UNION CARBIDE

Site Investigation Summary Report

for the property at
The Niacet Corporation
47th Street
Niagara Falls, New York

Prepared for:
Union Carbide Corporation, Inc.

Prepared by:
URS Corporation, Inc.
Buffalo, New York

October 2002

G3418

URS

October 30, 2002

Michael J. Hinton, P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: Voluntary Cleanup Program
Niacet Corporation Site #V00373-9
Site Investigation Summary Report

Dear Mr. Hinton:

As you are aware, the initial site investigation activities have been completed at the Union Carbide Corporation (UCC) – Niacet Site located at 47th Street in Niagara Falls, New York. The investigations were conducted in accordance with the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH)–approved, "*Work Plan for the Site Investigation/Remedial Alternatives Report (SI/RAR)*" prepared by URS Corporation (URS) and dated July 2001 (Revised December 2001). The investigation included soil gas surveys, test trench excavations, collection of surface and subsurface soil and water samples and analysis of samples for mercury, and in a few cases semi-volatile organic compounds and metals.

URS, on behalf of UCC, is pleased to submit the enclosed, "*Site Investigation Summary Report*" for the above-referenced site. This document presents a brief overview of the investigation activities and a summary of the geologic and analytical data developed for the site. The test trench logs and a data usability summary report (DUSR) are included as appendices.

In accordance with the Work Plan, the current investigations were limited to those portions of the site wherein it was known, and/or suspected, that mercury had been historically used or transported. Mercury contamination was in fact, identified in most of these areas. However, identification and delineation of any potential mercury contamination outside these areas (i.e., the remaining portions of the site) was beyond the scope of the current investigations. Consequently, based on the results of the initial investigations, UCC intends to conduct supplemental investigations to further delineate the nature and extent of the mercury contamination in the currently identified areas as well as the remaining portions of the site.

To that end, the enclosed report should be considered as an "interim" report. Once the supplemental investigations have been completed, a final SI/RAR report will be prepared that summarizes the results of all the investigations and presents suggested remedial alternatives for the site. The intent is to utilize the results presented in this report as the

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basis for discussions with the NYSDEC and NYSDOH in developing the scope of work for the supplemental investigation program.

Once you've had the opportunity to review the enclosed data, please call to arrange a meeting (tentatively during the week of November 11, 2002) to discuss the current results and the scope of the supplemental investigation program. In the meantime, should you have any questions or require any additional information, please call me at 856-5636.

Sincerely,

URS Corporation

Robert R. Henschel, P.G.
Project Manager

Enc.

cc: Tim King – UCC
Larry Montani – Niacet
Matt Forcucci – NYSDOH
Gary Litwin – NYSDOH
Andrew English – NYSDEC, Buffalo
J. Doerr – URS
File: 05-00035825.00 (C-1)

SITE INVESTIGATION SUMMARY REPORT

For the Property at

The Niacet Corporation

400 47th Street

Niagara Falls, New York

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The Niacet Corporation
400 47th Street
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SITE INVESTIGATION SUMMARY REPORT

The Niacet Corporation
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APPENDICES

1.0 INTRODUCTION

The Niacet Facility, formerly owned by Union Carbide Corporation (UCC), is located on 19.42 acres at the intersection of 47th Street and Pine Avenue in Niagara Falls, New York (Figure 1). Elemental mercury was observed in subsurface soils at the site during recent construction activities at the facility. UCC subsequently entered in to a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC) to investigate and remediate, as necessary, the mercury contamination at the site. UCC contracted URS Corporation (URS) to develop a Site Investigation Work Plan and conduct the investigations. This report provides a brief summary of the activities completed to date and the preliminary results of the investigations.

2.0 SITE INVESTIGATION

Based on review of the historical site data, four areas of the site were identified where mercury had been used, recovered or disposed (Figure 2). Subsequently, a Work Plan to investigate these areas was developed and submitted to the NYSDEC for approval.

The Site Investigation (SI) was conducted between April 29 and May 23, 2002. The SI consisted of a soil gas survey, excavation of test trenches and collection/analysis of soil samples in accordance with the NYSDEC-approved Work Plan.

The soil gas survey was conducted using a Geoprobe direct push unit to drive the soil gas probe to the selected depth (typically, 18–24 inches) at 60 locations (Figure 3). A gas sample was then collected in a Tedlar bag and screened with a Jerome 431 Mercury Vapor Analyzer (MVA). The results were plotted in the field and combined with historical information to select the locations for the test trenches.

A total of 33 test trenches were installed at selected locations (Figure 4). The trenches were advanced until the first occurrence of visible mercury (i.e., globules/beads), perched water, low permeability soil units or bedrock was encountered, whichever was less. Sixteen subsurface soil samples were collected during the trenching and sent to Severn Trent Laboratory for mercury analysis. These samples were collected from each type of fill material encountered, zones where

elevated MVA readings were recorded, and/or at the contacts between the various units. Additionally, 5 soil/fill material samples were collected and analyzed for Target Compound List (TCL) semivolatile organic compounds (SVOCs) and Target Analyte List (TAL) metals. Four grab samples of the perched water were also collected and analyzed for mercury. A limited data validation was performed on all samples collected. Based on this review, a Data Usability Summary Report (DUSR) was prepared. The DUSR is presented in Appendix B.

The analytical data was compared with the soil gas values, site historical information and the NYSDEC TAGM 4046 recommended soil cleanup objectives to determine the probable nature and extent of contamination onsite.

3.0 RESULTS

3.1 Site Stratigraphy

Based on the results of the SI, it appears that the stratigraphy of the site is relatively uniform. However, there are some variations locally. In general, the upper few inches to two feet consists of a dark brown to black, coarse, granular fill unit, containing fine to coarse gravel (coal, slag, rock, cinder and clinker), with some silty ash and cinders. Locally, this unit contains large amounts of industrial construction and demolition (C&D) debris. This unit is referred to as the "upper fill unit." This is underlain by a "lower fill unit" consisting of a red brown silty clay with large amounts of rock and C&D. This lower fill unit is not present between Buildings 11 and 17 in the western portion of the site. In this area, the upper fill unit, which appears to be exclusively building demo debris, extends down to the top of the native clay units.

Underlying the fill units are naturally occurring silty clays, comprised of both lacustrine and till materials

In the southeastern portion of the site, it appears that the silty clay excavated during construction of the new ASTs (i.e., the lower fill and naturally occurring silty clay units), was spread over the existing ground surface in the eastern half of the sludge disposal area and Process Areas II and III.

The thickness of the fill materials varies across the site, but typically averages about 5 to 6 feet. Copies of the test pit logs are contained in Appendix A.

3.2 Soil Gas Survey

The soil gas readings obtained during the SI are presented graphically on Figure 5. The readings generated on the MVA, in most cases, were not reflective of the concentrations shown in the analytical data for the subsurface soil samples. High soil gas concentrations were not always indicative of high mercury concentrations in the soil and low soil gas concentrations were not always indicative of low mercury concentrations in the soil. The results do tend to show that a reading of 20 ug/m^3 or higher on the MVA is indicative of detectable levels of mercury in the soils. However, readings below 20 ug/m^3 are no guarantee that mercury is not present in the soils. The limited correlation is thought to be related to the behavior of elemental mercury in the soil. The mercury beads form a "skin" that acts as a barrier to volatilization. Unless the beads are disturbed (i.e., the skin is ruptured) and fresh mercury is exposed, the mercury will not generate vapor levels that are detectable with the MVA. Consequently, the MVA readings can only be used as a screening tool and not to quantify the amount of mercury in the soil.

In Building 17, high MVA readings were obtained in two soil gas borings advanced through the concrete floor. Additionally, high readings were obtained on the explosimeter from an unknown gas that had collected under the floor. Due to the potential explosion hazard, the drilling was halted and the borings sealed with concrete. The additional borings planned for Building 17 were also put on hold for the time being. Because of the density of underground utilities around the building, particularly to the west, it was not possible to install alternate borings and/or test trenches outside the building to replace the proposed borings inside the building.

3.3 Test Trenches

3.3.1 Surface Soils

Only one surface soil sample (i.e., 0–2 inches) was collected onsite. This sample (SS-1+10) was obtained from the Upper Fill unit along the eastern edge of the new AST area and

exhibited a mercury concentration of 691 mg/kg (Table 1 and Figure 6). Whereas no other surface soil samples were collected, the MVA surveys conducted prior to the start of the intrusive activities and again after the conclusion of the intrusive activities obtained 0 ug/m^3 readings throughout most areas. The exception was in those areas where elemental mercury was observed in the soils at or near the surface.

3.3.2 Subsurface Soils

Visible elemental mercury was identified in the near surface soils (i.e., upper two feet) throughout the former mercury recovery area, as well as at a depth of approximately two feet in the soils immediately east of the new AST area (i.e., the area not excavated during construction). The size range of the mercury droplets is estimated at less than 2mm in diameter. Niacet personnel also stated that visible elemental mercury was seen at the bedrock surface at the bottom of the new AST pad excavation. Visible mercury was most likely not noted during the soil excavation inasmuch as no one was specifically looking for it. It is possible that the small mercury beads were not noticed during construction, until a large enough mass had collected to be readily visible and recognized. The spoil from the excavation, which was most probably mercury-contaminated, had in the meantime been transported and spread in the former sludge disposal area.

Niacet personnel also indicated that visible mercury had been observed in the soils immediately below the floor slab in Building 17 during excavation for a linear floor drain. The areas in which visible mercury was observed are presented graphically in Figure 7.

Mercury was detected in all 16 of the subsurface soil samples collected. The two samples (TT-03 and TT-04) collected from the fill materials immediately below the lower fill unit in the sludge disposal area exhibited concentrations of 0.058 and 0.077 mg/kg, respectively. These concentrations are below the NYSDEC TAGM 4046 recommended soil cleanup objectives (i.e., 0.1 mg/kg). The 12 samples collected from the upper and lower fill units outside the areas where visible mercury was observed, exhibited concentrations ranging from 20 to 1460 mg/kg. These concentrations all exceed the TAGM 4046 recommended cleanup objectives. However, with the exceptions of TT-02 (1320 mg/kg) and TT-12 (1460 mg/kg), all these concentrations are below

the USEPA Risk Based Criteria (RBCs) for industrial sites. The mercury concentrations for subsurface soil samples are presented in Table 1 and graphically depicted in Figures 6 and 7.

The five subsurface soil samples analyzed for TCL SVOCs and TAL metals, exhibited concentrations for a few carcinogenic polynuclear aromatic hydrocarbons (cPAHs) and several metals that exceed the TAGM 4046 recommended soil cleanup objectives. However, the observed levels are not unusual for industrial sites. The observed results are presented in Table 2 and graphically depicted on Figure 7.

3.3.3 Water Samples

The four water samples collected from the test trenches exhibited concentrations of mercury ranging from 0.122 to 574 mg/L. These results are presented in Table 3 and graphically depicted in Figure 8.

4.0 CONCLUSIONS

Based on the preliminary data evaluation, the following conclusions have been reached:

- Three areas of the site (i.e., the former mercury recovery area, Building 17 and the area east of the new AST facility) contain visible mercury in the near surface soils. (Due to the potential for exposure of onsite workers to mercury in the former mercury recovery area, it was determined in conjunction with the NYSDEC, NYS Department of Health, UCC, and Niacet personnel that access should be restricted. Consequently, fencing was installed around this area during the investigation program.)

