INTERIM REMEDIAL MEASURE

REPORT

for

Zip Zip Mini Market Brownfields Project
Syracuse, New York
NYSDEC Site # B-00075-7

MARCH 2008

Prepared for the City of Syracuse by

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INTERIM REMEDIAL MEASURE REPORT

1.0 INTRODUCTION

.1 Purpose and Format of the Report

This Interim Remedial Measure (IRM) Construction Certification Report documents the performance of an IRM at the Zip-Zip Mini-Market Brownfields Site, in the City of Syracuse, New York. The IRM was conducted by the City of Syracuse under the New York State Department of Environmental Conservation's (NYSDEC's) "Brownfields Program", utilizing funding allocated under the 1996 New York State Clean Water/Clean Air Bond Act. The IRM addressed petroleum-contaminated soils and infrastructure (foundations, equipment and piping) associated with the historical use of the property as a gasoline station and auto repair facility. A previous (2005) IRM, addressing abandoned underground petroleum storage tanks (USTs) and separate phase petroleum within the subsurface at the site, was documented in a May 2006 IRM Report.

The NYSDEC-approved March 2005 IRM Contract Documents (C&S Engineers, Inc.) provided general and special conditions of the contract, bid documents, mandatory State contract clauses, and technical specifications for the IRM work. The IRM Contractor, selected via competitive bid, was Abscope Environmental, Inc. (Abscope). C&S Engineers, Inc. (C&S) provided IRM construction observation and documentation services. Following the 2005 IRMs, C&S submitted a July 7, 2006 proposal to conduct these IRMS as Change Order #2 to the contract for the 2005 IRMs. NYSDEC subsequently approved that proposal to the additional IRMs in an October 13, 2006 letter.

This report follows the format for Remedial Action Reports provided in Section 5.8 of NYSDEC's Draft Technical Guidance for Site Investigation and Remediation (Draft DER-10). This Report concludes with recommendations regarding the Supplemental Site Investigation (SSI). Following the SSI, a report will be generated that will include a review and update of the Qualitative Human Health Risk Assessment, and a Remedial Alternatives Assessment, each with respect to post-IRM conditions at the site.

.2 Summary of the Remedy

The 2008 IRMs were conducted to address the known remaining source of petroleum-related impacts at the site, as determined by previous Site Investigation and IRM data. The remedial strategy for the 2008 IRMs was to excavate and properly dispose petroleum-impacted soils, subsurface structures, piping and equipment associated with previous use of the property as a gasoline service station. In designing the IRM the following special project conditions were specified:

- The Remedial Contractor was required to submit a Plan of Operations to demonstrate how he would successfully prevent site soils from becoming airborne, or from otherwise migrating from the site via storm water, on the wheels of vehicles, or by other means;
- The Contractor was required to provide a secure site during the IRM to protect the public from entering the site or otherwise being exposed to petroleum-impacted soils;
- The Contractor was to provide a site-specific Health and Safety Plan and an Emergency Response Contingency Plan for his employees to provide protection for their employees from exposure to site contaminants as well as general worksite hazards.

2.0 SUMMARY OF REMEDIAL ACTIONS

Several weeks prior to mobilizing for the IRMs, the remedial contractor collected several soil samples from the subsurface within the former dispenser area and established a waste profile with the City of Auburn Landfill for disposal of the petroleum-impacted materials. Site mobilization for the IRMs was initiated on January 7, 2008. The specific remedial strategy was, beginning at a location where petroleum-impacted soils (or infrastructure) were known to be present, was to excavate and load petroleum-impacted soils directly into trucks for transport to the disposal facility. C&S provided field screening of materials as they were excavated; soils that were visibly stained, that exhibited petroleum-like odors, or with measured levels of volatile vapors exceeding 20 parts-per-million a PID, were loaded for disposal. When soils at the limits of excavation met the above criteria, excavation was terminated and confirmation soil samples were collected. Figure 1 illustrates the approximate horizontal limits of the areas excavated as well as the approximate depths of the excavated areas. Figure 2 illustrates the locations where the confirmation samples were collected.

The principal area addressed during these IRMs was the former dispenser island area (see Figure 1). SI results and observations associated with monitoring well MW-3 indicated the presence of free product in this area and soil impacts to depths lower than the apparent water table. The remedial excavation in this area extended to a maximum depth of approximately 18 feet. Further to the south (away from Erie Boulevard), the depth of apparent impacts decreased. Excavation to the north (toward Erie Boulevard) was limited by an intact cut limestone vertical wall, presumably a part of the former Erie Canal. The top of the wall was five to six feet below the ground surface and the bottom of the wall was not apparent at the vertical limit of excavation (approximately 18 feet below the ground surface). This wall was exposed but not disturbed during the IRM. According to the utilities mark-out, an eight-inch diameter natural gas line is located approximately three feet north of the limestone wall at an unspecified depth.

As the remedial excavation in the dispenser island area reached its terminal depths, groundwater intrusion was observed as seepage from the north (through the limestone wall). The intruding water appeared clear with no evidence of product or sheen although some petroleum-like materials were observed on the water surface as it accumulated within the excavation. To manage this water and product, and facilitate excavation, a temporary sump was installed to a depth of approximately 19 feet below the ground surface and the liquids were periodically removed by a vacuum truck for proper disposal. The excavation proceeded to the west, then southward and eastward. Backfill commenced in the western portion of the area after confirmation samples along the west, south, and bottom were collected and while excavation continued to the east and groundwater control measures were maintained. The maximum level of water accumulation in the excavation occurred overnight when water rose to a depth of approximately two feet within a limited area near the sump.

The second remedial area was the vault and equipment area (see Figure 1). In this area, subsurface structures and equipment (including the vault and contents) were removed, along with associated petroleum-impacted soils and sediments. The same field screening criteria were followed in this area, except a lower PID threshold of 5 ppm was adopted due to the increased likelihood that the impacts in this area would be from lubricants rather than gasoline. Liquids present in this area consisted of groundwater or surface water trapped within a subsurface vault with apparent petroleum impacts. Those liquids were removed via vacuum truck for proper disposal. There were no penetrations observed in the sides or floor of the vault. Sediments and impacted soils were removed to the limits shown on Figures 1 and 2 and five confirmation soil samples were collected.

The third area addressed, identified on the figures as "Slab Removal" area, was apparently associated with a former structure. There was no evidence of equipment or piping systems in this area, so the work in this area consisted of:

- Removing residual subsurface concrete;
- Probing (test pitting) and field screening as described above to determine whether the soils exhibited evidence of petroleum contamination; and
- Collecting a confirmation sample.

In each of the above remedial areas, concrete was visually screened by C&S as the materials were removed from the subsurface. Concrete exhibiting no petroleum staining was segregated and removed from the site for recycling; concrete exhibiting staining was loaded with the impacted soils for disposal as non-hazardous industrial solid waste at the City of Auburn Landfill.

