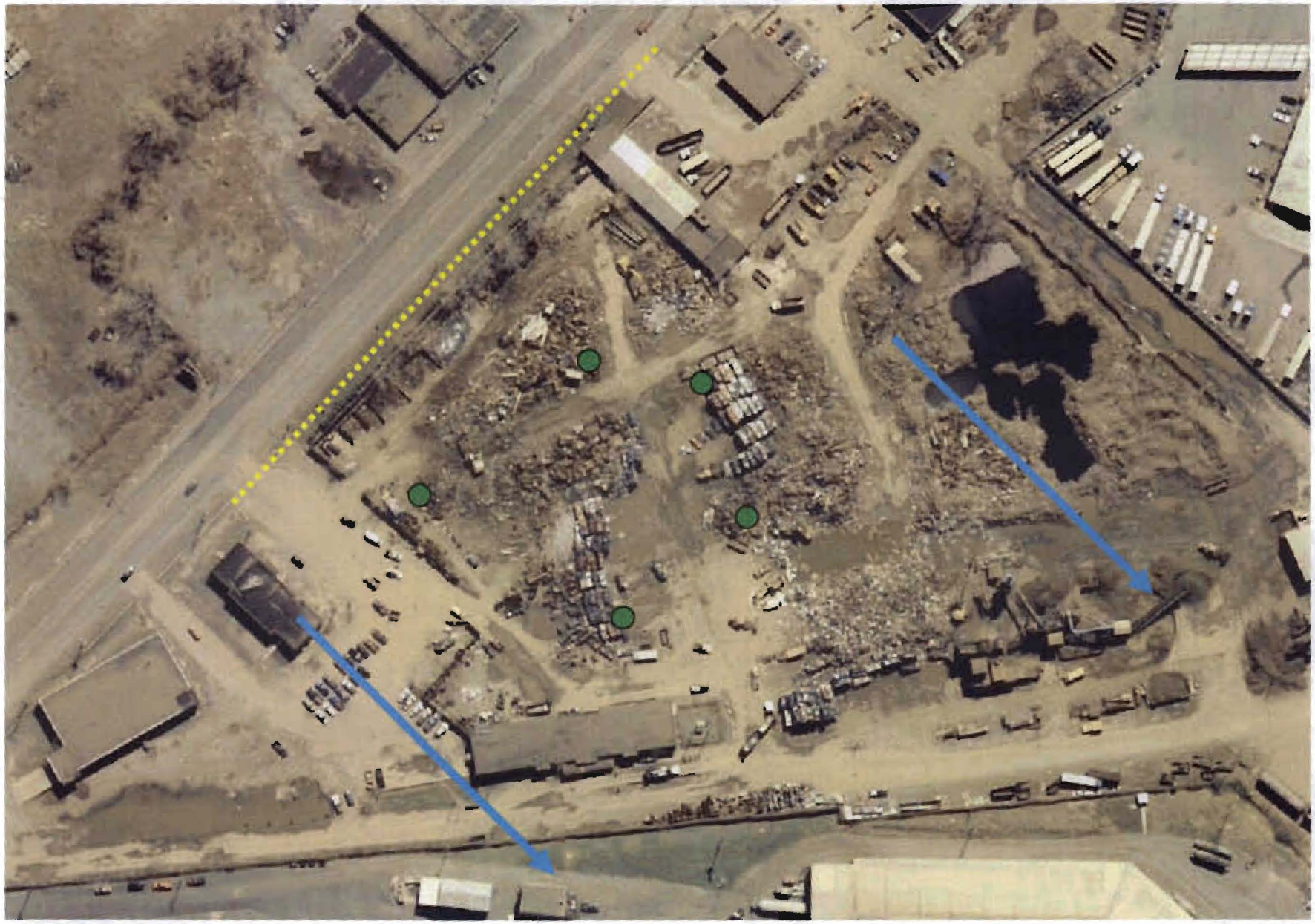
AERIAL IMAGES COURTSEY OF NYS GIS CLEARINGHOUSE

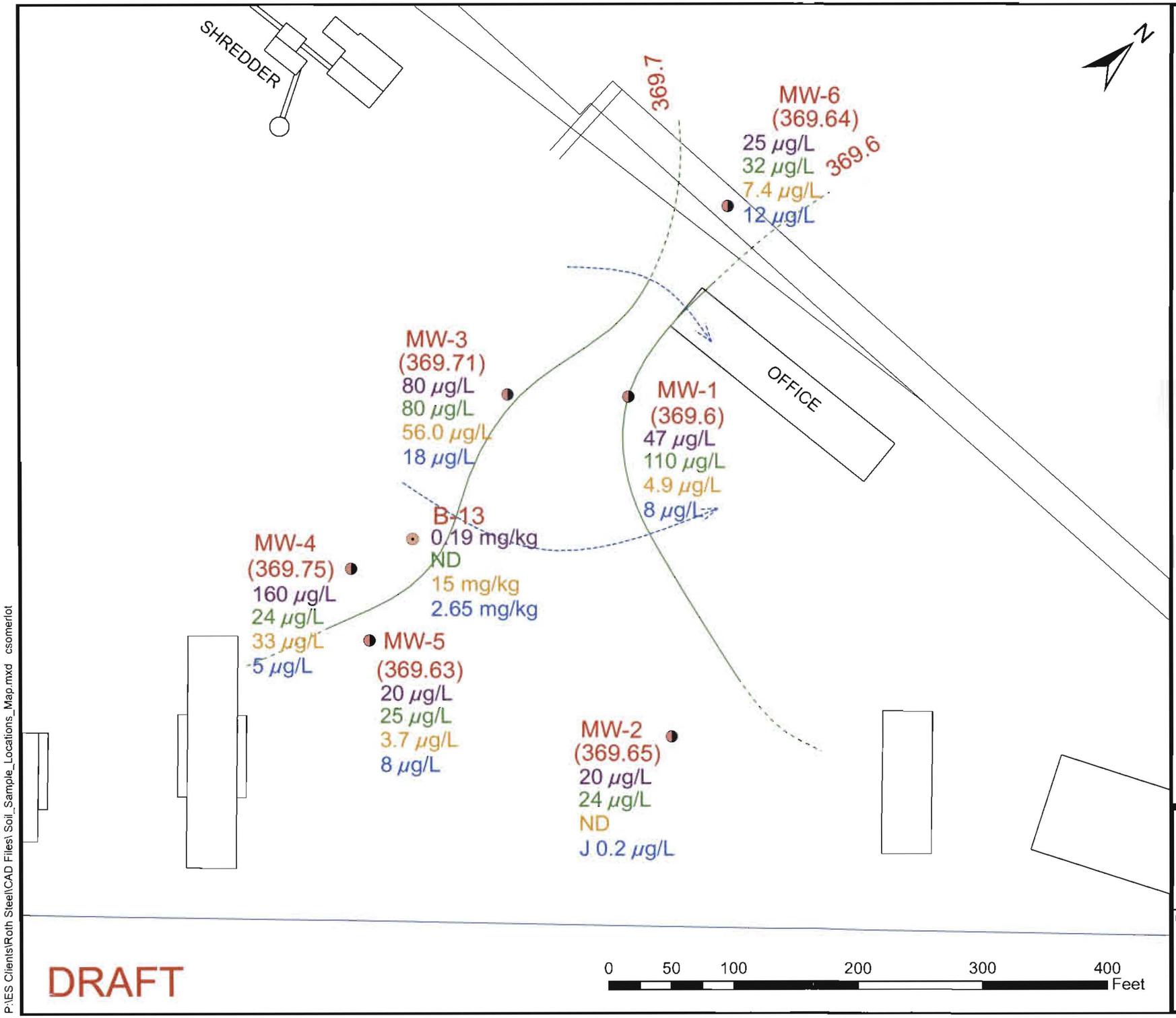
FIGURE 2

SOIL SAMPLING LOCATIONS
PETROLEUM INVESTIGATION REPORT

PROJECT LOCATION	DATE	PROJECT NUMBER
ROTH STEEL CORPORATION SYRACUSE, NEW YORK	October 2008	131364.040

BROWN AND CALDWELL ASSOCIATES
SYRACUSE, NEW YORK





Legend

- B-13 Soil Sampling Location
- MW-1 Monitoring Well Locations
- Groundwater Flow Direction
- Groundwater Level
- Presumed Groundwater Level
- Buildings
- Property Boundary
- (369.71) Groundwater Elevation (feet)

Select Compounds Detected

- Acetone
- Methyl-t-butyl ether
- Total Xylenes
- Napthalene

ND Not Detected
J Estimated Value
µg/L micrograms per liter
mg/kg milligrams per liter

NOTE:
BASE MAP PREPARED BY D. W. HANNING, L.S.
DATED 6/29/2004

GROUNDWATER LEVEL TAKEN 9/2/2008 - 9/3/2008

FIGURE 3

PETROLEUM INVESTIGATION REPORT
SELECT GROUNDWATER DATA

PROJECT LOCATION	DATE	PROJECT NUMBER
ROTH STEEL CORPORATION SYRACUSE, NEW YORK	October 2008	131364.040

BROWN AND CALDWELL ASSOCIATES
SYRACUSE, NEW YORK

P:\ES Clients\Roth Steel\CAD Files\ Soil_Sample_Locations_Map.mxd csomerlot

APPENDICES

APPENDIX A

Soil Boring Logs

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-1 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	7.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/21/08 - 7/21/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927937.3 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115519.0 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GW	**Anthropogenic Fill** Brown/Grey-moist, cmf GRAVEL, little (-) Silt		1					75.2	
			Concrete								
		SM	Dark Brown-moist, mf SAND, little (-) f Gravel, trace Silts. (Glass and other debris)		2					28.4	
5		SM	Dark Brown-wet, mf SAND, little (-) Silt. (Glass)		3					2.5	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-2 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	5.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/21/08 - 7/21/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83	Easting: 927934.3 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: --	Northing: 1115504.2 ft.
			Ground Surface Elev: --	TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GW GM	**Anthropogenic Fill** Dark brown m GRAVEL little (-) Silt, trace f Sand. (Glass and plastic)		1					8.2	
			Concrete								
		GW GM	Dark brown mf GRAVEL, little (+) Silt, trace f Sand. (metal, glass, plastic and fabric)		2					12.1	
5											

P:\Roth_Steel\Boring-Well_Logs\131364_roth_steel.gpj 07/31/2008

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-3 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	5.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/21/08 - 7/21/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927942.0 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115488.9 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GW GM	**Anthropogenic Fill** Dark brown, mf GRAVEL, little(-)Silt, trace Sand. (Glass, plastic and wood)		1					16.0	
			Concrete								
		GW GC	Dark brown, cmf GRAVEL, little (-) Clayey Silt, trace f Sand. @5' wet to saturated (Glass and metal)		2					1.2	
5											

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-4 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/21/08 - 7/21/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83	Easting: 927967.2 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: --	Northing: 1115499.3 ft.
			Ground Surface Elev: --	TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
			Anthropogenic Fill Concrete		1					10.8	
5		GC	Dark brown-wet, mf GRAVEL, some (-) Clayey Silt, **Trace** (-) f Sand. (Glass)		2					11.9	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-5 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/21/08 - 7/21/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927964.0 ft.
Doug	Direct Push	Ingersoll Rand 8200	Verr Datum: -- Northing: 1115521.0 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GM	**Anthropogenic Fill** Dark brown, cm GRAVEL, little (-) Silt. (Metal, wood and glass)		1					38.8	
			Concrete								
5		ML CL	Dark brown-wet, Clayey SILT, some (+) mf Gravel		2					0.3	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-6 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/21/08 - 7/21/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927982.0 ft. Vert Datum: -- Northing: 1115421.7 ft. Ground Surface Elev: -- TOC Elev: --
Doug	Direct Push	Ingersoll Rand 8200	

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GM	**Anthropogenic Fill** Grey-dry, cmf GRAVEL, little (-) Silt Concrete		1					0.8	
5		GW	Dark brown, mf GRAVEL, little (-) cm Sand, trace Silt. (Glass and metal)		2					22.3	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-7 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	5.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/21/08 - 7/21/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927975.5 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115447.0 ft.
			Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Backfill	PID Readings (ppm)	Remarks
		GM	Dark brown-moist, mf GRAVEL, little (+) Silt, trace (-) m Sand. (Brick and glass)		1					2.1	
			Anthropogenic Fill								
			Concrete								
			Auger refusal @ 3.0'								
5											

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-8 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	1.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/21/08 - 7/21/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927972.2 ft. Vert Datum: -- Northing: 1115462.3 ft. Ground Surface Elev: -- TOC Elev: --
Doug	Direct Push	Ingersoll Rand 8200	

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GW	Light brown-wet, cmf GRAVEL, trace mf Sand, trace Silt		1						
			Concrete								
			Auger refusal @ 2'								

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-9 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/22/08 - 7/22/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927999.7 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115462.3 ft.
			Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GW	**Anthropogenic Fill** Grey, cmf GRAVEL, trace Silt, trace f Sand		1					3.1	
			Concrete								
5		GW	Dark brwn-moist, cinf GRAVEL, trace Silt. (Wood, cloth, and glass)		2					45.0	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-10 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/22/08 - 7/22/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928003.3 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115447.8 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GM	**Anthropogenic Fill** Brown/grey-dry, cmf GRAVEL, little (-) Silt, trace mf Sand. (Glass and wood)		1					97.0	
			Concrete								
		GW	Grey-wet, cmf GRAVEL, trace Silt		2					7.7	
5		MH/SW	Black, Clayey SILT, little (-) Gravel. (Plastic material) Wet, f SAND, with some shells								

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-11 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	2.5 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/22/08 - 7/22/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927999.0 ft. Vert Datum: -- Northing: 1115467.3 ft. Ground Surface Elev: -- TOC Elev: --
Doug	Direct Push	Ingersoll Rand 8200	

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GM	**Anthropogenic Fill** Grey-dry, cm GRAVEL, little (+) Silt, trace mf Sand. (Glass and metal)		1					3.5	
			Concrete Auger refusal @ 2.5'								

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-12 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diamcter:	Screen Diamcter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	3.0 ft.

Srart/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Developmenr Merhod:
7/22/08 - 7/22/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927994.0 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115495.7 ft.
			Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GM	**Anthropogenic Fill** Grey, mf GRAVEL, little (-) mf Sand, trace (-) Silt. (Glass and metal)		1					25	
			Concrete								
			Auger refusal @ 3'								

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-13 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/22/08 - 7/22/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927996.5 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115519.1 ft.
			Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GW GC	**Anthropogenic Fill** Light brown-dry, mf GRAVEL, trace mf Sand, trace mf Silt. (Metal, glass and wood) Brown-wet, mf GRAVEL, little(+)Clay Silt Concrete		1					103	
5		SW SC SM	Dark brown-wet, cmf SAND, little(+)mf Gravel, trace Silt Black-wet, ClayeySILT, m Sand		2					6.2	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-14 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	3.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/22/08 - 7/22/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927989.0 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115551.4 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Backfill	PID Readings (ppm)	Remarks
		GW	**Anthropogenic Fill** Brown-wet, fmc GRAVEL, little(-) cmf Sand, trace Silt Concrete Auger refusal @ 3'		1					14.9	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-15 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	2.5 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/22/08 - 7/22/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 927989.0 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115590.8 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GW	**Anthropogenic Fill** Brown-dry, cmf GRAVEL, little(-) mf Sand, trace Silt		1					27.3	
			Concrete								
			Auger refusal @ 2.5'								

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-16 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	4.5 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/23/08 - 7/23/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928091.6 ft. Vert Datum: -- Northing: 1115552.1 ft. Ground Surface Elev: -- TOC Elev: --
Doug	Direct Push	Ingersoll Rand 8200	

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GM	Brown-dry, cmf GRAVEL, little mf Sand, trace(+) Silt **Anthropogenic Fill**		1					16	
			Concrete								
		GW	Brown-dry, cm GRAVEL, trace Silt		2					N/A	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-17 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	4.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/23/08 - 7/23/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928093.9 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115575.1 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GM	**Anthropogenic Fill** Brown-moist, cmf GRAVEL, little (-) f Sand, trace (+) Silt		1					1.4	
		GW SW	Brown/Black-wet, mcf GRAVEL, little (+) cmf Sand, trace Silt		2					1.2	Soil is stained black

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-18 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/23/08 - 7/23/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928091.8 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115600.2 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GM SM	**Anthropogenic Fill** Dark brown-moist, cm GRAVEL, little (+) m Sand, trace Silt. (Glass and metal)		1					43.3	
			Concrete								
5		SW SW	Dark Grey-wet, cm SAND, little(-) c Gravel, trace Silt. (wood) Black-wet, mf SAND, little (-) mf Gravel, trace Silt. (Wood and shells)		2					2.3	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-19 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	5.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/23/08 - 7/23/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928086.6 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115625.1 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GM	**Anthropogenic Fill** Brown-moist, mf GRAVEL, little cm Sand, Trace Silt		1					119	
			Concrete								
		GW SW GM	Dark brown/ black, mc GRAVEL, some(-) mc Sand, trace(-)Silt Shells		2					1.2	
5			Black, cm GRAVEL, little(-) mf Sand, trace Silt								

