August 28, 2007

Interim Remedial Measures Report

Environmental Restoration Project
Clean Water/Clean Air Bond Act of 1996

ERP Site #E-447036
Clinton South Parking Lot
314 Clinton Street
City of Schenectady
Schenectady County, New York

Prepared for:

Schenectady Metroplex Development Authority
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C.T. Male Project No: 05.5551

ENVIRONMENTAL RESTORATION PROJECT
INTERIM REMEDIAL MEASURES REPORT
CLINTON SOUTH PARKING LOT - 314 CLINTON STREET
CITY OF SCHENECTADY, NEW YORK

TABLE OF CONTENTS

1.0 INTRODUCTION

In a letter to the New York State Department of Environmental Conservation (DEC), dated March 12, 2007, C.T. Male Associates, P.C. (C.T. Male), on behalf of the Schenectady Metroplex Development Authority and the City of Schenectady, provided details for completion of IRM actions at the Clinton South Parking Lot/314 Clinton Street site, in Schenectady, New York, under the Environmental Restoration Program (ERP Site #E447036). Copies of this letter and the subsequent DEC approval letter are included in Appendix A.

The IRM activities were based on the preliminary findings of the Remedial Investigation (RI) conducted on the site during 2006, showing the presence of a single petroleum-related contaminant (benzo(a)pyrene) in soil at concentrations exceeding applicable regulatory limits on certain portions of the site. The IRM activities were performed in accordance with C.T. Male's March 12, 2007 IRM Work Plan (approved by DEC on March 16, 2007) and C.T. Male's June 1, 2007 correspondence describing additional IRM activities (approved by DEC on June 7, 2007).

1.1 IRM Objective and Goal

The objective of the IRM activity was to remove and dispose of the soil/fill material in the immediate vicinity of the sample locations exhibiting concentrations of benzo(a)pyrene in exceedence of regulatory limits as identified during the RI. The primary objective of the IRM Report is to summarize the IRM activities completed at the site, and to report any non-conformance to the approved IRM Work Plan. The goal of the IRM Report is to present the measures employed at the site; provide analytical results of samples collected and analyzed (inclusive of data validation results); and document the completion of the approved IRM Work Plan.

2.0 SCOPE OF WORK

The IRM focused on three particular areas of the site. Two were within the paved parking lot, in the vicinity of surface soil sampling locations SS-4 and SS-10, on the eastern and central portions of the site, respectively. The third was within the grass-covered area on the western portion of the site adjacent to Broadway, in the vicinity of soil boring/monitoring well location GP/CTM-11. The IRM excavation areas are depicted on Figure 2.

2.1 Pre-Excavation Sampling

Prior to commencing excavation activities, C.T. Male performed pre-excavation sampling of the near-surface soils in the areas of SS-4 and SS-10, and subsurface soils/fill materials in the area of GP-11 in order to establish horizontal limits of excavation. Pre-excavation samples were collected utilizing direct-push (Geoprobe) methods, and were handled in accordance with the sampling protocols contained in the field sampling plan portion of the RI Work Plan prepared for this project. The sampling strategy was presented in the IRM Work Plan and generally consisted of the following:

- In the area of SS-10, near-surface soil samples were collected from approximately 0.5 to 2 feet below grade at a total of eight locations. Two sampling locations were selected in each of four general directions (northwest, northeast, southeast and southwest) extending outward from SS-4, at distances of approximately 5 feet (inner samples) and 10 feet (outer samples).

- The same strategy was implemented in the area of SS-4, except that the total number of samples collected was limited to six, due to the presence of a vehicle which could not be moved, and the proximity of the concrete curb and sidewalk to the northwest of SS-4.

- In the area of GP-11, subsurface soil sampling locations were selected using the same general strategy, but at distances of 10 feet (inner samples) and 15 feet (outer samples) from GP-11. A total of eight samples were collected in this area from approximately 4 to 6 feet below grade.

All samples collected were submitted to the laboratory under chain-of-custody protocol. Initially, only the inner samples were analyzed (on an expedited turn-around time) for

TCL SVOCs in accordance with NYSDEC ASP Category B protocols. The outer samples were placed on hold, pending the results of the inner samples. Based on analytical results, none of the inner samples from the areas of SS-4 and GP-11 exhibited concentrations of benzo(a)pyrene exceeding applicable regulatory limit. In the area of SS-10, two of the four inner samples (to the southwest and southeast of SS-10) exhibited benzo(a)pyrene concentrations exceeding the applicable limit, necessitating analysis of the corresponding outer samples. The outer sample to the southwest did not exhibit a benzo(a)pyrene concentration above the laboratory method detection limit. However the outer sample to the southeast contained benzo(a)pyrene at a concentration exceeding the applicable limit. As a result, C.T. Male and the DEC concurred that the excavation would be extended approximately 3 feet to the southeast beyond that outer sampling location, and a post-excavation sample would be collected and submitted for analysis.

Appropriate Quality Assurance/Quality Control (QA/QC) samples were collected during the sampling event and included the collection of matrix spike/matrix spike duplicate and a field duplicate. The data deliverables were subjected to data validation. The results of the data validation process were presented in a Data Usability Summary Report (DUSR), the narrative portion of which is included in Appendix C.

In addition to the samples described above, three soil samples were collected immediately adjacent to original sample locations SS-4, SS-10 and GP-11 for waste characterization purposes, as required by the designated disposal facility (Environmental Soil Management, Inc.). These samples were submitted to the laboratory to be analyzed for Diesel Range Organics (DRO) and TCLP Lead.

2.2 Excavation of Soils and Fill Materials

Prior to commencing IRM excavation work, C.T. Male notified the DEC of the anticipated work schedule and sequence of activities. Field work commenced on March 28, 2007. MC Environmental Services, Inc. (MCES) mobilized personnel and equipment, including a Kobelco SK 300 track-mounted excavator and a Volvo L90C front-end loader. Work zones and staging areas were established for excavated soil and clean fill. The limits of excavation in the areas of locations SS-4, SS-10 and GP-11, as determined by the pre-excavation sampling results, were marked by a C.T. Male representative. Work on the site generally proceeded in the following order: excavation and backfilling in the area of SS-10; excavation and backfilling in the area of

SS-4; and excavation and backfilling in the area of GP-11. IRM field activities were observed by a C.T. Male representative.

2.2.1 SS-4 Excavation Zone

In the area of SS-4, the pavement was saw-cut and removed, along with subbase materials, exposing the underlying soil/fill material. The soil/fill material was excavated to a depth of 2 feet below grade within the established horizontal excavation limits, and was loaded into a truck for disposal. Groundwater was not encountered during excavation activities. After the desired depth of 2' below grade was reached, the excavation zone was backfilled with clean, imported sand fill and compacted to depth of 12 inches below grade. The remainder of the excavation was then backfilled with a suitable subbase material and compacted to existing grade. The final excavation dimensions were 16' x 12.5'. Surface restoration was completed on July 9, 2007, and included the removal of the subbase material to a depth of 5 inches below grade, and replacement with asphalt.

2.2.2 SS-10 Excavation Zone

In the area around SS-10, the pavement was saw-cut and removed, along with subbase materials, exposing the underlying soil/fill materials. The soil/fill was excavated to a depth of 2 feet below grade within the established horizontal excavation limits, and was loaded into a truck for disposal. Groundwater was not encountered during excavation activities.

Following abandonment of monitoring wells within the excavation zone, as described below in section 2.3, the excavation was backfilled with clean, imported sand fill and compacted to a depth of 12 inches below grade. The remainder of the excavation was backfilled with a suitable subbase material and compacted to existing grade. The final excavation dimensions were 18' x 15'. Surface restoration was completed on July 9, 2007, and included the removal of the subbase material to a depth of 5 inches below grade, and replacement with asphalt.

2.2.3 GP-11 Excavation Zone

In the area of GP-11, the soil/fill material from grade to approximately 2 feet below grade was removed and stockpiled adjacent to the excavation to be used as backfill material. The soil/fill material was then excavated within the established horizontal

excavation limits to a depth of 6 feet below grade, and loaded into a truck for disposal. Groundwater was not encountered during excavation activities.

Following abandonment of the monitoring well within the excavation zone, as described below in section 2.3, the excavation was backfilled with clean, imported sand fill and compacted to a depth of approximately 3 inches below grade. The final excavation dimensions were 22' x 20'. Surface restoration in this area was completed on May 25, 2007, and consisted of placement and grading of topsoil to grade, and application of grass seed.

The sand utilized for backfilling of the three excavation areas was obtained from Cranesville Aggregates Co., Inc. in South Glens Falls, New York. Documentation is included in Appendix C.

2.2.4 Disposal of IRM-Derived Waste

A total of 123.59 tons of soil/fill materials were excavated from the three areas and were transported off-site by MCES for disposal at Environmental Soil Management Inc.'s facility in Fort Edward, New York. Copies of waste disposal documentation, including non-hazardous waste manifests and weight tickets are included in Appendix B. Asphalt pavement removed from the parking lot in the areas of SS-4 and SS-10 was transported to MCES' facility in Queensbury, New York, and used as general fill.

2.3 Monitoring Well Abandonment

During excavation activities in the area of GP-11, groundwater monitoring well GP/CTM-11, which was located within the excavation zone, was exposed and abandoned. The PVC well materials were removed from the ground and disposed of as solid waste, and the remaining borehole was filled using a combination of bentonite pellets and cement-bentonite grout.

During excavation activities in the area of SS-10, groundwater monitoring wells CTM-10 and CTM-18, which were located within the excavation zone, were exposed and abandoned. The PVC well materials were cut off at a depth of 2 feet below grade, and the wells were filled using a combination of bentonite pellets and cement-bentonite grout.

Although not a specific component of the IRM, but rather as a function of the remedial alternative selected by the DEC, the remaining on-site monitoring wells (including those installed during C.T. Male's initial investigation activities in 2004) and off-site wells along the south side of Clinton Street, were abandoned on May 21 and 22, 2007. The 2-inch diameter deep wells (CTM-16, CTM-17 and CTM-18) were abandoned in place by filling with cement-bentonite grout to approximately 6 inches below grade, using tremie-grouting methods. The remaining wells, which were 1-inch diameter, were abandoned by removing the PVC well materials, if possible, and filling the borehole (or well, if the materials could not be removed) with cement-bentonite grout to approximately 6 inches below grade. Following grouting activities, with the approval of Metroplex and DEC, the curb box around each well was left in place and filled with concrete to a level flush with the surrounding asphalt pavement.