- It appears that mercury is disseminated in the fill materials in the former transportation corridor, Process Area I, and the Sludge Disposal Area. Whereas the concentrations exceed the TAGM 4046 recommended soil cleanup objectives, they do not exceed the USEPA RBCs for industrial sites, with the exception of TT-02 and TT-12.

- CPAHs and several metals were detected at concentrations that exceed the TAGM 4046 recommended soil cleanup objectives in subsurface soil samples in all areas of the site that were investigated. However, the cPAHs identified and their concentrations are very typical of other industrial sites in Western New York. Additionally, the metals concentrations may be representative of site background levels.

- The perched water at the site exhibited elevated concentrations of mercury in all areas of the site. The concentrations were highest in the Former Mercury Recovery Area and decreased to the south, with the lowest levels being observed in the Sludge Disposal Area. Inasmuch as the samples were grab samples of water flowing into the test trenches, and were not filtered to remove any suspended sediment, it is likely that the concentrations are reflective of the sediment and not soluble mercury in the perched water onsite.

- Mercury detected and/or observed at the site does not appear to have migrated (vertically or horizontally) very far from the original source areas. This is supported by the presence of visible mercury in the near surface soils and the relatively limited lateral extent of the mercury in soils in the three areas identified above.

TABLES

TABLE 1
ANALYTICAL MERCURY SAMPLE RESULTS
NIACET VCP

Location ID					SS-1+10	TT-02	TT-03	TT-07	TT-08
Sample ID					UCC-SS-1+10	UCC-TT-2 (2-3)	UCC-TT-3 (3-3.5)	UCC-TT-7 (2.5-3)	UCC-TT-8 (6-6.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.5	2.0-3.0	3.0-3.5	2.5-3.0	6.0-6.5
Date Sampled					05/21/02	05/06/02	05/07/02	05/07/02	05/08/02
Parameter	Units	Criteria (1)	Criteria (2)	Criteria (3)					
Metals									
Mercury	MG/KG	610	23	0.1	649	1,320	0.058	192	43.1

Criteria (1)- USEPA Region III Risk-Based Concentration (RBC) Table, Industrial Soil Criteria, 4/2/02.

Criteria (2)- USEPA Region III Risk-Based Concentration (RBC) Table, Residential Soil Criteria, 4/2/02.

Criteria (3)- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria 2

Border — Concentration Exceeds Criteria 3

Detection Limits shown are PQL

Advanced Selection: SO_Hg
J:\35825.00\db\Program\Program.mde
Printed: 6/18/02 11:03:34 AM
([LOCID] <> 'TT-05' AND [LOCID] <> 'TT-12' AND [LOCID] <> 'TT-16' AND [LOCID] <> 'TT-28' AND [LOCID] <> 'TT-04') AND [MATRIX] = 'SO'

TABLE 1
ANALYTICAL MERCURY SAMPLE RESULTS
NIACET VCP

Location ID					TT-09	TT-11	TT-22	TT-23	TT-26
Sample ID					UCC-TT-9 (4.5-5)	UCC-TT-11 (2.5-3)	UCC-TT-22(3-4)	UCC-TT-23(2-3)	UCC-TT-26(1.5-2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.5-5.0	2.5-3.0	3.0-4.0	2.0-3.0	1.5-2.0
Date Sampled					05/08/02	05/08/02	05/21/02	05/21/02	05/21/02
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Mercury	MG/KG	610	23	0.1	33.1	20.3	4.9	3.3	111

Criteria (1)- USEPA Region III Risk-Based Concentration (RBC) Table, Industrial Soil Criteria, 4/2/02.

Criteria (2)- USEPA Region III Risk-Based Concentration (RBC) Table, Residential Soil Criteria, 4/2/02.

Criteria (3)- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria 2

Border Concentration Exceeds Criteria 3

Detection Limits shown are PQL

Advanced Selection: SO_Hg
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Printed: 6/18/02 11:03:35 AM
([LOCID] <> 'TT-05' AND [LOCID] <> 'TT-12' AND [LOCID] <> 'TT-16' AND [LOCID] <> 'TT-28' AND [LOCID] <> 'TT-04') AND [MATRIX] = 'SO'

TABLE 1
ANALYTICAL MERCURY SAMPLE RESULTS
NIACET VCP

Location ID					TT-31	TT-33
Sample ID					UCC-TT-31(2-3)	UCC-TT-33(6-7)
Matrix					Soil	Soil
Depth Interval (ft)					2.0-3.0	6.0-7.0
Date Sampled					05/22/02	05/22/02
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		
Metals						
Mercury	MG/KG	610	23	0.1	134	117

Criteria (1)- USEPA Region III Risk-Based Concentration (RBC) Table, Industrial Soil Criteria, 4/2/02.

Criteria (2)- USEPA Region III Risk-Based Concentration (RBC) Table, Residential Soil Criteria, 4/2/02.

Criteria (3)- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria 2

Border Concentration Exceeds Criteria 3

Detection Limits shown are PQL

Advanced Selection: SO_Hg
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Printed: 6/18/02 11:03:35 AM
([LOCID] <> 'TT-05' AND [LOCID] <> 'TT-12' AND [LOCID] <> 'TT-16' AND [LOCID] <> 'TT-28' AND [LOCID] <> 'TT-04') AND [MATRIX] = 'SO'

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID			TT-04
Sample ID			UCC-TT-4 (5-5.5)
Matrix			Soil
Depth Interval (ft)			5.0-5.5
Date Sampled			05/07/02
Parameter	**Units**	**Criteria***	
Metals			
Aluminum	MG/KG	SB	22,700
Antimony	MG/KG	SB	4.2 B
Arsenic	MG/KG	7.5 or SB	6.5
Barium	MG/KG	300 or SB	136
Beryllium	MG/KG	0.16 or SB	1.2
Cadmium	MG/KG	1 or SB	1.3
Calcium	MG/KG	SB	12,200
Chromium	MG/KG	10 or SB	32
Cobalt	MG/KG	30 or SB	20.3
Copper	MG/KG	25 or SB	33.2
Iron	MG/KG	2000 or SB	35,300
Lead	MG/KG	200-500	22.3
Magnesium	MG/KG	SB	9,220
Manganese	MG/KG	SB	382
Mercury	MG/KG	0.1	0.077
Nickel	MG/KG	13 or SB	43
Potassium	MG/KG	SB	3,960
Selenium	MG/KG	2 or SB	0.92
Silver	MG/KG	SB	0.29 B
Sodium	MG/KG	SB	186 B
Thallium	MG/KG	SB	0.40 U
Vanadium	MG/KG	150 or SB	44.1
Zinc	MG/KG	20 or SB	203

*Criteria- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during laboratory review are shown.

( ) Concentration Exceeds Criteria.

Detection Limits shown are PQL

Advanced Selection: TT-04
J:\35825.00\db\Program\Program.mde
Printed: 10/24/02 11:31:13 AM
[LOCID] = 'TT-04' AND [MATRIX] = 'SO'

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID			TT-05	TT-12	TT-16	TT-28
Sample ID			UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix			Soil	Soil	Soil	Soil
Depth Interval (ft)			5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled			05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**	**Criteria***				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1,1-Trichloroethane	UG/KG	800	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1,2,2-Tetrachloroethane	UG/KG	600	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1,2-Trichloroethane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1-Dichloroethane	UG/KG	200	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1-Dichloroethene	UG/KG	400	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1-Dichloropropene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2,3-Trichlorobenzene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2,3-Trichloropropane	UG/KG	400	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2,4-Trichlorobenzene	UG/KG	3400	6.7 UJ	7.7 J	5.6 UJ	6 UJ
1,2,4-Trimethylbenzene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dibromo-3-chloropropane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dibromoethane (Ethylene dibromide)	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dichlorobenzene	UG/KG	7900	6.7 UJ	7.5 J	5.6 UJ	6 UJ
1,2-Dichloroethane	UG/KG	100	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dichloroethene (cis)	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dichloroethene (trans)	UG/KG	300	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dichloropropane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,3,5-Trimethylbenzene (Mesitylene)	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,3-Dichlorobenzene	UG/KG	1600	6.7 UJ	2.9 J	5.6 UJ	6 UJ
1,3-Dichloropropane	UG/KG	300	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,3-Dichloropropene (cis)	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,3-Dichloropropene (trans)	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ

*Criteria- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria.

Detection Limits shown are PQL

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID			TT-05	TT-12	TT-16	TT-28
Sample ID			UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix			Soil	Soil	Soil	Soil
Depth Interval (ft)			5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled			05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**	**Criteria***				
Volatile Organic Compounds						
1,4-Dichloro-2-butene (trans)	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,4-Dichlorobenzene	UG/KG	8500	6.7 UJ	5.7 J	5.6 UJ	6 UJ
1,4-Dioxane	UG/KG	-	R	R	R	R
2,2-Dichloropropane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
2-Chlorotoluene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
2-Hexanone	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
4-Chlorotoluene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
4-Isopropyltoluene (p-Cymene)	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
4-Methyl-2-pentanone	UG/KG	1000	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Acetone	UG/KG	200	12	160 J	10 J	6 UJ
Acrolein	UG/KG	-	R	R	R	R
Acrylonitrile	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Allyl chloride	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Benzene	UG/KG	60	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Bromobenzene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Bromochloromethane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Bromodichloromethane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Bromoform	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Bromomethane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Carbon disulfide	UG/KG	2700	6.7 UJ	14 J	5.6 UJ	6 UJ
Carbon tetrachloride	UG/KG	600	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Chlorobenzene	UG/KG	1700	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Chloroethane	UG/KG	1900	6.7 UJ	6 UJ	5.6 UJ	6 UJ

*Criteria- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria.

Detection Limits shown are PQL

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID			TT-05	TT-12	TT-16	TT-28
Sample ID			UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix			Soil	Soil	Soil	Soil
Depth Interval (ft)			5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled			05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**	**Criteria***				
Volatile Organic Compounds						
Chloroform	UG/KG	300	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Chloromethane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Chloroprene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Dibromochloromethane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Dibromomethane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Dichlorodifluoromethane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Ethyl methacrylate	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Ethylbenzene	UG/KG	5500	6.7 UJ	1.4 J	5.6 UJ	6 UJ
Freon TF	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Hexachlorobutadiene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Iodomethane (Methyl iodide)	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Isobutyl alcohol	UG/KG	-	R	R	R	R
Isopropylbenzene (Cumene)	UG/KG	-	6.7 UJ	2.8 J	5.6 UJ	6 UJ
Methacrylonitrile	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Methyl ethyl ketone (2-Butanone)	UG/KG	300	R	33 J	R	R
Methyl methacrylate	UG/KG	-	6.7 UJ	2.6 J	5.6 UJ	6 UJ
Methyl tert-butyl ether	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Methylene chloride	UG/KG	100	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Naphthalene	UG/KG	13000	6.7 UJ	6 UJ	5.6 UJ	6 UJ
n-Butylbenzene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
n-Propylbenzene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Propionitrile	UG/KG	-	R	R	R	R
sec-Butylbenzene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ

*Criteria- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria.