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-20 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/23/08 - 7/23/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83	Easting: 928086.6 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: --	Northing: 115648.5 ft.
			Ground Surface Elev: --	TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
			Anthropogenic Fill Concrete								
		GC	Light brown, cmf GRAVEL, some Silty Clay		1					17.5	
			Concrete								
5		SW GW	Dark brown, mf SAND, little (+) f Gravel, trace Silt. (Wood and Glass)		2					4.6	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-21 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/23/08 - 7/23/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928071.3 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115552.4 ft.
			Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GM	**Anthropogenic Fill** Brown-moist, cm GRAVEL, little Silt, trace mf Sand		1		6			58.5	
			Concrete								
5		SW GW	Light brown, mf SAND, little (+) cmf Gravel, trace (+) Silt. (Wood and shells)		2					5.4	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-22 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	5.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/23/08 - 7/23/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928070.2 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115576.9 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Backfill	PID Readings (ppm)	Remarks
		GW	**Anthropogenic Fill** Brown-moist, cmf GRAVEL, little (-) Silt, trace mf Sand. (Glass and metal)		1					44 3	
			Concrete								
		GM	Dark brown-moist, mf GRAVEL, little (+) Silt, trace mf Sand		2					3.4	
5											

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-23 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/23/08 - 7/23/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928070.7 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115601.4 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GW	**Anthropogenic Fill** Brown, cmf GRAVEL, little (-) mf Sand, trace Silt. (Glass and cloth)		1					17.6	
			Concrete								
5		SW GW	Dark brown/black, cmf SAND, little (+) Gravel, trace Silt		2					6.4	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-24 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/23/08 - 7/23/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928068.6 ft. Vert Datum: -- Northing: 1115626.3 ft. Ground Surface Elev: -- TOC Elev: --
Doug	Direct Push	Ingersoll Rand 8200	

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
			Anthropogenic Fill Concrete								
		GM	Brown, cmf GRAVEL, little(+) mf Sand, trace Silt		1					138	
			Concrete								
5		GW SW	Dark brown-wet, mf GRAVEL, some cm Sand, trace (-) Silt. (Glass and plastic material)		2					3.4	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-25 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/24/08 - 7/24/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928064.9 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115649.4 ft.
			Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
			Anthropogenic Fill Concrete								
		GM	Brown-dry, cmf GRAVEL, little (+) mf Sand, trace Silt		1					101	
			Concrete								
5		SW GW	Dark brown-wet, mf GRAVEL, some(-) cmf Sand, trace(+) Silt. (Glass and plastic material)		2					30.2	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-26 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/24/08 - 7/24/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928040.1 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115547.7 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GM	**Anthropogenic Fill** Dark brown-moist, cm GRAVEL, some (-) mf Sand, trace Silt. (Glass, wood and brick) Concrete		1					6.6	
5		GM SW	Brown grey, cm GRAVEL, little(-) cmf Sand, trace(-) Silt Moist, mf SAND, little (+) mf Gravel, trace (+) Silt		2					2.8	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-27 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/24/08 - 7/24/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928037.3 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115575.2 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GW	**Anthropogenic Fill** Brown-dry, cmf GRAVEL, little(-) cmf Sand, trace Silt. (Wood and Glass)		1					17.5	
			Concrete								
5		SW	Dark brown/black wet, mf SAND, little(-) mf Gravel, trace (-) Silt. (Wood, glass and shells)		2					4	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-28 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/24/08 - 7/24/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928035.3 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: 1115600.7 ft. Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
		GW	**Anthropogenic Fill** Brown, mf GRAVEL, little (-) cmf Sand, trace (-) Silt		1					12.2	
			Concrete								
5		SW	Dark brown/black-wet, cmf SAND, little(+) fm Gravel, trace Silt		2					6.0	

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-29 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/24/08 7/24/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83	Easting: 928028.0 ft.
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: --	Northing: 1115624.3 ft.
			Ground Surface Elev: --	TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Backfill	PID Readings (ppm)	Remarks
		GM	**Anthropogenic Fill** Brown, cmf GRAVEL, little (+) cmf Sand, trace Silt		1					196	
			Concrete								
5		SW	Black-wet, mf SAND, trace (+) m Gravel, trace (-) Silt		2					11.3	soil stained black

BORING LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number: N/A	Boring No. B-30 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		2"	NA	N/A"	6.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
7/24/08 - 7/24/08	Parratt Wolff	Hammer Type: N/A	N/A

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: 928036.7 ft. Vert Datum: -- Northing: 1115647.7 ft. Ground Surface Elev: -- TOC Elev: --
Doug	Direct Push	Ingersoll Rand 8200	

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	PID Readings (ppm)	Remarks
5		SW	Concrete Light brwn, cmf SAND, little (+) mf Gravel, trace Silt Concrete		1					85.3	

APPENDIX B

Well Construction Details

MONITORING WELL LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number:	Well No. MW-1 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		6.25"	2.0" PVC	.010"	16.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
8/12/08 - 8/12/08	Parratt Wolff	Hammer Type: N/A	Surge with Whale Pump

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: --
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: --
			Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Well (Stick Up)	PID Readings (ppm)	Remarks
		GW	**Anthropogenic Fill** Brown mf GRAVEL, little (-) c Sand, trace Silt	N/A	1					0	0-1' Cement Pad
		GM	Dark brown/black mf GRAVEL, little (+) c Sand trace Silt		2					0	1'-3' Bentonite Pellets
		GM	Dark brown/black mf GRAVEL little(+) c Sand, trace Silt		3					0	
5		GM	Black cmf GRAVEL, little c Sand, trace Silt		4					0	
			(No recovery)		5					0	3'-15' #1 Filter Pack Sand
10		ML	White SILT (Solvay Waste)		6					0	
					7					0	5'-15' .010 Slot PVC Screen
15					8					0	

MONITORING WELL LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number:	Well No. MW-2 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		6.25"	2.0" PVC	.010"	16.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
8/12/08 - 8/12/08	Parratt Wolff	Hammer Type: N/A	Surge with Whale Pump

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: --
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: -- Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Well (Stick Up)	PID Readings (ppm)	Remarks
		GW	**Anthropogenic Fill** Brown cmf GRAVEL, little c Sand, trace Silt	N/A	1					0	0-1' Cement Pad
			Concrete								
		GM	Dark brown cmf GRAVEL, little (+) cm Sand, trace (+) Silt		2					0.3	1'-3' Bentonite Pellets
		SM GM	Brown cmf SAND, little mf Gravel, trace Silt. Mixed with Solvay waste		3					0.1	
5		GM SM	Brown/Grey mf GRAVEL, some cmf Sand, trace Silt		4					0.3	
		ML	White SILT (Solvay waste)		5					0.1	3'-15' #1 Filter Pack Sand
10					6					0.1	
					7					0.1	5'-15' .010 Slot PVC Screen
15					8					0	
		SM	Grey mf SAND, trace Silt								

MONITORING WELL LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number:	Well No. MW-3 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		6.25"	2.0" PVC	.010"	16.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
8/13/08 - 8/13/08	Parratt Wolff	Hammer Type: N/A	Surge with Whale Pump

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: --
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: --
			Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int / Recovery / Lithology / Well (Stick Up)	PID Readings (ppm)	Remarks
			Anthropogenic Fill Concrete	N/A	1		4.4	0-1' Cement Pad
		GM SM	Dark brown-dry cmf GRAVEL, some (-) cm Sand, trace Silt.		2		45.6	1'-3' Bentonite Pellets
5		GM SM	Dark brown/black cm GRAVEL, some (-) m Sand, trace Silt		3		3.7	
		SM	Dark brown m SAND, little (-) f Gravel, trace (+) Silt		4		4.1	
					5		0	3'-15' #1 Filter Pack Sand
10		ML	White SILT (Solvay Waste)		6		0	
					7		0	5'-15' .010 Slot PVC Screen
					8		0	
15		SW	Brown, cm SAND, trace Silt					

MONITORING WELL LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number:	Well No. MW-4 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		6.25"	2.0" PVC	.010"	16.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
8/13/08 - 8/13/08	Parratt Wolff	Hammer Type: N/A	Surge with Whale Pump

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: --	
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: --	Northing: --
			Ground Surface Elev: --	TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int / Recovery / Lithology / Well (Stick Up)	PID Readings (ppm)	Remarks
		GW	**Anthropogenic Fill** Brown cmf GRAVEL, little c Sand, tracc (+) Silt.	N/A	1		4.9	0-1' Cement Pad
		SM	Concrete					
			Dark brown f SAND, little (+) Silt, tracc (+) f Gravel		2		7.7	1'-3' Bentonite Pellets
		GM	Dark Brown mf GRAVEL, little (+) mf Sand, trace (+) Silt		3		4.9	
5		GM	Dark brown f GRAVEL, little cmf Sand, trace (+) Silt		4		0	
		SM GM	Dark brown cmf SAND, some(+) f Gravel, trace Silt		5		0	
		ML	White SILT (Solvay Waste)					3'-15' #1 Filter Pack Sand
10					6			
					7			5'-15' .010 Slot PVC Screen
					8		0	
15		SW	Brown, cmf SAND with shells					

MONITORING WELL LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number:	Well No. MW-5 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diamcter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		6.25"	2.0" PVC	.010"	16.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
8/13/08 - 8/13/08	Parratt Wolff	Hammer Type: N/A	Surge with Whale Pump

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: --
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: --
			Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Well (Stick Up)	PID Readings (ppm)	Remarks
		GM	**Anthropogenic Fill** Brown cmf GRAVEL, little (-) mf Sand, trace Silt	N/A	1					8.3	0-1' Cement Pad
			Concrete		2					0.0	1'-3' Bentonite Pellets
		GM	Dark brown cmf GRAVEL, little(-) mf Sand, trace (+) silt		3					3.4	
5		GM SM	Dark brown f GRAVEL, some(+) cm Sand, trace(+) Silt		4					10.1	
			(No recovery)		5						3'-15' #1 Filter Pack Sand
10		ML	White SILT (Solvay Waste)		6					0	
					7					0	
					8					0	5'-15' .010 Slot PVC Screen
15		ML	Grey SILT, little cmf SAND								

MONITORING WELL LOG

BROWN AND CALDWELL	Project Name: Roth Steel Preliminary Investigation Project Number: 131364.040 Project Location: Syracuse, New York	Permit Number:	Well No. MW-6 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
T Joki/Allendale		6.25"	2.0" PVC	.010"	16.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
8/14/08 - 8/14/08	Parratt Wolff	Hammer Type: N/A	Surge with Whale Pump

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NY/NAD83 Easting: --
Doug	Direct Push	Ingersoll Rand 8200	Vert Datum: -- Northing: --
			Ground Surface Elev: -- TOC Elev: --

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int / Recovery / Lithology / Well (Stick Up)	PID Readings (ppm)	Remarks
		GM	Brown mf GRAVEL, little (+) cm Sand, trace Silt	N/A	1		.04	0-1' Cement Pad
		SM	Brown/Grey m SAND mixed with Solvay waste		2		0	1'-3' Bentonite Pellets
		GM SM	Light brown m GRAVEL, some (+) cm Sand. Solvay Waste		3		0	
5		SM	Grey m SAND mixed with Solvay Waste		4		0	
					5		0	
10					6		0	3'-15' #1 Filter Pack Sand
		ML	White SILT (Solvay Waste)		7		0	
					8		0	5'-15' .010 Slot PVC Screen
15								

APPENDIX C

Data Usability Summary Report

BROWN AND CALDWELL

QUALITATIVE DATA USABILITY SUMMARY REPORT (DUSR)

SDG No.: 8841

Laboratory: Test America, Amherst, New York

Site: Roth Steel, Syracuse, New York

Date: September 24, 2008

Samples

Data from the following samples was reviewed (constituent groups in parentheses were added for clarity and were not included as part of the original sample name):

Metals	Soil (19 samples): B-1, B-6, B-8, B-9, B-10, B-12, B-13, B-15, B-16, B-18, B-19, B-22 (MS/MSD), B-24, B-27, B-29, DUP072208 and FB072208 (all samples include Mercury) Aqueous (10 samples): MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 (MS/MSD), DUP090208, and FB090308.
VOC	Soil (21 samples): B-1, B-6, B-8, B-9, B-10, B-12, B-13, B-15, B-16, B-18, B-19, B-22 (MS/MSD), B-24, B-27, B-29, DUP072208, FB072208, TB072208 and TB072408 Aqueous (11 samples): MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 (MS/MSD), DUP090208, TB090308, and FB090308
SVOC	Soil (19 samples): B-1, B-6, B-8, B-9, B-10, B-12, B-13, B-15, B-16, B-18, B-19, B-22 (MS/MSD), B-24, B-27, B-29, DUP072208 and FB072208 Aqueous (10 samples): MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 (MS/MSD), DUP090208, and FB090308.
PCB	Soil (19 samples): B-1, B-6, B-8, B-9, B-10, B-12, B-13, B-15, B-16, B-18, B-19, B-22 (MS/MSD), B-24, B-27, B-29, DUP072208 and FB072208 Aqueous (10 samples): MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 (MS/MSD), DUP090208, and FB090308.
Glycols	Soil (19 samples): B-1, B-6, B-8, B-9, B-10, B-12, B-13, B-15, B-16, B-18, B-19, B-22 (MS/MSD), B-24, B-27, B-29, DUP072208 and FB072208 Aqueous (10 samples): MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 (MS/MSD), DUP090208, and FB090308.

A Qualitative Data Usability Review was performed on the organic analytical data for 19 soil and 10 aqueous metal samples, 21 soil and 11 aqueous VOC samples, 19 soil and 10 aqueous SVOC samples, 19 soil and 11 aqueous PCB samples, and 19 soil and 10 aqueous glycol samples collected by Brown and Caldwell at the Roth Steel Site in Syracuse, New York. The samples were analyzed under SW8463 Methods ASP05 6010 for metals analysis, 7470 and 7471 for mercury analysis, 8260B for volatile organic compounds (VOCs), 8270C for semi-volatile organic compounds (SVOCs), 8082 for polychlorinated biphenyls (PCBs), 8015 for Ethylene Propylene Glycols (Glycols). This review was based on guidance provided by most current NYSDEC Analytical Services Protocol (ASP) and the EPA-Region 2 data validation guidance.

The review included the parameters listed below. The parameters listed with an asterisk (*) were within acceptable limits.

- Data Completeness Review*
- Sample Temperatures*
- Holding Times*
- Analytical Detection Limits*
- Surrogate Recovery Data*
- MS/MSD Results*
- Laboratory Control Sample (LCS) Review*
- Evaluation of Laboratory Qualified Results*
- Review of QA/QC Samples*
- Laboratory Case Narrative Review*
- Overall Evaluation of Data and Potential Usability Issues*

QUALITATIVE REVIEW SUMMARY

Metals

Aqueous: None of the Metals data required qualification during this review.

Soil: The majority of Metals data was not qualified during this review. The laboratory control samples (LCS) did not result in any issues for metals. The MS/ MSD did have issues but this is to be expected due to the non-homogenous matrix. Some of the results were qualified due to the RPDs and the detection limit criteria.

VOC

Aqueous: None of the VOC data required qualification during this review.

Soil: The majority of the VOC data were not qualified during this review; however a laboratory control sample (LCS) issue and several MS/MSD issues were identified. The LCS/LCSD recovery for Tetrachloroethene was outside of limits; however, the 1% difference did not require that the data be qualified due to its minimal exceedance. The MS/MSD showed several constituents out of range, calling for qualification. Most of the issues with the MS/MSD can be attributed to the non-homogenous matrix. Some of the

detection limits were elevated because of sample dilution; this does not reflect a systemic inability of the laboratory to meet the standards.

SVOC

Aqueous: The majority of SVOC data were not qualified during this review. Only four constituents required qualification.

Soil: The majority of the SVOC data were not qualified during this review. However, several constituents were out of range in the MS/MSD samples, which called for qualification. Most of the issues with the MS/MSD can be attributed to the non-homogenous matrix. Some of the detection limits were elevated because of sample dilution; this does not reflect a systemic inability of the laboratory to meet the standards.

PCB

The PCB data were not qualified during this review.

Glycols

The Glycols data were not qualified during this review.

OVERALL USABILITY ISSUES

The majority of the data was not impacted, did not require qualification, and therefore is acceptable for the intended purposes. However, some data had detection limits were elevated due to sample dilution. The non-homogenous soil matrix affected the sample results, especially when comparing the MS and the MSD.

DESCRIPTION OF QUALITATIVE REVIEW

Data Completeness Review

Each of the criteria are in conformance.

Sample Temperature

Each of the criteria are in conformance.

Holding Times

Each of the criteria are in conformance.

Sample Moisture

DUP072208 contained a 50% moisture content, which is equal to the lowest limit used to specify the moisture criteria (50-90% moisture content of a sample requires all data to be flagged with a "J").

Analytical Detection Limits

The detection limits for each of the constituents was compared to the NYCRR Part 375 Industrial standards. The majority of the detection limits were within range for each constituent. Some appeared elevated due to sample dilution; this does not reflect a systemic inability of the laboratory to meet the standards..

Surrogate Recovery Data

Each of the criteria for the aqueous samples are in conformance.

Each of the criteria for the soil samples are in conformance, with a few exceptions. Below is a table which includes all samples with percent recoveries out of range during the initial analysis of SVOCs.

Sample ID	Parameter	% Recovery and QC Limits		Bias	Action
B-13-.5-1	2-Fluorophenol	11	30-120	Low	UJ
B-13-.5-1	2,4,6-Tribromophenol	0	46-129	Low	R
B-19-0-.5	2-Fluorophenol	20	30-120	Low	UJ
B-19-0-.5	2,4,6-Tribromophenol	0	46-129	Low	R
B-24-1.5-2.0	2,4,6-Tribromophenol	19	46-129	Low	UJ
DUP072208	2-Fluorophenol	26	30-120	Low	UJ
DUP072208	2,4,6-Tribromophenol	0	46-129	Low	R

MS/MSD Review

Aqueous:
The field MS/MSD was taken at MW-6. The following constituents from MS/MSD B-8 were outside of the guidance criteria as specified by the lab.