Additionally, in each of the above remedial areas, metallic equipment, piping and debris were segregated as removed for cleaning and recycling.

2.1 Areas of Concern

As described in the previous section, the areas of concern identified during the SI and addressed by this IRM were:

- The former dispenser island area ;
- The vault/equipment (former repair shop) area; and
- The area south of the former dispenser island area and west of the vault/equipment area, identified on the site figures as "Slab Removal" area.

Figure 1 indicates the three areas of concern, the horizontal limits of excavation, and the depths of excavation. Figure 2 indicates soil confirmation sample locations.

2.2 Problems Encountered During Construction

As the IRM progressed, the quantities of soil and groundwater removed for disposal approached the estimated quantities included in the base bid for the work. At that time, C&S coordinated with the City of Syracuse, NYSDEC Region 7, and the contractor to assure an understanding and agreement among all parties regarding the estimated volumes of additional materials, and the extent to which those materials could be addressed under this

contract. The work then progressed to completion based on those agreed-upon limits, with the additional work conducted as Change Order #3 to the Contract.

2.3 Changes to the Design Documents

Change Order #3 to the contract was instituted to conduct the additional removals described above. No other changes to the contract documents were required during the IRM.

2.4 Volume and Concentrations of Materials Removed

Based on weigh tickets, 1,707.46 tons of petroleum-contaminated soils and debris were removed from the site and disposed as non-hazardous industrial solid waste during the IRM. In addition, a total of 10,422 gallons of petroleum-contaminated liquids were collected and disposed off-site, including excavation de-watering fluids, and liquids extracted from a subsurface vault. Appendix A provides the disposal documents for the above materials.

2.5 Waste Disposal Listing

As discussed above, 1,707.46 tons of petroleum-contaminated soil were properly disposed at the City of Auburn Landfill during the IRM. In addition, 10,422 gallons of petroleum-contaminated water were disposed at the Industrial Oil Tank Services facility in Oriskany, New York. In addition to the petroleum-contaminated soils and liquids, an unreported quantity of scrap metals, including decontaminated equipment and piping removed from the subsurface, were transported off-site for recycling.

3.0 APPLICABLE REMEDIATION STANDARDS

The NYSDEC's Technical and Guidance Memorandum (TAGM) # 4046 – "Determination of Soil Clean-up Objectives and Clean-up Levels" lists recommended soil clean-up objectives (RSCOs) for petroleum-related compounds. Those RSCOs are provided for reference on the IRM data tables, discussed in the following section. With respect to sites in the NYSDEC Brownfields Clean-Up Program, it may be appropriate to utilize alternative clean-up standards, as set forth in NYSDEC's Draft 6NYCRR Part 375, depending on the projected future use of the property.

4.0 IRM DATA REVIEW

Table 1 provides a log describing each of the sixteen samples (S-1 through S-16) collected at excavation endpoints (sidewalls and bottom) during the IRM. Table 1 also provides PID headspace field screening measurement that was taken from each bagged sample prior to that sample being prepared for submittal to the analytical laboratory. Table 2 provides a summary of the laboratory analytical data for the sixteen soil confirmation samples submitted to the laboratory. Table 2 includes the approximate depth intervals from which each confirmation sample was collected. Soil confirmation samples were submitted for laboratory analysis of TCL volatile organic compounds (USEPA Method 8260) and semi-volatile organic compounds (USEPA Method 8270 B/N). Ten confirmation samples (S-1 through S-7, and S-14 through S-16) were collected from the former "Dispenser Island" area, five confirmation samples (S-8 through S-12) were collected from the "Vault/Equipment" area, and one confirmation sample (S-13) was collected from the "Slab Removal Area", as identified on the site figures.

Figure 2 illustrates the approximate location where each of the confirmation samples was collected. Appendix B provides the Data Usability Summary Report prepared by the data validator as well as the validated sample report forms.

The analytical results for confirmation samples indicate that:

- One volatile organic compound (benzene) was detected in four samples (S-5, S-6, S-14 and S-15) at concentrations exceeding the TAGM 4046 RSCO of 60 ug/kg (ppb), with a maximum concentration of 160 ug/kg (S-15).
- Three sample locations (S-2, S-7, and S-13) exhibited one or more polycyclic aromatic hydrocarbons (PAHs) exceeding the respective TAGM 4046 RSCOs, with a maximum single concentration of 1,100 ug/kg [Benzo(b)fluoranthene at S-13].
- With the above-noted exceptions, concentrations of volatile and base/neutral semi-volatile compounds in the confirmation samples were less than the respective RSCOs from NYSDEC's TAGM # 4046.

5.0 SITE RESTORATION AND SOURCE OF FILL MATERIALS

Following completion of the IRM excavation, the excavated areas were backfilled to the approximate original grade utilizing crusher run gravel imported from the Hanson Aggregate facility located in Jamesville, New York.

6.0 SUMMARY OF PROJECT COSTS

Appendix C provides the approved invoices for all work completed through Substantial Completion of the IRM. Final Contract Closeout for the IRM is ongoing; after Final contract Closeout, the 5% retainage held by the City of Syracuse will be released.

7.0 "AS-BUILT" DRAWINGS

Figure 1 provides the approximate horizontal limits of the IRM excavations as well as the SI sampling locations and the former site structures. The approximate vertical limits of IRM excavations are indicated on Figure 1 and by bottom sample depths (Tables 1 and 2). Figure 2 indicates the locations of IRM confirmation samples.

8.0 WASTE TRANSPORT MANIFESTS

Appendix A provides a copy of each waste transport manifest executed during the IRM. These manifests indicate that a total of 1,707.46 tons of non-hazardous industrial solid waste were disposed at the City of Auburn Landfill and 10,422 gallons of liquid waste were disposed at the Industrial Oil Tank Services facility in Oriskany, New York.

9.0 OBSERVATIONS AND RECOMMENDED FURTHER ACTIONS

Based on the results of the SI and IRMs, we offer the following observations:

- All known petroleum-related infrastructure, and the vast majority of petroleum impacted soils within the site, have been removed during the IRMs;
- Subsurface soils along the northern boundary of the site (proximate to the former canal) exhibit altered physical properties compared to subsurface soils further to the

south. In our opinion, this is due to disturbance of those soils at the time of construction of the canal. Further to the south, undisturbed clay tills limited vertical migration within the subsurface, resulting in the notably shallower depths of petroleum impacted soils in the former tank area (previous IRM), the vault/equipment area, and in the southerly portion of the dispenser island area excavation.