3.0 FINDINGS

3.1 Post-Excavation Sampling

On March 28, 2007, upon completion of excavation in the area of SS-10, a post-excavation confirmatory sample (identified as "SS-10 Post-Ex SE Wall") was collected from the southeast sidewall of the excavation, at a depth range of approximately 1 to 2 feet below grade, to determine the residual concentration of benzo(a)pyrene remaining in soil/fill material at the southeastern extent of the excavation. The sample was collected and handled in accordance with established sampling protocols for this project, and forwarded to the laboratory of record to be analyzed for SVOCs by EPA Method 8270, in accordance with NYSDEC ASP Category B protocols. The data deliverables were subjected to data validation. The results of the data validation process were presented in a Data Usability Summary Report (DUSR), the narrative portion of which is included in Appendix D.

Analytical results of the SS-10 Post-Ex SE Wall sample indicated the presence of benzo(a)pyrene at a concentration of 1,600 ug/Kg, which is above the applicable regulatory limit of 1,000 ug/Kg. During the data validation process, the result was determined to be estimated/biased high, due to surrogate recoveries of two or more base/neutral surrogates which exceeded laboratory specifications during both the initial and reanalysis of the sample. The degree to which the result was biased high could not be specifically quantified; therefore compliance with the regulatory limit could not be confirmed.

3.2 Additional Post-Excavation Sampling

On June 1, 2007, C.T. Male submitted an IRM Work Plan Amendment to the DEC proposing additional confirmatory sampling activities and potential removal of additional soil/fill material in the area to the southeast of SS-10. The DEC approved the IRM Work Plan Amendment on June 7, 2007, requiring that a sample be collected from along the existing edge of the excavation (in light of the results of the initial confirmatory sample), and that additional samples collected from step-out locations be analyzed only if the sample from the edge of the excavation contained benzo(a)pyrene at a concentration greater than 1,000 ug/Kg.

On June 11, 2007, three additional confirmatory samples were collected in the area to the southeast of SS-10, using direct-push methods. Samples were collected from a depth interval of 1 to 2 feet below grade from within a few inches of the edge of the excavation, and then at step-out locations of 5 and 10 feet from the edge of the excavation. Samples were handled in accordance with established protocols for this project. All three samples were submitted to the laboratory under chain-of-custody protocol. However, only the sample from along the excavation edge (identified as "PostExA 1-2") was initially analyzed (on an expedited turn-around time) for benzo(a)pyrene accordance with NYSDEC ASP Category B protocols. The other samples were placed on hold, pending the results of the excavation edge sample. The data deliverables were subjected to data validation. The results of the data validation process were presented in the DUSR prepared for the initial post-excavation sample, the narrative portion of which is included in Appendix C.

Analytical results of the "PostExA 1-2" sample indicated the presence of benzo(a)pyrene at a concentration of 980 ug/Kg, which is below the applicable regulatory limit. As a result of the data validation process, the data was determined to be usable, although the result of 980 ug/Kg was determined to be estimated/biased high, due to recovery of benzo(a)pyrene in the matrix spike and matrix spike duplicate samples which exceeded laboratory specifications. Given that the result was below the applicable regulatory limit, although estimated and determined to be biased high, the DEC determined that further removal of soil/fill material was not necessary. As such, the samples collected from the step-out locations were not analyzed.

3.3 Data Usability Summary Report

The laboratory analytical data from all sampling activities conducted as part of the IRM were validated in accordance with NYSDEC DUSR requirements. The analytical results presented in Table 1 (attached) reflect the results of the data validation process and have been appropriately qualified. The narrative portions of the DUSRs are presented in Appendix C of this report.

4.0 CONCLUSIONS

IRM activities were conducted at the 314 Clinton Street site to address petroleum-related impacts to soil/fill material as documented during the Remedial Investigation performed at the site during 2006. The general scope of the IRM included the following: pre-excavation sampling to determine horizontal limits of excavation; removal and off-site disposal of soil/fill material from three areas of the site where benzo(a)pyrene was exhibited at concentrations exceeding the applicable regulatory limit; backfilling and surface restoration in the areas of excavation; and post-excavation confirmatory sampling in one of the excavation areas.

Based on the implementation of the activities as described in the previous sections of this report, the objectives of the IRM were achieved. Based on the results of pre- and post-excavation sampling in the areas of the site targeted by the IRM activities, the DEC has determined that residual concentrations of benzo(a)pyrene within near-surface and subsurface soil/fill material in these areas are below the applicable regulatory limit, and that further removal of soil/fill material in these areas is not required.

TABLES

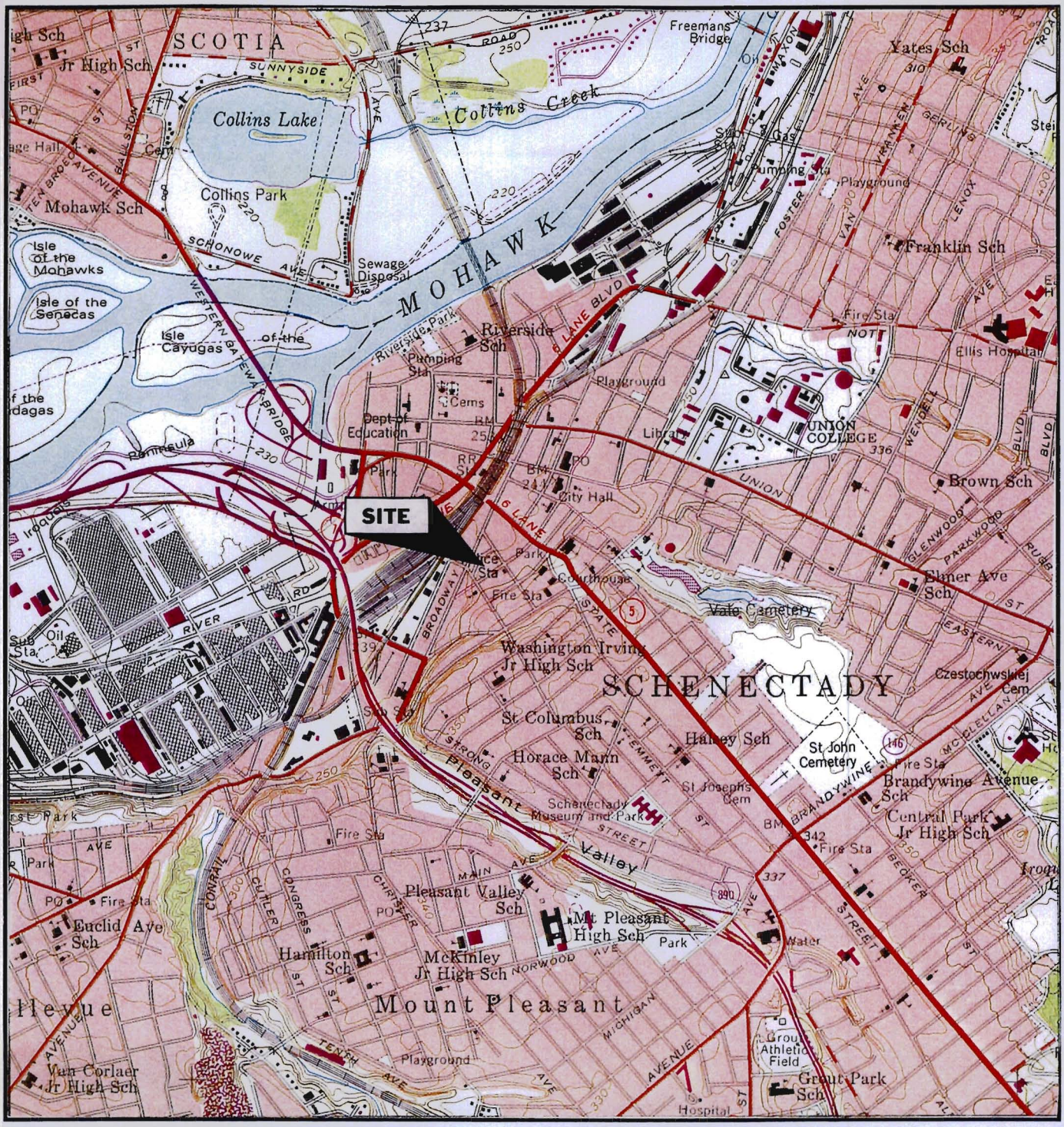
TABLE 1
CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

INTERIM REMEDIAL MEASURES
SUMMARY OF PRE- AND POST-EXCAVATION SAMPLING RESULTS
SEMI-VOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