MS from MW-6:

Constituent	Spike Added	MS Result	% Recovery	Limit	Bias	Action
Benzene	25	40	122	76-121	High	None
Atrazine	95.2	57	60	70-129	Low	J
Caprolactam	95.2	4.7	5	30-140	Low	R
3,3-Dichlorobenzidine	95.2	0	0	33-140	Low	R
4-Nitroaniline	95.2	41.2	43	64-135	Low	J

MSD from MW-6:

Constituent	% Recovery	Recovery Limit	RPD	RPD Limit	Bias	Action
Benzene	--	--	14	13	--	None
Atrazine	60	70-129	0	20	Low	J

Constituent	% Recovery	Recovery Limit	RPD	RPD Limit	Bias	Action
Benzo(b)fluoranthene	--	--	16	15	--	J
Caprolactam	5	30-140	0	20	Low	R
3,3-Dichlorobenzidine	0	33-140	0	25	Low	R
4-Nitroaniline	44	64-135	2	24	Low	J

Soil:

The field MS/MSD was taken at B-22; however, the lab ran another MS/MSD using sample B-8. The MS/MSD from B-22 will not be counted in this Data Usability Review because the spikes added to each sample were routinely less then the results from that location. When the spikes are less then the actual results the percent recoveries will not be accurate or precise. Thus only the MS/MSD from B-8 will be reviewed. The following constituents from MS/MSD B-8 were outside of the guidance criteria as specified by the lab.

MS from B-8:

Constituent	Spike Added	MS Result	% Recovery	Limit	Bias	Action
Acetone	321	191	59	61-137	Low	None
Benzene	64.2	47.2	73	79-127	Low	J
Bromoform	64.2	41.6	65	68-126	Low	None
2-Butanone	321	173	54	70-134	Low	J
Carbon Disulfide	64.2	36.3	56	64-131	Low	J
Chlorobenzene	64.2	35.9	56	78-123	Low	J
Cyclohexane	64.2	17.7	28	70-130	Low	R
Dibromochloromethane	64.2	47	73	76-125	Low	None
1,2-Dibromo-3-chloropropane	64.2	30.2	47	63-124	Low	J
1,2-Dibromoethane	64.2	42.1	66	78-120	Low	J
1,2-Dichlorobenzene	64.2	18.8	29	75-120	Low	R
1,3-Dichlorobenzene	64.2	16.4	26	74-120	Low	R
1,4-Dichlorobenzene	64.2	17.3	27	73-120	Low	R
Cis-1,2-Dichloroethene	64.2	49.9	78	80-123	Low	None
Trans-1,2-Dichloroethene	64.2	47.3	74	78-126	Low	J
1,2-Dichlorpropane	64.2	45.4	71	75-124	Low	None
Cis-1,3-dichloropropene	64.2	43.2	67	82-120	Low	J
Trans-1,3-Dichloropropene	64.2	43.2	67	73-123	Low	None
Ethylbenzene	64.2	30.1	47	80-120	Low	J
2-Hexanone	321	180	56	59-130	Low	None
Isopropylbenzene	64.2	16.8	26	72-120	Low	R
Methylcyclohexane	64.2	10.9	17	60-140	Low	R
4-Methyl-2-pentanone	321	199	62	65-133	Low	None
Styrene	64.2	31.7	49	80-116	Low	J
1,1,2,2-Tetrachloroethane	64.2	35.5	55	80-120	Low	J
1,1,2-Trichloro-1,2,2-Trifluoroethane	64.2	33.1	52	60-140	Low	J
Tetrachloroethene	64.2	28.1	44	74-122	Low	J
Toluene	64.2	41.1	64	74-128	Low	J
1,2,4-Trichlorobenzene	64.2	6.6	10	64-120	Low	J

Constituent	Spike Added	MS Result	% Recovery	Limit	Bias	Action
1,1,2-Trichloroethane	64.2	45.1	70	78-122	Low	None
Trichloroethene	64.2	42.7	66	77-129	Low	J
Total Xylenes	192	84.4	44	80-120	Low	J
Dimethyl phthalate	3465	4788	136	65-124	High	None
4,6-Dinitro-2-methylphenol	3465	1481	43	49-155	Low	J
Aluminum	--	--	46	75-125	Low	J
Barium	--	--	-31	75-125	Low	R
Copper	--	--	1630	75-125	Low	R
Lead	--	--	672	75-125	Low	R

MSD from B-8:

Constituent	% Recovery	Recovery Limit	RPD	RPD Limit	Bias	Action
Benzene	77	79-127	--	--	Low	None
2-Butanone	57	70-134	--	--	Low	J
Carbon Disulfide	62	64-131	--	--	Low	None
Chlorobenzene	64	78-123	--	--	Low	J
Cyclohexane	33	70-130	--	--	Low	J
1,2-Dibromo-3-chloropropane	58	63-124	21	20	Low	None
1,2-Dibromoethane	69	78-120	--	--	Low	J
1,2-Dichlorobenzene	38	75-120	27	20	Low	J
1,3-Dichlorobenzene	33	74-120	24	20	Low	J
1,4-Dichlorobenzene	34	73-120	23	20	Low	J
1,2-Dichlorpropane	74	75-124	--	--	Low	None
Cis-1,3-dichloropropene	71	82-120	--	--	Low	J
Trans-1,3-Dichloropropene	71	73-123	--	--	Low	None
Ethylbenzene	53	80-120	--	--	Low	J
Isopropylbenzene	33	72-120	24	20	Low	J
Methylcyclohexane	20	60-140	--	--	Low	R
Styrene	57	80-116	--	--	Low	J
1,1,2,2-Tetrachloroethane	61	80-120	--	--	Low	J
1,1,2-Trichloro-1,2,2-trifluoroethane	59	60-140	--	--	Low	J
Tetrachloroethene	52	74-122	--	--	Low	J
Toluene	70	74-128	--	--	Low	None
1,2,4-Trichlorobenzene	15	64-120	--	--	Low	R
1,1,2-Trichloroethane	72	78-122	--	--	Low	None
Trichloroethene	72	77-129	--	--	Low	None
Total Xylenes	51	80-120	--	--	Low	
Benzo (k) fluoranthene	--	--	26	22	--	J
Benzo (g,h,i) perylene	--	--	28	15	--	J

Constituent	% Recovery	Recovery Limit	RPD	RPD Limit	Bias	Action
Benzo (a) pyrene	--	--	18	15	--	J
Bis(2-ethylhexyl) phthalate	--	--	33	15	--	R
Dibenzo (a,h) anthracene	--	--	22	15	--	J
3,3-Dichlorobenzidine	--	--	28	25	--	J
Dimethyl phthalate	--	--	41	15	--	R
4,6-Dinitro-2-methylphenol	20	49-155	73	15	Low	R
Di-n-octyl phthalate	--	--	22	16	--	J
Fluoranthene	--	--	16	15	--	J
Hexachlorocyclopentadiene	18	31-120	82	49	Low	R
Indeno(1,2,3-cd) pyrene	--	--	27	15	--	J
2-Nitroaniline	--	--	27	15	--	J
N-nitrosodiphenylamine	--	--	17	15	--	J
2,4,5-Trichlorophenol	--	--	26	18	--	J
2,4,6-Trichlorophenol	--	--	26	19	--	J
Aluminum	61	75-125	--	--	Low	J
Barium	163	75-125	--	--	High	R
Copper	185	75-125	--	--	High	R
Lead	257	75-125	--	--	High	R

The constituents with the RPDs above or below the RPD limits do not have a bias listed because it was not an accuracy issue; it was a precision issue between the MS results and the MSD results. The MS and MSD results were not out of the criteria but there was such a difference in the data that it was reflected in the RPD. The "R" listed in the Action column for several of the constituents, represents data that should be rejected due to its extreme percent recoveries. The constituents with "None" denoted in their Action column falls within 10% of the limit, so no further action was taken. Every constituent with a "J" listed has been qualified due to low bias. The results impacted by the samples' bias are listed in the table found at the end of the report.

Laboratory Control Sample (LCS) Review (Matrix Spike Blank Recovery):

The aqueous matrix spike blanks were non-detected for all analyzed constituents. The soil matrix spike blanks showed tetrachloroethene had a recovery of 123%. It was out of the lab specified limits by 1% (the limit is 74-122%). Due to its minimal exceedance, none of the Tetrachloroethene results required qualification.

Evaluation of Laboratory Qualified Results

Brown and Caldwell concur with the use of the laboratory qualifications.

QC Samples

Duplicates:

Soil: DUP072208 is a duplicate of B-13. When comparing the sample results with the DUP results each of the constituents was consistent; every compound that was detected in one

sample was detected in the other. However, the range between the data results for the two samples does show variation. In order to show the magnitude of difference between the sample and DUP results the RPD was calculated for each constituent. Below is a table displaying all the RPD's above 35%. When deciding whether the DUP is acceptable, its matrix, which is soil, needs to be taken into account. Soil is not homogenous. It is not unreasonable to get such variation amongst results. That being said the DUP does show comparability with the field sample despite the range of RPDs.

Aqueous: DUP090208 is a duplicate of MW-5. When comparing the sample results with the DUP results most of the constituents were consistent. All but four of the chemicals detected in the DUP were detected in the MW-5 sample (Acenaphthylene, Ethylene glycol, Cobalt and Vanadium). All of which were qualified with a "J", indicating an estimated value. The RPD between the sample and DUP results were all below 5%. No further action is required.

Soil Constituents	Soil Sample Results	RPD	DUP Results
Carbon Disulfide	6	50%	10
PCE	72	77%	32
Toluene	120	47%	74
Ethylbenzene	150	68%	74
Total Xylenes	6500	50%	3900
TIC (VOC)	1400	43%	900
Naphthalene	2100	42%	3200
2-Methylnaphthalene	4500	38%	6600
Acenaphthene	130	38%	190
Dibenzofuran	81	39%	120
Anthracene	330	37%	480
Di-n-octyl phthalate	2600	56%	4600
Isopropylbenzene	67	63%	35
TIC (SVOC)	1900	57%	3400
TIC (SVOC)	1500	54%	2600
TIC (SVOC)	5000	55%	8800
TIC (SVOC)	1500	109%	5100
TIC (SVOC)	1600	36%	2300
TIC (SVOC)	1600	51%	2700
TIC (SVOC)	1600	106%	5200
TIC (SVOC)	1500	46%	2400
TIC (SVOC)	1600	36%	2300
TIC (SVOC)	2800	44%	4400
TIC (SVOC)	1600	48%	2600
Ethylene glycol	75000	95%	210000
Antimony	12.8	148%	1.9
Cadmium	2.5	44%	1.6
Lead	631	138%	116
Nickel	64.8	72%	138
Silver	0.56	46%	0.89
Mercury	0.258	178%	4.5
Zinc	594	55%	337

Method Blanks: The aqueous laboratory method blanks were non-detected for all but one constituent. Chrysene came back at 0.6 J for SMBLK53.

The soil laboratory method blanks were non-detect for most of the analyzed constituents. Below is a list of method blanks with their detected constituent.

- Toluene came back with at 1 J for both method blanks, VBLK66 and VBLK70.

- VBLK70 and 71 had hits of 8 JN and 16 JN, respectively, for Butylated Hydroxtoluene.
- SBLK61 results showed Chrysene and Benzo (k) fluoranthene at 19 J and 13 J.
- Chrysene also was detected in SBLK 99.
- Naphthalene and 2-Methylnaphthalene were detected in SBLK105 at 0.3 J and 0.2 J, respectively. Also detected in SBLK105 was Di-n-butyl phthalate, Chrysene, Di-n-octyl phthalate, Benzo (b) fluoranthene, Benzo (k) fluorantene.
- A few metals were detected (B) during the initial and continuing calibration blanks.

Trip Blanks: The soil trip blank was non-detected for the analyzed constituents. However, the aqueous trip blank had 4.9J of Acetone detected; most likely due to laboratory contamination.

Field Blanks: Below is a table containing the constituents which were detected during analysis. Each of the analytes listed below were detected in one or more of the samples, so their presence in the field blank may be due to high concentrations in the sample matrix and/or laboratory contamination.

Soil:

Constituents	**FB072208 Results**
Acetone	3.4 J
Chrysene	0.7 BJ
Di-n-octyl phthalate	5 B
Ethylene glycol	2100 J
Aluminum	62.1 B
Barium	1.9 B
Calcium	1350
Chromium	2.1 B
Iron	325
Magnesium	145 B
Manganese	3.7

Aqueous:

Constituents	**FB090308 Results**
Acetone	4.4 J
Chrysene	0.6 BJ
Barium	0.38 B
Calcium	185 B
Iron	21.5 B
Manganese	0.59 B

Laboratory Case Narrative Review

There were several issues noted in the Laboratory Case Narrative. Below is a list of those issues:

Soil:

- The Matrix Spike Blanks, MSB ML 073008 (A8B1977101), MSB ML 073108 (A8B1992003) and MSB ML 080408 (A8B2006003) were prepared and analyzed using medium level soil techniques. Although this job requests that the spike contains all target analytes, the method only required a 5 compound spike. The lab does not include the full compound spike in the medium level soil preparation, only in low level soil prep. All quality control criteria were met, therefore, no further action is necessary.

- The Matrix Spike Blank MSB66 (A8B1969201) was above control limits for the analyte Tetrachloroethene. However, since the matrix spike was only associated with the MS/MSD of B-8 and the high recovery would yield a high bias, the data is not affected.

- The spike recovery of numerous analytes in the Matrix Spike and in the Matrix Spike Duplicate of sample B-8 exceeded quality control limits. The RPD between the MS and the MSD of the samples B-8 also exceeded quality control limits for several analytes. The associated Matrix Spike Blank recoveries were compliant, with the exception of Tetrachloroethene, so no corrective action was performed.

- The spike recovery of numerous analytes in the Matrix Spike and in the Matrix Spike Duplicate of sample B-22 exceeded quality control limits. The RPD between the MS and the MSD of the samples B-22 also exceeded quality control limits for several analytes. The associated Matrix Spike Blank recoveries were compliant, so no corrective action was performed.

- The analytes Styrene and Trichlorofluoromethane were detected in the dilution of sample B-10 but were not present in the base sample analysis. This inconsistency is due to the non homogenous matrix of the sample.

- Samples B-10, B-13, B-22, B-24, and B-29 were analyzed using medium level techniques due to high concentrations to target analytes.

- The analytes Trichlorofluoromethane and Methyl acetate were detected in the dilutions of samples B-13, and B-24 but were not present in the base sample analyses. This inconsistency is due to the non-homogenous matrix of these samples.

- The analyte Trichlorofluoromethane was detected in the dilution of samples B-22 and B-29 but were not present in the base sample analyses. This inconsistency is due to the non-homogenous matrix of these samples.

- The analyte Di-n-octyl phthalate was detected in the method blank (A8B1963606) at a level above the lab reporting limit. According to EPA validation criteria up to 5 times the reporting limit is acceptable for phthalate contamination. No further action needed.

- For method 8270, B-13, B-19, B-24, and DUP072208 required dilution due to heavy matrix present or high concentration of analytes. The surrogate and spike recoveries are diluted out of all sample extracts with a dilution factor of 10x or greater.

- Recovery of 4,6-Dinitro-2-methylphenol and Dimethyl phthalate in sample B-8 MS and 4,6-Dinitro-2-methylphenol and Hexachlorocyclopentadiene in sample B-8 MSD exceeded limits. The MS Blank recoveries are compliant.

- The spike recoveries for several analytes were outside the lab quality criteria limits in the MS and MSD from B-22. The MS Blank recoveries were compliant, so no corrective action was required.

- The RPD between B-22 MS and MSD exceeded limits.

- For method 8082, B-16 required dilution due to heavy matrix present or high concentration of analytes. The surrogate and spike recoveries are diluted out of all sample extracts with a dilution factor of 10x or greater.

- The recoveries of samples B-8 MS show results above the quality control limits for Calcium, Iron, and zinc and a result below the quality control limits for Magnesium. The recoveries for B-8 MSD exhibit results above limits for Iron and Zinc and results below the quality control limits for Calcium and Magnesium. The sample results are more then four times greater then the spike added. The RPD between B-8 MS and MSD exceeded criteria for Ca, Mg, Zn. However, the LCS was acceptable.

- Recoveries of samples B-8 MS exhibited results below limits for Al and Barium and results above the limits for Copper and Lead. The MSD for B-8 showed results below quality Al and above criteria for Barium, Copper and Lead. Sample matrix is suspect. The RPD between MS and MSD for B-8 exceeded quality control for Barium, Copper, and lead. The LCS was acceptable.

- The recoveries for B-22 MS exhibited results below the quality control limits for Calcium and above the limits for Iron, Magnesium and Zinc. The recoveries of sample B-22 MSD showed results below quality control limits for Calcium and Manganese and above limits for Magnesium and Zinc. The sample results are more then four times greater then the spike added. The LCS was acceptable.

- The recoveries for B-22 MS exhibited results below the quality control limits for Barium, Lead and Silver. The recoveries for B-22 MSD showed results above the quality control limits for Calcium and lead, and results below limits for Silver. The sample matrix is suspect. The RPD between B-22 MS and MSD exceeded the control limits for Barium and Lead. The LCS was acceptable.

Aqueous:

- The recovery of the analyte Benzene in the matrix spike of sample MW-6 exceeded quality control limits. The RPD between the Matrix spike and the Matrix spike duplicate of sample MW-6 also exceeded quality control limits for the analyte Benzene. The Matrix Spike blank recoveries were compliant so no corrective action was taken.

- For method 8260, samples MW-1 and MW-4 exhibited a pH> 2 at the time of analysis. The analysis was performed within 7 days of sampling therefore there was no impact on data usability.

- For method 8260, all samples were preserved to a pH < 2 except for samples MW-1 and MW-4 which had pH's of 7 and 10 respectively.