- Subsurface seepage from the north (through the limestone wall of the former canal) into the dispenser area remedial excavation indicates hydraulic communication between the former canal and the site. Given the backfill materials used in the remedial excavation (crusher run limestone), such hydraulic communication would likely be maintained as water levels return to static conditions following the IRMs.
- SI groundwater contours (Figure 4 from the July 2000 SI Report) inferred from water surface elevations in the four site monitoring wells indicated that under static conditions there is movement of groundwater from the canal towards the site and eastward across the site (parallel to the former canal).
- Based on PID measurements reported on the SI boring log for monitoring well MW-4, located approximately 10 feet further to the east from the IRM excavations, a zone of petroleum-impacted soils was observed at the depth of 20 feet to 24 feet below the ground surface (PID measurements of > 400 ppm for the 20-22 ft. interval and 150 ppm for the 22-24 ft. interval). PID measurements from the depth intervals above 20 feet were all less than 1 ppm. The groundwater sample from MW-4 exhibited concentrations of BTEX compounds that exceeded Class GA Standards, but were approximately one order of magnitude less than the levels detected in the groundwater sample collected from monitoring well MW-3. The MW-3 boring log however indicated PID measurements that were elevated along the entire depth interval of the boring, as would be expected in an area impacted by a petroleum release from dispensing spill. Therefore, it appears that the source of impacts in the deep zone at MW-4 is likely to be other than that which was excavated within the dispenser island area during this IRM.
- During installation of the site monitoring wells, the apparent depth of saturated conditions was reported to be in the 16 ft. to 18 ft. depth below the ground surface. However, when the wells were sampled approximately one week later, the depth to groundwater in the wells ranged from 5.48 to 6.66 feet below ground surface. Observations at all wells during development and purging indicated extremely low recharge rates, with all wells pumped to dry conditions several times within a 60 to 90 minute period. These data reinforce the conclusion of the previous paragraph, indicating that an upgradient, and perhaps remote, source is likely for the deep soil and groundwater impacts observed at MW-4.

In summary, the data from the two IRMs and the SI indicate that petroleum-impacted media detected during the SI have been removed from the site during the IRMs, with the following two exceptions:

- PAHs are present at levels exceeding TAGM 4046 RSCOs within the shallow overburden soils in site areas that were not excavated during the IRMs. PAH concentrations of this magnitude are often exhibited within urban fills and surface soils near roads; and
- Apparent petroleum-related impacts are present in the deeper overburden (20-24 feet) in the eastern portion of the site, as detected in SI monitoring well MW-4. SI boring logs indicate that overburden above 20 feet at MW-4 are not impacted, suggesting a source other than a local surface or near surface source may be the cause of the deep impacts observed at MW-4.

Based on the above observations, it is our opinion that the levels of petroleum-contamination remaining within site soils are not significant enough to warrant additional remedial actions, unless an unrestricted future use of the site is anticipated. Given the more likely use of the site for commercial purposes and the feasible receptor populations and exposure scenarios presented in the July 2000 Human Health Risk Assessment, the need for further cleanup of site soils does not appear to be warranted.

Groundwater at the site, or in the vicinity of the site, is not used as a drinking water source. Properties near the site are generally commercial in nature and served by the public water system. Since the area is a fully developed urban area with long-established public drinking water sources from remote surface waters, future withdrawal and use of the groundwater from beneath the site is not necessary. Since the on-site source of potential groundwater impacts has been removed during the IRMs, there is no reason to expect that actions to remedy any residual on-site impacts would have a significant affect on potential human receptors or on regional groundwater quality. Therefore, the need for aggressive remedial actions associated with site groundwater does not appear to be warranted.

Given the above conclusions, we propose to:

- Update the qualitative human health risk assessment (previously presented in the July 2000 SI report) to include a discussion of potential vapor intrusion issues associated with the site, and
- Prepare a Remedial Alternatives Assessment (RAA) for the site.

We anticipate that the RAA shall be based on a commercial redevelopment scenario and post-IRM conditions. We further anticipate that, with appropriate institutional and/or engineering controls, present site conditions appear to be consistent with a return to beneficial use without further investigative or active remedial measures.

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TABLES

TABLE 1
Zip-Zip Mini-Market 2008 Interim Remedial Measures
Brownfield Cleanup Program – NYSDEC Site No. B-00075-7
Soil Confirmation Sample Log

Sample ID	Date (Time)	PID measurement (ppm)	Sample Description/Details
S-1	1/7/08 (1300)	14.8	Sample from 10-14 ft. depth at northwest corner of excavation, along canal wall. Wet, medium, brown gravelly clay till, some silt. No odor. MS/MSD taken at this location.
S-2	1/8/08 (1200)	0.4	Composite sample from 8-12 ft. depth on west sidewall of excavation, south of S-1 to southwest corner. Moist red/brown and brown silt/clay gravelly till. No odor.
S-3	1/8/08 (1300)	24	Sample from 5-8 ft. depth on south sidewall near western corner of dispenser excavation. Red/brown gravelly till. No odor.
S-4	1/8/08 (1330)	2.2	Sample from bottom of dispenser excavation at 10-ft. depth. Moist red/brown gravelly silt. No odor.
S-5	1/8/08 (1400)	24	Sample from bottom (11-ft. to 12-ft. depth) of dispenser excavation . Dense, wet gravelly, clay till. No odor.
S-6	1/10/08 (1000)	5.5	Sample from bottom of dispenser excavation- 18 ft. depth – along canal wall at maximum depth of excavation Red/brown silt/clay, gravelly. No odor.
S-7	1/10/08 (1100)	85	Sample from north sidewall of dispenser excavation- 2-6 ft. depth (above the limestone wall of former canal). Brown silt with gravel and debris. Slight petroleum odor.
S-8	1/14/08 (0900)	5.1	Sample from bottom of vault/equipment excavation at 7 ft. depth (beneath former vault). Brown gravelly silt/clay till, wet. No odor.
S-9	1/15/08 (1000)	4.9	Sample from west wall of equipment/vault excavation at 4-6 ft depth. Moist, medium brown silt/clay till, gravelly. No odor.
S-10	1/15/08 (1010)	0.8	Sample from south wall of equipment/vault excavation at 5 ft. to 7 ft. depth. Moist brown gravelly till. No odor.
S-11	1/15/08 (1020)	0.8	Sample from north wall of equipment/vault excavation (4 ft. to 7 ft. depth). Moist brown clay till, gravel. No odor.
S-12	1/15/08 (1030)	5.5	Sample from east wall of equipment/vault excavation (3 ft. to 6 ft. depth). Moist brown clay till w/ gravel. No odor.