		PRE-EXCAVATION SAMPLES															POST-EXCAVATION SAMPLES	
Sample ID		B-1A	B-2A	B-3A	B-3BRE	B-4A	B-4B	B-5	B-6	B-8	B-10	FD-01	B-11A	B-11B	B-12B	B-13B	B-14BRE	SS-10 PostEx-SE Wall	PostExA 1-2
Lab Sample Number		Y1921-01	Y1921-03	Y1921-05	Y1921-06RE	Y1921-07	Y1921-08	Y1921-10	Y1921-11	Y1921-13	Y1921-15	Y1921-17	Y1921-18	Y1921-21	Y1921-23	Y1921-25	Y1921-27RE	Y2140-01	Y3053-01
Sampling Date		03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/12/07	03/28/07	6/11/2007
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	5.0	1.0	10.0	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	5.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)																		
Acenaphthylene	500,000	63 U	300 U	63 J	610 U	320 U	63 U	63 U	63 U	62 U	64 U	65 U	62 U	170 J	60 U	60 U	120 U	310 U	NA
Acenaphthene	500,000	69 U	330 U	68 U	670 U	350 U	69 U	69 U	69 U	200 J	70 U	90 J	68 U	67 U	65 U	66 U	130 U	300 U	NA
Dibenzofuran	NS	64 U	310 U	63 U	620 U	330 U	64 U	64 U	64 U	65 J	65 U	66 U(J)	63 U	160 J	61 U	61 U	120 U	310 U	NA
Fluorene	500,000	66 U	310 U	65 U	640 U	330 U	65 U	66 U	66 U	170 J	66 U	83 J	65 U	240 J	62 U	62 U	130 U	320 U	NA
Phenanthrene	500,000	150 J	300 U	990	2100 J	720 J	62 U	89 J	62 U	2100 (J)	63 U	970 (J)	220 J	1500	270 J	320 J	570 J	1400 J	NA
Anthracene	500,000	59 U	280 U	180 J	570 U	300 U	59 U	59 U	59 U	450 (J)	59 U	230 J	58 U	500	73 J	85 J	180 J	290 U	NA
Carbazole	NS	59 U	280 U	170 J	580 U	300 U	59 U	60 U	59 U	150 J	60 U	100 J	58 U	130 J	56 U	56 U	120 U	290 U	NA
Fluoranthene	500,000	370 J	280 U	2700	6100	2000	58 U	190 J	58 U	2200 (J)	58 U	1200 (J)	440	1500	450	410	1200	2400	NA
Pyrene	500,000	320 J	620 J	2600	7600	4800	69 U	170 J	69 U	2500 (J)	70 U	1500 (J)	370 J	1200	680	340 J	1300 (J)	4700	NA
Benzo(a)anthracene	5,600	190 J	260 U(J)	1600 (J)	3800	1600 J	54 U	99 J	54 U	980 (J)	55 U	490 (J)	190 J	510	200 J	170 J	750 (J)	1500 J	NA
Chrysene	56,000	210 J	330 U(J)	1500 (J)	3900	1500 J	70 U	96 J	70 U	960 (J)	71 U	470 (J)	200 J	460	190 J	160 J	670 J	1400 J	NA
bis(2-Ethylhexyl)phthalate	NS	75 U	360 U(J)	73 U(J)	730 U	380 U	75 U	75 U	75 U	73 U	75 U	77 U	73 U	73 U	110 J	71 U	180 J	360 U	NA
Benzo(b)fluoranthene	5,600	270 J	270 J	2000	**5700 (J)**	2400	43 U	110 J	43 U	1300 (J)	43 U	640 (J)	290 J	590	310 J	190 J	950	2100	NA
Benzo(k)fluoranthene	56,000	120 J	410 U(J)	900 (J)	2200 J	990 J	85 U	86 U	86 U	590 (J)	86 U	240 J	130 J	220 J	110 J	87 J	430 J	790 J	NA
Benzo(a)pyrene	1,000	190 J	300 U(J)	**1600 (J)**	**3900 (J)**	**1400 J**	62 U	88 J	62 U	880 (J)	63 U	420 (J)	200 J	470	190 J	150 J	690 J	**1600 J**	980 J
Indeno(1,2,3-cd)pyrene	5,600	57 J	240 U(J)	150 J	1300 J	250 U	49 U	50 U	49 U	68 J	50 U	51 U(J)	49 U(J)	98 J	47 U	47 U	110 J	360 J	NA
Dibenz(a,h)anthracene	56,000	49 U	230 U(J)	51 J	470 U(J)	250 U	49 U	49 U	49 U	48 U(J)	49 U	50 U(J)	48 U	47 U	46 U(J)	46 U	95 U	240 U	NA
Benzo(g,h,i)perylene	500,000	72 J	310 U(J)	560 (J)	3200 J	510 J	64 U	64 U	64 U	250 J	65 U	130 J	63 U	140 J	66 J	61 U	200 J	950 J	NA
Total Confident Conc. SVOC		1949	890	18264	39800	15920	0	842	0	14163	0	6563	2040	7888	2639	1912	7230	17,200	980

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero.
J - The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **bold** print denote exceedence of SCG.
NS - No established standard
ug/Kg - micrograms per kilogram
NA - Sample not analyzed for this compound
Samples B-1A, B-2A, B-3A, B-3B, B-4A and B-4B were collected in the vicinity of SS-10
Samples B-5, B-6, B-8 and B-10 were collected in the vicinity of SS-4.
Samples B-11A, B-11B, B-12B, B-13B and B-14B were collected in the vicinity of GP-11.

FIGURES



MAP REFERENCE
United States Geological Survey
7.5 Minute Series Topographic Map
Quadrangle: Schenectady, NY
Date: 1980

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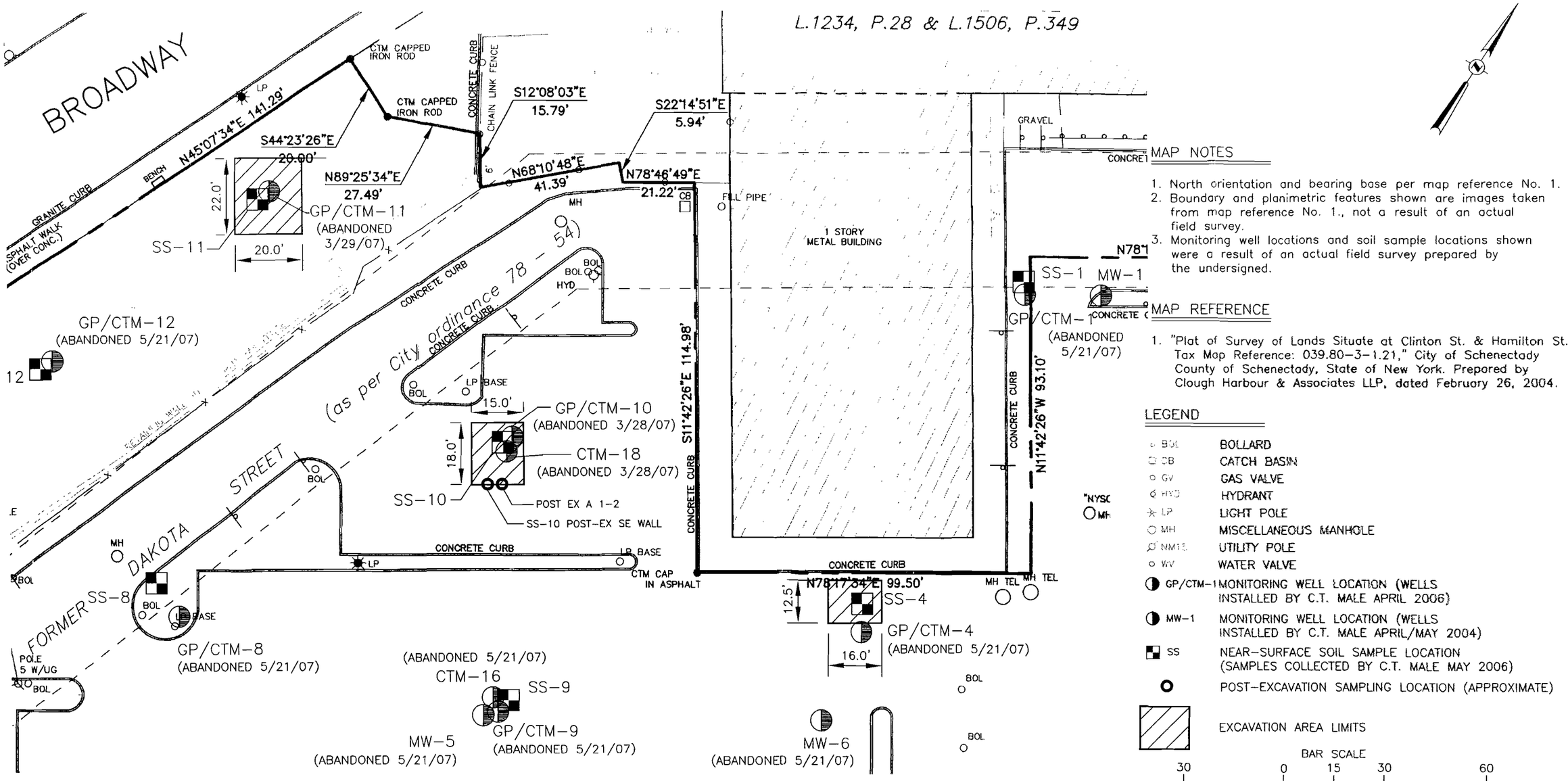
FIGURE 1 - SITE LOCATION MAP

CLINTON SOUTH PARKING LOT

CITY OF SCHENECTADY	SCHENECTADY COUNTY, NY
SCALE: 1"=2,000'	
DRAFTER: ASG	
PROJECT No. 04.9227	



MAP NOTES

1. North orientation and bearing base per map reference No. 1.
2. Boundary and planimetric features shown are images taken from map reference No. 1., not a result of an actual field survey.
3. Monitoring well locations and soil sample locations shown were a result of an actual field survey prepared by the undersigned.

MAP REFERENCE

1. "Plat of Survey of Lands Situate at Clinton St. & Hamilton St. Tax Map Reference: 039.80-3-1.21," City of Schenectady County of Schenectady, State of New York. Prepared by Clough Harbour & Associates LLP, dated February 26, 2004.

LEGEND

BOL	BOLLARD
CB	CATCH BASIN
GV	GAS VALVE
HYD	HYDRANT
LP	LIGHT POLE
MH	MISCELLANEOUS MANHOLE
NMTE	UTILITY POLE
WV	WATER VALVE
GP/CTM-1	MONITORING WELL LOCATION (WELLS INSTALLED BY C.T. MALE APRIL 2006)
MW-1	MONITORING WELL LOCATION (WELLS INSTALLED BY C.T. MALE APRIL/MAY 2004)
SS	NEAR-SURFACE SOIL SAMPLE LOCATION (SAMPLES COLLECTED BY C.T. MALE MAY 2006)
	POST-EXCAVATION SAMPLING LOCATION (APPROXIMATE)
	EXCAVATION AREA LIMITS

BAR SCALE

30 0 15 30 60

1 inch = 30 ft.

DATE		REVISIONS RECORD/DESCRIPTION	DRAFTED	CHECK	APPR.
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				

APPROVED:

DRAFTED : SMW

CHECKED :

PROJ. NO: 05.5551

SCALE : 1"=30'

DATE : AUG 8, 2007

FIGURE 2
IRM EXCAVATION AREAS

ENVIRONMENTAL RESTORATION PROGRAM
CLINTON SOUTH PARKING LOT/314 CLINTON STREET

CITY OF SCHENECTADY — SCHENECTADY COUNTY, NY.

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ENVIRONMENTAL SERVICES * SURVEY & LAND INFORMATION SERVICES

SHEET 1 OF 1

DWG. NO:

APPENDIX A

IRM WORK PLAN & DEC APPROVAL LETTER

C.T. MALE ASSOCIATES, P.C.