Detection Limits shown are PQL

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID			TT-05	TT-12	TT-16	TT-28
Sample ID			UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix			Soil	Soil	Soil	Soil
Depth Interval (ft)			5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled			05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**	**Criteria***				
Volatile Organic Compounds						
Styrene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
tert-Butylbenzene	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Tetrachloroethene	UG/KG	1400	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Tetrahydrofuran	UG/KG	-	67 UJ	60 UJ	56 UJ	60 UJ
Toluene	UG/KG	1500	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Trichloroethene	UG/KG	700	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Trichlorofluoromethane	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Vinyl acetate	UG/KG	-	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Vinyl chloride	UG/KG	200	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Xylene (total)	UG/KG	1200	6.7 UJ	1.9 J	5.6 UJ	6 UJ
Semivolatile Organic Compounds						
1,2,4-Trichlorobenzene	UG/KG	3400	440 U	430 J	530 U	24 J
1,2-Dichlorobenzene	UG/KG	7900	440 U	130 J	530 U	400 U
1,3-Dichlorobenzene	UG/KG	1600	440 U	2,000 U	530 U	400 U
1,4-Dichlorobenzene	UG/KG	8500	440 U	2,000 U	530 U	400 U
2,2'-oxybis(1-Chloropropane)	UG/KG	-	440 U	2,000 U	530 U	400 U
2,4,5-Trichlorophenol	UG/KG	100	1,100 U	5,000 U	1,300 U	1,000 U
2,4,6-Trichlorophenol	UG/KG	-	440 U	2,000 U	530 U	400 U
2,4-Dichlorophenol	UG/KG	400	440 U	2,000 U	530 U	400 U
2,4-Dimethylphenol	UG/KG	-	440 UJ	2,000 UJ	530 UJ	400 UJ
2,4-Dinitrophenol	UG/KG	200 or MDL	1,100 U	5,000 U	1,300 U	1,000 U
2,4-Dinitrotoluene	UG/KG	-	440 U	2,000 U	530 U	400 U
2,6-Dinitrotoluene	UG/KG	1000	440 U	2,000 U	530 U	400 U

*Criteria- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria.

Detection Limits shown are PQL

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID			TT-05	TT-12	TT-16	TT-28
Sample ID			UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix			Soil	Soil	Soil	Soil
Depth Interval (ft)			5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled			05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**	**Criteria***				
Semivolatile Organic Compounds						
2-Chloronaphthalene	UG/KG	-	440 U	92 J	530 U	400 UJ
2-Chlorophenol	UG/KG	800	440 U	2,000 U	530 U	400 U
2-Methylnaphthalene	UG/KG	36400	440 U	2,000 U	41 J	1,100
2-Methylphenol (o-cresol)	UG/KG	100 or MDL	440 U	2,000 U	530 U	400 U
2-Nitroaniline	UG/KG	430 or MDL	1,100 U	5,000 U	1,300 U	1,000 U
2-Nitrophenol	UG/KG	330 or MDL	440 U	2,000 U	530 U	400 U
3,3'-Dichlorobenzidine	UG/KG	-	440 U	2,000 U	530 U	400 U
3-Nitroaniline	UG/KG	500 or MDL	1,100 U	5,000 U	1,300 U	1,000 U
4,6-Dinitro-2-methylphenol	UG/KG	-	1,100 U	5,000 U	1,300 U	1,000 U
4-Bromophenyl-phenylether	UG/KG	-	440 U	2,000 U	530 U	400 U
4-Chloro-3-methylphenol	UG/KG	240 or MDL	440 U	2,000 U	530 U	400 U
4-Chloroaniline	UG/KG	220 or MDL	440 U	2,000 U	530 U	400 U
4-Chlorophenyl-phenylether	UG/KG	-	440 U	2,000 U	530 U	400 U
4-Methylphenol (p-cresol)	UG/KG	900	440 U	2,000 U	530 U	400 U
4-Nitroaniline	UG/KG	-	1,100 U	5,000 U	1,300 U	1,000 U
4-Nitrophenol	UG/KG	100 or MDL	1,100 U	5,000 U	1,300 U	1,000 U
Acenaphthene	UG/KG	50000	33 J	240 J	260 J	160 J
Acenaphthylene	UG/KG	41000	440 U	2,000 U	530 U	400 U
Aniline	UG/KG	100	R	R	R	1,000 U
Anthracene	UG/KG	50000	76 J	2,300	660	290 J
Azobenzene	UG/KG	-	440 U	2,000 U	530 U	400 U
Benzidine	UG/KG	-	1,100 UJ	5,000 UJ	1,300 UJ	1,000 UJ
Benzo(a)anthracene	UG/KG	224 or MDL	280 J	1,800 J	1,800	1,000

*Criteria- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria.

Detection Limits shown are PQL

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID			TT-05	TT-12	TT-16	TT-28
Sample ID			UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix			Soil	Soil	Soil	Soil
Depth Interval (ft)			5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled			05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**	**Criteria***				
Semivolatile Organic Compounds						
Benzo(a)pyrene	UG/KG	61 or MDL	280 J	930 J	1,600	1,000
Benzo(b)fluoranthene	UG/KG	1100	240 J	1,300 J	2,200	2,200
Benzo(g,h,i)perylene	UG/KG	50000	200 J	240 J	550	360 J
Benzo(k)fluoranthene	UG/KG	1100	340 J	2,000 U	1,500 J	400 U
Benzoic acid	UG/KG	2700	1,100 U	5,000 U	1,300 U	220 J
Benzyl alcohol	UG/KG	-	440 U	2,000 U	530 U	400 U
bis(2-Chloroethoxy)methane	UG/KG	-	440 U	2,000 U	530 U	400 U
bis(2-Chloroethyl)ether	UG/KG	-	440 U	2,000 U	530 U	400 U
bis(2-Ethylhexyl)phthalate	UG/KG	50000	24 J	2,000 U	530 U	72 J
Butylbenzylphthalate	UG/KG	50000	440 U	2,000 U	530 U	400 U
Carbazole	UG/KG	-	43 J	2,000 U	130 J	200 J
Chrysene	UG/KG	400	330 J	2,000 J	1,800	1,100
Dibenz(a,h)anthracene	UG/KG	14 or MDL	45 J	170 J	200 J	220 J
Dibenzofuran	UG/KG	6200	440 U	290 J	120 J	530
Diethylphthalate	UG/KG	7100	440 U	2,000 U	530 U	400 U
Dimethylphthalate	UG/KG	2000	440 U	2,000 U	530 U	400 U
Di-n-butylphthalate	UG/KG	8100	440 U	2,000 U	530 U	400 U
Di-n-octylphthalate	UG/KG	50000	440 U	2,000 U	530 U	400 U
Fluoranthene	UG/KG	50000	510	1,800 J	3,700	1,800
Fluorene	UG/KG	50000	27 J	900 J	240 J	150 J
Hexachlorobenzene	UG/KG	410	440 U	2,000 U	530 U	400 U
Hexachlorobutadiene	UG/KG	-	440 U	2,000 U	530 U	400 U
Hexachlorocyclopentadiene	UG/KG	-	440 U	2,000 U	530 U	400 U

*Criteria- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria.

Detection Limits shown are PQL

Advanced Selection: SO_FULL LIST
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([LOCID] = 'TT-05' OR [LOCID] = 'TT-12' OR [LOCID] = 'TT-16' OR [LOCID] = 'TT-28') AND [MATRIX] = 'SO'

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID			TT-05	TT-12	TT-16	TT-28
Sample ID			UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix			Soil	Soil	Soil	Soil
Depth Interval (ft)			5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled			05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**	**Criteria***				
Semivolatile Organic Compounds						
Hexachloroethane	UG/KG	-	440 U	2,000 U	530 U	400 U
Indeno(1,2,3-cd)pyrene	UG/KG	3200	180 J	220 J	640	360 J
Isophorone	UG/KG	4400	440 U	2,000 U	530 U	400 U
Naphthalene	UG/KG	13000	24 J	2,000 U	46 J	1,200
Nitrobenzene	UG/KG	200 or MDL	440 U	2,000 U	530 U	400 U
N-Nitrosodimethylamine	UG/KG	-	440 U	2,000 U	530 U	400 U
N-Nitroso-di-n-propylamine	UG/KG	-	440 U	2,000 U	530 U	400 U
N-Nitrosodiphenylamine	UG/KG	-	440 U	2,000 U	530 U	400 U
Pentachlorophenol	UG/KG	1000 or MDL	1,100 U	5,000 U	1,300 U	1,000 U
Phenanthrene	UG/KG	50000	340 J	770 J	2,600	1,800
Phenol	UG/KG	30 or MDL	440 U	2,000 U	530 U	400 U
Pyrene	UG/KG	50000	510	4,300	3,000	1,600
Pyridine	UG/KG	-	440 U	2,000 U	530 U	400 U
Metals						
Aluminum	MG/KG	SB	13,800 J	13,200 J	11,200 J	5,010
Antimony	MG/KG	SB	3.9 B	4 B	1.6 B	5.4 B
Arsenic	MG/KG	7.5 or SB	42.3 J	22.9 J	18.4 J	73.1
Barium	MG/KG	300 or SB	132 J	156 J	68.4 J	193
Beryllium	MG/KG	0.16 or SB	0.74	0.78	0.6	0.51 B
Cadmium	MG/KG	1 or SB	1.4	1.2	1.1	2.1 J
Calcium	MG/KG	SB	58,100	27,400	45,900	59,800
Chromium	MG/KG	10 or SB	336 J	222 J	122 J	73.1
Cobalt	MG/KG	30 or SB	19.1 J	14.6 J	7.4 J	77.6

*Criteria- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria.

Detection Limits shown are PQL

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID			TT-05	TT-12	TT-16	TT-28
Sample ID			UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix			Soil	Soil	Soil	Soil
Depth Interval (ft)			5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled			05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**	**Criteria***				
Metals						
Copper	MG/KG	25 or SB	135 J	476 J	34.4 J	269
Iron	MG/KG	2000 or SB	23,900 J	26,900 J	20,600 J	24,400
Lead	MG/KG	200-500	90.1 J	150 J	253 J	362 J
Magnesium	MG/KG	SB	16,100	12,200	22,400	17,500
Manganese	MG/KG	SB	4,170	483	891	1,060
Mercury	MG/KG	0.1	251	1,460	5,870	230
Nickel	MG/KG	13 or SB	39.7 J	26.8 J	16.7 J	25.7 J
Potassium	MG/KG	SB	2,390 J	2,140 J	1,730 J	721 J
Selenium	MG/KG	2 or SB	2.5	1.6	0.78	R
Silver	MG/KG	SB	0.99 B	0.45 B	0.39 B	0.47 B
Sodium	MG/KG	SB	208 B	266 B	325 B	244 B
Thallium	MG/KG	SB	0.38 U	0.40 U	0.34 U	0.68 U
Vanadium	MG/KG	150 or SB	37.6 J	24.8 J	26.5 J	20.6
Zinc	MG/KG	20 or SB	311 J	229 J	197 J	346

*Criteria- NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 January 24, 1994 (Revised). Recommended Cleanup Objectives.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria.