TABLE 1
Zip-Zip Mini-Market 2008 Interim Remedial Measures
Brownfield Cleanup Program – NYSDEC Site No. B-00075-7
Soil Confirmation Sample Log

Sample ID	Date (Time)	PID measurement (ppm)	Sample Description/Details
S-13	1/15/08 (1130)	18.1	Sample from 2 ft. to 5 ft. depth in area west of equipment/ vault excavation and south of dispenser excavation, beneath former concrete pad. No odor.
S-14	1/16/08 (1000)	8.4	Composite sample from the east and south sidewalls of the dispenser area extended excavation at 4-8 ft. depth. MS & MSD samples collected from this location. No odor.
S-15	1/16/08 (1015)	5.8	Sample from bottom of the dispenser area extended excavation at 16 ft. depth. Dense, wet red/brown clay till w/gravel. No odor.
S-16	1/16/08 (1100)	69	Sample from 4 ft. to 6 ft. depth in southerly eastward extension of dispenser excavation. Materials sampled were from the interval surrounding a drainage pipe that was associated with high PID measurements. No odor.

Notes: *See Figure 2 for confirmation sample locations.*
Samples were submitted for laboratory analysis of volatile and semi-volatile compounds via ASP 2000 (USEPA Methods 8260 and 8270, respectively)
See Table 2 for laboratory analytical results summary and Appendix B for Data Usability Summary Reports

Zip Zip Mini Mart Brownfields Site
2008 Interim Remedial Measures
Table 2 - Soil Confirmation Sampling Data

Sample ID ->	Units	TAGM 4046		S-1		S-2		S-3		S-4		S-5		S-6		S-7		S-8	
Depth - >		RSCO	Eastern USA	10-14 ft.		8-12 ft.		5-8 ft.		10 ft.		11-12 ft.		18 ft.		2-6 ft.		7 ft.	
Date Sampled ->			Background	1/7/2008		1/8/2008		1/8/2008		1/8/2008		1/8/2008		1/10/2008		1/10/2008		1/14/2008	
VOLATILES	ug/kg																		
Chloromethane	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Bromomethane	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Vinyl chloride	ug/kg	200		11	U	11	U	10	U	11	U	10	U	11	U	10	U	11	U
Chloroethane	ug/kg	1,900		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Methylene chloride	ug/kg	100		5	U	6	U	5	U	5	U	5	U	**9**		**2**	**J**	**2**	**J**
Acetone	ug/kg	200		**41**		**75**		**17**	**J**	**13**	**J**	**35**		**75**	**J**	**12**	**J**	**15**	**J**
Carbon disulfide	ug/kg	2,700		5	U	6	U	5	U	5	U	5	U	5	U	**1**	**J**	5	U
1,1-Dichloroethene	ug/kg	400		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	ug/kg	200		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Chloroform	ug/kg	300		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	ug/kg	100		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Butanone	ug/kg	300		27	U	**16**	**J**	**9**	**J**	**7**	**J**	**12**	**J**	**12**	**J**	26	U	27	U
1,1,1-Trichloroethane	ug/kg	800		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Carbon tetrachloride	ug/kg	600		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Trichloroethene	ug/kg	700		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Benzene	ug/kg	60 or MDL		5	U	6	U	5	U	5	U	**150**		**120**		**6**		5	U
trans-1,3-Dichloropropene	ug/kg			**5**	**U**	**6**	**U**	**5**	**U**	**5**	**U**	5	U	5	U	5	U	5	U
Bromoform	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-pentanone	ug/kg	1,000		27	U	28	U	26	U	27	U	26	U	27	U	26	U	27	U
2-Hexanone	ug/kg			27	U	28	U	26	U	27	U	26	U	27	U	26	U	27	U
Tetrachloroethene	ug/kg	1,400		5	U	6	U	5	U	5	U	5	J	5	U	5	U	5	U
Toluene	ug/kg	1,500		5	U	6	U	**2**	**J**	**2**	**J**	**19**		**6**		2	U	1	U
1,1,2,2-Tetrachloroethane	ug/kg	600		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	ug/kg	1,700		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	ug/kg	5,500		5	U	6	U	**1**	**J**	**1**	**J**	**30**		5	U	**4**	**J**	5	U
Styrene	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Total xylenes	ug/kg	1,200		16	U	17	U	**3**	**J**	5	U	**170**		16	U	**16**		16	U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	1,000		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	ug/kg	300		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Dichlorodifluoromethane	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Methyl acetate	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Methyl tert butyl ether	ug/kg	120		5	U	6	U	5	U	5	U	5	U	**10**		5	U	5	U
Cyclohexane	ug/kg			**36**		6	U	5	U	5	U	**27**		5	U	5	U	5	U
Methylcyclohexane	ug/kg			**14**		6	U	5	U	**1**	**J**	**3**	**J**	5	U	**2**	**J**	5	U
1,2-Dibromoethane	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
Isopropylbenzene	ug/kg			5	U	6	U	**2**	**J**	5	U	**2**	**J**	5	U	**1**	**J**	5	U
1,3-Dichlorobenzene	ug/kg	1,600		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	ug/kg	8,500		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	ug/kg	7,900		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	ug/kg			5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	ug/kg	3,400		5	U	6	U	5	U	5	U	5	U	5	U	5	U	5	U

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Table 2 - Soil Confirmation Sampling Data