- The spike recoveries for 3, 3-Dichlorobenzidine, 4-Nitrophenol, Atrazine, Caprolactam were below the lab quality control limits in the matrix spike MW-6 and matrix spike duplicate MW-6. The Matrix spike blank was compliant so no corrective action was required.

- The RPD between the between the Matrix spike and the matrix spike duplicate exceeded quality control criteria for Benzo (b) fluoranthene, though all individual recoveries were compliant. (no action required)

- The recoveries of sample MW-6 Matrix spike and matrix spike duplicate exhibited results above the quality control limits for Calcium and Sodium. The sample results were more then four times greater then the spike added. However, the LFB was acceptable.

- The recovery of sample MW-6 Matrix spike exhibited a result above the quality control limit for Potassium. Sample matrix was suspect. However, the LFB was acceptable.

- The recoveries of sample MW-6 Post Spike exhibited results below the quality control limits for Calcium and Sodium. However, the serial dilution of this sample was compliant, so no corrective action was necessary.

Validation Qualifiers

The following validation qualifiers may have been applied to the data, as appropriate.

- J = The analyte was positively identified; the associated numerical value is an estimated concentration of the analyte in the sample.
- U = The analyte was tested, but was not detected above the sample reporting limit.
- E = The analyte's concentrations exceed the calibration range of the instrument.
- R = The sample result is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.
- UJ=The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte.

Qualified Aqueous Results using MS/MSD Recoveries:

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
DUP090208	Atrazine	5	ug/L	U	R
FB090308	Atrazine	5	ug/L	U	R
MW-1	Atrazine	5	ug/L	U	R
MW-2	Atrazine	5	ug/L	U	R
MW-3	Atrazine	5	ug/L	U	R
MW-4	Atrazine	5	ug/L	U	R
MW-5	Atrazine	5	ug/L	U	R
MW-6	Atrazine	5	ug/L	U	R
MW-6MS	Atrazine	57	ug/L		J
MW-6MSD	Atrazine	60	ug/L		J
DUP090208	Benzo(B)Fluoranthene	5	ug/L	U	R
FB090308	Benzo(B)Fluoranthene	5	ug/L	U	R
MW-1	Benzo(B)Fluoranthene	5	ug/L	U	R
MW-2	Benzo(B)Fluoranthene	5	ug/L	U	R
MW-3	Benzo(B)Fluoranthene	5	ug/L	U	R
MW-4	Benzo(B)Fluoranthene	5	ug/L	U	R
MW-5	Benzo(B)Fluoranthene	5	ug/L	U	R
MW-6	Benzo(B)Fluoranthene	5	ug/L	U	R
MW-6MS	Benzo(B)Fluoranthene	85	ug/L		J
MW-6MSD	Benzo(B)Fluoranthene	75	ug/L		J
DUP090208	Caprolactam	5	ug/L	U	R
FB090308	Caprolactam	5	ug/L	U	R
MW-1	Caprolactam	5	ug/L	U	R
MW-2	Caprolactam	5	ug/L	U	R
MW-3	Caprolactam	5	ug/L	U	R
MW-4	Caprolactam	5	ug/L	U	R
MW-5	Caprolactam	5	ug/L	U	R
MW-6	Caprolactam	5	ug/L	U	R
MW-6MS	Caprolactam	5	ug/L		J
MW-6MSD	Caprolactam	5	ug/L		J
DUP090208	3,3'-Dichlorobenzidine	5	ug/L	U	R
FB090308	3,3'-Dichlorobenzidine	5	ug/L	U	R
MW-1	3,3'-Dichlorobenzidine	5	ug/L	U	R
MW-2	3,3'-Dichlorobenzidine	5	ug/L	U	R
MW-3	3,3'-Dichlorobenzidine	5	ug/L	U	R
MW-4	3,3'-Dichlorobenzidine	5	ug/L	U	R
MW-5	3,3'-Dichlorobenzidine	5	ug/L	U	R
MW-6	3,3'-Dichlorobenzidine	5	ug/L	U	R
MW-6MS	3,3'-Dichlorobenzidine	5	ug/L	U	R
MW-6MSD	3,3'-Dichlorobenzidine	5	ug/L	U	R
DUP090208	4-Nitroaniline	10	ug/L	U	R
FB090308	4-Nitroaniline	10	ug/L	U	R
MW-1	4-Nitroaniline	10	ug/L	U	R
MW-2	4-Nitroaniline	10	ug/L	U	R
MW-3	4-Nitroaniline	10	ug/L	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
MW-4	4-Nitroaniline	10	ug/L	U	R
MW-5	4-Nitroaniline	10	ug/L	U	R
MW-6	4-Nitroaniline	10	ug/L	U	R
MW-6MS	4-Nitroaniline	41	ug/L		J
MW-6MSD	4-Nitroaniline	43	ug/L		J

Qualified Soil Results using MS/MSD Recoveries:

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-01-0-.5	Benzene	3	ug/Kg	J	J
B-06-.5-1	Benzene	5	ug/Kg	U	R
B-08-0-.5	Benzene	6	ug/Kg	U	R
B-08-0-.5MS	Benzene	47	ug/Kg		J
B-08-0-.5MSD	Benzene	49	ug/Kg		J
B-09-4.5-5	Benzene	2	ug/Kg	J	J
B-10-.5-1	Benzene	120	ug/Kg		J
B-12-0-.5	Benzene	5	ug/Kg	U	R
B-13-.5-1	Benzene	29	ug/Kg	U	R
B-15-0-.5	Benzene	2	ug/Kg	J	J
B-16-.5-1	Benzene	5	ug/Kg	U	R
B-18-.5-1	Benzene	6	ug/Kg	U	R
B-19-0-.5	Benzene	15	ug/Kg		J
B-22-0-.5	Benzene	230	ug/Kg	E	J
B-22-0-.5 DL	Benzene	66	ug/Kg	DJ	J
B-22-0-.5MS	Benzene	64	ug/Kg		J
B-22-0-.5MSD	Benzene	250	ug/Kg	E	J
B-24-15-2.0	Benzene	190	ug/Kg		J
B-27-0-.5	Benzene	5	ug/Kg	U	R
B-29-0-.5	Benzene	31	ug/Kg		J
DUP 072208	Benzene	49	ug/Kg	U	R
FB072208	Benzene	1	ug/L	U	R
TB 072208	Benzene	1	ug/L	U	R
TB072408	Benzene	1	ug/L	U	R
B-01-0-.5	2-Butanone	150	ug/Kg		
B-06-.5-1	2-Butanone	27	ug/Kg	U	R
B-08-0-.5	2-Butanone	32	ug/Kg	U	R
B-08-0-.5MS	2-Butanone	170	ug/Kg		J
B-08-0-.5MSD	2-Butanone	180	ug/Kg		J
B-09-4.5-5	2-Butanone	10	ug/Kg	J	J
B-10-.5-1	2-Butanone	28	ug/Kg	U	R
B-12-0-.5	2-Butanone	25	ug/Kg	U	R
B-13-.5-1	2-Butanone	34	ug/Kg	J	J
B-15-0-.5	2-Butanone	29	ug/Kg	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-16-.5-1	2-Butanone	25	ug/Kg	U	R
B-18-.5-1	2-Butanone	28	ug/Kg	U	R
B-19-0-.5	2-Butanone	40	ug/Kg		J
B-22-0-.5	2-Butanone	38	ug/Kg		J
B-22-0-.5MS	2-Butanone	120	ug/Kg		J
B-22-0-.5MSD	2-Butanone	140	ug/Kg		J
B-24-15-2.0	2-Butanone	86	ug/Kg		J
B-27-0-.5	2-Butanone	25	ug/Kg	U	R
B-29-0-.5	2-Butanone	100	ug/Kg		J
DUP 072208	2-Butanone	240	ug/Kg	U	R
FB072208	2-Butanone	5	ug/L	U	R
TB 072208	2-Butanone	5	ug/L	U	R
TB072408	2-Butanone	5	ug/L	U	R
B-01-0-.5	Carbon Disulfide	1	ug/Kg	J	J
B-06-.5-1	Carbon Disulfide	1	ug/Kg	J	J
B-08-0-.5	Carbon Disulfide	6	ug/Kg	U	R
B-08-0-.5MS	Carbon Disulfide	36	ug/Kg		J
B-08-0-.5MSD	Carbon Disulfide	40	ug/Kg		J
B-09-4.5-5	Carbon Disulfide	6	ug/Kg		J
B-10-.5-1	Carbon Disulfide	2	ug/Kg	J	J
B-12-0-.5	Carbon Disulfide	5	ug/Kg	U	R
B-13-.5-1	Carbon Disulfide	6	ug/Kg	J	J
B-15-0-.5	Carbon Disulfide	2	ug/Kg	J	J
B-16-.5-1	Carbou Disulfide	1	ug/Kg	J	J
B-18-.5-1	Carbon Disulfide	1	ug/Kg	J	J
B-19-0-.5	Carbon Disulfide	2	ug/Kg	J	J
B-22-0-.5	Carbon Disulfide	3	ug/Kg	J	J
B-22-0-.5MS	Carbon Disulfide	25	ug/Kg		J
B-22-0-.5MSD	Carbon Disulfide	27	ug/Kg		J
B-24-15-2.0	Carbon Disulfide	16	ug/Kg		J
B-27-0-.5	Carbon Disulfide	5	ug/Kg	U	R
B-29-0-.5	Carbon Disulfide	2	ug/Kg	J	J
DUP 072208	Carbon Disulfide	10	ug/Kg	J	J
FB072208	Carbon Disulfide	1	ug/L	U	R
TB 072208	Carbon Disulfide	1	ug/L	U	R
TB072408	Carbon Disulfide	1	ug/L	U	R
B-01-0-.5	Chlorobenzene	5	ug/Kg	U	R
B-06-.5-1	Chlorobenzene	5	ug/Kg	U	R
B-08-0-.5	Chlorobenzene	6	ug/Kg	U	R
B-08-0-.5MS	Chlorobenzene	36	ug/Kg		J
B-08-0-.5MSD	Chlorobenzene	41	ug/Kg		J
B-09-4.5-5	Chlorobenzene	6	ug/Kg	U	R
B-10-.5-1	Chlorobenzene	6	ug/Kg	U	R
B-12-0-.5	Chlorobenzene	5	ug/Kg	U	R
B-13-.5-1	Chlorobenzene	29	ug/Kg	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-15-0-.5	Chlorobenzene	6	ug/Kg	U	R
B-16-.5-1	Chlorobenzene	5	ug/Kg	U	R
B-18-.5-1	Chlorobenzene	6	ug/Kg	U	R
B-19-0-.5	Chlorobenzene	5	ug/Kg	U	R
B-22-0-.5	Chlorobenzene	5	ug/Kg	U	R
B-22-0-.5MS	Chlorobenzene	14	ug/Kg		J
B-22-0-.5MSD	Chlorobenzene	16	ug/Kg		J
B-24-15-2.0	Chlorobenzene	6	ug/Kg	U	R
B-27-0-.5	Chlorobenzene	5	ug/Kg	U	R
B-29-0-.5	Chlorobenzene	5	ug/Kg	U	R
DUP 072208	Chlorobenzene	49	ug/Kg	U	R
FB072208	Chlorobenzene	1	ug/L	U	R
TB 072208	Chlorobenzene	1	ug/L	U	R
TB072408	Chlorobenzene	1	ug/L	U	R
B-06-.5-1	1,2-Dibromo-3-Chloropropane	5	ug/Kg	U	R
B-08-0-.5	1,2-Dibromo-3-Chloropropane	6	ug/Kg	U	R
B-08-0-.5MS	1,2-Dibromo-3-Chloropropane	30	ug/Kg		J
B-08-0-.5MSD	1,2-Dibromo-3-Chloropropane	37	ug/Kg		J
B-09-4.5-5	1,2-Dibromo-3-Chloropropane	6	ug/Kg	U	R
B-10-.5-1	1,2-Dibromo-3-Chloropropane	6	ug/Kg	U	R
B-12-0-.5	1,2-Dibromo-3-Chloropropane	5	ug/Kg	U	R
B-13-.5-1	1,2-Dibromo-3-Chloropropane	29	ug/Kg	U	R
B-15-0-.5	1,2-Dibromo-3-Chloropropane	6	ug/Kg	U	R
B-16-.5-1	1,2-Dibromo-3-Chloropropane	5	ug/Kg	U	R
B-18-.5-1	1,2-Dibromo-3-Chloropropane	6	ug/Kg	U	R
B-19-0-.5	1,2-Dibromo-3-Chloropropane	5	ug/Kg	U	R
B-22-0-.5	1,2-Dibromo-3-Chloropropane	5	ug/Kg	U	R
B-22-0-.5MS	1,2-Dibromo-3-Chloropropane	19	ug/Kg		J
B-22-0-.5MSD	1,2-Dibromo-3-Chloropropane	18	ug/Kg		J
B-24-15-2.0	1,2-Dibromo-3-Chloropropane	6	ug/Kg	U	R
B-27-0-.5	1,2-Dibromo-3-Chloropropane	5	ug/Kg	U	R
B-29-0-.5	1,2-Dibromo-3-Chloropropane	5	ug/Kg	U	R
DUP 072208	1,2-Dibromo-3-Chloropropane	49	ug/Kg	U	R
FB072208	1,2-Dibromo-3-Chloropropane	1	ug/L	U	R
TB 072208	1,2-Dibromo-3-Chloropropane	1	ug/L	U	R
TB072408	1,2-Dibromo-3-Chloropropane	1	ug/L	U	R
B-06-.5-1	1,2-Dibromoethane	5	ug/Kg	U	R
B-08-0-.5	1,2-Dibromoethane	6	ug/Kg	U	R
B-08-0-.5MS	1,2-Dibromoethane	42	ug/Kg		J
B-08-0-.5MSD	1,2-Dibromoethane	45	ug/Kg		J
B-09-4.5-5	1,2-Dibromoethane	6	ug/Kg	U	R
B-10-.5-1	1,2-Dibromoethane	6	ug/Kg	U	R
B-12-0-.5	1,2-Dibromoethane	5	ug/Kg	U	R
B-13-.5-1	1,2-Dibromoethane	29	ug/Kg	U	R
B-15-0-.5	1,2-Dibromoethane	6	ug/Kg	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-16-.5-1	1,2-Dibromoethane	5	ug/Kg	U	R
B-18-.5-1	1,2-Dibromoethane	6	ug/Kg	U	R
B-19-0-.5	1,2-Dibromoethane	5	ug/Kg	U	R
B-22-0-.5	1,2-Dibromoethane	5	ug/Kg	U	R
B-22-0-.5MS	1,2-Dibromoethane	18	ug/Kg		J
B-22-0-.5MSD	1,2-Dibromoethane	19	ug/Kg		J
B-24-15-2.0	1,2-Dibromoethane	6	ug/Kg	U	R
B-27-0-.5	1,2-Dibromoethane	5	ug/Kg	U	R
B-29-0-.5	1,2-Dibromoethane	5	ug/Kg	U	R
DUP 072208	1,2-Dibromoethane	49	ug/Kg	U	R
FB072208	1,2-Dibromoethane	1	ug/L	U	R
TB 072208	1,2-Dibromoethane	1	ug/L	U	R
TB072408	1,2-Dibromoethane	1	ug/L	U	R
B-01-0-.5	Trans-1,2-Dichloroethene	5	ug/Kg	U	R
B-06-.5-1	Trans-1,2-Dichloroethene	5	ug/Kg	U	R
B-08-0-.5	Trans-1,2-Dichloroethene	6	ug/Kg	U	R
B-08-0-.5MS	Trans-1,2-Dichloroethene	47	ug/Kg		J
B-08-0-.5MSD	Trans-1,2-Dichloroethene	50	ug/Kg		J
B-09-4.5-5	Trans-1,2-Dichloroethene	6	ug/Kg	U	R
B-10-.5-1	Trans-1,2-Dichloroethene	6	ug/Kg	U	R
B-12-0-.5	Trans-1,2-Dichloroethene	5	ug/Kg	U	R
B-13-.5-1	Trans-1,2-Dichloroethene	29	ug/Kg	U	R
B-15-0-.5	Trans-1,2-Dichloroethene	6	ug/Kg	U	R
B-16-.5-1	Trans-1,2-Dichloroethene	5	ug/Kg	U	R
B-18-.5-1	Trans-1,2-Dichloroethene	6	ug/Kg	U	R
B-19-0-.5	Trans-1,2-Dichloroethene	5	ug/Kg	U	R
B-22-0-.5	Trans-1,2-Dichloroethene	5	ug/Kg	U	R
B-22-0-.5MS	Trans-1,2-Dichloroethene	24	ug/Kg		J
B-22-0-.5MSD	Trans-1,2-Dichloroethene	24	ug/Kg		J
B-24-15-2.0	Trans-1,2-Dichloroethene	6	ug/Kg	U	R
B-27-0-.5	Trans-1,2-Dichloroethene	5	ug/Kg	U	R
B-29-0-.5	Trans-1,2-Dichloroethene	5	ug/Kg	U	R
DUP 072208	Trans-1,2-Dichloroethene	49	ug/Kg	U	R
FB072208	Trans-1,2-Dichloroethene	1	ug/L	U	R
TB 072208	Trans-1,2-Dichloroethene	1	ug/L	U	R
TB072408	Trans-1,2-Dichloroethene	1	ug/L	U	R
B-06-.5-1	Cis-1,3-Dichloropropene	5	ug/Kg	U	R
B-08-0-.5	Cis-1,3-Dichloropropene	6	ug/Kg	U	R
B-08-0-.5MS	Cis-1,3-Dichloropropene	43	ug/Kg		J
B-08-0-.5MSD	Cis-1,3-Dichloropropene	46	ug/Kg		J
B-09-4.5-5	Cis-1,3-Dichloropropene	6	ug/Kg	U	R
B-10-.5-1	Cis-1,3-Dichloropropene	6	ug/Kg	U	R
B-12-0-.5	Cis-1,3-Dichloropropene	5	ug/Kg	U	R
B-13-.5-1	Cis-1,3-Dichloropropene	29	ug/Kg	U	R
B-15-0-.5	Cis-1,3-Dichloropropene	6	ug/Kg	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-16-.5-1	Cis-1,3-Dichloropropene	5	ug/Kg	U	R
B-18-.5-1	Cis-1,3-Dichloropropene	6	ug/Kg	U	R
B-19-0-.5	Cis-1,3-Dichloropropene	5	ug/Kg	U	R
B-22-0-.5	Cis-1,3-Dichloropropene	5	ug/Kg	U	R
B-22-0-.5MS	Cis-1,3-Dichloropropene	20	ug/Kg		J
B-22-0-.5MSD	Cis-1,3-Dichloropropene	22	ug/Kg		J
B-24-15-2.0	Cis-1,3-Dichloropropene	6	ug/Kg	U	R
B-27-0-.5	Cis-1,3-Dichloropropene	5	ug/Kg	U	R
B-29-0-.5	Cis-1,3-Dichloropropene	5	ug/Kg	U	R
DUP 072208	Cis-1,3-Dichloropropene	49	ug/Kg	U	R
FB072208	Cis-1,3-Dichloropropene	1	ug/L	U	R
TB 072208	Cis-1,3-Dichloropropene	1	ug/L	U	R
TB072408	Cis-1,3-Dichloropropene	1	ug/L	U	R
B-06-.5-1	Ethylbenzene	5	ug/Kg	U	R
B-08-0-.5	Ethylbenzene	6	ug/Kg	U	R
B-08-0-.5MS	Ethylbenzene	30	ug/Kg		J
B-08-0-.5MSD	Ethylbenzene	34	ug/Kg		J
B-09-4.5-5	Ethylbenzene	6	ug/Kg	U	R
B-10-.5-1	Ethylbenzene	290	ug/Kg	E	J
B-10-.5-1 DL	Ethylbenzene	490	ug/Kg	D	J
B-12-0-.5	Ethylbenzene	5	ug/Kg	U	R
B-13-.5-1	Ethylbenzene	150	ug/Kg		J
B-15-0-.5	Ethylbenzene	18	ug/Kg		J
B-16-.5-1	Ethylbenzene	1	ug/Kg	J	J
B-18-.5-1	Ethylbenzene	6	ug/Kg	U	R
B-19-0-.5	Ethylbenzene	130	ug/Kg		J
B-22-0-.5	Ethylbenzene	380	ug/Kg	E	J
B-22-0-.5 DL	Ethylbenzene	2300	ug/Kg	D	J
B-22-0-.5MS	Ethylbenzene	77	ug/Kg		J
B-22-0-.5MSD	Ethylbenzene	160	ug/Kg		J
B-24-15-2.0	Ethylbenzene	160	ug/Kg		J
B-27-0-.5	Ethylbenzene	5	ug/Kg	U	R
B-29-0-.5	Ethylbenzene	260	ug/Kg	E	J
B-29-0-.5 DL	Ethylbenzene	1100	ug/Kg	D	J
DUP 072208	Ethylbenzene	74	ug/Kg		J
FB072208	Ethylbenzene	1	ug/L	U	R
TB 072208	Ethylbenzene	1	ug/L	U	R
TB072408	Ethylbenzene	1	ug/L	U	R
B-06-.5-1	Styrene	5	ug/Kg	U	R
B-08-0-.5	Styrene	6	ug/Kg	U	J
B-08-0-.5MS	Styrene	32	ug/Kg		J
B-08-0-.5MSD	Styrene	37	ug/Kg		J
B-09-4.5-5	Styrene	6	ug/Kg	U	R
B-10-.5-1	Styrene	6	ug/Kg	U	R
B-12-0-.5	Styrene	5	ug/Kg	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-13-.5-1	Styrene	29	ug/Kg	U	R
B-15-0-.5	Styrene	6	ug/Kg	U	R
B-16-.5-1	Styrene	5	ug/Kg	U	R
B-18-.5-1	Styrene	6	ug/Kg	U	R
B-19-0-.5	Styrene	5	ug/Kg	U	R
B-22-0-.5	Styrene	5	ug/Kg	U	R
B-22-0-.5MS	Styrene	31	ug/Kg		J
B-22-0-.5MSD	Styrene	44	ug/Kg		J
B-24-15-2.0	Styrene	6	ug/Kg	U	R
B-27-0-.5	Styrene	5	ug/Kg	U	R
B-29-0-.5	Styrene	5	ug/Kg	U	R
FB072208	Styrene	1	ug/L	U	R
TB 072208	Styrene	1	ug/L	U	R
TB072408	Styrene	1	ug/L	U	R
B-01-0-.5	1,1,2,2-Tetrachloroethane	5	ug/Kg	U	R
B-06-.5-1	1,1,2,2-Tetrachloroethane	5	ug/Kg	U	R
B-08-0-.5	1,1,2,2-Tetrachloroethane	6	ug/Kg	U	R
B-08-0-.5MS	1,1,2,2-Tetrachloroethane	36	ug/Kg		J
B-08-0-.5MSD	1,1,2,2-Tetrachloroethane	39	ug/Kg		J
B-09-4.5-5	1,1,2,2-Tetrachloroethane	6	ug/Kg	U	R
B-10-.5-1	1,1,2,2-Tetrachloroethane	6	ug/Kg	U	R
B-12-0-.5	1,1,2,2-Tetrachloroethane	5	ug/Kg	U	R
B-13-.5-1	1,1,2,2-Tetrachloroethane	29	ug/Kg	U	R
B-15-0-.5	1,1,2,2-Tetrachloroethane	6	ug/Kg	U	R
B-16-.5-1	1,1,2,2-Tetrachloroethane	5	ug/Kg	U	R
B-18-.5-1	1,1,2,2-Tetrachloroethane	6	ug/Kg	U	R
B-19-0-.5	1,1,2,2-Tetrachloroethane	5	ug/Kg	U	R
B-22-0-.5	1,1,2,2-Tetrachloroethane	5	ug/Kg	U	R
B-22-0-.5MS	1,1,2,2-Tetrachloroethane	18	ug/Kg		J
B-22-0-.5MSD	1,1,2,2-Tetrachloroethane	19	ug/Kg		J
B-24-15-2.0	1,1,2,2-Tetrachloroethane	6	ug/Kg	U	R
B-27-0-.5	1,1,2,2-Tetrachloroethane	5	ug/Kg	U	R
B-29-0-.5	1,1,2,2-Tetrachloroethane	5	ug/Kg	U	R
DUP 072208	1,1,2,2-Tetrachloroethane	49	ug/Kg	U	R
FB072208	1,1,2,2-Tetrachloroethane	1	ug/L	U	R
TB 072208	1,1,2,2-Tetrachloroethane	1	ug/L	U	R
TB072408	1,1,2,2-Tetrachloroethane	1	ug/L	U	R
B-01-0-.5	1,1,2-Trichloro-1,2,2-Trifluroethane	5	ug/Kg	U	R
B-06-.5-1	1,1,2-Trichloro-1,2,2-Trifluroethane	5	ug/Kg	U	R
B-08-0-.5	1,1,2-Trichloro-1,2,2-Trifluroethane	6	ug/Kg	U	R
B-08-0-.5MS	1,1,2-Trichloro-1,2,2-Trifluroethane	33	ug/Kg		J
B-08-0-.5MSD	1,1,2-Trichloro-1,2,2-Trifluroethane	38	ug/Kg		J
B-09-4.5-5	1,1,2-Trichloro-1,2,2-Trifluroethane	6	ug/Kg	U	R
B-10-.5-1	1,1,2-Trichloro-1,2,2-Trifluroethane	6	ug/Kg	U	R
B-12-0-.5	1,1,2-Trichloro-1,2,2-Trifluroethane	5	ug/Kg	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-13-.5-1	1,1,2-Trichloro-1,2,2-Trifluroethane	29	ug/Kg	U	R
B-15-0-.5	1,1,2-Trichloro-1,2,2-Trifluroethane	6	ug/Kg	U	R
B-16-.5-1	1,1,2-Trichloro-1,2,2-Trifluroethane	5	ug/Kg	U	R
B-18-.5-1	1,1,2-Trichloro-1,2,2-Trifluroethane	6	ug/Kg	U	R
B-19-0-.5	1,1,2-Trichloro-1,2,2-Trifluroethane	5	ug/Kg	U	R
B-22-0-.5	1,1,2-Trichloro-1,2,2-Trifluroethane	5	ug/Kg	U	R
B-22-0-.5MS	1,1,2-Trichloro-1,2,2-Trifluroethane	13	ug/Kg		J
B-22-0-.5MSD	1,1,2-Trichloro-1,2,2-Trifluroethane	17	ug/Kg		J
B-24-15-2.0	1,1,2-Trichloro-1,2,2-Trifluroethane	6	ug/Kg	U	R
B-27-0-.5	1,1,2-Trichloro-1,2,2-Trifluroethane	5	ug/Kg	U	R
B-29-0-.5	1,1,2-Trichloro-1,2,2-Trifluroethane	5	ug/Kg	U	R
DUP 072208	1,1,2-Trichloro-1,2,2-Trifluroethane	49	ug/Kg	U	R
FB072208	1,1,2-Trichloro-1,2,2-Trifluroethane	1	ug/L	U	R
TB 072208	1,1,2-Trichloro-1,2,2-Trifluroethane	1	ug/L	U	R
TB072408	1,1,2-Trichloro-1,2,2-Trifluroethane	1	ug/L	U	R
B-01-0-.5	Tetrachloroethene	2	ug/Kg	J	J
B-06-.5-1	Tetrachloroethene	5	ug/Kg	U	R
B-08-0-.5	Tetrachloroethene	6	ug/Kg	U	R
B-08-0-.5MS	Tetrachloroethene	28	ug/Kg		J
B-08-0-.5MSD	Tetrachloroethene	34	ug/Kg		J
B-09-4.5-5	Tetrachloroethene	6	ug/Kg	U	R
B-10-.5-1	Tetrachloroethene	4	ug/Kg	J	J
B-12-0-.5	Tetrachloroethene	5	ug/Kg	U	R
B-13-.5-1	Tetrachloroethene	72	ug/Kg		J
B-15-0-.5	Tetrachloroethene	6	ug/Kg	U	R
B-16-.5-1	Tetrachloroethene	8	ug/Kg		J
B-18-.5-1	Tetrachloroethene	2	ug/Kg	J	J
B-19-0-.5	Tetrachloroethene	2	ug/Kg	J	J
B-22-0-.5	Tetrachloroethene	5	ug/Kg		J
B-22-0-.5MS	Tetrachloroethene	12	ug/Kg		J
B-22-0-.5MSD	Tetrachloroethene	15	ug/Kg		J
B-24-15-2.0	Tetrachloroethene	1	ug/Kg	J	J
B-27-0-.5	Tetrachloroethene	1	ug/Kg	J	J
B-29-0-.5	Tetrachloroethene	5	ug/Kg	U	R
DUP 072208	Tetrachloroethene	32	ug/Kg	J	J
FB072208	Tetrachloroethene	1	ug/L	U	R
TB 072208	Tetrachloroethene	1	ug/L	U	R
TB072408	Tetrachloroethene	1	ug/L	U	R
B-01-0-.5	Toluene	60	ug/Kg		J
B-06-.5-1	Toluene	5	ug/Kg	U	R
B-08-0-.5	Toluene	6	ug/Kg	U	R
B-08-0-.5MS	Toluene	41	ug/Kg	B	J
B-08-0-.5MSD	Toluene	45	ug/Kg	B	J
B-09-4.5-5	Toluene	6	ug/Kg	U	R
B-10-.5-1	Toluene	900	ug/Kg	E	J