Detection Limits shown are PQL

Advanced Selection: SO_FULL LIST
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([LOCID] = 'TT-05' OR [LOCID] = 'TT-12' OR [LOCID] = 'TT-16' OR [LOCID] = 'TT-28') AND [MATRIX] = 'SO'

TABLE 3
ANALYTICAL GROUNDWATER SAMPLE RESULTS
NIACET VCP

Location ID			TT-02	TT-12	TT-24	TT-28
Sample ID			UCC-TT-2	UCC-TT-12	UCC-TT-24	UCC-TT-28
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	2.5-3.0	-	-
Date Sampled			05/07/02	05/08/02	05/21/02	05/21/02
Parameter	**Units**	**Criteria***				
Metals						
Mercury	UG/L	0.7	122	12,300	574,000	20,900

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 Addendum). Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria.

Detection Limits shown are PQL

Advanced Selection: WG
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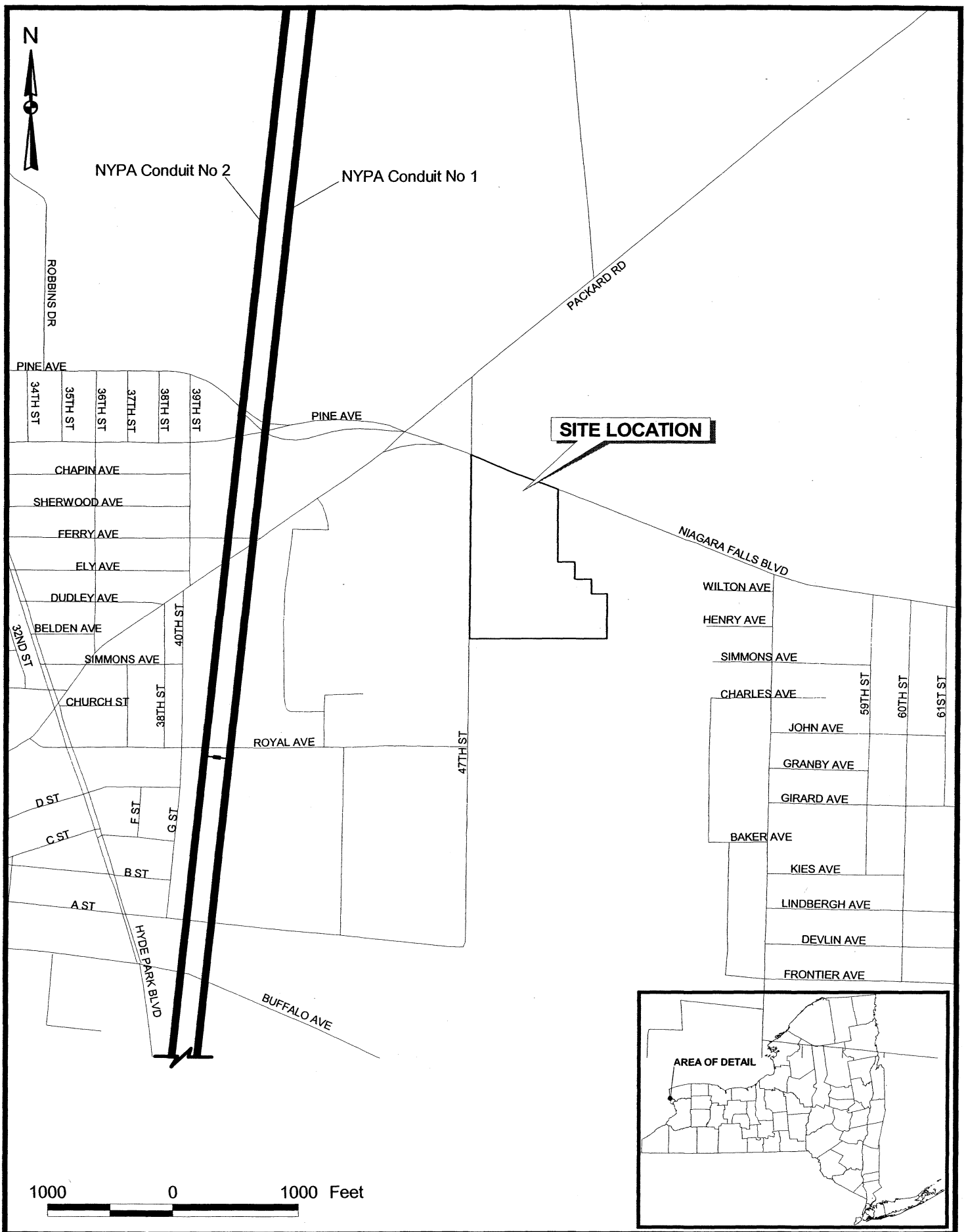
[MATRIX] = 'WG'

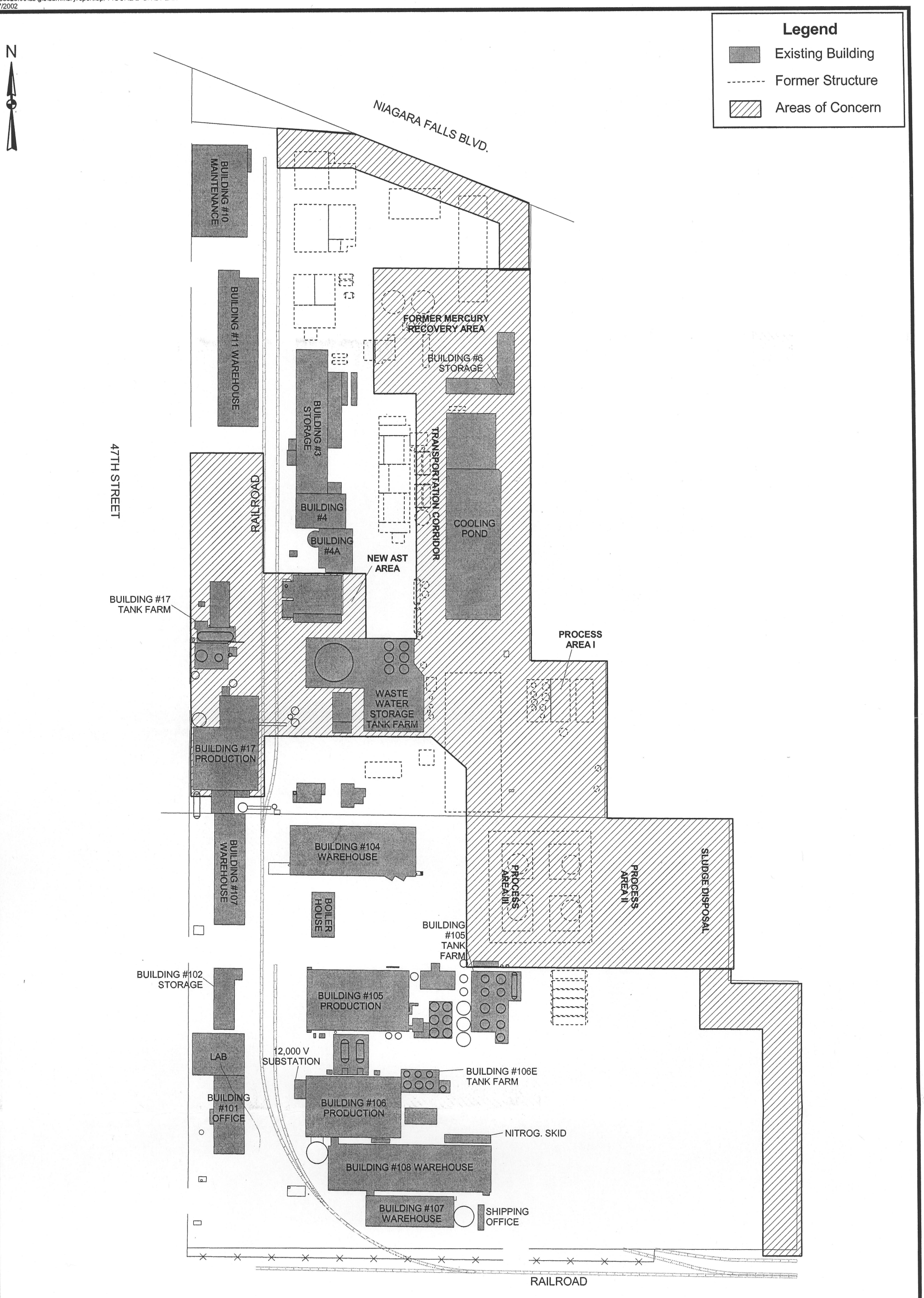
FIGURES



URS	NIACET CORPORATION SITE LOCATION MAP	FIGURE 1

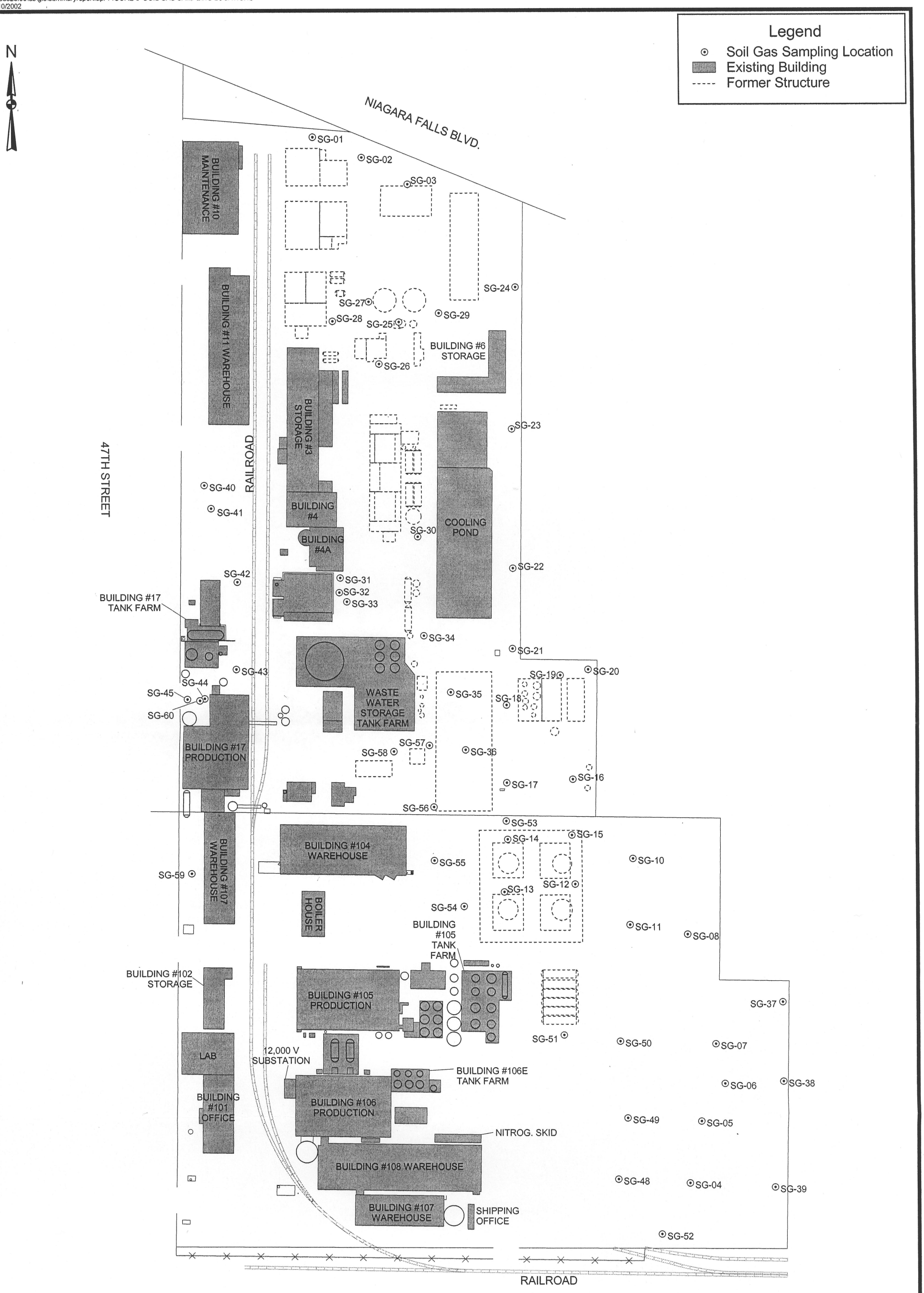
J:\35825.00\dbl\gis\sitelocation.apr Figure 1
9/10/2002