50 Century Hill Drive, P.O. Box 727, Latham, New York 12110-0727
518.786.7400 FAX 518.786.7299 ctmale@ctmale.com

March 12, 2007

Mr. Ian Beilby, P.E.
Environmental Engineer
NYSDEC - Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233-7013

Re: IRM Work Plan
ERP Site No. E447036
Clinton South Parking Lot, 314 Clinton Street, Schenectady, NY
CTM Project No. 05.5551

Dear Mr. Beilby,

On behalf of the City of Schenectady and the Schenectady Metroplex Development Authority, C.T. Male Associates, P.C. (C.T. Male) has prepared this Work Plan to present our proposed scope of work for implementing an Interim Remedial Measure (IRM) at the 314 Clinton Street property (Site). The IRM will be implemented to address semivolatile organic contaminants identified within near-surface soils and subsurface soils/fill material at concentrations exceeding applicable regulatory Standards, Criteria and Guidance (SCG) levels during the recent Remedial Investigation (RI) completed at the Site, as presented in C.T. Male's report entitled, *Remedial Investigation Report, ERP Site #E447036, Clinton South Parking Lot, 314 Clinton Street, City of Schenectady, Schenectady County, New York,* dated January 2007.

The IRM will consist of the excavation, removal and off-site disposal of impacted soils/fill material from three areas of the Site: the locations of SS-4, SS-10 and GP-11, and the areas immediately surrounding these locations (see attached figure), and abandonment of monitoring wells located within the proposed excavation areas.

At the locations of SS-4 and SS-10, the areas of excavation are assumed to be 10'x10' square, centered around each of these locations. At GP-11, the excavation area is assumed to be 20'x20' square, centered around this location. The horizontal excavation

limits in these areas will be confirmed based on the results of pre-excavation sampling to be completed as described in the following section. The vertical excavation limits will be 2 feet below grade in the areas of SS-4 and SS-10, and 6 feet below grade in the area of GP-11, based on sampling conducted during the RI.

Pre-excavation Sampling

Prior to mobilizing excavation equipment to the Site, C.T. Male will perform sampling of the near-surface soils and subsurface soils/fill materials in the areas surrounding the above-referenced sampling locations. This is being done in lieu of endpoint sampling while excavation is open to expedite the IRM. Samples will be collected utilizing direct-push (Geoprobe) methods, and will be handled in accordance with the sampling protocols contained in the Field Sampling Plan portion of the RI Work Plan prepared for this project. The proposed sampling strategy for the areas of SS-4 and SS-10 (within the paved parking lot) is as follows:

- Collect one sample from the mid-point along each side of a 10' x 10' square (centered around each of the above-referenced locations), at a depth interval from just below the asphalt subbase material to 2 feet below grade.
- Collect one additional sample from 5 feet beyond each of the initial locations, at the same depth interval.
- Submit all samples to the laboratory, but initially analyze only the inner samples for TCL SVOCs on an expedited turn-around-time, while the outer samples are held.
- If the initial sampling results indicate that one or more of the inner samples exhibits an SCG exceedence, then the corresponding outer sample(s) will be analyzed for TCL SVOCs, also on an expedited turn-around-time.

The proposed sampling strategy for the area of GP-11 (within the grass-covered area adjacent to Broadway) is as follows:

- Collect one sample from the mid-point along each side of a 20' x 20' square (centered around the location of GP-11), at a depth interval of 4 to 6 feet below grade.
- Collect one additional sample from 5 feet beyond each of the initial locations, at the same depth interval.

- Submit all samples to the laboratory, but initially, analyze only the inner samples for TCL SVOCs on an expedited turn-around-time, while outer samples are held.

- If the initial sampling results indicate that one or more of the inner samples exhibits an SCG exceedence, then the corresponding outer sample(s) will be analyzed for TCL SVOCs, also on an expedited turn-around-time.

In the event that one or more outer samples from any of the three areas exhibits an SCG exceedence, the NYSDEC will be consulted prior to making a decision to conduct additional sampling or expand the excavation area(s).

Quality assurance/quality control (QA/QC) samples will be collected during the sampling and will consist of two duplicate samples, an equipment rinse blank, and a sample collected for MS/MSD analyses.

Additionally during the sampling activities, samples will be collected immediately adjacent to the locations of SS-4 and SS-10, at a depth interval of 0.5 to 2 feet below grade, and at GP-11, at a depth interval of 4 to 6 feet, and submitted to the laboratory for waste disposal characterization purposes (analysis for diesel range organics). Upon completion of soil sampling activities in each area, the boreholes will be sealed with granular bentonite. At sampling locations within paved areas, asphalt patch will be used to repair the pavement at the surface.

The analytical results will be prepared by the laboratory consistent with those requirements for ASP Category B deliverable packages. Data validation of the analytical results will be performed in accordance with Data Usability Summary Report guidelines.

Excavation & Disposal of Contaminated Soil/Fill Material

Following review of the analytical results confirming the horizontal limits of excavation, C.T. Male and our subcontractor will mobilize equipment and personnel to the site to implement the IRM excavation activities. In the areas around SS-4 and SS-10, the asphalt pavement will be saw-cut and removed, along with the subbase material, exposing the underlying contaminated soil/fill material. In each of these areas, the soil/fill material will be excavated to a depth of 2 feet below grade within the established horizontal excavation limits, and will be loaded into a truck for disposal. In these areas, the excavations will be backfilled with clean, imported fill material, and

compacted, to a depth of 12 inches below grade. The remainder of the excavation will be backfilled with suitable subbase material and compacted to existing pavement grade. Surface restoration will be completed when the weather allows, and will include the removal of the subbase material to a depth of 5 inches below grade, and replacement with asphalt.

In the area of GP-11, the soil/fill material from grade to 2 feet below grade will be removed and stockpiled to be used as backfill material. The soil/fill material will then be excavated within the established horizontal excavation limits to a depth of 6 feet below grade, and loaded into a truck for disposal. The excavation will then be backfilled with clean, imported fill material, and compacted to a depth of 3 inches below grade. The remainder of the excavation will be filled with topsoil. Surface restoration, consisting of application of grass seed to the topsoil, will be completed when the weather allows.

In the event that material exhibiting gross contamination, such as petroleum staining or odors, is encountered during excavation activities, the material will be excavated to a point where that contamination is no longer observed, and confirmatory samples will then be collected and submitted for laboratory analysis for volatile and and/or semivolatile organic compounds to assure that the material has been removed to an adequate extent.

Contaminated soil/fill material will be transported off-site by a licensed waste hauler for disposal at Environmental Soil Management Inc.'s facility located in Fort Edward, New York. Following completion of the described excavation and waste disposal activities, C.T. Male will prepare a report which will summarize the IRM activities, and include an updated site plan (depicting the excavation areas), laboratory analytical results from the pre-excavation sampling, and waste disposal documentation.

Schedule

The pre-excavation sampling is scheduled to be completed on March 12, 2007. Excavation activities are anticipated to commence on or about March 21, 2007. IRM activities, with the exception of asphalt restoration and seeding of topsoil, are anticipated to be completed by March 30, 2007.

Please contact the undersigned at (518) 786-7400 with any questions or comments concerning the proposed scope of work.

Respectfully submitted,

C.T. Male Associates, P.C.

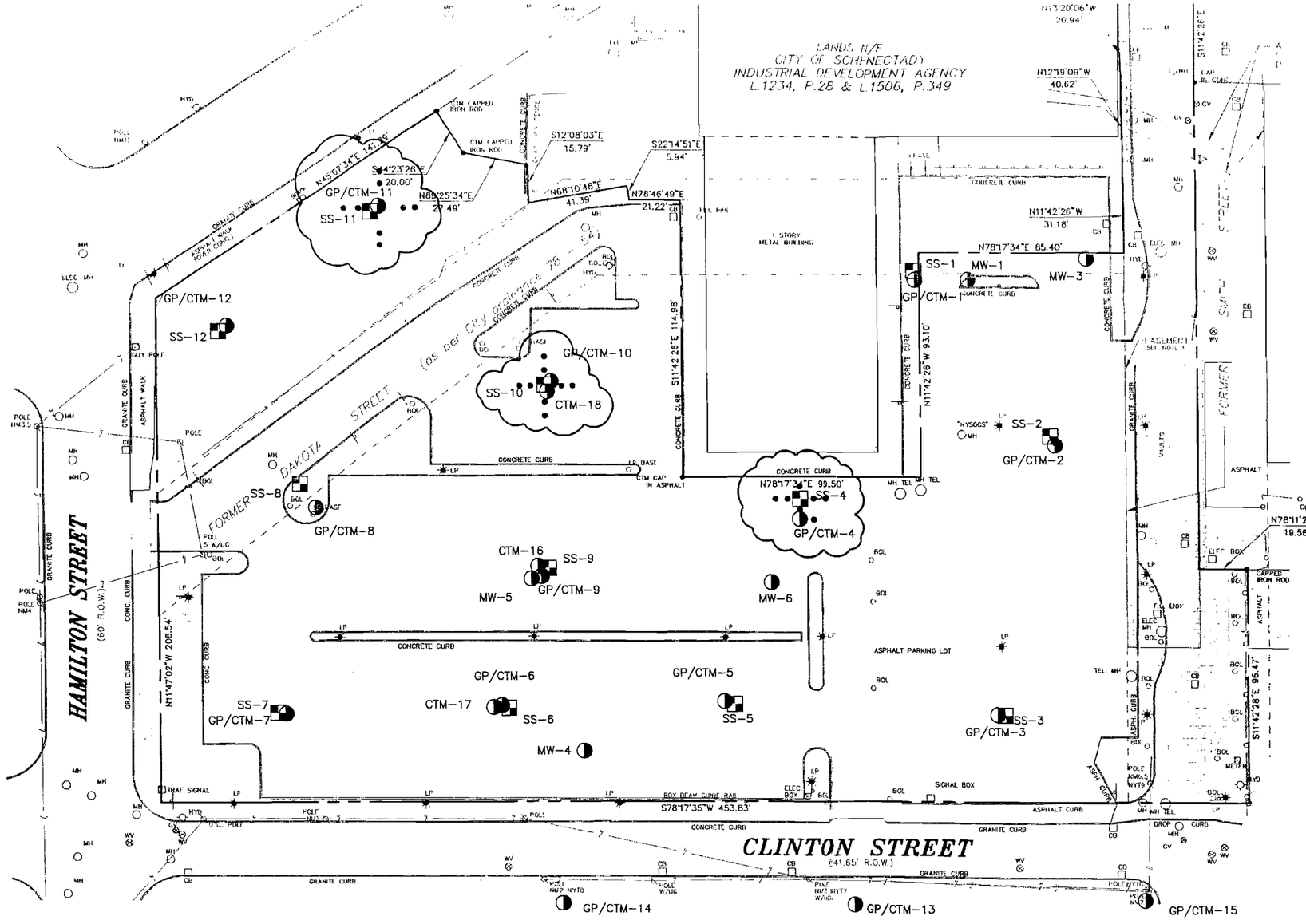
John L. Favreau
Sr. Environmental Scientist

Kirk Moline
Project Manager

Attachment : IRM/Pre-Excavation Soil Sampling Locations

cc: Jayme Lahut
Michael Sterthous, Esq.

k:\projects\055551\admin\IRM\L_IRM Workplan.doc



MAP NOTES

1. North orientation and bearing base per map reference No. 1.
2. Boundary and planimetric features shown are images taken from map reference No. 1., not a result of an actual field survey.
3. Monitoring well locations and soil sample locations shown were a result of an actual field survey prepared by the undersigned.