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-10-.5-1 DL	Toluene	790	ug/Kg	D	J
B-12-0-.5	Toluene	2	ug/Kg	J	J
B-13-.5-1	Toluene	120	ug/Kg		J
B-15-0-.5	Toluene	30	ug/Kg	B	J
B-16-.5-1	Toluene	2	ug/Kg	BJ	J
B-18-.5-1	Toluene	6	ug/Kg	U	R
B-19-0-.5	Toluene	230	ug/Kg	BE	J
B-19-0-.5 DL	Toluene	250	ug/Kg	D	J
B-22-0-.5	Toluene	1400	ug/Kg	BE	J
B-22-0-.5 DL	Toluene	3400	ug/Kg	D	J
B-22-0-.5MS	Toluene	410	ug/Kg	BE	J
B-22-0-.5MSD	Toluene	840	ug/Kg	BE	J
B-24-15-2.0	Toluene	1300	ug/Kg	BE	J
B-24-15-2.0 DL	Toluene	3100	ug/Kg	D	J
B-27-0-.5	Toluene	2	ug/Kg	BJ	J
B-29-0-.5	Toluene	590	ug/Kg	BE	J
B-29-0-.5 DL	Toluene	970	ug/Kg	D	J
DUP 072208	Toluene	74	ug/Kg		J
FB072208	Toluene	1	ug/L	U	J
TB 072208	Toluene	1	ug/L	U	J
TB072408	Toluene	1	ug/L	U	J
B-01-0-.5	1,2,4-Trichlorobenzene	5	ug/Kg	U	R
B-01-0-.5	1,2,4-Trichlorobenzene	7100	ug/Kg	U	R
B-06-.5-1	1,2,4-Trichlorobenzene	5	ug/Kg	U	R
B-06-.5-1	1,2,4-Trichlorobenzene	3400	ug/Kg	U	R
B-08-0-.5	1,2,4-Trichlorobenzene	6	ug/Kg	U	R
B-08-0-.5	1,2,4-Trichlorobenzene	3400	ug/Kg	U	R
B-08-0-.5MS	1,2,4-Trichlorobenzene	7	ug/Kg		J
B-08-0-.5MS	1,2,4-Trichlorobenzene	2800	ug/Kg	J	J
B-08-0-.5MSD	1,2,4-Trichlorobenzene	10	ug/Kg		J
B-08-0-.5MSD	1,2,4-Trichlorobenzene	2600	ug/Kg	J	J
B-09-4.5-5	1,2,4-Trichlorobenzene	6	ug/Kg	U	R
B-09-4.5-5	1,2,4-Trichlorobenzene	3700	ug/Kg	U	R
B-10-.5-1	1,2,4-Trichlorobenzene	6	ug/Kg	U	R
B-10-.5-1	1,2,4-Trichlorobenzene	3400	ug/Kg	U	R
B-12-0-.5	1,2,4-Trichlorobenzene	5	ug/Kg	U	R
B-12-0-.5	1,2,4-Trichlorobenzene	3400	ug/Kg	U	R
B-13-.5-1	1,2,4-Trichlorobenzene	29	ug/Kg	U	R
B-13-.5-1	1,2,4-Trichlorobenzene	3700	ug/Kg	U	R
B-15-0-.5	1,2,4-Trichlorobenzene	6	ug/Kg	U	R
B-15-0-.5	1,2,4-Trichlorobenzene	3600	ug/Kg	U	R
B-16-.5-1	1,2,4-Trichlorobenzene	5	ug/Kg	U	R
B-16-.5-1	1,2,4-Trichlorobenzene	3600	ug/Kg	U	R
B-18-.5-1	1,2,4-Trichlorobenzene	6	ug/Kg	U	R
B-18-.5-1	1,2,4-Trichlorobenzene	3900	ug/Kg	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-19-0-.5	1,2,4-Trichlorobenzene	5	ug/Kg	U	R
B-19-0-.5	1,2,4-Trichlorobenzene	3700	ug/Kg	U	R
B-22-0-.5	1,2,4-Trichlorobenzene	5	ug/Kg	U	R
B-22-0-.5	1,2,4-Trichlorobenzene	3600	ug/Kg	U	R
B-22-0-.5MS	1,2,4-Trichlorobenzene	4	ug/Kg	J	J
B-22-0-.5MS	1,2,4-Trichlorobenzene	3200	ug/Kg	J	J
B-22-0-.5MSD	1,2,4-Trichlorobenzene	3	ug/Kg	J	J
B-22-0-.5MSD	1,2,4-Trichlorobenzene	2600	ug/Kg	J	J
B-24-15-2.0	1,2,4-Trichlorobenzene	6	ug/Kg	U	R
B-24-15-2.0	1,2,4-Trichlorobenzene	3500	ug/Kg	U	R
B-27-0-.5	1,2,4-Trichlorobenzene	5	ug/Kg	U	R
B-27-0-.5	1,2,4-Trichlorobenzene	3400	ug/Kg	U	R
B-29-0-.5	1,2,4-Trichlorobenzene	5	ug/Kg	U	R
B-29-0-.5	1,2,4-Trichlorobenzene	3500	ug/Kg	U	R
DUP 072208	1,2,4-Trichlorobenzene	49	ug/Kg	U	R
DUP 072208	1,2,4-Trichlorobenzene	3600	ug/Kg	U	R
FB072208	1,2,4-Trichlorobenzene	1	ug/L	U	R
TB 072208	1,2,4-Trichlorobenzene	1	ug/L	U	R
TB072408	1,2,4-Trichlorobenzene	1	ug/L	U	R
B-01-0-.5	Trichloroethene	5	ug/Kg	U	R
B-06-.5-1	Trichloroethene	5	ug/Kg	U	R
B-08-0-.5	Trichloroethene	6	ug/Kg	U	R
B-08-0-.5MS	Trichloroethene	43	ug/Kg		J
B-08-0-.5MSD	Trichloroethene	46	ug/Kg		J
B-09-4.5-5	Trichloroethene	6	ug/Kg	U	R
B-10-.5-1	Trichloroethene	6	ug/Kg	U	R
B-12-0-.5	Trichloroethene	5	ug/Kg	U	R
B-13-.5-1	Trichloroethene	29	ug/Kg	U	R
B-15-0-.5	Trichloroethene	6	ug/Kg	U	R
B-16-.5-1	Trichloroethene	5	ug/Kg	U	R
B-18-.5-1	Trichloroethene	6	ug/Kg	U	R
B-19-0-.5	Trichloroethene	5	ug/Kg	U	R
B-22-0-.5	Trichloroethene	5	ug/Kg	U	R
B-22-0-.5MS	Trichloroethene	19	ug/Kg		J
B-22-0-.5MSD	Trichloroethene	22	ug/Kg		J
B-24-15-2.0	Trichloroethene	6	ug/Kg	U	R
B-27-0-.5	Trichloroethene	5	ug/Kg	U	R
B-29-0-.5	Trichloroethene	5	ug/Kg	U	R
DUP 072208	Trichloroethene	49	ug/Kg	U	R
FB072208	Trichloroethene	1	ug/L	U	R
TB 072208	Trichloroethene	1	ug/L	U	R
TB072408	Trichloroethene	1	ug/L	U	R
B-01-0-.5	Aluminum	2140	mg/Kg	N	R
B-06-.5-1	Aluminum	3200	mg/Kg	N	R
B-08-0-.5	Aluminum	2620	mg/Kg	N	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-08-0-.5MS	Aluminum	3605.29	mg/Kg	N	R
B-08-0-.5MSD	Aluminum	3893.56	mg/Kg	N	R
B-09-4.5-5	Aluminum	2830	mg/Kg	N	R
B-10-.5-1	Aluminum	2520	mg/Kg	N	R
B-12-0-.5	Aluminum	1840	mg/Kg	N	R
B-13-.5-1	Aluminum	6300	mg/Kg	N	R
B-15-0-.5	Aluminum	1180	mg/Kg		J
B-16-.5-1	Aluminum	3080	mg/Kg		J
B-18-.5-1	Aluminum	2370	mg/Kg		J
B-19-0-.5	Aluminum	2190	mg/Kg		J
B-22-0-.5	Aluminum	1510	mg/Kg		J
B-22-0-.5MS	Aluminum	3548.58	mg/Kg		J
B-22-0-.5MSD	Aluminum	3862.11	mg/Kg		J
B-24-15-2.0	Aluminum	4340	mg/Kg		J
B-27-0-.5	Aluminum	961	mg/Kg		J
B-29-0-.5	Aluminum	1680	mg/Kg		J
DUP 072208	Aluminum	5370	mg/Kg	N	R
FB072208	Aluminum	62.1	ug/L	B	J
B-01-0-.5	Cyclohexane	2	ug/Kg	J	J
B-06-.5-1	Cyclohexane	5	ug/Kg	U	R
B-08-0-.5	Cyclohexane	6	ug/Kg	U	R
B-08-0-.5MS	Cyclohexane	18	ug/Kg		J
B-08-0-.5MSD	Cyclohexane	21	ug/Kg		J
B-09-4.5-5	Cyclohexane	5	ug/Kg	J	J
B-10-.5-1	Cyclohexane	150	ug/Kg		J
B-12-0-.5	Cyclohexane	5	ug/Kg	U	R
B-13-.5-1	Cyclohexane	29	ug/Kg	U	R
B-15-0-.5	Cyclohexane	3	ug/Kg	J	J
B-16-.5-1	Cyclohexane	1	ug/Kg	J	J
B-18-.5-1	Cyclohexane	2	ug/Kg	J	J
B-19-0-.5	Cyclohexane	4	ug/Kg	J	J
B-22-0-.5	Cyclohexane	49	ug/Kg		J
B-22-0-.5MS	Cyclohexane	59	ug/Kg		J
B-22-0-.5MSD	Cyclohexane	66	ug/Kg		J
B-24-15-2.0	Cyclohexane	23	ug/Kg		J
B-27-0-.5	Cyclohexane	5	ug/Kg	U	R
B-29-0-.5	Cyclohexane	11	ug/Kg		J
DUP 072208	Cyclohexane	49	ug/Kg	U	R
FB072208	Cyclohexane	1	ug/L	U	R
TB 072208	Cyclohexane	1	ug/L	U	R
TB072408	Cyclohexane	1	ug/L	U	R
B-01-0-.5	1,2-Dichlorobenzene	5	ug/Kg	U	R
B-01-0-.5	1,2-Dichlorobenzene	7100	ug/Kg	U	R
B-06-.5-1	1,2-Dichlorobenzene	5	ug/Kg	U	R
B-06-.5-1	1,2-Dichlorobenzene	3400	ug/Kg	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-08-0-.5	1,2-Dichlorobenzene	6	ug/Kg	U	R
B-08-0-.5	1,2-Dichlorobenzene	3400	ug/Kg	U	R
B-08-0-.5MS	1,2-Dichlorobenzene	19	ug/Kg		J
B-08-0-.5MS	1,2-Dichlorobenzene	2400	ug/Kg	J	J
B-08-0-.5MSD	1,2-Dichlorobenzene	24	ug/Kg		J
B-08-0-.5MSD	1,2-Dichlorobenzene	2300	ug/Kg	J	J
B-09-4.5-5	1,2-Dichlorobenzene	6	ug/Kg	U	R
B-09-4.5-5	1,2-Dichlorobenzene	3700	ug/Kg	U	R
B-10-.5-1	1,2-Dichlorobenzene	6	ug/Kg	U	R
B-10-.5-1	1,2-Dichlorobenzene	3400	ug/Kg	U	R
B-12-0-.5	1,2-Dichlorobenzene	5	ug/Kg	U	R
B-12-0-.5	1,2-Dichlorobenzene	3400	ug/Kg	U	R
B-13-.5-1	1,2-Dichlorobenzene	17	ug/Kg	J	J
B-13-.5-1	1,2-Dichlorobenzene	3700	ug/Kg	U	R
B-15-0-.5	1,2-Dichlorobenzene	6	ug/Kg	U	R
B-15-0-.5	1,2-Dichlorobenzene	3600	ug/Kg	U	R
B-16-.5-1	1,2-Dichlorobenzene	5	ug/Kg	U	R
B-16-.5-1	1,2-Dichlorobenzene	3600	ug/Kg	U	R
B-18-.5-1	1,2-Dichlorobenzene	6	ug/Kg	U	R
B-18-.5-1	1,2-Dichlorobenzene	3900	ug/Kg	U	R
B-19-0-.5	1,2-Dichlorobenzene	5	ug/Kg	U	R
B-19-0-.5	1,2-Dichlorobenzene	3700	ug/Kg	U	R
B-22-0-.5	1,2-Dichlorobenzene	5	ug/Kg	U	R
B-22-0-.5	1,2-Dichlorobenzene	3600	ug/Kg	U	R
B-22-0-.5MS	1,2-Dichlorobenzene	7	ug/Kg		J
B-22-0-.5MS	1,2-Dichlorobenzene	2800	ug/Kg	J	J
B-22-0-.5MSD	1,2-Dichlorobenzene	8	ug/Kg		J
B-22-0-.5MSD	1,2-Dichlorobenzene	2200	ug/Kg	J	J
B-24-15-2.0	1,2-Dichlorobenzene	6	ug/Kg	U	R
B-24-15-2.0	1,2-Dichlorobenzene	3500	ug/Kg	U	R
B-27-0-.5	1,2-Dichlorobenzene	5	ug/Kg	U	R
B-27-0-.5	1,2-Dichlorobenzene	3400	ug/Kg	U	R
B-29-0-.5	1,2-Dichlorobenzene	5	ug/Kg	U	R
B-29-0-.5	1,2-Dichlorobenzene	3500	ug/Kg	U	R
DUP 072208	1,2-Dichlorobenzene	11	ug/Kg	J	R
DUP 072208	1,2-Dichlorobenzene	3600	ug/Kg	U	R
FB072208	1,2-Dichlorobenzene	1	ug/L	U	R
TB 072208	1,2-Dichlorobenzene	1	ug/L	U	R
TB072408	1,2-Dichlorobenzene	1	ug/L	U	R
B-01-0-.5	1,3-Dichlorobenzene	5	ug/Kg	U	R
B-01-0-.5	1,3-Dichlorobenzene	7100	ug/Kg	U	R
B-06-.5-1	1,3-Dichlorobenzene	5	ug/Kg	U	R
B-06-.5-1	1,3-Dichlorobenzene	3400	ug/Kg	U	R
B-08-0-.5	1,3-Dichlorobenzene	6	ug/Kg	U	R
B-08-0-.5	1,3-Dichlorobenzene	3400	ug/Kg	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-08-0-.5MS	1,3-Dichlorobenzene	16	ug/Kg		J
B-08-0-.5MS	1,3-Dichlorobenzene	2100	ug/Kg	J	J
B-08-0-.5MSD	1,3-Dichlorobenzene	21	ug/Kg		J
B-08-0-.5MSD	1,3-Dichlorobenzene	2000	ug/Kg	J	J
B-09-4.5-5	1,3-Dichlorobenzene	6	ug/Kg	U	R
B-09-4.5-5	1,3-Dichlorobenzene	3700	ug/Kg	U	R
B-10-.5-1	1,3-Dichlorobenzene	6	ug/Kg	U	R
B-10-.5-1	1,3-Dichlorobenzene	3400	ug/Kg	U	R
B-12-0-.5	1,3-Dichlorobenzene	5	ug/Kg	U	R
B-12-0-.5	1,3-Dichlorobenzene	3400	ug/Kg	U	R
B-13-.5-1	1,3-Dichlorobenzene	29	ug/Kg	U	R
B-13-.5-1	1,3-Dichlorobenzene	3700	ug/Kg	U	R
B-15-0-.5	1,3-Dichlorobenzene	6	ug/Kg	U	R
B-15-0-.5	1,3-Dichlorobenzene	3600	ug/Kg	U	R
B-16-.5-1	1,3-Dichlorobenzene	5	ug/Kg	U	R
B-16-.5-1	1,3-Dichlorobenzene	3600	ug/Kg	U	R
B-18-.5-1	1,3-Dichlorobenzene	6	ug/Kg	U	R
B-18-.5-1	1,3-Dichlorobenzene	3900	ug/Kg	U	R
B-19-0-.5	1,3-Dichlorobenzene	5	ug/Kg	U	R
B-19-0-.5	1,3-Dichlorobenzene	3700	ug/Kg	U	R
B-22-0-.5	1,3-Dichlorobenzene	5	ug/Kg	U	R
B-22-0-.5	1,3-Dichlorobenzene	3600	ug/Kg	U	R
B-22-0-.5MS	1,3-Dichlorobenzene	6	ug/Kg		J
B-22-0-.5MS	1,3-Dichlorobenzene	2500	ug/Kg	J	J
B-22-0-.5MSD	1,3-Dichlorobenzene	7	ug/Kg		J
B-22-0-.5MSD	1,3-Dichlorobenzene	1900	ug/Kg	J	J
B-24-15-2.0	1,3-Dichlorobenzene	6	ug/Kg	U	R
B-24-15-2.0	1,3-Dichlorobenzene	3500	ug/Kg	U	R
B-27-0-.5	1,3-Dichlorobenzene	5	ug/Kg	U	R
B-27-0-.5	1,3-Dichlorobenzene	3400	ug/Kg	U	R
B-29-0-.5	1,3-Dichlorobenzene	5	ug/Kg	U	R
B-29-0-.5	1,3-Dichlorobenzene	3500	ug/Kg	U	R
DUP 072208	1,3-Dichlorobenzene	49	ug/Kg	U	R
DUP 072208	1,3-Dichlorobenzene	3600	ug/Kg	U	R
FB072208	1,3-Dichlorobenzene	1	ug/L	U	R
TB 072208	1,3-Dichlorobenzene	1	ug/L	U	R
TB072408	1,3-Dichlorobenzene	1	ug/L	U	R
B-01-0-.5	1,4-Dichlorobenzene	5	ug/Kg	U	R
B-01-0-.5	1,4-Dichlorobenzene	7100	ug/Kg	U	R
B-06-.5-1	1,4-Dichlorobenzene	5	ug/Kg	U	R
B-06-.5-1	1,4-Dichlorobenzene	3400	ug/Kg	U	R
B-08-0-.5	1,4-Dichlorobenzene	6	ug/Kg	U	R
B-08-0-.5	1,4-Dichlorobenzene	3400	ug/Kg	U	R
B-08-0-.5MS	1,4-Dichlorobenzene	17	ug/Kg		J
B-08-0-.5MS	1,4-Dichlorobenzene	2100	ug/Kg	J	J