Sample ID ->	Units	TAGM 4046		S-1		S-2		S-3		S-4		S-5		S-6		S-7		S-8	
Depth - >		RSCO	Eastern USA	10-14 ft.		8-12 ft.		5-8 ft.		10 ft.		11-12 ft.		18 ft.		2-6 ft.		7 ft.	
Date Sampled ->			Background	1/7/2008		1/8/2008		1/8/2008		1/8/2008		1/8/2008		1/10/2008		1/10/2008		1/14/2008	
SEMIVOLATILES																			
Benzaldehyde	ug/kg			190	UJ	180	UJ	190	UJ	190	UJ	180	UJ	180	UJ	960	UJ	190	UJ
Phenol	ug/kg	30 or MDL		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Bis(2-chloroethyl) ether	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
2-Chlorophenol	ug/kg	800		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
2-Methylphenol	ug/kg	100 or MDL		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
2,2'-Oxybis(1-Chloropropane)	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Acetophenone	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
4-Methylphenol	ug/kg	900		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
N-Nitroso-Di-n-propylamine	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Hexachloroethane	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Nitrobenzene	ug/kg	200 or MDL		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Isophorone	ug/kg	4400		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
2-Nitrophenol	ug/kg	330 or MDL		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
2,4-Dimethylphenol	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Bis(2-chloroethoxy) methane	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
2,4-Dichlorophenol	ug/kg	400		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Naphthalene	ug/kg	1,300		190	U	**8**	**J**	190	U	190	U	**33**	**J**	180	U	**110**	**J**	190	U
4-Chloroaniline	ug/kg	220 or MDL		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Hexachlorobutadiene	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Caprolactam	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
4-Chloro-3-methylphenol	ug/kg	240 or MDL		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
2-Methylnaphthalene	ug/kg	36,400		190	U	180	U	190	U	190	U	180	U	180	U	**240**	**J**	190	U
Hexachlorocyclopentadiene	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
2,4,6-Trichlorophenol	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
2,4,5-Trichlorophenol	ug/kg	100		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Biphenyl	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
2-Chloronaphthalene	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
2-Nitroaniline	ug/kg	430 or MDL		190	U	360	U	370	U	370	U	340	U	350	U	1,800	U	190	U
Dimethyl phthalate	ug/kg	2,000		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Acenaphthylene	ug/kg	41,000		190	U	**14**	**J**	190	U	190	U	180	U	180	U	960	U	190	U
2,6-Dinitrotoluene	ug/kg	1,000		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
3-Nitroaniline	ug/kg	500 or MDL		360	U	360	U	370	U	370	U	340	U	350	U	1,800	U	360	U
Acenaphthene	ug/kg	50,000		190	U	**12**	**J**	190	U	190	U	180	U	180	U	960	U	190	U
2,4-Dinitrophenol	ug/kg	200 or MDL		360	U	360	U	370	U	370	U	340	U	350	U	1,800	U	360	U
4-Nitrophenol	ug/kg	100 or MDL		360	U	360	U	370	U	370	U	340	U	350	U	1,800	U	360	U
Dibenzofuran	ug/kg	6,200		190	U	**8**	**J**	190	U	190	U	180	U	180	U	960	U	190	U
2,4-Dinitrotoluene	ug/kg	1,000		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Diethyl phthalate	ug/kg	7,100		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
4-Chlorophenyl phenyl ether	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Flourene	ug/kg	50,000		190	U	**9**	**J**	190	U	190	U	180	U	180	U	960	U	190	U
4-Nitroaniline	ug/kg			360	U	360	U	370	U	370	U	340	U	350	U	1,800	U	360	U
4,6-Dinitro-2-methylphenol	ug/kg			360	U	360	U	370	U	370	U	340	U	350	U	1,800	U	360	U
N-nitrosodiphenylamine	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
4-Bromophenyl phenyl ether	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Hexachlorobenzene	ug/kg	410		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Atrazine	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Pentachlorophenol	ug/kg	1000 or MDL		360	U	360	U	370	U	370	U	340	U	350	U	1,800	U	360	U
Phenanthrene	ug/kg	50,000		**11**	**J**	**82**	**J**	190	U	190	U	180	U	180	U	**94**	**J**	190	U

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Table 2 - Soil Confirmation Sampling Data

Sample ID ->	Units	TAGM 4046		S-1		S-2		S-3		S-4		S-5		S-6		S-7		S-8	
Depth - >		RSCO	Eastern USA	10-14 ft.		8-12 ft.		5-8 ft.		10 ft.		11-12 ft.		18 ft.		2-6 ft.		7 ft.	
Date Sampled ->			Background	1/7/2008		1/8/2008		1/8/2008		1/8/2008		1/8/2008		1/10/2008		1/10/2008		1/14/2008	
Anthracene	ug/kg	50,000		190	U	**32**	**J**	190	U	190	U	180	U	180	U	**54**	**J**	190	U
Carbazole	ug/kg			190	U	**8**	**J**	190	U	190	U	180	U	180	U	960	U	190	U
Di-n-butyl phthalate	ug/kg	8,100		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Fluoranthene	ug/kg	50,000		**12**	**J**	**210**		190	U	190	U	180	U	180	U	**360**	**J**	190	U
Pyrene	ug/kg	50,000		**12**	**J**	**180**		190	U	190	U	180	U	180	U	**310**	**J**	190	U
Butyl benzyl phthalate	ug/kg	50,000		190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
3,3'-Dichlorobenzidine	ug/kg			190	U	180	U	190	U	190	U	180	U	180	U	960	U	190	U
Benzo(a)anthracene	ug/kg	224 or MDL		**11**	**J**	**130**	**J**	**8**	**J**	190	U	180	U	180	U	**170**	**J**	190	U
Chrysene	ug/kg	400		190	U	**110**	**J**	190	U	190	U	180	U	180	U	**120**	**J**	190	U
Bis(2-ethylhexyl) phthalate	ug/kg			**140**	**J**	180	U	190	U	190	U	**600**		180	U	960	U	190	U
Di-n-octyl phthalate	ug/kg	50,000		8	U	10	U	24	U	14	U	19	U	**10**	**J**	960	U	190	U
Benzo(b)fluoranthene	ug/kg	1,100		190	U	**140**	**J**	190	U	190	U	180	U	180	U	**140**	**J**	190	U
Benzo(k)fluoranthene	ug/kg	1,100		190	U	**40**	**J**	190	U	190	U	180	U	180	U	**76**	**J**	190	U
Benzo(a)pyrene	ug/kg	61 or MDL		190	U	**100**	**J**	190	U	190	U	190	U	180	U	**130**	**J**	190	U
Indeno(1,2,3-cd)pyrene	ug/kg	3,200		190	U	**77**	**J**	190	U	190	U	180	U	180	U	**86**	**J**	190	U
Dibenzo(a,h)anthracene	ug/kg	14 or MDL		190	U	**24**	J	190	U	190	U	180	U	180	U	960	U	190	U
Benzo(ghi)perylene	ug/kg	50,000		190	U	**83**	**J**	190	U	190	U	180	U	180	U	**92**	**J**	190	U

RSCO = Recommended Soil Cleanup Objectives

130 - **bold** indicates detected value.

- shaded indicates value exceeds TAGM 4046 RSCO

Data Qualifiers:

U = parameter was not detected at or exceeding the reporting limit

B = concentration less than the quantitation limit

J = result qualified by data validator as estimated

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Table 2 - Soil Confirmation Sampling Data