MAP REFERENCE

1. "Plat of Survey of Lands Situate at Clinton St. & Hamilton St. Tax Map Reference: 039.80-3-1.21," City of Schenectady County of Schenectady, State of New York. Prepared by Clough Harbour & Associates LLP, dated February 26, 2004.

LEGEND

BOL	BOLLARD
CB	CATCH BASIN
GV	GAS VALVE
HYD	HYDRANT
LP	LIGHT POLE
MH	MISCELLANEOUS MANHOLE
NM15	UTILITY POLE
WV	WATER VALVE
GP/CTM-1	MONITORING WELL LOCATION (WELLS INSTALLED BY C.T. MALE APRIL 2006)
MW-1	MONITORING WELL LOCATION (WELLS INSTALLED BY C.T. MALE APRIL/MAY 2004)
SS	NEAR-SURFACE SOIL SAMPLE LOCATION (SAMPLES COLLECTED BY C.T. MALE MAY 2006)
	PROPOSED AREAS OF EXCAVATION
	PROPOSED PRE-EXCAVATION SOIL SAMPLE LOCATION

BAR SCALE

50 0 25 50 100

1 inch = 50 ft.

DATE		REVISIONS RECORD/DESCRIPTION	DRAFTED	CHECK	APPR.
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				

APPROVED:
DRAFTED : S.WUNSCH
CHECKED : J.FAVREAU
PROJ. NO: 05.5551
SCALE : 1"=50'
DATE : MARCH 6, 2007

IRM/PRE-EXCAVATION SOIL SAMPLING LOCATIONS

ENVIRONMENTAL RESTORATION PROGRAM INVESTIGATION
CLINTON SOUTH PARKING LOT/314 CLINTON STREET

CITY OF SCHENECTADY — SCHENECTADY COUNTY, NY.

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299
ARCHITECTURE & BUILDING SYSTEMS ENGINEERING * CIVIL ENGINEERING
ENVIRONMENTAL SERVICES * SURVEY & LAND INFORMATION SERVICES

SHEET 1 OF 1
DWG. NO:

CAD DWG. FILE NAME:RE EX_LOC.DWG

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau D, 12th Floor
625 Broadway, Albany, New York 12233-7013
Phone: (518) 402-9818 • **FAX:** (518) 402-9819
Website: www.dec.state.ny.us

Mr. John Favreau
C.T. Male Associates, P.C.
50 Century Hill Drive
Latham, New York 1210-0727

Re: IRM Workplan, March 12, 2007
314 Clinton Street, Site No. E4-47-036
Schenectady (C), Schenectady County

Dear Mr. Favreau:

The New York State Department of Environmental Conservation (Department) has reviewed C.T. Male's letter workplan to perform an Interim Remedial Measure (IRM) at the above referenced site. This IRM includes the removal of approximately 100 yd^3 from three separate areas of the site, backfilling with clean fill, and replacement of topsoil or asphalt cover to match the surrounding area.

The letter workplan is acceptable and I approve initiating fieldwork towards completing the IRM.

Please contact me at (518) 402-9818. if you have any questions.

Sincerely,

Ian Beilby, P.E.
Project Manager
Remedial Bureau D
Division of Environmental Remediation

APPENDIX B

IRM PHOTOS

IRM REPORT
314 CLINTON STREET - SCHENECTADY, NY

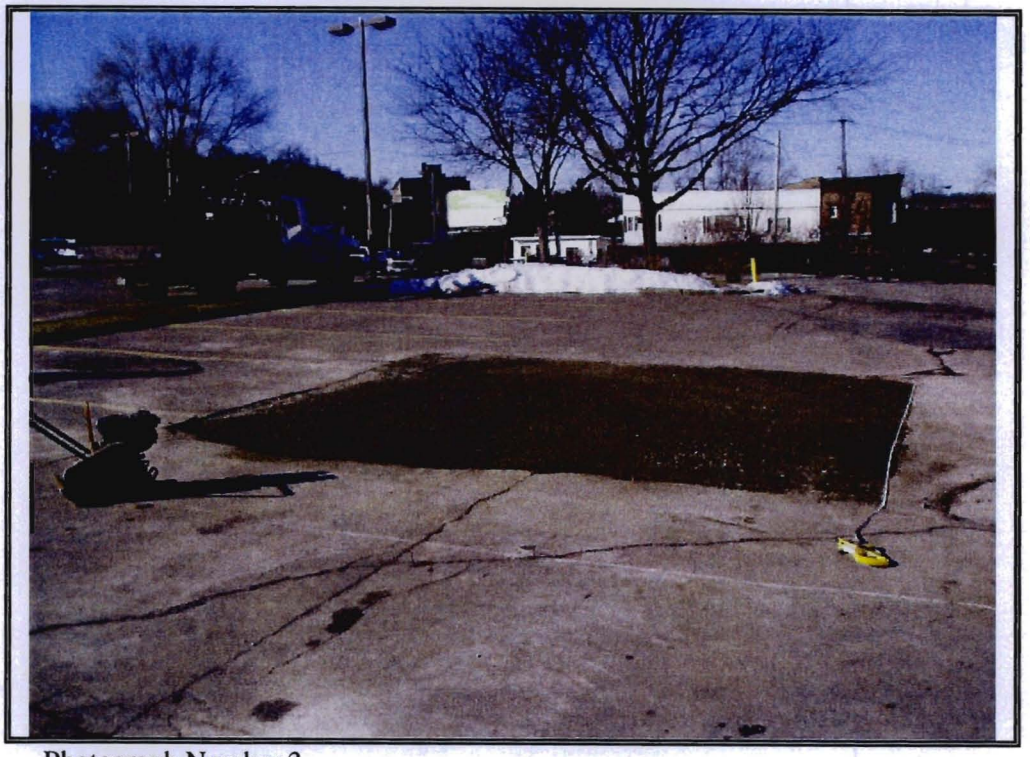
CTM Project No. 05.5551

PHOTO LOG

No.	Description
1.	Pre-excavation view of SS-10 area (Facing Northeast)
2.	During excavation of SS-10 area (Facing East)
3.	Post-excavation view of SS-10 area (Facing West)
4.	Pre-excavation view of SS–4 area (Facing North)
5.	During excavation of SS-4 area (Facing West)
6.	Post excavation view of SS-4 area (Facing West)
7.	Pre-excavation view of GP-11 area (Facing Northeast)
8.	During excavation of GP-11 area (Facing North)
9.	Concrete debris and fill observed during GP-11 excavation (Facing West)
10.	Post excavation view of GP-11 area (Facing Northeast)

Photograph Number 1

Photograph Number 2



Photograph Number 3

Photograph Number 4

Photograph Number 5

Photograph Number 6

Photograph Number 7

Photograph Number 8

Photograph Number 9

Photograph Number 10

APPENDIX C

WASTE DISPOSAL & BACKFILL MATERIAL DOCUMENTATION

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

5. Transporter 1 Company Name

6. US EPA ID Number

NYR000021071

A. State Transporter's ID

B. Transporter 1 Phone (518) 747-3380

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address

ESSM OF NEW YORK
304 TOWPATH ROAD
PORT EDWARD, NY 12828

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone (518) 747-5500

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. PETROLEUM CONTAMINATED SOIL	001	DT		T
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

GENERATOR

Printed/Typed Name	Signature	Date Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date Month	Day	Year

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

5. Transporter 1 Company Name	6. US EPA ID Number	A. State Transporter's ID
M C ENVIRONMENTAL SERVICES, INC.	NYR000218471	B. Transporter 1 Phone (518) 747-3080
7. Transporter 2 Company Name	8. US EPA ID Number	C. State Transporter's ID
		D. Transporter 2 Phone

9. Designated Facility Name and Site Address	10. US EPA ID Number	E. State Facility's ID
STATE OF NEW YORK 324 TOWPATH ROAD FORT EDWARD, NY 12828		F. Facility's Phone (518) 747-5500

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. PETROLEUM CONTAMINATED SOIL	XX1	DT	2318	T
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above	H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date Month	Day	Year
		3	24	97

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date Month	Day	Year

Rev. 3/95

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of
3. Generator's Name and Mailing Address			
4. Generator's Phone ( )			

5. Transporter 1 Company Name	6. US EPA ID Number	A. State Transporter's ID
M C ENVIRONMENTAL SERVICES, INC.	NYRD000021071	B. Transporter 1 Phone (518) 747-3050
7. Transporter 2 Company Name	8. US EPA ID Number	C. State Transporter's ID
		D. Transporter 2 Phone

9. Designated Facility Name and Site Address	10. US EPA ID Number	E. State Facility's ID
ESMI OF NEW YORK 324 TWENTY ROAD PORT EDWARD, NY 12828		F. Facility's Phone (518) 747-5500

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. PETROLEUM CONTAMINATED SOIL	XX1	D T		T
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above	H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

GENERATOR

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date Month	Day	Year

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of 1

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

5. Transporter 1 Company Name: M C ENVIRONMENTAL SERVICES, INC.

6. US EPA ID Number: NYR000022871

A. State Transporter's ID: 38-275

B. Transporter 1 Phone: (518) 747-3050

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address:
ESMI OF NEW YORK
304 TOWPATH ROAD
FORT EDWARD, NY 12828

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone: (518) 747-5500

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. PETROLEUM CONTAMINATED SOIL	XXL	DT		T
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

GENERATOR

Printed/Typed Name	Signature	Date Month	Day	Year
James B Lathrop	James B Lathrop	3	28	07

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year
Tim Shaw		3	28	07

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date Month	Day	Year

NON-HAZARDOUS WASTE

Rev. 3/95

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

5. Transporter 1 Company Name

6. US EPA ID Number

A. State Transporter's ID

B. Transporter 1 Phone

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a.				
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

GENERATOR

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name | Signature | Date: Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name | Signature | Date: Month Day Year

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. N/A	Manifest Document No.	2. Page 1 of 1
3. Generator's Name and Mailing Address Schenectady Metroplex Dev. Auth. 433 State St Schenectady, NY		214 Clinton St Schenectady NY	
4. Generator's Phone (518) 377-1109			
5. Transporter 1 Company Name M C ENVIRONMENTAL SERVICES, INC.	6. US EPA ID Number NYR000021671	A. State Transporter's ID [illegible]-175	
		B. Transporter 1 Phone (518) 747-3080	
7. Transporter 2 Company Name	8. US EPA ID Number	C. State Transporter's ID	
		D. Transporter 2 Phone	
9. Designated Facility Name and Site Address ESMI OF NEW YORK 304 TOWPATH ROAD FORT EDWARD, NY 12828	10. US EPA ID Number	E. State Facility's ID	
		F. Facility's Phone (518) 747-5500	

GENERATOR

11. WASTE DESCRIPTION	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. PETROLEUM CONTAMINATED SOIL	XX1	D T		T
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date Month	Day	Year
Jayme B Lawn[illegible]	[signature]	3	25	07

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year
ROGER CONLEW	[signature]	3	30	07

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date Month	Day	Year

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N/A

Manifest Document No.