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-08-0-.5MSD	1,4-Dichlorobenzene	22	ug/Kg		J
B-08-0-.5MSD	1,4-Dichlorobenzene	2000	ug/Kg	J	J
B-09-4.5-5	1,4-Dichlorobenzene	6	ug/Kg	U	R
B-09-4.5-5	1,4-Dichlorobenzene	3700	ug/Kg	U	R
B-10-.5-1	1,4-Dichlorobenzene	6	ug/Kg	U	R
B-10-.5-1	1,4-Dichlorobenzene	3400	ug/Kg	U	R
B-12-0-.5	1,4-Dichlorobenzene	5	ug/Kg	U	R
B-12-0-.5	1,4-Dichlorobenzene	3400	ug/Kg	U	R
B-13-.5-1	1,4-Dichlorobenzene	29	ug/Kg	U	R
B-13-.5-1	1,4-Dichlorobenzene	3700	ug/Kg	U	R
B-15-0-.5	1,4-Dichlorobenzene	6	ug/Kg	U	R
B-15-0-.5	1,4-Dichlorobenzene	3600	ug/Kg	U	R
B-16-.5-1	1,4-Dichlorobenzene	5	ug/Kg	U	R
B-16-.5-1	1,4-Dichlorobenzene	3600	ug/Kg	U	R
B-18-.5-1	1,4-Dichlorobenzene	6	ug/Kg	U	R
B-18-.5-1	1,4-Dichlorobenzene	3900	ug/Kg	U	R
B-19-0-.5	1,4-Dichlorobenzene	5	ug/Kg	U	R
B-19-0-.5	1,4-Dichlorobenzene	3700	ug/Kg	U	R
B-22-0-.5	1,4-Dichlorobenzene	5	ug/Kg	U	R
B-22-0-.5	1,4-Dichlorobenzene	3600	ug/Kg	U	R
B-22-0-.5MS	1,4-Dichlorobenzene	7	ug/Kg		J
B-22-0-.5MS	1,4-Dichlorobenzene	2600	ug/Kg	J	J
B-22-0-.5MSD	1,4-Dichlorobenzene	8	ug/Kg		J
B-22-0-.5MSD	1,4-Dichlorobenzene	1900	ug/Kg	J	J
B-24-15-2.0	1,4-Dichlorobenzene	6	ug/Kg	U	R
B-24-15-2.0	1,4-Dichlorobenzene	3500	ug/Kg	U	R
B-27-0-.5	1,4-Dichlorobenzene	5	ug/Kg	U	R
B-27-0-.5	1,4-Dichlorobenzene	3400	ug/Kg	U	R
B-29-0-.5	1,4-Dichlorobenzene	5	ug/Kg	U	R
B-29-0-.5	1,4-Dichlorobenzene	3500	ug/Kg	U	R
DUP 072208	1,4-Dichlorobenzene	49	ug/Kg	U	R
DUP 072208	1,4-Dichlorobenzene	3600	ug/Kg	U	R
FB072208	1,4-Dichlorobenzene	1	ug/L	U	R
TB 072208	1,4-Dichlorobenzene	1	ug/L	U	R
TB072408	1,4-Dichlorobenzene	1	ug/L	U	R
B-01-0-.5	Isopropylbenzene	2	ug/Kg	J	J
B-06-.5-1	Isopropylbenzene	5	ug/Kg	U	R
B-08-0-.5	Isopropylbenzene	6	ug/Kg	U	R
B-08-0-.5MS	Isopropylbenzene	17	ug/Kg		J
B-08-0-.5MSD	Isopropylbenzene	21	ug/Kg		J
B-09-4.5-5	Isopropylbenzene	3	ug/Kg	J	J
B-10-.5-1	Isopropylbenzene	21	ug/Kg		J
B-12-0-.5	Isopropylbenzene	5	ug/Kg	U	R
B-13-.5-1	Isopropylbenzene	67	ug/Kg		J
B-15-0-.5	Isopropylbenzene	2	ug/Kg	J	J