J:\35825.00\db\gis\summaryreport.apr FIGURE 2 SITE PLAN
8/7/2002



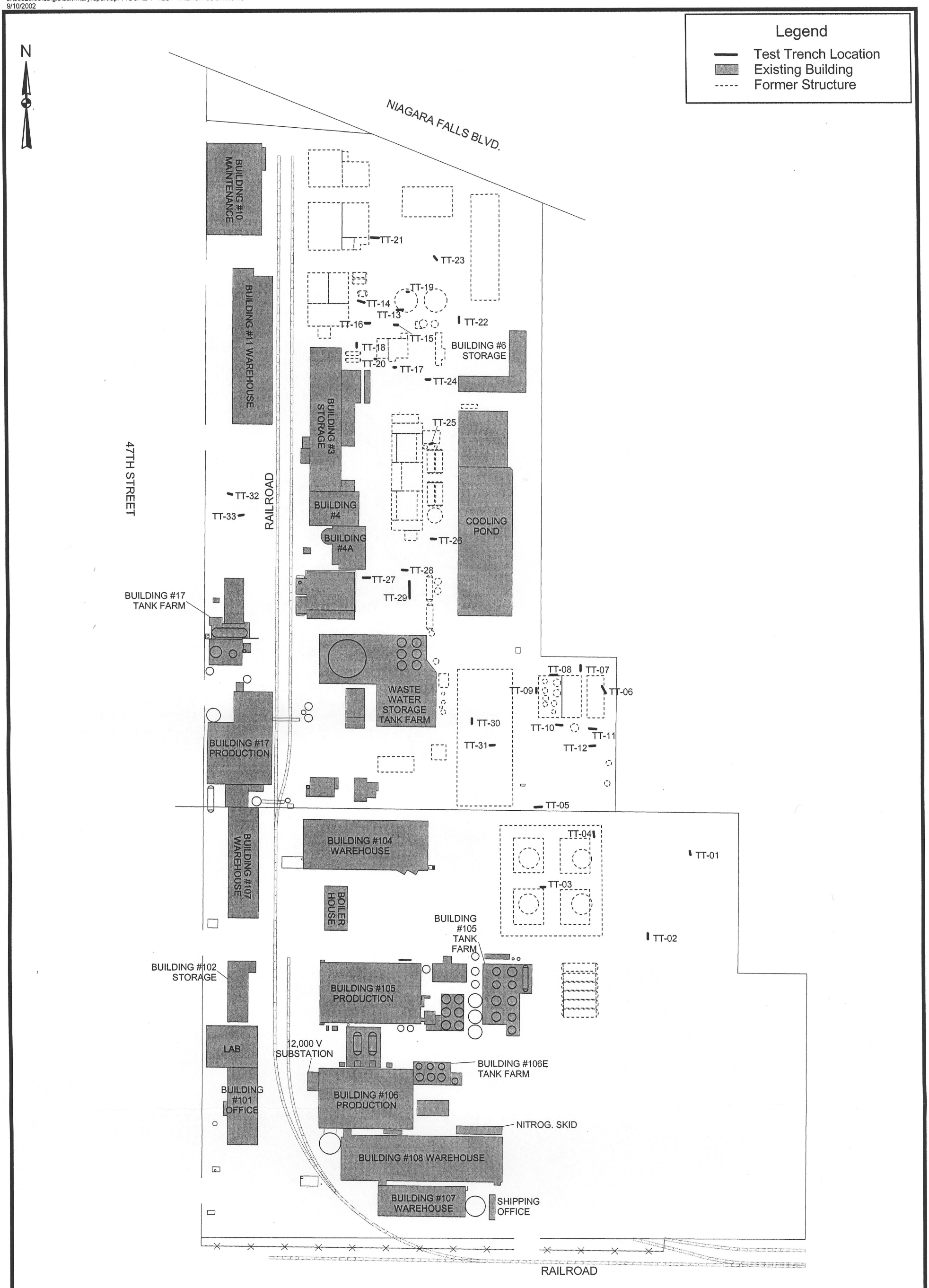
URS	NIACET SITE PLAN	FIGURE 2

J:\35825.00\db\gis\summaryreport.apr FIGURE 3 SOIL GAS SAMPLING LOCATIONS
9/10/2002