2. Page 1 of 1

3. Generator's Name and Mailing Address
Schenectady Metroplex Dev. Auth.
433 State St
Schenectady, NY

314 Clinton St
Schenectady, NY

4. Generator's Phone (518) 377-1109

5. Transporter 1 Company Name
MC Environmental Services, Inc

6. US EPA ID Number
NYR000021071

A. State Transporter's ID SAL175

B. Transporter 1 Phone (518) 615-0349

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
ESMI OF New York
304 Towpath Rd.
Fort Edward, NY

10. US EPA ID Number
N/A

E. State Facility's ID

F. Facility's Phone (518) 747-5500

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. Petroleum Contaminated Soil	1	DT		T
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

GENERATOR

Printed/Typed Name: * JAYME BLANUT

Signature: Jayme B Lanut

Date: Month 3 Day 30 Year 07

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: ROGER COCKEWS

Signature: Roger Cockews

Date: Month 3 Day 30 Year 07

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name

Signature

Date: Month Day Year

ESMI OF NEW YORK
504 Towpath Road
Fort Edward, New York 12828

(518)747-5500

Ticket No : 2028594
Date : 5/28/2007

Max. Acceptable Soil: 750.00

Customer: MCE10
MC ENVIRONMENTAL SERVICES
526 QUEENSBURY AVE.

QUEENSBURY,NY 12804

Job No :7871
SCHENECTADY METROPLEX AUTH.
314 CLINTON ST
SCHENECTADY NY
Running Tonnage: 23.15

Trucker:
MC-001 MC ENVIRONMENTAL

Gross : 77000 Scale 1 In 11:19:44AM
Tare : 30640 STORED Out

Net : 46360 lb
23.180

UF01 07 URBAN FILL

Weigh Master: Kim Matteson #530022

Driver:

Remarks:

Material $
Delivery $
Misc $
Tax $

Total $

ESMI OF NEW YORK
304 Towpath Road
Fort Edward, New York 12828

(518)747-5500

Ticket No : 2028612
Date : 3/28/2007

Max. Acceptable Soil: 750.00

Customer: MCE10
MC ENVIRONMENTAL SERVICES
526 QUEENSBURY AVE.

QUEENSBURY,NY 12804

Job No :7871
SCHENECTADY METROPLEX AUTH.
314 CLINTON ST
SCHENECTADY NY
Running Tonnage: 44.38

Trucker:
MC-001 MC ENVIRONMENTAL

Gross : 73040 Scale 1 In 4:10:07PM
Tare : 30640 STORED Out

Net : 42400 lb
21.200

UF01 07 URBAN FILL

Weigh Master: Kim Matteson #530022

Driver:

Remarks:

Material $
Delivery $
Misc $
Tax $

Total $

ESMI OF NEW YORK
304 Towpath Road
Fort Edward, New York 12828

(518)747-5500

Ticket No : 2028629
Date : 3/29/2007

Max. Acceptable Soil: 750.00

Customer: MCE10
MC ENVIRONMENTAL SERVICES
526 QUEENSBURY AVE.

QUEENSBURY,NY 12804

Job No :7871
SCHENECTADY METROPLEX AUTH.
314 CLINTON ST
SCHENECTADY NY
Running Tonnage: 65.43

Trucker:
MC-001 MC ENVIRONMENTAL

Gross : 72740 Scale 1 In 12:46:20PM
Tare : 30640 STORED Out

Net : 42100 lb
21.050

UF01 07 URBAN FILL

Weigh Master: Kim Matteson #530022

Driver:

Remarks:

Material $
Delivery $
Misc $
Tax $

Total $

ESMI OF NEW YORK
304 Towpath Road
Fort Edward, New York 12828

(518)747-5500 Ticket No : 2028641
Date : 3/29/2007

Max. Acceptable Soil: 750.00

Customer: MCE10
MC ENVIRONMENTAL SERVICES
526 QUEENSBURY AVE.

QUEENSBURY,NY 12804

Job No :7871
SCHENECTADY METROPLEX AUTH.
314 CLINTON ST
SCHENECTADY NY
Running Tonnage: 87.04

Trucker:
MC-001 MC ENVIRONMENTAL

Gross : 73860 Scale 1 In 4:29:40PM
Tare : 30640 STORED Out

Net : 43220 lb
21.610

UF01 07 URBAN FILL

Weigh Master: Kim Matteson #530022

Driver:

Remarks:

Material $
Delivery $
Misc $
Tax $

Total $

ESMI OF NEW YORK
304 Towpath Road
Fort Edward, New York 12828

(518)747-5500

Ticket No : 2028643
Date : 3/30/2007

Max. Acceptable Soil: 750.00

Customer: MCE10
MC ENVIRONMENTAL SERVICES
526 QUEENSBURY AVE.

QUEENSBURY,NY 12804

Job No :7871
SCHENECTADY METROPLEX AUTH.
314 CLINTON ST
SCHENECTADY NY
Running Tonnage: 93.48

Trucker:
MC-1 MC ENVIRONMENTAL

Gross : 29760 Scale 1 In 8:27:02AM
Tare : 16880 STORED Out

Net : 12880 lb
6.440

UF01 07 URBAN FILL

Weigh Master: Kim Matteson #530022

Driver: Roger L Colley

Remarks:

Material $
Delivery $
Misc $
Tax $

Total $

ESMI OF NEW YORK
304 Towpath Road
Fort Edward, New York 12828

(518)747-5500

Ticket No : 2028644
Date : 3/30/2007

Max. Acceptable Soil: 750.00

Customer: MCE10
MC ENVIRONMENTAL SERVICES
526 QUEENSBURY AVE.

QUEENSBURY,NY 12804

Job No :7871
SCHENECTADY METROPLEX AUTH.
314 CLINTON ST
SCHENECTADY NY
Running Tonnage: 113.59

Trucker:
MC-001 MC ENVIRONMENTAL

Gross : 70860 Scale 1 In 9:12:56AM
Tare : 30640 STORED Out

Net : 40220 lb
20.110

UF01 07 URBAN FILL

Weigh Master: Kim ~~Matteson~~ #530022

Driver: J Shaw

Remarks:

Material $
Delivery $
Misc $
Tax $

Total $

ESMI OF NEW YORK
304 Towpath Road
Fort Edward, New York 12828

(518)747-5500

Ticket No : 2028646
Date : 3/30/2007

Max. Acceptable Soil: 750.00

Customer: MCE10
MC ENVIRONMENTAL SERVICES
526 QUEENSBURY AVE.

QUEENSBURY,NY 12804

Job No :7871
SCHENECTADY METROPLEX AUTH.
314 CLINTON ST
SCHENECTADY NY
Running Tonnage: 120.38

Trucker:
MC-1 MC ENVIRONMENTAL

Gross : 30460 Scale 1 In 11:05:25AM
Tare : 16880 STORED Out

Net : 13580 lb
6.790

UF01 07 URBAN FILL

Weigh Master: Kim Matteson #530022

Driver: Ryan L Culver

Remarks:

Material $
Delivery $
Misc $
Tax $

Total $

ESMI OF NEW YORK
304 Towpath Road
Fort Edward, New York 12828

(518)747-5500

Ticket No : 2028665
Date : 3/30/2007

Max. Acceptable Soil: 750.00

Customer: MCE10
MC ENVIRONMENTAL SERVICES
526 QUEENSBURY AVE.

QUEENSBURY,NY 12804

Job No :7871
SCHENECTADY METROPLEX AUTH.
314 CLINTON ST
SCHENECTADY NY
Running Tonnage: 123.59

Trucker:
MC-001 MC ENVIRONMENTAL

Gross : 37060 Scale 1 In 3:19:33PM
Tare : 30640 STORED Out

Net : 6420 lb
3.210

UF01 07 URBAN FILL

Weigh Master: Kim Matteson #530022

Driver:

Remarks:

Material $
Delivery $
Misc $
Tax $

Total $

CTMak
Clinton St.

Cranesville Aggregates Co., Inc
South Glens Falls Plant
(518) 792-0450

Order Number: 11
METH

DATE	TICKET NO.	CUST. ID	ORDER NO.		
03/28/07	4127998	4609	0	56	***SEE TERMS AND CONDITIONS ON REVERSE SIDE***

CUSTOMER NAME/ADDRESS
M C Environmental Services, I
526 Queensbury Avenue
Queensbury NY 12804

PROJECT: Project# P/U

PURCHASE ORDER NO.		MAP PAGE	SLUMP	LOADS TO JOB	TOTAL TO JOB
	HV1			** 1	33.94

PRODUCT ID	QUANTITY	PRODUCT DESCRIPTION	UNIT/MEASURE	PRICE/UNIT	EXTENDED
CMDS	33.94	DOUBLE SAND			

Weightmaster #

GROSS: 50.45 TONS
TARE: 16.51 TONS
NET WGT: 33.94 TONS

WAITING TIME CHARGED AFTER 6 MINUTES PER YARD

LV PLANT	AT JOB	START POUR	STOP POUR	LEAVE JOB	ARRIVE PLANT	PLANT WATER	JOB WATER	SLUMP TEST	AIR TEST
07:51									

SUB-TOTAL
FREIGHT
SALES TAX
TOTAL PRICE
BALANCE DUE

WARNING: IRRITATION TO SKIN AND EYES. Contains Portland Cement. Avoid contact with eyes and prolonged contact with skin. Wear rubber boots and proper eye protection and gloves. In case of contact with skin or eyes, flush thoroughly with water. If irritation persists, get medical attention. Keep children away.