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-16-.5-1	Isopropylbenzene	5	ug/Kg	U	R
B-18-.5-1	Isopropylbenzene	6	ug/Kg	U	R
B-19-0-.5	Isopropylbenzene	12	ug/Kg		J
B-22-0-.5	Isopropylbenzene	28	ug/Kg		J
B-22-0-.5MS	Isopropylbenzene	15	ug/Kg		J
B-22-0-.5MSD	Isopropylbenzene	21	ug/Kg		J
B-24-15-2.0	Isopropylbenzene	9	ug/Kg		J
B-27-0-.5	Isopropylbenzene	5	ug/Kg	U	R
B-29-0-.5	Isopropylbenzene	26	ug/Kg		J
DUP 072208	Isopropylbenzene	35	ug/Kg	J	J
FB072208	Isopropylbenzene	1	ug/L	U	R
TB 072208	Isopropylbenzene	1	ug/L	U	R
TB072408	Isopropylbenzene	1	ug/L	U	R
B-01-0-.5	Benzo(K)Fluoranthene	3600	ug/Kg	U	R
B-06-.5-1	Benzo(K)Fluoranthene	1700	ug/Kg	U	R
B-08-0-.5	Benzo(K)Fluoranthene	230	ug/Kg	BJ	J
B-08-0-.5MS	Benzo(K)Fluoranthene	2900	ug/Kg	B	J
B-08-0-.5MSD	Benzo(K)Fluoranthene	2300	ug/Kg	B	J
B-09-4.5-5	Benzo(K)Fluoranthene	1900	ug/Kg	U	R
B-10-.5-1	Benzo(K)Fluoranthene	1800	ug/Kg	U	R
B-12-0-.5	Benzo(K)Fluoranthene	1800	ug/Kg	U	R
B-13-.5-1	Benzo(K)Fluoranthene	1900	ug/Kg	U	R
B-15-0-.5	Benzo(K)Fluoranthene	180	ug/Kg	J	J
B-16-.5-1	Benzo(K)Fluoranthene	430	ug/Kg	J	J
B-18-.5-1	Benzo(K)Fluoranthene	260	ug/Kg	J	J
B-19-0-.5	Benzo(K)Fluoranthene	290	ug/Kg	J	J
B-22-0-.5	Benzo(K)Fluoranthene	1800	ug/Kg	U	R
B-22-0-.5MS	Benzo(K)Fluoranthene	3600	ug/Kg		J
B-22-0-.5MSD	Benzo(K)Fluoranthene	2800	ug/Kg		J
B-24-15-2.0	Benzo(K)Fluoranthene	230	ug/Kg	J	J
B-27-0-.5	Benzo(K)Fluoranthene	320	ug/Kg	J	J
B-29-0-.5	Benzo(K)Fluoranthene	240	ug/Kg	J	J
DUP 072208	Benzo(K)Fluoranthene	1900	ug/Kg	U	R
FB072208	Benzo(K)Fluoranthene	5	ug/L	U	R
B-01-0-.5	Benzo(G,H,I)Perylene	1900	ug/Kg	J	J
B-06-.5-1	Benzo(G,H,I)Perylene	220	ug/Kg	J	J
B-08-0-.5	Benzo(G,H,I)Perylene	180	ug/Kg	J	J
B-08-0-.5MS	Benzo(G,H,I)Perylene	2800	ug/Kg		J
B-08-0-.5MSD	Benzo(G,H,I)Perylene	2200	ug/Kg		J
B-09-4.5-5	Benzo(G,H,I)Perylene	500	ug/Kg	J	J
B-10-.5-1	Benzo(G,H,I)Perylene	270	ug/Kg	J	J
B-12-0-.5	Benzo(G,H,I)Perylene	250	ug/Kg	J	J
B-13-.5-1	Benzo(G,H,I)Perylene	290	ug/Kg	J	J
B-15-0-.5	Benzo(G,H,I)Perylene	99	ug/Kg	J	J
B-16-.5-1	Benzo(G,H,I)Perylene	700	ug/Kg	J	J

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-18-.5-1	Benzo(G,H,I)Perylene	290	ug/Kg	J	J
B-19-0-.5	Benzo(G,H,I)Perylene	290	ug/Kg	J	J
B-22-0-.5	Benzo(G,H,I)Perylene	1800	ug/Kg	U	R
B-22-0-.5MS	Benzo(G,H,I)Perylene	4900	ug/Kg		J
B-22-0-.5MSD	Benzo(G,H,I)Perylene	3800	ug/Kg		J
B-24-15-2.0	Benzo(G,H,I)Perylene	170	ug/Kg	J	J
B-27-0-.5	Benzo(G,H,I)Perylene	290	ug/Kg	J	J
B-29-0-.5	Benzo(G,H,I)Perylene	110	ug/Kg	J	J
DUP 072208	Benzo(G,H,I)Perylene	330	ug/Kg	J	J
FB072208	Benzo(G,H,I)Perylene	5	ug/L	U	R
B-01-0-.5	Benzo(A)Pyrene	3400	ug/Kg	J	J
B-06-.5-1	Benzo(A)Pyrene	350	ug/Kg	J	J
B-08-0-.5	Benzo(A)Pyrene	240	ug/Kg	J	J
B-08-0-.5MS	Benzo(A)Pyrene	3900	ug/Kg		J
B-08-0-.5MSD	Benzo(A)Pyrene	3300	ug/Kg		J
B-09-4.5-5	Benzo(A)Pyrene	1400	ug/Kg	J	J
B-10-.5-1	Benzo(A)Pyrene	520	ug/Kg	J	J
B-12-0-.5	Benzo(A)Pyrene	450	ug/Kg	J	J
B-13-.5-1	Benzo(A)Pyrene	600	ug/Kg	J	J
B-15-0-.5	Benzo(A)Pyrene	92	ug/Kg	J	J
B-16-.5-1	Benzo(A)Pyrene	900	ug/Kg	J	J
B-18-.5-1	Benzo(A)Pyrene	240	ug/Kg	J	J
B-19-0-.5	Benzo(A)Pyrene	300	ug/Kg	J	J
B-22-0-.5	Benzo(A)Pyrene	1800	ug/Kg	U	R
B-22-0-.5MS	Benzo(A)Pyrene	5000	ug/Kg		J
B-22-0-.5MSD	Benzo(A)Pyrene	4000	ug/Kg		J
B-24-15-2.0	Benzo(A)Pyrene	200	ug/Kg	J	J
B-27-0-.5	Benzo(A)Pyrene	420	ug/Kg	J	J
B-29-0-.5	Benzo(A)Pyrene	180	ug/Kg	J	J
DUP 072208	Benzo(A)Pyrene	730	ug/Kg	J	J
FB072208	Benzo(A)Pyrene	5	ug/L	U	R
B-01-0-.5	Bis(2-Ethylhexyl) Phthalate	20000	ug/Kg		J
B-06-.5-1	Bis(2-Ethylhexyl) Phthalate	8800	ug/Kg		J
B-08-0-.5	Bis(2-Ethylhexyl) Phthalate	2700	ug/Kg		J
B-08-0-.5MS	Bis(2-Ethylhexyl) Phthalate	7000	ug/Kg		J
B-08-0-.5MSD	Bis(2-Ethylhexyl) Phthalate	5800	ug/Kg		J
B-09-4.5-5	Bis(2-Ethylhexyl) Phthalate	1400	ug/Kg	J	J
B-10-.5-1	Bis(2-Ethylhexyl) Phthalate	5700	ug/Kg		J
B-12-0-.5	Bis(2-Ethylhexyl) Phthalate	10000	ug/Kg		J
B-13-.5-1	Bis(2-Ethylhexyl) Phthalate	14000	ug/Kg		J
B-15-0-.5	Bis(2-Ethylhexyl) Phthalate	5400	ug/Kg		J
B-16-.5-1	Bis(2-Ethylhexyl) Phthalate	6400	ug/Kg		J
B-18-.5-1	Bis(2-Ethylhexyl) Phthalate	4200	ug/Kg		J
B-19-0-.5	Bis(2-Ethylhexyl) Phthalate	14000	ug/Kg		J
B-22-0-.5	Bis(2-Ethylhexyl) Phthalate	2100	ug/Kg		J

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-22-0-.5MS	Bis(2-Ethylhexyl) Phthalate	7400	ug/Kg		J
B-22-0-.5MSD	Bis(2-Ethylhexyl) Phthalate	12000	ug/Kg		J
B-24-15-2.0	Bis(2-Ethylhexyl) Phthalate	9700	ug/Kg		J
B-27-0-.5	Bis(2-Ethylhexyl) Phthalate	9900	ug/Kg		J
B-29-0-.5	Bis(2-Ethylhexyl) Phthalate	5500	ug/Kg		J
DUP 072208	Bis(2-Ethylhexyl) Phthalate	12000	ug/Kg		J
FB072208	Bis(2-Ethylhexyl) Phthalate	5	ug/L	U	R
B-01-0-.5	Dibenz(A,H)Anthracene	160	ug/Kg	J	J
B-06-.5-1	Dibenz(A,H)Anthracene	89	ug/Kg	J	J
B-08-0-.5	Dibenz(A,H)Anthracene	1800	ug/Kg	U	R
B-08-0-.5MS	Dibenz(A,H)Anthracene	3000	ug/Kg		J
B-08-0-.5MSD	Dibenz(A,H)Anthracene	2400	ug/Kg		J
B-09-4.5-5	Dibenz(A,H)Anthracene	150	ug/Kg	J	J
B-10-.5-1	Dibenz(A,H)Anthracene	1800	ug/Kg	U	R
B-12-0-.5	Dibenz(A,H)Anthracene	78	ug/Kg	J	J
B-13-.5-1	Dibenz(A,H)Anthracene	1900	ug/Kg	U	R
B-15-0-.5	Dibenz(A,H)Anthracene	1900	ug/Kg	U	R
B-16-.5-1	Dibenz(A,H)Anthracene	1900	ug/Kg	U	R
B-18-.5-1	Dibenz(A,H)Anthracene	2000	ug/Kg	U	R
B-19-0-.5	Dibenz(A,H)Anthracene	83	ug/Kg	J	J
B-22-0-.5	Dibenz(A,H)Anthracene	1800	ug/Kg	U	R
B-22-0-.5MS	Dibenz(A,H)Anthracene	5100	ug/Kg		J
B-22-0-.5MSD	Dibenz(A,H)Anthracene	4000	ug/Kg		J
B-24-15-2.0	Dibenz(A,H)Anthracene	1800	ug/Kg	U	R
B-27-0-.5	Dibenz(A,H)Anthracene	1800	ug/Kg	U	R
B-29-0-.5	Dibenz(A,H)Anthracene	1800	ug/Kg	U	R
DUP 072208	Dibenz(A,H)Anthracene	85	ug/Kg	J	J
FB072208	Dibenz(A,H)Anthracene	5	ug/L	U	R
B-01-0-.5	3,3'-Dichlorobenzidine	3600	ug/Kg	U	R
B-06-.5-1	3,3'-Dichlorobenzidine	1700	ug/Kg	U	R
B-08-0-.5	3,3'-Dichlorobenzidine	1800	ug/Kg	U	R
B-08-0-.5MS	3,3'-Dichlorobenzidine	3100	ug/Kg		J
B-08-0-.5MSD	3,3'-Dichlorobenzidine	2300	ug/Kg		J
B-09-4.5-5	3,3'-Dichlorobenzidine	1900	ug/Kg	U	R
B-10-.5-1	3,3'-Dichlorobenzidine	1800	ug/Kg	U	R
B-12-0-.5	3,3'-Dichlorobenzidine	1800	ug/Kg	U	R
B-13-.5-1	3,3'-Dichlorobenzidine	1900	ug/Kg	U	R
B-15-0-.5	3,3'-Dichlorobenzidine	1900	ug/Kg	U	R
B-16-.5-1	3,3'-Dichlorobenzidine	1900	ug/Kg	U	R
B-18-.5-1	3,3'-Dichlorobenzidine	2000	ug/Kg	U	R
B-19-0-.5	3,3'-Dichlorobenzidine	1900	ug/Kg	U	R
B-22-0-.5	3,3'-Dichlorobenzidine	1800	ug/Kg	U	R
B-22-0-.5MS	3,3'-Dichlorobenzidine	4300	ug/Kg		J
B-22-0-.5MSD	3,3'-Dichlorobenzidine	3400	ug/Kg		J
B-24-15-2.0	3,3'-Dichlorobenzidine	1800	ug/Kg	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-27-0-.5	3,3'-Dichlorobenzidine	1800	ug/Kg	U	R
B-29-0-.5	3,3'-Dichlorobenzidine	1800	ug/Kg	U	R
DUP 072208	3,3'-Dichlorobenzidine	1900	ug/Kg	U	R
FB072208	3,3'-Dichlorobenzidine	5	ug/L	U	R
B-01-0-.5	Di-N-Octyl Phthalate	5400	ug/Kg		J
B-06-.5-1	Di-N-Octyl Phthalate	2100	ug/Kg		J
B-08-0-.5	Di-N-Octyl Phthalate	1800	ug/Kg		J
B-08-0-.5MS	Di-N-Octyl Phthalate	5100	ug/Kg		J
B-08-0-.5MSD	Di-N-Octyl Phthalate	4400	ug/Kg		J
B-09-4.5-5	Di-N-Octyl Phthalate	1900	ug/Kg	U	R
B-10-.5-1	Di-N-Octyl Phthalate	2300	ug/Kg		J
B-12-0-.5	Di-N-Octyl Phthalate	2000	ug/Kg		J
B-13-.5-1	Di-N-Octyl Phthalate	2600	ug/Kg		J
B-15-0-.5	Di-N-Octyl Phthalate	2300	ug/Kg		J
B-16-.5-1	Di-N-Octyl Phthalate	2200	ug/Kg		J
B-18-.5-1	Di-N-Octyl Phthalate	2100	ug/Kg		J
B-19-0-.5	Di-N-Octyl Phthalate	3200	ug/Kg		J
B-22-0-.5	Di-N-Octyl Phthalate	1800	ug/Kg		J
B-22-0-.5MS	Di-N-Octyl Phthalate	6400	ug/Kg		J
B-22-0-.5MSD	Di-N-Octyl Phthalate	11000	ug/Kg		J
B-24-15-2.0	Di-N-Octyl Phthalate	1800	ug/Kg		J
B-27-0-.5	Di-N-Octyl Phthalate	3600	ug/Kg		J
B-29-0-.5	Di-N-Octyl Phthalate	2600	ug/Kg		J
DUP 072208	Di-N-Octyl Phthalate	4600	ug/Kg		J
FB072208	Di-N-Octyl Phthalate	5	ug/L	B	
B-01-0-.5	Fluoranthene	7100	ug/Kg		J
B-06-.5-1	Fluoranthene	880	ug/Kg	J	J
B-08-0-.5	Fluoranthene	340	ug/Kg	J	J
B-08-0-.5MS	Fluoranthene	3900	ug/Kg		J
B-08-0-.5MSD	Fluoranthene	3400	ug/Kg		J
B-09-4.5-5	Fluoranthene	4900	ug/Kg		J
B-10-.5-1	Fluoranthene	1400	ug/Kg	J	J
B-12-0-.5	Fluoranthene	420	ug/Kg	J	J
B-13-.5-1	Fluoranthene	1800	ug/Kg	J	J
B-15-0-.5	Fluoranthene	240	ug/Kg	J	J
B-16-.5-1	Fluoranthene	2000	ug/Kg		J
B-18-.5-1	Fluoranthene	350	ug/Kg	J	J
B-19-0-.5	Fluoranthene	750	ug/Kg	J	J
B-22-0-.5	Fluoranthene	86	ug/Kg	J	J
B-22-0-.5MS	Fluoranthene	4600	ug/Kg		J
B-22-0-.5MSD	Fluoranthene	3800	ug/Kg		J
B-24-15-2.0	Fluoranthene	420	ug/Kg	J	J
B-27-0-.5	Fluoranthene	790	ug/Kg	J	J
B-29-0-.5	Fluoranthene	620	ug/Kg	J	J
DUP 072208	Fluoranthene	2400	ug/Kg		J