Sample ID ->	Units	TAGM 4046		S-9		S-10		S-11		S-12		S-13		S-14		S-15		S-16	
Depth - >		RSCO	Eastern USA	4-6 ft.		5-7 ft.		4-7 ft.		3-6 ft.		2-5 ft.		4-8 ft.		16 ft.		4-6 ft.	
Date Sampled ->			Background	1/15/2008		1/15/2008		1/15/2008		1/15/2008		1/15/2008		1/16/2008		1/16/2008		1/16/2008	
VOLATILES	ug/kg																		
Chloromethane	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Bromomethane	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Vinyl chloride	ug/kg	200		11	U	11	U	12	U	14	U	11	U	11	U	11	U	11	U
Chloroethane	ug/kg	1,900		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Methylene chloride	ug/kg	100		6	U	5	U	**3**	**J**	**3**	**J**	**4**	**J**	**7**		6	U	**9**	
Acetone	ug/kg	200		28	U	16	U	**33**		**13**	**J**	28	U	28	U	**42**		29	U
Carbon disulfide	ug/kg	2,700		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
1,1-Dichloroethene	ug/kg	400		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
1,1-Dichloroethane	ug/kg	200		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Chloroform	ug/kg	300		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
1,2-Dichloroethane	ug/kg	100		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
2-Butanone	ug/kg	300		28	U	27	U	30	U	36	U	28	U	28	U	28	U	29	U
1,1,1-Trichloroethane	ug/kg	800		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Carbon tetrachloride	ug/kg	600		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Bromodichloromethane	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
1,2-Dichloropropane	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
cis-1,3-Dichloropropene	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Trichloroethene	ug/kg	700		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Dibromochloromethane	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
1,1,2-Trichloroethane	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Benzene	ug/kg	60 or MDL		6	U	5	U	6	U	7	U	6	U	**120**		**160**		**8**	
trans-1,3-Dichloropropene	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Bromoform	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
4-Methyl-2-pentanone	ug/kg	1,000		28	U	27	U	30	U	36	U	28	U	28	U	28	U	29	U
2-Hexanone	ug/kg			28	U	27	U	30	U	36	U	28	U	28	U	28	U	29	U
Tetrachloroethene	ug/kg	1,400		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Toluene	ug/kg	1,500		1	U	1	U	6	U	7	U	1	U	4	U	**18**	**B**	3	U
1,1,2,2-Tetrachloroethane	ug/kg	600		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Chlorobenzene	ug/kg	1,700		6	U	5	U	6	U	**2**	**J**	6	U	6	U	6	U	6	U
Ethylbenzene	ug/kg	5,500		6	U	5	U	6	U	7	U	6	U	**2**	**J**	**150**		**9**	
Styrene	ug/kg			11	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Total xylenes	ug/kg	1,200		17	U	16	U	18	U	21	U	4	U	**23**	**B**	**77**	**B**	**25**	**B**
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	1,000		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
cis-1,2-Dichloroethene	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
trans-1,2-Dichloroethene	ug/kg	300		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Dichlorodifluoromethane	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Trichlorofluoromethane	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Methyl acetate	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Methyl tert butyl ether	ug/kg	120		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Cyclohexane	ug/kg			6	U	5	U	6	U	7	U	6	U	**47**		**43**		**99**	
Methylcyclohexane	ug/kg			6	U	5	U	6	U	7	U	6	U	**42**		**47**		**44**	
1,2-Dibromoethane	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
Isopropylbenzene	ug/kg			6	U	5	U	6	U	7	U	6	U	**4**	**J**	**30**		**54**	
1,3-Dichlorobenzene	ug/kg	1,600		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
1,4-Dichlorobenzene	ug/kg	8,500		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
1,2-Dichlorobenzene	ug/kg	7,900		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
1,2-Dibromo-3-chloropropane	ug/kg			6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U
1,2,4-Trichlorobenzene	ug/kg	3,400		6	U	5	U	6	U	7	U	6	U	6	U	6	U	6	U

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Table 2 - Soil Confirmation Sampling Data

Sample ID ->	Units	TAGM 4046		S-9		S-10		S-11		S-12		S-13		S-14		S-15		S-16	
Depth - >		RSCO	Eastern USA	4-6 ft.		5-7 ft.		4-7 ft.		3-6 ft.		2-5 ft.		4-8 ft.		16 ft.		4-6 ft.	
Date Sampled ->			Background	1/15/2008		1/15/2008		1/15/2008		1/15/2008		1/15/2008		1/16/2008		1/16/2008		1/16/2008	
SEMIVOLATILES																			
Benzaldehyde	ug/kg			190	UJ	190	UJ	190	UJ	190	UJ	180	UJ	190	UJ	190	UJ	180	UJ
Phenol	ug/kg	30 or MDL		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Bis(2-chloroethyl) ether	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
2-Chlorophenol	ug/kg	800		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
2-Methylphenol	ug/kg	100 or MDL		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
2,2'-Oxybis(1-Chloropropane)	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Acetophenone	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
4-Methylphenol	ug/kg	900		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
N-Nitroso-Di-n-propylamine	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Hexachloroethane	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Nitrobenzene	ug/kg	200 or MDL		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Isophorone	ug/kg	4400		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
2-Nitrophenol	ug/kg	330 or MDL		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
2,4-Dimethylphenol	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Bis(2-chloroethoxy) methane	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
2,4-Dichlorophenol	ug/kg	400		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Naphthalene	ug/kg	1,300		190	U	190	U	190	U	190	U	**68**	**J**	**13**	**J**	**96**	**J**	180	U
4-Chloroaniline	ug/kg	220 or MDL		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Hexachlorobutadiene	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Caprolactam	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
4-Chloro-3-methylphenol	ug/kg	240 or MDL		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
2-Methylnaphthalene	ug/kg	36,400		190	U	190	U	190	U	190	U	**14**	**J**	**9**	**J**	**67**	**J**	180	U
Hexachlorocyclopentadiene	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
2,4,6-Trichlorophenol	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
2,4,5-Trichlorophenol	ug/kg	100		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Biphenyl	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
2-Chloronaphthalene	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
2-Nitroaniline	ug/kg	430 or MDL		370	U	190	U	380	U	360	U	350	U	360	U	370	U	180	U
Dimethyl phthalate	ug/kg	2,000		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Acenaphthylene	ug/kg	41,000		190	U	190	U	190	U	190	U	**110**	**J**	190	U	190	U	180	U
2,6-Dinitrotoluene	ug/kg	1,000		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
3-Nitroaniline	ug/kg	500 or MDL		370	U	360	U	380	U	360	U	350	U	360	U	370	U	360	U
Acenaphthene	ug/kg	50,000		190	U	190	U	190	U	190	U	**16**	**J**	190	U	190	U	180	U
2,4-Dinitrophenol	ug/kg	200 or MDL		370	U	360	U	380	U	360	U	350	U	360	U	370	U	360	U
4-Nitrophenol	ug/kg	100 or MDL		370	U	360	U	380	U	360	U	350	U	360	U	370	U	360	U
Dibenzofuran	ug/kg	6,200		190	U	190	U	190	U	190	U	**10**	**J**	190	U	190	U	180	U
2,4-Dinitrotoluene	ug/kg	1,000		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Diethyl phthalate	ug/kg	7,100		**9**	**J**	190	U	190	U	**10**	**J**	180	U	190	U	190	U	180	U
4-Chlorophenyl phenyl ether	ug/kg			190	U	190	U	190	U	190	U	180	J	190	U	190	U	180	U
Flourene	ug/kg	50,000		190	U	190	U	190	U	190	U	**25**	**J**	190	U	190	U	180	U
4-Nitroaniline	ug/kg			370	U	360	U	380	U	360	U	350	U	360	U	370	U	360	U
4,6-Dinitro-2-methylphenol	ug/kg			370	U	360	U	380	U	360	U	350	U	360	U	370	U	360	U
N-nitrosodiphenylamine	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
4-Bromophenyl phenyl ether	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Hexachlorobenzene	ug/kg	410		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Atrazine	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Pentachlorophenol	ug/kg	1000 or MDL		370	U	360	U	380	U	360	U	350	U	360	U	370	U	360	U
Phenanthrene	ug/kg	50,000		190	U	190	U	190	U	190	U	**230**		**20**	**J**	**36**	**J**	180	U