AUTHORIZED SIGNATURE

REC'D BY OWNER
OR OWNER'S REPRESENTATIVE

THIS CONCRETE HAS BEEN PROPORTIONED AND MIXED IN

Owner or owners representative assumes all responsibility for trucks

Cranesville Aggregates Co., Inc
South Glens Falls Plant
(518) 792 0450

Order Number: 14
METH

DATE	TICKET NO.	CUST. ID	ORDER NO.		
03/29/07	112802	4609	0	56 Project#	***SEE TERMS AND CONDITIONS ON REVERSE SIDE***

CUSTOMER NAME/ADDRESS	PROJECT
M C Environmental Services, I 526 Queensbury Avenue Queensbury NY 12804	p/n

PURCHASE ORDER NO.		MAP PAGE	SLUMP	LOADS TO JOB	TOTAL TO JOB
	HV1			1	31.75

PRODUCT ID	QUANTITY	PRODUCT DESCRIPTION	UNIT/MEASURE	PRICE/UNIT	EXTENDED
GRITS	31.75	SAND			
Weightmaster #		GROSS: 45.65 TONS TARE: 13.90 TONS NET WGT: 31.75 TONS			

WAITING TIME CHARGED AFTER 6 MINUTES PER YARD

LV PLANT	AT JOB	START POUR	STOP POUR	LEAVE JOB	ARRIVE PLANT	PLANT WATER	JOB WATER	SLUMP TEST	AIR TEST
07:27									

SUB-TOTAL	
FREIGHT	
SALES TAX	
TOTAL PRICE	
BALANCE DUE	

WARNING: IRRITATION TO SKIN AND EYES. Contains Portland Cement. Avoid contact with eyes and prolonged contact with skin. Wear rubber boots and proper eye protection and gloves. In case of contact with skin or eyes, flush thoroughly with water. If irritation persists, get medical attention. Keep children away.

Owner or owners representative assumes all responsibility for trucks going beyond curb and any damages to driveways, lawns, personal or private property, and any damage to our company's vehicles.

AUTHORIZED SIGNATURE

REC'D BY OWNER OR OWNER'S REPRESENTATIVE

THIS CONCRETE HAS BEEN PROPORTIONED AND MIXED IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS. SINCE WE HAVE NO CONTROL OVER THE USE OF THIS CONCRETE WE THEREFORE CANNOT GUARANTEE OR ASSUME RESPONSIBILITY FOR THE FINISHED WORK FOR WHICH IT IS USED.

347385

Cranesville Aggregates Co., Inc
South Glens Falls Plant
(518) 792-0450

Order Number: 8
METH

DATE	TICKET NO.	CUST. ID.	ORDER NO.		
03/30/07	412807	4609	0	56	**SEE TERMS AND CONDITIONS ON REVERSE SIDE**

Project #

CUSTOMER NAME/ADDRESS

M C Environmental Services, I
526 Queensbury Avenue

Queensbury NY 12804

PROJECT

p/u

1

PURCHASE ORDER NO.		MAP PAGE	SLUMP	LOADS TO JOB	TOTAL TO JOB
	HWY			..	34.24

PRODUCTS	QUANTITY	PRODUCT DESCRIPTION	UNIT/MEASURE	PRICE/UNIT	EXTENDED

Weightmaster #

GROSS: 50.91 TONS
TARE: 16.67 TONS
NET WGT: 34.24 TONS

WAITING TIME CHARGED AFTER 6 MINUTES PER YARD

LV. PLANT	AT JOB	START POUR	STOP POUR	LEAVE JOB	ARRIVE PLANT	PLANT WATER	JOB WATER	SLUMP TEST	AIR TEST
07:10									

SUB-TOTAL
FREIGHT
SALES TAX
TOTAL PRICE
BALANCE DUE

WARNING: IRRITATION TO SKIN AND EYES. Contains Portland Cement. Avoid contact with eyes and prolonged contact with skin. Wear rubber boots and proper eye protection and gloves. In case of contact with skin or eyes, wash thoroughly with water. If irritation persists, get medical attention. Keep children away.

AUTHORIZED SIGNATURE

REC'D BY OWNER OR OWNER'S REPRESENTATIVE

Owner or owners representative assumes all responsibility for trucks going beyond curb and any damages to driveways, lawns, personal or private property, and any damage to our company's vehicles.

THIS CONCRETE HAS BEEN PROPORTIONED AND MIXED IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS. SINCE WE HAVE NO CONTROL OVER THE USE OF THIS CONCRETE WE THEREFORE CANNOT GUARANTEE OR ASSUME RESPONSIBILITY FOR THE FINISHED WORK FOR WHICH IT IS USED.

347441

PECKHAM INDUSTRIES, INC.

MAIN OFFICE
20 HAARLEM AVE - WHITE PLAINS, NEW YORK 10603
914-949-2000

DRIVER SIGN HERE

CUSTOMER SIGN HERE

SUBSIDIARY	CO	TICKET#	USRID
PECKHAM MATERIALS CORP.	3 31	91049632	cbrun

LOCATION	WEATHER
HUDSON FALLS QUARRY (31) 518-747-3353	Thanks for your business

M C ENVIRONMENTAL SERVICES INC. 526 QUEENSBURY AVE QUEENSBURY,NY 12804	CUSTOMER NO. 59779	Avoid prolonged exposure to dust. Wear a mask if possible.NOTICE: Customer/driver certifies that the loaded gross vehicle weight of this vehicle is in compliance with allstate and federal regulations.

Job/P.O.	Product	Truck	Quantity Req'd	Description
	1315	mces 301	21.61	304.03 ITEM 4-1 1/4

Transaction Summary	Tons
Gross Weight:	36.33
Tare Weight:	14.72
Net Weight:	21.61

Job:

	ENGLISH	METRIC	
Load Total:	21.61	19.60	Ref Num:
Daily Total:	21.61	19.60	PO Desc:
Y-T-D Total:	28.43	25.79	JMF Code:

MODE:

Wed, Mar 28, 2007 11:53:47AM

A Manufacturers Safety Data Sheet is at the plant office for you inspection. For a free copy call 914-949-2000

Driver Copy

APPENDIX D

DATA USABILITY SUMMARY REPORTS

C.T. MALE ASSOCIATES, P.C.

SUBJECT: Data Usability Summary Report (DUSR)
Metroplex – 314 Clinton St. IRM Site
Chemtech SDG No.: Y1921
C.T. Male Project No.: 05.5551

DATE: April 3, 2007

On March 12, 2007, C.T. Male Associates, P.C. (C. T. Male) collected twenty-three (23) subsurface soil samples from the Metroplex IRM site at 314 Clinton Street. The samples were submitted, along with an equipment blank to Chemtech Laboratories (Chemtech) in Mountainside, NJ for the following analyses:

Parameter	Sample Date	SVOC, SW-846 8270C
Sample Ids		
B-1A	3/12/2007	1
B-1B	3/12/2007	0
B-2A	3/12/2007	1
B-2B	3/12/2007	0
B-3A	3/12/2007	1
B-3B	3/12/2007	1
B-4A	3/12/2007	1
B-4B	3/12/2007	1
B-5	3/12/2007	1
B-6	3/12/2007	1
B-7	3/12/2007	0
B-8	3/12/2007	1
B-9	3/12/2007	0
B-10	3/12/2007	1
B-11A	3/12/2007	1
B-11B	3/12/2007	1
B-12A	3/12/2007	0
B-12B	3/12/2007	1
B-13A	3/12/2007	0
B-13B	3/12/2007	1
B-14A	3/12/2007	0
B-14B	3/12/2007	1
FD-01	3/12/2007	1
Equipment Blank	3/12/2007	1
Total Samples		**17**

SVOC – Semi-volatile organic compounds

It should be noted that samples B-1B, B-2B, B-3B, B-4B, B-11B, B-12B, B-13B and B-14B were designated on the chain of custody (COC) record to be placed on hold for possible later analysis pending the results of their corresponding samples ending in A (i.e. B-1A), however the laboratory was instructed by C. T. Male to hold samples B-12A, B-13A, B-14A and analyze samples B-11B, B-12B, B-13B and B-14B upon Chemtech's receipt of the samples. C. T. Male instructed the laboratory to analyze samples B-

3B and B-4B based on the results of their corresponding samples. Correspondence between C. T. Male and Chemtech in included in Attachment A.

C. T. Male evaluated the data reported by the laboratory to determine usability per Appendix 2B of the *Draft DER-10 Technical Guidance for Site Investigation and Remediation* (NYSDEC, December 2002), with guidance from the *USEPA CLP National Functional Guidelines for Organic Data Review* (October 1999). The following criteria were reviewed:

- Completeness of data package as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables;
- Holding time compliance for chemical analysis;
- Protocol required limits and specification compliance for quality control (QC) data (e.g., instrument tuning, calibration standards, blank results, spike results, duplicate results, etc);
- Contract compliance for analytical protocols;
- Omissions and transcription errors; and
- Data qualification.

Data Completeness

Documentation required by the project was included in the data package. There were no discrepancies found between the raw data and summary forms. The laboratory Case Narratives (Attachment B) identified deviations from laboratory analytical specifications. C. T. Male reviewed these QC results to determine if sample results should be qualified based on the criteria provided in Appendix 2B of the *Technical Guidance for Site Investigation and Remediation*. QC exceedences and data qualification recommendations are presented in the Data Evaluation Checklist (Attachment C). Qualified sample results are presented in the laboratory summary forms, which are located in Attachment D.

QC exceedences and data qualification recommendations are summarized below. It is recommended that results from the initial analyses of each sample be reported as the representative results for that sample except where noted below.

Sample Condition upon Receipt and Holding Times

Chemtech received all the samples listed on the COC records intact and in good condition. The temperature of the samples were within laboratory specification limits of 2 to 6°C upon receipt.

Project samples were prepared and analyzed within EPA-established holding times.