URS	NIACET SOIL GAS SAMPLING LOCATIONS	FIGURE 3

J:\35825.00\db\gis\summaryreport.apr FIGURE 4 TEST TRENCH LOCATIONS
9/10/2002

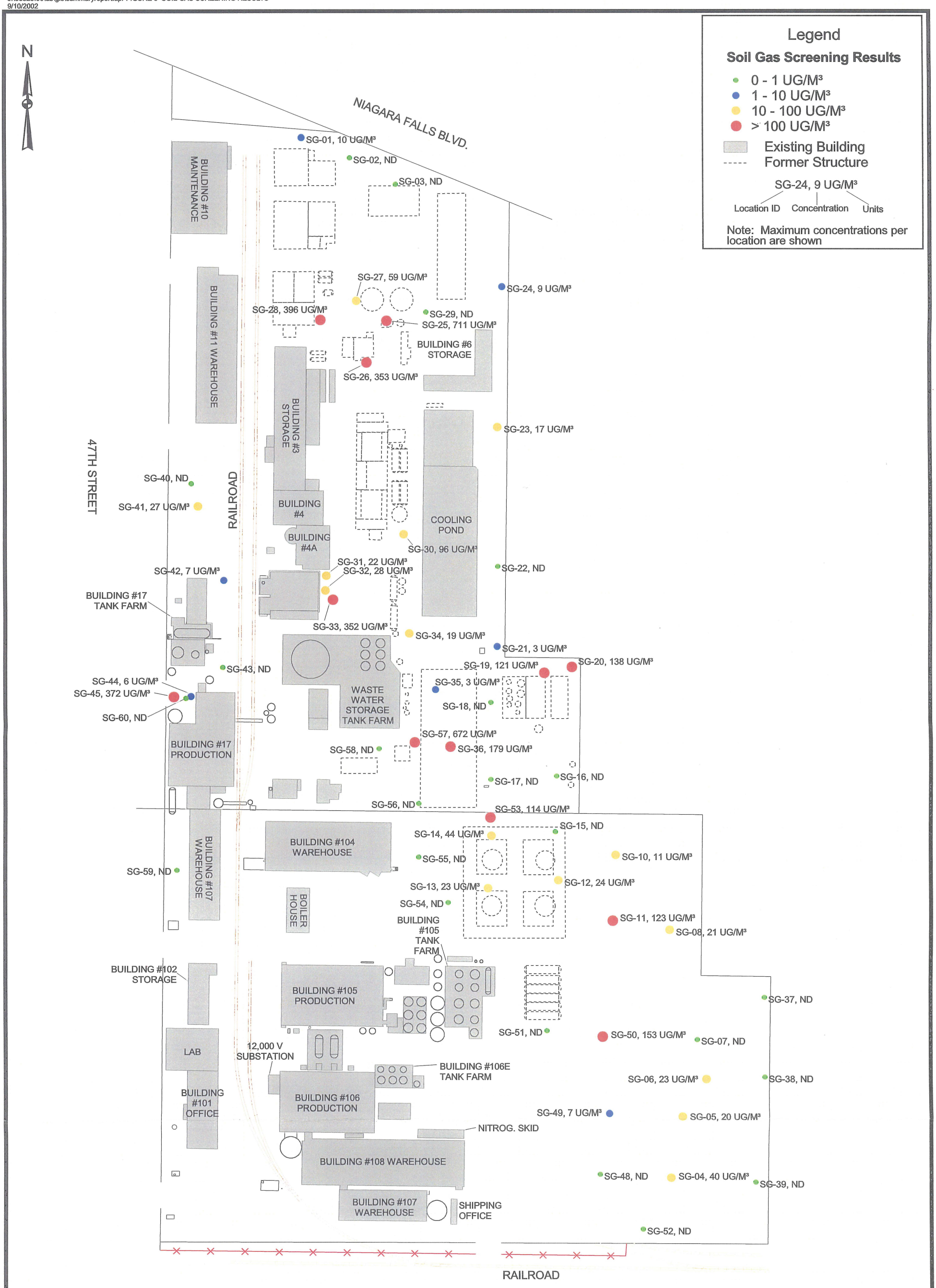


URS

NIACET
TEST TRENCH LOCATIONS

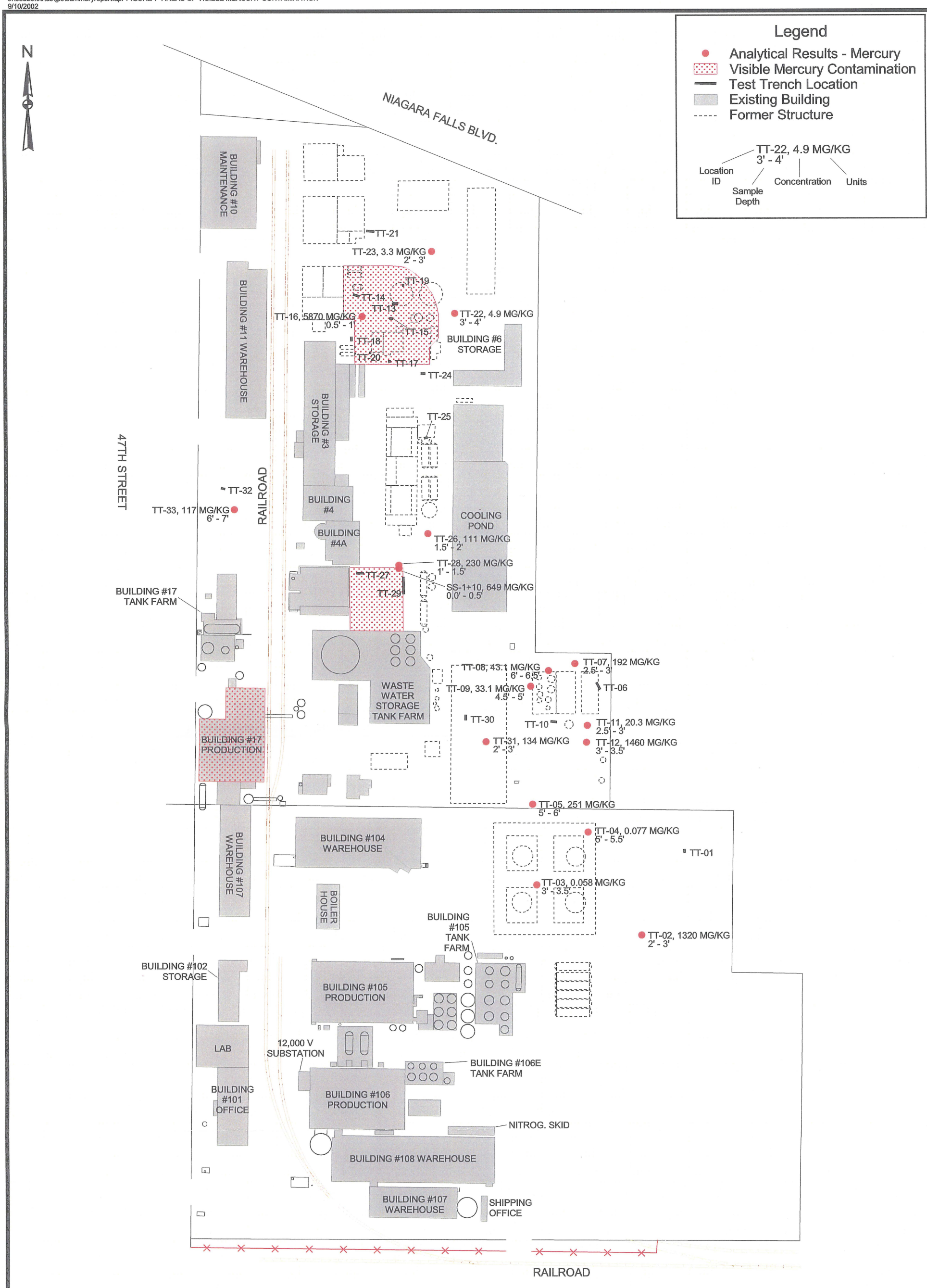
FIGURE 4

J:\35825.00\db\gis\summaryreport.apr FIGURE 5 SOIL GAS SCREENING RESULTS
9/10/2002



URS	NIACET SOIL GAS SCREENING RESULTS	FIGURE 5

J:\35825.00\db\gis\summaryreport.apr FIGURE 7 AREAS OF VISIBLE MERCURY CONTAMINATION
9/10/2002



URS	NIACET AREAS OF VISIBLE MERCURY CONTAMINATION AND SOIL ANALYTICAL RESULTS - MERCURY	FIGURE 6

J:\35825.00\db\gis\summaryreport.apr FIGURE 6 SUBSURFACE SOIL ANALYTICAL RESULTS
9/10/2002

N

Legend

- No Compounds Detected
- No Compounds Exceed Criteria
- At Least One Compound Exceeds Criteria
- Existing Building
- Former Structure

TT-16 Benzo(a)anthracene, 1800 UG/KG

Location ID | Compound Exceeding Criteria | Concentration | Units

NIAGARA FALLS BLVD.

BUILDING #10 MAINTENANCE

BUILDING #11 WAREHOUSE

BUILDING #3 STORAGE

BUILDING #6 STORAGE

47TH STREET

RAILROAD

BUILDING #4

BUILDING #4A

COOLING POND

BUILDING #17 TANK FARM

WASTE WATER STORAGE TANK FARM

BUILDING #17 PRODUCTION

BUILDING #104 WAREHOUSE

BUILDING #107 WAREHOUSE

BOILER HOUSE

BUILDING #105 TANK FARM

BUILDING #102 STORAGE

BUILDING #105 PRODUCTION

LAB

12,000 V SUBSTATION

BUILDING #106E TANK FARM

BUILDING #101 OFFICE

BUILDING #106 PRODUCTION

NITROG. SKID

BUILDING #108 WAREHOUSE

BUILDING #107 WAREHOUSE

SHIPPING OFFICE

RAILROAD

TT-16 (0.5 - 1.0')

SVOCs:
- Benzo(a)anthracene, 1800 UG/KG
- Benzo(a)pyrene, 1600 UG/KG
- Benzo(b)fluoranthene, 2200 UG/KG
- Benzo(k)fluoranthene, 1500 UG/KG
- Chrysene, 1800 UG/KG
- Dibenz(a,h)anthracene, 200 UG/KG

Metals:
- Arsenic, 18.4 MG/KG
- Beryllium, 0.6 MG/KG
- Cadmium, 1.1 MG/KG
- Chromium, 122 MG/KG
- Copper, 34.4 MG/KG
- Iron, 20,600 MG/KG
- Mercury, 5870 MG/KG
- Nickel, 16.7 MG/KG
- Zinc, 197 MG/KG

TT-28 (1.0 - 1.5')

SVOCs:
- Benzo(a)anthracene, 1000 UG/KG
- Benzo(a)pyrene, 1000 UG/KG
- Benzo(b)fluoranthene, 2200 UG/KG
- Chrysene, 1100 UG/KG
- Dibenz(a,h)anthracene, 220 UG/KG

Metals:
- Arsenic, 73.1 MG/KG
- Beryllium, 0.51 MG/KG
- Cadmium, 2.1 MG/KG
- Chromium, 73.1 MG/KG
- Cobalt, 77.6 MG/KG
- Copper, 269 MG/KG
- Iron, 24,400 MG/KG
- Mercury, 230 MG/KG
- Nickel, 25.7 MG/KG
- Zinc, 346 MG/KG

TT-12 (3.0 - 3.5')

SVOCs:
- Benzo(a)anthracene, 1800 UG/KG
- Benzo(a)pyrene, 930 UG/KG
- Benzo(b)fluoranthene, 1300 UG/KG
- Chrysene, 2000 UG/KG
- Dibenz(a,h)anthracene, 170 UG/KG

Metals:
- Arsenic, 22.9 MG/KG
- Beryllium, 0.78 MG/KG
- Cadmium, 1.2 MG/KG
- Chromium, 222 MG/KG
- Copper, 476 MG/KG
- Iron, 26,900 MG/KG
- Mercury, 1460 MG/KG
- Nickel, 26.8 MG/KG
- Zinc, 229 MG/KG

TT-05 (5.0 - 6.0')

SVOCs:
- Benzo(a)anthracene, 280 UG/KG
- Benzo(a)pyrene, 280 UG/KG
- Dibenz(a,h)anthracene, 45 UG/KG

Metals:
- Arsenic, 42.3 MG/KG
- Beryllium, 0.74 MG/KG
- Cadmium, 1.4 MG/KG
- Chromium, 336 MG/KG
- Copper, 135 MG/KG
- Iron, 23,900 MG/KG
- Mercury, 251 MG/KG
- Nickel, 39.7 MG/KG
- Selenium, 2.5 MG/KG
- Zinc, 311 MG/KG

TT-04 (5.0 - 5.5')

Metals:
- Beryllium, 1.2 MG/KG
- Cadmium, 1.3 MG/KG
- Chromium, 32 MG/KG
- Copper, 33.2 MG/KG
- iron, 35,300 MG/KG
- Mercury, 0.077 MG/KG
- Nickel, 43 MG/KG
- Zinc, 203 MG/KG

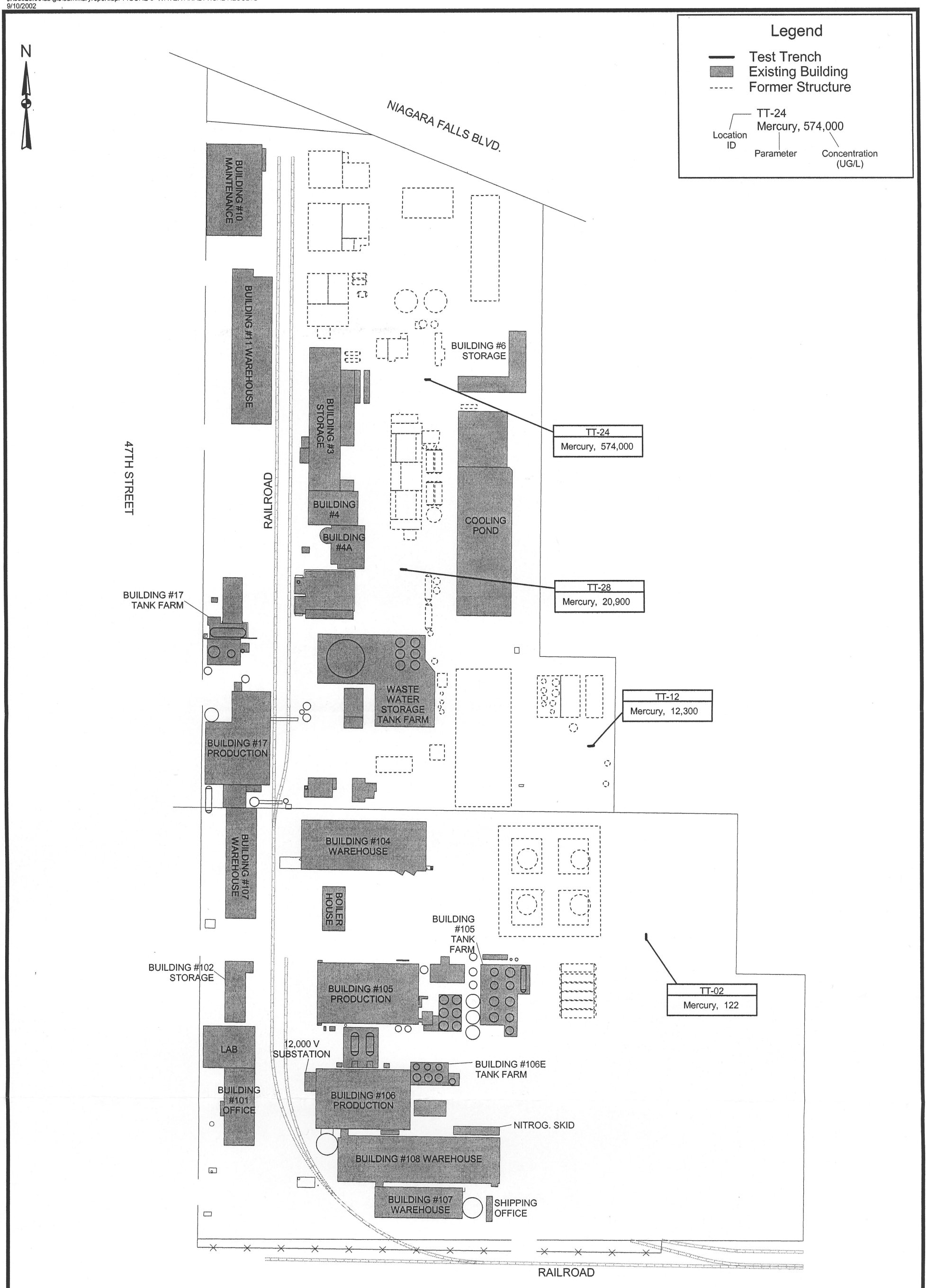
120 0 120 Feet

URS

NIACET
SOIL ANALYTICAL RESULTS
(SVOCs AND METALS)