Zip Zip Mini Mart Brownfields Site
2008 Interim Remedial Measures
Table 2 - Soil Confirmation Sampling Data

Sample ID ->	Units	TAGM 4046		S-9		S-10		S-11		S-12		S-13		S-14		S-15		S-16	
Depth - >		RSCO	Eastern USA	4-6 ft.		5-7 ft.		4-7 ft.		3-6 ft.		2-5 ft.		4-8 ft.		16 ft.		4-6 ft.	
Date Sampled ->			Background	1/15/2008		1/15/2008		1/15/2008		1/15/2008		1/15/2008		1/16/2008		1/16/2008		1/16/2008	
Anthracene	ug/kg	50,000		190	U	190	U	190	U	190	U	**100**	**J**	**11**	**J**	**10**	**J**	180	U
Carbazole	ug/kg			190	U	190	U	190	U	190	U	180	U	190	**U**	190	U	180	U
Di-n-butyl phthalate	ug/kg	8,100		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Fluoranthene	ug/kg	50,000		190	U	**10**	**J**	190	U	190	U	**910**		**30**	**J**	**50**	**J**	180	U
Pyrene	ug/kg	50,000		190	U	**8**	**J**	190	U	190	U	**840**		**24**	**J**	**39**	**J**	180	U
Butyl benzyl phthalate	ug/kg	50,000		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
3,3'-Dichlorobenzidine	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Benzo(a)anthracene	ug/kg	224 or MDL		190	U	**9**	**J**	190	U	190	U	**640**		**24**	**J**	**31**	**J**	180	U
Chrysene	ug/kg	400		190	U	190	U	190	U	190	U	**580**		**15**	**J**	**25**	**J**	180	U
Bis(2-ethylhexyl) phthalate	ug/kg			190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Di-n-octyl phthalate	ug/kg	50,000		190	U	190	U	190	U	190	U	180	U	190	U	190	U	180	U
Benzo(b)fluoranthene	ug/kg	1,100		190	U	190	U	190	U	190	U	**1,100**		**30**	**J**	**30**	**J**	180	U
Benzo(k)fluoranthene	ug/kg	1,100		190	U	190	U	190	U	190	U	**310**		**24**	**J**	**10**	**J**	180	U
Benzo(a)pyrene	ug/kg	61 or MDL		190	U	190	U	190	U	190	U	**900**		**17**	**J**	**25**	**J**	180	U
Indeno(1,2,3-cd)pyrene	ug/kg	3,200		190	U	190	U	190	U	190	U	**560**		**9**	**J**	**14**	**J**	180	U
Dibenzo(a,h)anthracene	ug/kg	14 or MDL		190	U	190	U	190	U	190	U	**190**		190	U	190	U	180	U
Benzo(ghi)perylene	ug/kg	50,000		190	U	190	U	190	U	190	U	**600**		**10**	**J**	**15**	**J**	180	U

RSCO = Recommended Soil Cleanup Objectives

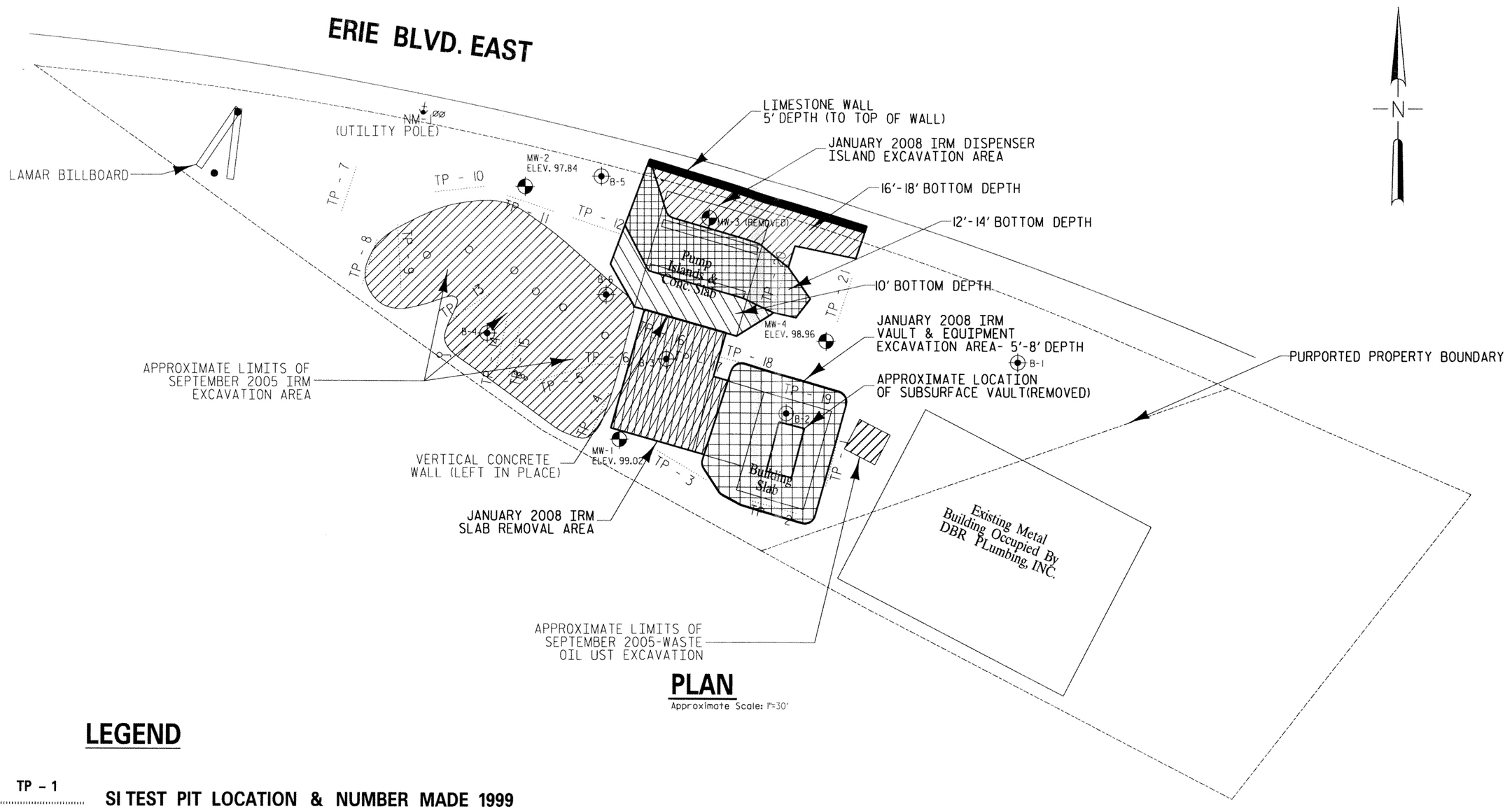
130 - **bold** indicates detected value.