Semi-Volatile Organic Analysis (SVOA) by SW-846 8270C

Project samples were analyzed within 12 hours of the performance check standard, DFTPP. Percent relative abundance of ions met the criteria specified in Table 3 of the EPA SW-846 Method 8270C. Laboratory specifications were met during the initial and continuing calibrations associated with the project samples. In addition the average relative response factor (RRF) was greater than or equal to 0.05 for target analytes during the initial and continuing calibrations. The percent relative standard deviation (%RSD) between RRF was less than or equal to 30% during the initial calibration, and the percent difference (%D) between the initial calibration average RRF and continuing calibration RRF was less

than or equal to 25% for target analytes except 2,4-dinitrophenol during the initial calibration associated with the analysis of sample B-4B and the initial and reanalysis of sample B-3B; and indeno(1,2,3-cd)pyrene during the continuing calibration associated with the analysis of sample Equipment Blank. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.

Surrogate recoveries and internal standard results met laboratory specifications for project samples except the following:

- Internal Standards –
    - B-3B: Chrysene-d12 was below specifications during the initial analysis, and perylene-d12 was below specifications during the initial and reanalysis. The associated results have been qualified as estimated (J/UJ) due to interference.
        - It is recommended that the SVOA results from the reanalysis of B-3B be reported as representative results for B-3B.
    - FD-01: Perylene-d12 was below specifications during the initial and reanalysis. The associated results have been qualified as estimated (J/UJ) due to interference.
    - B-8: Perylene-d12 was below specifications during the initial and diluted analysis. The associated results have been qualified as estimated (J/UJ) due to interference.
    - B-12B: Perylene-d12 was below specifications during the initial and reanalysis. The associated results have been qualified as estimated (J/UJ) due to interference.
    - B-3A: Chrysene-d12 and perylene-d12 were below specifications during the initial analysis. The associated results have been qualified as estimated (J/UJ) due to interference.
    - B-14B: Chrysene-d12 was below specifications during the initial analysis, and perylene-d12 was below specifications during the initial and reanalysis. The associated results have been qualified as estimated (J/UJ) due to interference.
        - It is recommended that the SVOA results from the reanalysis of B-14B be reported as representative results for B-14B.
    - B-2A: Chrysene-d12 and perylene-d12 were below specifications during the initial and reanalysis. The associated results have been qualified as estimated (J/UJ) due to interference.

The percent recovery results for laboratory control sample (LCS) analyses were within laboratory specifications for target analytes except phenol exceeded specifications and 4-chloroaniline and 3,3-dichlorobenzidine were below specifications during the LCS associated with the analysis of sample Equipment Blank. The associated detected phenol results have been qualified as estimated (J) due to analytical inaccuracy and the associated 4-chloroaniline and 3,3-dichlorobenzidine results have been qualified as estimated (J/UJ).

A method blank was reported for each analytical batch. An equipment blank was also submitted to the laboratory for SVOA. Several TICs were detected during the analysis of the method blanks and equipment blank associated with the analysis of the project samples. Action levels were developed by multiplying the highest concentration observed among the associated blank by a factor of 5. Results in the associated sample reported below the action level have been have been qualified as non-detect (U) and the detection limit has been elevated to the amount detected in the sample.

Criteria for accuracy and precision were met for target analytes during the MS and MSD analysis of sample B-11A except the %R for 2-nitrophenol, hexachlorocyclopentadiene, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol and indeno(1,2,3-cd)pyrene were below specifications and the %R for pyrene, butylbenzylphthalate and bis(2-ethylhexyl)phthalate exceeded specifications during the MS and MSD. 2-Nitrophenol, hexachlorocyclopentadiene, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, indeno(1,2,3-cd)pyrene, pyrene, butylbenzylphthalate and bis(2-ethylhexyl)phthalate results for B-11A have been qualified as estimated (J/UJ) due to analytical inaccuracy.

A field duplicate evaluation was performed on samples FD-01 (blind field duplicate) and B-8. Refer to Attachment C-1 for the duplicate evaluation. Acenaphthene, dibenzofuran, fluorine, phenanthrene, anthracene, fluoranthene, pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene and benzo(g,h,i)perylene results have been qualified as estimated (J/UJ) in the associated samples due to analytical imprecision.

Summary

Overall, data quality objectives for the Metroplex IRM site at 314 Clinton Street were met, as there were no data deficiencies that would indicate the need for re-sampling. The analytical results are usable with the qualification of results as described in this DUSR. No analytical data has been rejected.

Megan Drosky
Environmental Scientist

C.T. MALE ASSOCIATES, P.C.

SUBJECT: Data Usability Summary Report (DUSR)
Metroplex – 314 Clinton St. IRM Site
Chemtech SDG No.: Y2140 and Y3053
C.T. Male Project No.: 05.5551

DATE: July 2, 2007

On March 28, 2007 and June 11, 2007, C.T. Male Associates, P.C. (C. T. Male) collected two (2) post-excavation subsurface soil samples from the Metroplex IRM site at 314 Clinton Street. Samples SS-10 Post-Ex SE Wall and Post-ExA (1-2) were submitted to Chemtech Laboratories (Chemtech) in Mountainside, NJ for semi-volatile organic analysis (SVOA) by EPA SW-846 method 8270C. Sample Post-ExA (1-2) was analyzed for the compound benzo(a)pyrene only.

C. T. Male evaluated the data reported by the laboratory to determine usability per Appendix 2B of the *Draft DER-10 Technical Guidance for Site Investigation and Remediation* (NYSDEC, December 2002), with guidance from the *USEPA CLP National Functional Guidelines for Organic Data Review* (October 1999). The following criteria were reviewed:

- Completeness of data package as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables;
- Holding time compliance for chemical analysis;
- Protocol required limits and specification compliance for quality control (QC) data (e.g., instrument tuning, calibration standards, blank results, spike results, duplicate results, etc);
- Contract compliance for analytical protocols;
- Omissions and transcription errors; and
- Data qualification.

Data Completeness

Documentation required by the project was included in the data package. There were no discrepancies found between the raw data and summary forms. The laboratory Case Narratives (Attachment A) identified deviations from laboratory analytical specifications. C. T. Male reviewed these QC results to determine if sample results should be qualified based on the criteria provided in Appendix 2B of the *Technical Guidance for Site Investigation and Remediation*. QC exceedences and data qualification recommendations are presented in the Data Evaluation Checklist (Attachment B). Qualified sample results are presented in the laboratory summary forms, which are located in Attachment C.

QC exceedences and data qualification recommendations are summarized below. It is recommended that results from the initial analyses of each sample be reported as the representative results for that sample.

Sample Condition upon Receipt and Holding Times

Chemtech received all the samples listed on the COC records intact and in good condition. The temperature of the samples were within laboratory specification limits of 2 to 6°C upon receipt.

Project samples were prepared and analyzed within EPA-established holding times.

SVOA by SW-846 8270C

Project samples were analyzed within 12 hours of the performance check standard, DFTPP. Percent relative abundance of ions met the criteria specified in Table 3 of the EPA SW-846 Method 8270C. Laboratory specifications were met during the initial and continuing calibrations associated with the project samples. In addition the average relative response factor (RRF) was greater than or equal to 0.05 for target analytes during the initial and continuing calibrations. The percent relative standard deviation (%RSD) between RRF was less than or equal to 30% during the initial calibration, and the percent difference (%D) between the initial calibration average RRF and continuing calibration RRF was less than or equal to 25% for target analytes except chrysene during the continuing calibration associated with the initial analysis of sample SS-10 Post-Ex SE Wall. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.

Surrogate recoveries and internal standard results met laboratory specifications for project samples except the percent recovery (%R) exceeded laboratory specifications during the initial and reanalysis of sample SS-10 Post-Ex SE Wall. The associated detected base neutral compounds have been qualified as estimated/biased high (J) due to analytical inaccuracy. The internal standard results for chrysene-d12 and perylene-d12 were below specifications during the initial and reanalysis of sample SS-10 Post-Ex SE Wall. The associated results have been qualified as estimated (J/UJ) due to matrix interference.

The %R results for laboratory control sample (LCS) analyses were within laboratory specifications for target analytes except 4-chloroaniline was below specifications during the LCS associated with the analysis of sample SS-10 Post-Ex SE Wall. The associated 4-chloroaniline results have been qualified as estimated (J/UJ).

A method blank was reported for each analytical batch. Target analytes were not detected in the associated blanks. The tentatively identified compound (TIC), ACP2.97 was detected in the method blank associated with the analysis of sample SS-10 Post-Ex SE Wall. An action level was developed by multiplying the highest concentration observed among the associated blank by a factor of 5. Results in the associated sample reported below the action level have been have been qualified as non-detect (U) and the detection limit has been elevated to the amount detected in the sample.

Criteria for accuracy and precision were met for target analytes during the MS and MSD analysis of samples SS-10 Post-Ex SE Wall and Post-ExA (1-2) except the following:

- SS-10 Post-Ex SE Wall – The %R for hexachloroethane, 2-nitrophenol, hexachlorocyclopentadiene, 2,6-dinitrotoluene, 2,4-dinitrophenol, 4-nitrophenol, 2,4-dinitrotoluene, 4,6-dinitro-2-methylphenol, fluoroanthene and indeno(1,2,3-cd)pyrene were below specifications and the %R for pyrene exceeded specifications during the MS and MSD. Hexachloroethane, 2-nitrophenol, hexachlorocyclopentadiene, 2,6-dinitrotoluene, 2,4-dinitrophenol, 4-nitrophenol, 2,4-dinitrotoluene, 4,6-dinitro-2-methylphenol, fluoroanthene and indeno(1,2,3-cd)pyrene results for SS-10 Post-Ex SE Wall have been qualified as estimated/biased low (J/UJ) and detected pyrene results for SS-10 Post-Ex SE Wall have been qualified as estimated/biased high (J) due to analytical inaccuracy.
- Post-ExA (1-2) – The %R for benzo(a)pyrene exceeded specifications during the MS and MSD. The detected benzo(a)pyrene results for Post-ExA (1-2) have been qualified as estimated/biased high (J) due to analytical inaccuracy.

Summary

Overall, data quality objectives for the Metroplex IRM site at 314 Clinton Street were met, as there were no data deficiencies that would indicate the need for re-sampling. The analytical results are usable with the qualification of results as described in this DUSR. No analytical data has been rejected.

Megan Drosky
Environmental Scientist