FIGURE 7

J:\35825.00\db\gis\summaryreport.apr FIGURE 8 WATER ANALYTICAL RESULTS
9/10/2002



URS	NIACET WATER ANALYTICAL RESULTS (TOTAL MERCURY)	FIGURE 8

APPENDIX A

TEST TRENCH LOGS

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: NE corner Process Area II
DATE STARTED: 5/6/02	GROUND ELEVATION: 573.09
DATE COMPLETED: 5/6/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-1	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-2.0: FILL; Dark brown to black, silty fine sand, some cinder, ash, coal, slag, fine to coarse gravel, cobbles, brick and concrete, moist
2			2.0-5.5: FILL; Brown to red brown silty clay, some fine to coarse sand seams, some to trace cinder coal, ash, wood, fine to coarse gravel, moist wet in sand seams
3			
4			
5			
6			5.5-7.0: Gray SILTY CLAY, laminated, moist, natural
7			
8			End trench at 7' BGS
9			
10			
11			
12			

COMMENTS: All MVA readings were 0, ended trench in natural clays. No samples collected

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: 20' South of SG-11
DATE STARTED: 5/6/02	GROUND ELEVATION: 573.49
DATE COMPLETED: 5/6/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-2	GEOLOGIST: John Doerr
	GROUNDWATER: 4.5'BGS

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1–12	UCC TT-2	Hg	0.0-2.0: FILL; Dark brown to black, silty fine sand, some cinder, ash, coal, slag, fine to coarse gravel, cobbles, brick and concrete, moist 2.0-4.0: FILL; Brown to red brown silty clay, some fine to coarse angular to subrounded gravel, cobbles boulders, moist 4.0-4.5: FILL; Dark brown to black fine to coarse cinder/slag gravel, some fine to coarse sand (cinder) wet Trench abandoned due to infiltrating perched water at 4.5' BGS

COMMENTS: All MVA readings were 0; Soil and water samples collected and submitted for Hg analysis, soil, 2'-3'

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: 10' east of SG-13
DATE STARTED: 5/7/02	GROUND ELEVATION: 572.71
DATE COMPLETED: 5/7/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-3	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1–2			0.0-0.8: FILL: Black to dark brown, silty fine sand, some ash, coal, cinder, trace clay, moist 0.8-3.4: FILL; red brown, silty clay, some fine to coarse angular gravel, cobbles, boulders, brick, wire, moist
3–4	TT-3	Hg	3.4-4.6: FILL; Dark gray, silt, some clay, coarse gravel, cobbles, boulders, brick, very moist
5–6			4.6-6.0: Gray SILTY CLAY, trace fine sand
7–12			End trench at 6' BGS

Comments: MVA Readings: Sample collected from 3.0 to 3.5 and submitted for Hg analysis.

Depth	Readings
0.8-3.4	0-8
3.4-4.6	0-58

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: 10' south of SG-15
DATE STARTED: 5/7/02	GROUND ELEVATION: 574.68
DATE COMPLETED: 5/7/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-4	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.5: FILL: Black to dark brown, silty fine sand, some ash, coal, cinder, trace clay, moist
			05.-2.0: FILL; Red brown silty clay, some cobbles, brick, moist
2			
			2.0-4.0: FILL; Dark gray cinder, clinker, ash slag, some silt, moist
3			
4			
			4.0-5.0: FILL; Red brown silty clay, some cobbles, bricks, moist
5	TT-4	Hg	5.0-5.5: FILL: Dark gray to black silty clay, some wood, brick, wet at 5.5
6			Trench abandoned due to infiltrating perched water at 5.5' BGS
7			
8			
9			
10			
11			
12			

Comments: All MVA readings were 0. Soil sample collected 5'-5.5' and submitted for Hg analysis.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: South of the Pikes Creek Culvert
DATE STARTED: 5/7/02	GROUND ELEVATION: 575.31
DATE COMPLETED: 5/7/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-5	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1–5	TT-5	Full	0.0-5.4: FILL; Dark brown to black silty fine sand, some clay, coarse sand, fine to coarse angular gravel, cobbles, boulders, red and yellow brick, concrete and metal debris, moist
6–12			Trench abandoned due to infiltrating perched water at 5.4' BGS

Comments: All MVA reading were 0. Sample collected from 5.0-5.4 and submitted for full TCL/TAL and Hg analysis.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: 10' east of former East Process I Bldg.
DATE STARTED: 5/7/02	GROUND ELEVATION: No GPS Signal
DATE COMPLETED: 5/7/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-6	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1 – 6			0.0-1.5: FILL; Brown to dark brown, silty fine sand, some fine to coarse angular gravel, cobbles, trace coarse sand and clay, moist 1.5-5.8: FILL; Gray brown with yellow brown mottling, silty fine sand, some fine to coarse angular gravel, brick, slag, trace clay, cobbles, boulders, moist
6			5.8-6.5: Fine to coarse sub rounded to well rounded GRAVEL, some fine to coarse sand, trace clay
7 – 12			Trench abandoned due to infiltrating perched water at 6.5' BGS

Comments: All MVA reading were 0. No samples collected

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: North of former East Process I Bldg.
DATE STARTED: 5/7/02	GROUND ELEVATION: 577.43
DATE COMPLETED: 5/7/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-7	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.5: FILL; black silty fine sand, some fine to coarse angular gravel, moist 0.5-1.5: FILL; Yellow coarse sand (decomposed brick) brick, concrete, metal debris, fine to coarse angular gravel, moist
2			1.5-3.5: FILL; fine to coarse angular gravel, some fine to coarse sand, trace silt, (former roadbed), moist MVA- 144-391
3	TT-7	Hg	
4			3.5-3.9: FILL; red brown very tight, highly compacted silty clay, MVA 7-12, moist
5			End trench at 3.9' BGS
6			
7			
8			
9			
10			
11			
12			

Comments: Very high MVA readings in coarse roadbed horizon, no visible Hg, Sample collected 2.5-3 and submitted for Hg analysis.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: North of former West Process I Bldg.
DATE STARTED: 5/8/02	GROUND ELEVATION: 576.98
DATE COMPLETED: 5/8/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-8	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.4: FILL; black silty fine sand, some fine to coarse angular gravel, moist 0.4-2.0: FILL; Yellow brown silty fine sand, some fine to coarse angular gravel, trace brick, cobbles, moist
2			
3			2.0-4.0: FILL; red brown silty clay, some gray/blue gray well cemented boulders, with black to metallic relic materials, source unknown, trace brick, cobbles, boulders, moist, MVA 0
4			
5			4.0-5.5: FILL; Fine to coarse angular gravel, some fine to coarse sand, moist
6	TT-8	Hg	5.5-6.5: FILL; red brown silty clay, some fine to coarse well rounded gravel, trace wood, moist
7			6.5-8.0: SILTY CLAY, gray, trace fine sand, some black partings, wet
8			
9			End trench at 8.0' BGS
10			
11			
12			

Comments, all MVA readings 0 Sample collected 6.0-6.5 feet submitted for Hg analysis.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: South of former West Process I Bldg.
DATE STARTED: 5/8/02	GROUND ELEVATION: 576.11
DATE COMPLETED: 5/8/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-9	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1–4			0.0-0.6: FILL; black silty fine sand, some fine to coarse angular gravel, moist 0.6-2.8: FILL; red brown silty clay some brick and fine to coarse angular gravel, moist 2.8-4.8: FILL; Dark gray silty clay, some fine to coarse angular gravel, cobbles, boulders, moist
5	TT-9	Hg	4.8-5.5: SILTY CLAY, red brown, well laminated, moist
6–12			End trench at 5.5' BGS

Comments, all MVA readings 0 Sample collected 4.5-5.0 and submitted for Hg analysis.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: South of former West Process I Bldg.
DATE STARTED: 5/8/02	GROUND ELEVATION: 576.98
DATE COMPLETED: 5/8/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-10	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.6: FILL; black silty fine sand, some fine to coarse angular gravel, moist, 0.6-1.2: FILL; Gray, angular coarse gravel, some angular fine gravel, fine to coarse sand and silt, moist 1.2-3.8: FILL; Gray silty clay, some fine to coarse gravel, cobbles, boulders, moist
2			
3			
4			
5			3.8-5.5: FILL; red brown silty clay, some fine to coarse gravel, cobbles, boulders, moist 5.5-5.7: TILL; Gray Silty clay some fine to coarse angular rock fragments, fine to coarse sand, moist
6			End trench at 5.7' BGS
7			
8			
9			
10			
11			
12			

Comments, all MVA readings 0 No samples collected.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: South of former East Process I Bldg.
DATE STARTED: 5/8/02	GROUND ELEVATION: 577.83
DATE COMPLETED: 5/8/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-11	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1–2			0.0-0.5: FILL; black silty fine sand, some fine to coarse angular gravel, moist, 0.5-3.0: FILL; gray silty fine sand, pea gravel, some concrete, brick, steel beams, rebar, wire and other assorted debris, moist MVA 356 @ 2.5'
3	TT-11	Hg	
3			3.0-3.5: Gray well laminated SILTY CLAY, moist
4–12			End Trench at 3.5' BGS

Comments: Sample collected 2.5-3 submitted for Hg analysis.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: South of former East Process I Bldg.
DATE STARTED: 5/8/02	GROUND ELEVATION: 576.89
DATE COMPLETED: 5/8/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-12	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1–12	TT-12	Full	0.0-0.7: FILL; black silty fine sand, some fine to coarse angular gravel, moist, 0.7-2.3: FILL: red brown silty clay, some fine to coarse gravel, brick, concrete, moist 2.3-4.2: FILL; black fine to coarse angular gravel, some fine to coarse gravel, cobbles, boulders, greasy appearance, moist to wet, sheen, petroleum odor, MVA 746, FID 0 End trench on concrete pad at 4.2' BGS

Comments: Soil and water samples collected 3.5-4 and submitted for Hg and TCL/TAL analysis, water Hg only
No visible Hg

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: Mercury Recovery Area
DATE STARTED: 5/9/02	GROUND ELEVATION: 577.30
DATE COMPLETED: 5/9/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-13	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.4: FILL; black silty fine sand, and fine to coarse angular gravel, moist, 0.4-1.3: FILL: tan to yellow ash, moist
2			1.3-2.1: FILL; Red brown silty clay, some fine to coarse angular gravel, cobbles, moist, visible mercury
3			End trench at 2.1' BGS due to encountering visible mercury
4			
5			
6			
7			
8			
9			
10			
11			
12			

Comments : visible mercury 1.5'- 2'

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: Mercury Recovery Area
DATE STARTED: 5/9/02	GROUND ELEVATION: 577.21
DATE COMPLETED: 5/9/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-14	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.3: FILL; black silty fine sand, and fine to coarse angular gravel, moist 0.3-1.3: FILL: tan to yellow ash, some brick, concrete, rebar, metal, visible mercury, moist
2			End trench at 1.3' BGS due to visible mercury
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Comments: visible mercury at 1.3'

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: Mercury Recovery Area
DATE STARTED: 5/9/02	GROUND ELEVATION: 577.61
DATE COMPLETED: 5/9/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-15	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
			0.0-0.5: FILL; black silty fine sand and fine to coarse angular gravel, moist
1			End Trench at 0.5' BGS due to visible mercury
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Comments: Visible mercury at 0.5'