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
FB072208	Fluoranthene	5	ug/L	U	R
B-01-0-.5	Indeno(1,2,3-Cd)Pyrene	1800	ug/Kg	J	J
B-06-.5-1	Indeno(1,2,3-Cd)Pyrene	210	ug/Kg	J	J
B-08-0-.5	Indeno(1,2,3-Cd)Pyrene	140	ug/Kg	J	J
B-08-0-.5MS	Indeno(1,2,3-Cd)Pyrene	3200	ug/Kg		J
B-08-0-.5MSD	Indeno(1,2,3-Cd)Pyrene	2500	ug/Kg		J
B-09-4.5-5	Indeno(1,2,3-Cd)Pyrene	530	ug/Kg	J	J
B-10-.5-1	Indeno(1,2,3-Cd)Pyrene	240	ug/Kg	J	J
B-12-0-.5	Indeno(1,2,3-Cd)Pyrene	240	ug/Kg	J	J
B-13-.5-1	Indeno(1,2,3-Cd)Pyrene	250	ug/Kg	J	J
B-15-0-.5	Indeno(1,2,3-Cd)Pyrene	1900	ug/Kg	U	R
B-16-.5-1	Indeno(1,2,3-Cd)Pyrene	570	ug/Kg	J	J
B-18-.5-1	Indeno(1,2,3-Cd)Pyrene	220	ug/Kg	J	J
B-19-0-.5	Indeno(1,2,3-Cd)Pyrene	230	ug/Kg	J	J
B-22-0-.5	Indeno(1,2,3-Cd)Pyrene	1800	ug/Kg	U	R
B-22-0-.5MS	Indeno(1,2,3-Cd)Pyrene	5200	ug/Kg		J
B-22-0-.5MSD	Indeno(1,2,3-Cd)Pyrene	4100	ug/Kg		J
B-24-15-2.0	Indeno(1,2,3-Cd)Pyrene	160	ug/Kg	J	J
B-27-0-.5	Indeno(1,2,3-Cd)Pyrene	240	ug/Kg	J	J
B-29-0-.5	Indeno(1,2,3-Cd)Pyrene	86	ug/Kg	J	J
DUP 072208	Indeno(1,2,3-Cd)Pyrene	290	ug/Kg	J	J
FB072208	Indeno(1,2,3-Cd)Pyrene	5	ug/L	U	R
B-01-0-.5	2-Nitroaniline	7100	ug/Kg	U	R
B-06-.5-1	2-Nitroaniline	3400	ug/Kg	U	R
B-08-0-.5	2-Nitroaniline	3400	ug/Kg	U	R
B-08-0-.5MS	2-Nitroaniline	2800	ug/Kg	J	J
B-08-0-.5MSD	2-Nitroaniline	2100	ug/Kg	J	J
B-09-4.5-5	2-Nitroaniline	3700	ug/Kg	U	R
B-10-.5-1	2-Nitroaniline	3400	ug/Kg	U	R
B-12-0-.5	2-Nitroaniline	3400	ug/Kg	U	R
B-13-.5-1	2-Nitroaniline	3700	ug/Kg	U	R
B-15-0-.5	2-Nitroaniline	3600	ug/Kg	U	R
B-16-.5-1	2-Nitroaniline	3600	ug/Kg	U	R
B-18-.5-1	2-Nitroaniline	3900	ug/Kg	U	R
B-19-0-.5	2-Nitroaniline	3700	ug/Kg	U	R
B-22-0-.5	2-Nitroaniline	3600	ug/Kg	U	R
B-22-0-.5MS	2-Nitroaniline	3700	ug/Kg		J
B-22-0-.5MSD	2-Nitroaniline	2900	ug/Kg	J	J
B-24-15-2.0	2-Nitroaniline	3500	ug/Kg	U	R
B-27-0-.5	2-Nitroaniline	3400	ug/Kg	U	R
B-29-0-.5	2-Nitroaniline	3500	ug/Kg	U	R
DUP 072208	2-Nitroaniline	3600	ug/Kg	U	R
FB072208	2-Nitroaniline	10	ug/L	U	R
B-01-0-.5	N-Nitrosodiphenylamine	3600	ug/Kg	U	R
B-06-.5-1	N-Nitrosodiphenylamine	1700	ug/Kg	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-08-0-.5	N-Nitrosodiphenylamine	1800	ug/Kg	U	R
B-08-0-.5MS	N-Nitrosodiphenylamine	4100	ug/Kg		J
B-08-0-.5MSD	N-Nitrosodiphenylamine	3500	ug/Kg		J
B-09-4.5-5	N-Nitrosodiphenylamine	1400	ug/Kg	J	J
B-10-.5-1	N-Nitrosodiphenylamine	1800	ug/Kg	U	R
B-12-0-.5	N-Nitrosodiphenylamine	1800	ug/Kg	U	R
B-13-.5-1	N-Nitrosodiphenylamine	1900	ug/Kg	U	R
B-15-0-.5	N-Nitrosodiphenylamine	1900	ug/Kg	U	R
B-16-.5-1	N-Nitrosodiphenylamine	1900	ug/Kg	U	R
B-18-.5-1	N-Nitrosodiphenylamine	2000	ug/Kg	U	R
B-19-0-.5	N-Nitrosodiphenylamine	1900	ug/Kg	U	R
B-22-0-.5	N-Nitrosodiphenylamine	1800	ug/Kg	U	R
B-22-0-.5MS	N-Nitrosodiphenylamine	5300	ug/Kg		J
B-22-0-.5MSD	N-Nitrosodiphenylamine	4300	ug/Kg		J
B-24-15-2.0	N-Nitrosodiphenylamine	1800	ug/Kg	U	R
B-27-0-.5	N-Nitrosodiphenylamine	1800	ug/Kg	U	R
B-29-0-.5	N-Nitrosodiphenylamine	1800	ug/Kg	U	R
DUP 072208	N-Nitrosodiphenylamine	1900	ug/Kg	U	R
FB072208	N-Nitrosodiphenylamine	5	ug/L	U	R
B-01-0-.5	2,4,5-Trichlorophenol	3600	ug/Kg	U	R
B-06-.5-1	2,4,5-Trichlorophenol	1700	ug/Kg	U	R
B-08-0-.5	2,4,5-Trichlorophenol	1800	ug/Kg	U	R
B-08-0-.5MS	2,4,5-Trichlorophenol	3000	ug/Kg		J
B-08-0-.5MSD	2,4,5-Trichlorophenol	2300	ug/Kg		J
B-09-4.5-5	2,4,5-Trichlorophenol	1900	ug/Kg	U	R
B-10-.5-1	2,4,5-Trichlorophenol	1800	ug/Kg	U	R
B-12-0-.5	2,4,5-Trichlorophenol	1800	ug/Kg	U	R
B-13-.5-1	2,4,5-Trichlorophenol	1900	ug/Kg	U	R
B-15-0-.5	2,4,5-Trichlorophenol	1900	ug/Kg	U	R
B-16-.5-1	2,4,5-Trichlorophenol	1900	ug/Kg	U	R
B-18-.5-1	2,4,5-Trichlorophenol	2000	ug/Kg	U	R
B-19-0-.5	2,4,5-Trichlorophenol	1900	ug/Kg	U	R
B-22-0-.5	2,4,5-Trichlorophenol	1800	ug/Kg	U	R
B-22-0-.5MS	2,4,5-Trichlorophenol	3500	ug/Kg		J
B-22-0-.5MSD	2,4,5-Trichlorophenol	2900	ug/Kg		J
B-24-15-2.0	2,4,5-Trichlorophenol	1800	ug/Kg	U	R
B-27-0-.5	2,4,5-Trichlorophenol	1800	ug/Kg	U	R
B-29-0-.5	2,4,5-Trichlorophenol	1800	ug/Kg	U	R
DUP 072208	2,4,5-Trichlorophenol	1900	ug/Kg	U	R
FB072208	2,4,5-Trichlorophenol	5	ug/L	U	R
B-01-0-.5	2,4,6-Trichlorophenol	3600	ug/Kg	U	R
B-06-.5-1	2,4,6-Trichlorophenol	1700	ug/Kg	U	R
B-08-0-.5	2,4,6-Trichlorophenol	1800	ug/Kg	U	R
B-08-0-.5MS	2,4,6-Trichlorophenol	3000	ug/Kg		J
B-08-0-.5MSD	2,4,6-Trichlorophenol	2300	ug/Kg		J

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-09-4.5-5	2,4,6-Trichlorophenol	1900	ug/Kg	U	R
B-10-.5-1	2,4,6-Trichlorophenol	1800	ug/Kg	U	R
B-12-0-.5	2,4,6-Trichlorophenol	1800	ug/Kg	U	R
B-13-.5-1	2,4,6-Trichlorophenol	1900	ug/Kg	U	R
B-15-0-.5	2,4,6-Trichlorophenol	1900	ug/Kg	U	R
B-16-.5-1	2,4,6-Trichlorophenol	1900	ug/Kg	U	R
B-18-.5-1	2,4,6-Trichlorophenol	2000	ug/Kg	U	R
B-19-0-.5	2,4,6-Trichlorophenol	1900	ug/Kg	U	R
B-22-0-.5	2,4,6-Trichlorophenol	1800	ug/Kg	U	R
B 22-0-.5MS	2,4,6-Trichlorophenol	3500	ug/Kg		J
B-22-0-.5MSD	2,4,6-Trichlorophenol	2900	ug/Kg		J
B-24-15-2.0	2,4,6-Trichlorophenol	1800	ug/Kg	U	R
B-27-0-.5	2,4,6-Trichlorophenol	1800	ug/Kg	U	R
B-29-0-.5	2,4,6-Trichlorophenol	1800	ug/Kg	U	R
DUP 072208	2,4,6-Trichlorophenol	1900	ug/Kg	U	R
FB072208	2,4,6-Trichlorophenol	5	ug/L	U	R
B-01-0-.5	M,P-Xylenes	140	ug/Kg		J
B-06-.5-1	M,P Xylenes	16	ug/Kg	U	R
B-08-0-.5	M,P-Xylenes	20	ug/Kg	U	R
B-08-0-.5MS	M,P-Xylenes	84	ug/Kg		J
B-08-0-.5MSD	M,P-Xylenes	99	ug/Kg		J
B-09-4.5-5	M,P-Xylenes	19	ug/Kg	U	R
B-10-.5-1	M,P-Xylenes	1100	ug/Kg	E	J
B-10-.5-1 DL	M,P-Xylenes	1800	ug/Kg	D	J
B-12-0-.5	M,P-Xylenes	4	ug/Kg	J	J
B-13-.5-1	M,P-Xylenes	6500	ug/Kg	E	J
B-13-.5-1 DL	M,P-Xylenes	26000	ug/Kg	D	J
B-15-0-.5	M,P-Xylenes	94	ug/Kg		J
B-16-.5-1	M,P-Xylenes	7	ug/Kg	J	J
B-18-.5-1	M,P-Xylenes	17	ug/Kg	U	R
B-19-0-.5	M,P-Xylenes	730	ug/Kg	E	J
B-19-0-.5 DL	M,P-Xylenes	1900	ug/Kg	D	J
B-22-0-.5	M,P-Xylenes	1800	ug/Kg	E	J
B-22-0-.5 DL	M,P-Xylenes	17000	ug/Kg	D	J
B-22-0-.5MS	M,P-Xylenes	1100	ug/Kg	E	J
B-22-0-.5MSD	M,P-Xylenes	1300	ug/Kg	E	J
B-24-15-2.0	M,P-Xylenes	720	ug/Kg	E	J
B-24-15-2.0 DL	M,P-Xylenes	3600	ug/Kg	D	J
B-27-0-.5	M,P-Xylenes	4	ug/Kg	J	J
B-29-0-.5	M,P-Xylenes	1300	ug/Kg	E	J
B-29-0-.5 DL	M,P-Xylenes	7500	ug/Kg	D	J
DUP 072208	M,P-Xylenes	3900	ug/Kg		J
FB072208	M,P-Xylenes	3	ug/L	U	R
TB 072208	M,P-Xylenes	3	ug/L	U	R
TB072408	M,P-Xylenes	3	ug/L	U	R

Sample	Constituents	Results	Units	Lab Qualifier	Validation Qualifier
B-01-0-.5	2-Methyl-4,6-Dinitrophenol	7100	ug/Kg	U	R
B-06-.5-1	2-Methyl-4,6-Dinitrophenol	3400	ug/Kg	U	R
B-08-0-.5	2-Methyl-4,6-Dinitrophenol	3400	ug/Kg	U	R
B-08-0-.5MS	2-Methyl-4,6-Dinitrophenol	1500	ug/Kg	J	J
B-08-0-.5MSD	2-Methyl-4,6-Dinitrophenol	720	ug/Kg	J	J
B-09-4.5-5	2-Methyl-4,6-Dinitrophenol	3700	ug/Kg	U	R
B-10-.5-1	2-Methyl-4,6-Dinitrophenol	3400	ug/Kg	U	R
B-12-0-.5	2-Methyl-4,6-Dinitrophenol	3400	ug/Kg	U	R
B-13-.5-1	2-Methyl-4,6-Dinitrophenol	3700	ug/Kg	U	R
B-15-0-.5	2-Methyl-4,6-Dinitrophenol	3600	ug/Kg	U	R
B-16-.5-1	2-Methyl-4,6-Dinitrophenol	3600	ug/Kg	U	R
B-18-.5-1	2-Methyl-4,6-Dinitrophenol	3900	ug/Kg	U	R
B-19-0-.5	2-Methyl-4,6-Dinitrophenol	3700	ug/Kg	U	R
B-22-0-.5	2-Methyl-4,6-Dinitrophenol	3600	ug/Kg	U	R
B-22-0-.5MS	2-Methyl-4,6-Dinitrophenol	1200	ug/Kg	J	J
B-22-0-.5MSD	2-Methyl-4,6-Dinitrophenol	880	ug/Kg	J	J
B-24-15-2.0	2-Methyl-4,6-Dinitrophenol	3500	ug/Kg	U	R
B-27-0-.5	2-Methyl-4,6-Dinitrophenol	3400	ug/Kg	U	R
B-29-0-.5	2-Methyl-4,6-Dinitrophenol	3500	ug/Kg	U	R
DUP 072208	2-Methyl-4,6-Dinitrophenol	3600	ug/Kg	U	R
FB072208	2-Methyl-4,6-Dinitrophenol	10	ug/L	U	R

ROTH STEEL CORPORATION
Consent Order D7-1015-11-04
DEC Comments

Solid Waste Investigation Report – received on 3/19/09

1. Page 1-2, Section 2.1. Delete the second sentence in the second paragraph which reads as follows "The Onondaga Lake Superfund Site includes approximately 2,000 acres of....."

2. Page 1-3, Second Paragraph from top. In this paragraph they quote Section 761.62(b)(1)(i) of TSCA for the disposal of non-liquid PCB bulk product waste. What the report leaves out is the rest of the section which states "provided PCB small capacitors have been removed". This is critical because if the small capacitors have not been removed then the waste can not be disposed at a municipal or non-municipal non-hazardous waste landfill. This shall be better explained.

3. Page 3-1, Section 3.2. Second paragraph references figure 3 which show GW contours developed from GW level measurements taken on 11/21/08. GW contour maps shall be provided for all sampling events including the measurements taken on 10/31/08 and 3/15/09. Also, once additional wells are installed, GW level measurements shall be taken on all wells installed to-date onsite and presented on an additional map to confirm GW flow direction.

4. Page 3-1, Section 3.3. The Surface Soil Investigation section does not mention the detection of mercury in the surface soil samples one (8.7mg/kg) of which exceeded the Soil Cleanup Objective concentration (5.7mg/kg). A discussion of the mercury analytical results shall be provided. The results will need to be shown on a map. — Does not apply.

5. Page 3-2, Section 3.4. Fourth paragraph indicates there was considerable TSS and turbidity within the samples taken for MW-7 which the report attempts to suggest was the cause of the Aroclor 1242 levels detected in the well's groundwater. The well shall be re-sampled once turbidity levels are less than 50 NYU.

6. Page 4-1, Section 4.1. Second paragraph method 6010 for metals analyses. Is this correct or should it be 6020 as stated earlier in the report (Section 2)? — PREFERRED; COMMON NOE IS TO BE CONSISTANT.

7. Page 5-1, Data Assessment. In the Soil Sample paragraph it states only cadmium exceeded the Soil Cleanup Objective (SCO), yet Table 3-2 shows mercury to exceed the SCO. BCP SCOs do not apply. The report shall compare results against TAGM 4046 as directed by the DEC in earlier discussions. — for STARS - 4046 "petroleum"

8. Page 6-1. The Conclusions and Recommendations section states "plans will be developed for covering Cells #1 and #2 area in a manner that is acceptable to the NYSDEC." The Consent Order states the Closure and Monitoring shall be in accordance with 6NYCRR Part 360 Regulations. Please revise accordingly for consistency with the Consent Order.

9. Table 3-1. Verify Aroclor 1260 "E" values. Explain what is meant by results reported as "Deemed an estimate following data quality review ("E"). There's inconsistency with the use of the nomenclature between the summary tables and the DUSR. "E" typically signifies that the sample exceeds the calibration range of the instrument. Is this the case? Please explain? See Bob

10. Table 3-7. Some of the Standards that are listed in this table are incorrect. The Tables shall be revised so that the groundwater (GW) samples are compared to the correct GW Standards of 6NYCRR Section 703.5.

11. All Tables: The interchangeable use of "B" and "J" among the tables for indication of results "Below quantitation limit" can lead to confusion. Please revise accordingly for consistency between the tables. LAB ISSUE.

12. All Tables: Averages were reported for samples with duplicate analyses conducted. The results should be reported separately and not averaged.

13. All Tables: A significant amount of the reported results were listed as "R- Rejected following data quality review" and "E- Deemed an estimate following data quality review". All soil and water samples designated with an "R" or "E" will need to be re-sampling in the field and analyzed with proper quality control procedures being followed. Will be resampled.

14. Figure 2. B-31 thru 33 had been spread out more during the planning and approval process. Explain the reason for their close proximity to each other?

15. In accordance with the approved Work Plan, in-situ hydraulic conductivity tests (i.e. slug tests) were to be performed on all monitoring well installations. Rising head slug tests were to be conducted and data entered into AQTESOLV software for hydraulic conductivity calculations. There was no indication in the investigation report of this work being conducted. Please provide the results of this testing. Will do.

16. Plan view figures shall be prepared for all water and soil exceedances above standards and guidance values. OK

Petroleum Investigation Work Plan Addendum – received on 4/2/09

1. Section 2. Monitoring well (MW-10) shall be located downgradient of the shredder along the northern property line as discussed during our 12/15/08 meeting. Agreed.

2. Section 2. Once the new groundwater wells are installed and developed, groundwater levels and groundwater sampling and analyses should be conducted on all groundwater wells including the solid waste investigation wells. GW levels shall be taken from all wells and a groundwater contour map prepared for further examination of the groundwater flow direction onsite. GW levels shall be measured on a quarterly basis to examine seasonal variations. A full GW analysis shall be conducted on all the wells once the new ones are established. The GW analysis shall include sampling and analysis consistent with the parameters listed in the table presented on page 2-2 of the approved Work Plan.

3. Section 3. Second sentence indicates the previous petroleum investigation soil samples showed few exceedances of the TAGM 4046 criteria, however, the previous report only compared the results to the BCP SCO criteria. The results shall be re-submitted comparing them to TAGM 4046. - Plotted from it.

4. Section 3.0. A minimum of ten (10) additional soil samples shall be taken in the area of the shredder and raw metal storage area in addition to the 3 locations proposed (MW-10, MW-11, and B-37). All sampling shall be in accordance with the approved Work Plan. Please provide a map listing the proposed locations of the additional samples for our review and approval. MW-11 - upgradient MW-10 - Downgradient of Shredder.

5. Section 3.0. The Department doesn't consider the location of the MW-7 soil boring as relatively close proximity to the shredder. The additional samples stated in Item 4 above will need to be located closer to the shredder operation.

6. The summary analytical tables listed in the report shall include the following guidance values:

   - MTBE soil matrix – 120 ppb / Guidance numbers.
   - MTBE water matrix – 10 ppb
   - Glycol water matrix – 50 ppb

7. Figures. Plan view figures shall be prepared for all water and soil exceedances above standards and guidance values.