- shaded indicates value exceeds TAGM 4046 RSC

Data Qualifiers:

U = parameter was not detected at or exceeding the reporting limit
B = concentration less than the quantitation limit
J = result qualified by data validator as estimated

FIGURES



PLAN

Approximate Scale: 1"=30'

LEGEND

TP – 1 ..... SI TEST PIT LOCATION & NUMBER MADE 1999

B-1 ⊕ SI BORING LOCATION & NUMBER MADE 1999

MW-4 ELEV. 98.96 ⊕ SI MONITORING WELL LOCATION & NUMBER INSTALLED 1999

30 0 30 60 FT.

30'

CITY OF SYRACUSE — NEW YORK

ZIP-ZIP MINI MART
ERIE BLVD. EAST
BROWNFIELDS
SITE PLAN WITH 2008 IRM EXCAVATION AREAS

C&S Engineers, Inc. SYRACUSE • BUFFALO • BINGHAMTON

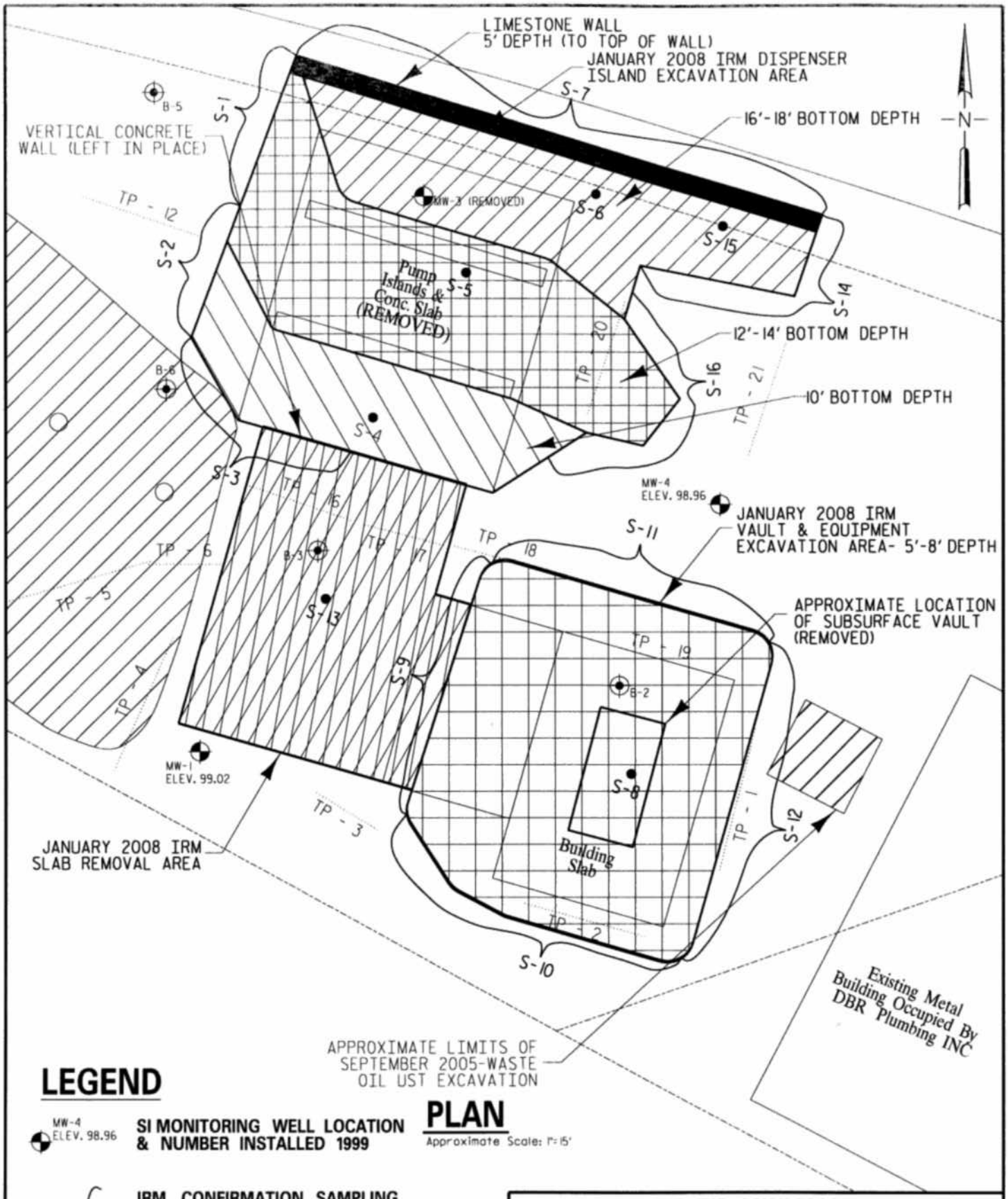
DATE: MARCH 2008
SCALE: AS SHOWN
FILE NO. 119.332.002

1

CADD FILE NO. ZIPZIP.DGN

REFNAME

SYTIME



LEGEND

MW-4 ELEV. 98.96 — SI MONITORING WELL LOCATION & NUMBER INSTALLED 1999

S-9 S-2 — IRM CONFIRMATION SAMPLING LOCATION (SEE TABLE 1 FOR SAMPLE DESCRIPTIONS)

B-1 — SI BORING LOCATION & NUMBER MADE 1999

PLAN

Approximate Scale: 1"=15'

15 0 15 30 FT.

15'

SYTIME

REFNAME

CITY OF SYRACUSE

ZIP-ZIP MINI MART
ERIE BLVD. EAST
BROWNFIELDS
IRM SOIL CONFIRMATION SAMPLE LOCATIONS

NEW YORK

C&S Engineers, Inc.
SYRACUSE • BUFFALO • BINGHAMTON

DATE: MARCH 2008
SCALE: AS SHOWN
FILE NO. 119.332.002

2

CADD FILE NO. ZIPZIP.DGN

APPENDIX A

WASTE PROFILES AND MANIFESTS

APPENDIX B

DATA USABILITY SUMMARY REPORT

APPENDIX C

PROJECT COST DOCUMENTATION