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: Mercury Recovery Area
DATE STARTED: 5/9/02	GROUND ELEVATION: 577.06
DATE COMPLETED: 5/9/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-16	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
	TT-16	Full	0.0-0.5: FILL; black silty fine sand and fine to coarse angular gravel, moist
1			End Trench at 0.5' BGS due to visible mercury
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Comments: Visible mercury at 0.5', TCL/TAL sample collected at 0.5 feet.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: Mercury Recovery Area
DATE STARTED: 5/9/02	GROUND ELEVATION: 577.21
DATE COMPLETED: 5/9/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-17	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.5: FILL; black silty fine sand and fine to coarse angular gravel, moist
2			End Trench at 0.5' BGS due to visible mercury
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Comments: Visible mercury at 0.5'

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: West of Mercury Recovery Area
DATE STARTED: 5/9/02	GROUND ELEVATION: 577.27
DATE COMPLETED: 5/9/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-18	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.4: FILL; black silty fine sand and fine to coarse angular gravel, moist 0.4-4.6: FILL; Red brown silty clay some fine to coarse angular gravel, cobbles, boulders, brick, metal debris, wood, concrete, moist
2			4.6-4.8: TILL; Red brown silty clay, some fine to coarse angular gravel rock fragments, cobbles boulders,
3			End trench at 4.8' BGS in glacial till
4			
5			
6			
7			
8			
9			
10			
11			
12			

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: Mercury Recovery Area
DATE STARTED: 5/9/02	GROUND ELEVATION: 576.99
DATE COMPLETED: 5/9/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-19	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
			0.0-0.5: FILL; black silty sand, some fine to coarse angular gravel, moist
1			End Trench at 0.5' BGS due to visible mercury
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Comments: Visible mercury at 0.5'

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: Mercury Recovery Area
DATE STARTED: 5/9/02	GROUND ELEVATION: 577.32
DATE COMPLETED: 5/9/02	OPERATOR: Butch Eagan
TEST TRENCH NUMBER: TT-20	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
			0.0-0.5: FILL; black silty fine sand and fine to coarse angular gravel, moist
1			End Trench at 0.5' BGS due to visible mercury
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Comments: Visible mercury at 0.5'

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: North of Mercury Recovery Area
DATE STARTED: 5/13/02	GROUND ELEVATION: 577.48
DATE COMPLETED: 5/13/02	OPERATOR: Ken Eagan
TEST TRENCH NUMBER: TT-21	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.5: FILL; Dark gray fine to coarse angular gravel, some ash and cinder, moist 0.5-2.8: FILL; red brown silty clay, some brick, concrete metal debris.
2			
3			End trench at 2.8' BGS due to in filling by water from upper gravel.
4			
5			
6			
7			
8			
9			
10			
11			
12			

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: North of Mercury Recovery Area
DATE STARTED: 5/21/02	GROUND ELEVATION: 577.39
DATE COMPLETED: 5/21/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-22	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.4: FILL; Dark gray fine to coarse angular gravel, some ash and cinder, moist
			0.4-1.0: FILL; Dark gray ash and cinder, moist
2			1.0-2.0: FILL; light gray to yellow slag clinker and cinder, moist
			2.0-4.0: FILL; Dark gray grading down to red brown silty clay, some rounded fine to coarse gravel, moist
3	UCC TT-22	Hg	
4			End trench at 4.0'BGS refusal on concrete pad
5			
6			
7			
8			
9			
10			
11			
12			

Comments: Soil sample collected 3-4 and submitted for Hg
No visible Hg

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: East of Mercury Recovery Area
DATE STARTED: 5/21/02	GROUND ELEVATION: 577.17
DATE COMPLETED: 5/21/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-23	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.5: FILL; Dark gray fine to coarse angular gravel, some ash and cinder, moist
2			0.5-3.0: FILL; red brown silty clay, some rounded fine to coarse gravel, moist, MVA=68-116
3	UCC TT-23	Hg	
4			End Trench at 3.0' BGS, refusal on concrete pad
5			
6			
7			
8			
9			
10			
11			
12			

Comments: Soil sample collected 2-3 and submitted for Hg
No visible Hg

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: South of Mercury Recovery Area
DATE STARTED: 5/21/02	GROUND ELEVATION: 577.41
DATE COMPLETED: 5/21/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-24	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.4: FILL: black silty sand, some fine to coarse angular gravel, moist 0.4-2.0: FILL: red brown silty clay, some fine to coarse gravel, brick, concrete, cobble, boulder, metal, wood, moist, MVA 23-68
2			
3			2.0-4.9: FILL: Same as above, MVA 0-14
4			
5			4.9: Concrete pad, perched water.
6			End trench on concrete pad at 4.9' BGS
7			
8			
9			
10			
11			
12			

Comments: No visible Hg, Water sample collected and submitted for Hg analysis.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: South of Mercury Recovery Area
DATE STARTED: 5/21/02	GROUND ELEVATION: 577.65
DATE COMPLETED: 5/21/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-25	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.3: FILL: black silty sand, some fine to coarse angular gravel, moist 0.3-3.9: FILL: red brown silty clay and concrete, some brick, metal, wood, cobble, boulder, MVA <24
2			
3			
4			End trench at 3.9' BGS
5			
6			
7			
8			
9			
10			
11			
12			

Comments: No visible Hg.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: South of TT-25, West of Cooling Pond
DATE STARTED: 5/21/02	GROUND ELEVATION: 577.22
DATE COMPLETED: 5/21/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-26	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-1.5: FILL: dark gray coarse sand, cinder and clinker, some fine sand, ash, fine to coarse gravel, slag, brick, metal, wood, moist.
2	TT-26	Hg	1.5-3.7: FILL: red brown silty clay and concrete, some brick, metal, wood, cobble, boulder, moist, MVA <31
3			
4			Trench abandoned due to infiltrating perched water at 3.7' BGS
5			
6			
7			
8			
9			
10			
11			
12			

Comments: No visible Hg. Soil Sample collected from 1.5-2' and submitted for Hg analysis.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: East of "New" AST Area
DATE STARTED: 5/21/02	GROUND ELEVATION: 577.68
DATE COMPLETED: 5/21/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-27	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-2.0: FILL: dark gray cinder, brick, slag, wood, concrete, moist.
2			Visible Hg at 2.0'
3			End trench at 2.0' BGS
4			
5			
6			
7			
8			
9			
10			
11			
12			

Comments: Visible Hg at 2.0' BGS

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: East of "New" AST Area
DATE STARTED: 5/21/02	GROUND ELEVATION: 577.35
DATE COMPLETED: 5/21/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-28	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-1.4: FILL: gray, cinder, brick, metal, concrete, wood, moist, MVA 127-672
	TT-28	TCL	
2			1.4-1.8: FILL: light brown, pea gravel
			1.8-2.4: FILL: dark red, fine to coarse sand, trace fine to coarse gravel, clay
3			2.4-5.9: FILL: red brown, silty clay and concrete, brick, metal, wood, cobble, boulder
4			
5			
6			Trench abandoned due to infiltrating perched water at 5.9" BGS
7			
8			
9			
10			
11			
12			

Comments: No visible Hg, High MVA readings in upper 1.4' of fill. Soil Sample collected from 1-1.5' and submitted for TCL analysis, groundwater sample collected and submitted for Hg analysis.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: East of "New" AST Area
DATE STARTED: 5/21/02	GROUND ELEVATION: 578.36
DATE COMPLETED: 5/21/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-29	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-1.0: FILL: dark gray cinder, brick, slag, wood, concrete, moist. 1.0-1.5: FILL: red, compact clay, moist
2			End trench at 1.5' BGS
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Comments: No visible Hg, all MVA readings were 0.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: South of Cooling Pond, in scrap piles.
DATE STARTED: 5/22/02	GROUND ELEVATION: 576.41
DATE COMPLETED: 5/22/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-30	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.5: FILL: dark gray cinder, brick, slag, wood, concrete, moist, MVA <10 0.5-1.4: FILL: gray, compacted silty clay and coarse gravel
2			1.4-4.2: FILL: gray, fine to coarse sand, some fine to coarse gravel.
3			
4			
5			Trench abandoned due to infiltrating perched water at 4.2' BGS
6			
7			
8			
9			
10			
11			
12			

Comments: No visible Hg.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: South of Cooling Pond, in scrap piles.
DATE STARTED: 5/22/02	GROUND ELEVATION: 575.70
DATE COMPLETED: 5/22/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-31	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.5: FILL: dark gray cinder, brick, slag, wood, concrete, moist, MVA <10 0.5-1.8: FILL: gray, coarse angular gravel, some fine to coarse sand, trace clay.
2			1.8-2.9: FILL: gray, fine to coarse sand, brick, concrete, cobbles, boulder, metal, wood
3	TT-31	Hg	
4			Trench abandoned due to infiltrating perched water at 52.9' BGS wet at 2.9'
5			
6			
7			
8			
9			
10			
11			
12			

Comments: No visible Hg, Soil sample collected from 2'-3' and submitted for Hg analysis.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: North of Building #17
DATE STARTED: 5/22/02	GROUND ELEVATION: 576.04
DATE COMPLETED: 5/22/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-32	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1			0.0-0.3: FILL: dark gray fine to coarse gravel, brick, slag, wood, concrete, moist, MVA <10 0.3-3.0: FILL: dark gray, coarse angular gravel, concrete, rebar, red and yellow brick, metal, wood, cobble, boulder, some fine to coarse sand, trace clay
2			
3			End trench at 3.0' BGS, refusal because of too much rebar
4			
5			
6			
7			
8			
9			
10			
11			
12			

Comments: No visible Hg.

TEST TRENCH LOG

URS
CORPORATION

PROJECT: Niacet VCP	SHEET: 1 OF 1
CLIENT: Union Carbide Corporation	JOB NUMBER: 05-000535825.00
CONTRACTOR: Zebra	LOCATION: North of Building #17
DATE STARTED: 5/22/02	GROUND ELEVATION: 576.09
DATE COMPLETED: 5/22/02	OPERATOR: Matt Reardon
TEST TRENCH NUMBER: TT-33	GEOLOGIST: John Doerr
	GROUNDWATER:

DEPTH	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION
1–6			0.0-0.5: FILL: dark gray fine to coarse gravel, brick, slag, wood, concrete, moist, MVA <10 0.5-6.2: FILL: dark gray, coarse angular gravel, concrete, rebar, red and yellow brick, metal, wood, cobble, boulder, some fine to coarse sand, trace clay, MVA <10, except at 2.5' one reading of 35
6–7	TT-33	Hg	6.2-6.8: FILL: black/gray/yellow silt-silty clay, moist.
7–12			End trench at 6.8' BGS

Comments: No visible Hg, Soil sample collected from 6'-7' and submitted for Hg analysis.

APPENDIX B

DATA USABILITY SUMMARY REPORT (DUSR)

DATA USABILITY SUMMARY REPORT

NIACET VCP
NIAGARA FALLS, NEW YORK

Analyses Performed by:
SEVERN TRENT LABORATORIES, INC.

Prepared by:

URS CORPORATION
282 DELAWARE AVENUE
BUFFALO, NY 14202

JULY 2002

TABLE OF CONTENTS

TABLES
(following text)

ATTACHMENTS

I. INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *Guidance for the Development of Data Usability Summary Reports*, dated June 1999.

II. ANALYTICAL METHODOLOGIES

The data being evaluated is from the May 6, 2002 through May 22, 2002 sampling of 17 soil samples, and four groundwater samples. The analytical laboratory that performed the analyses is Severn Trent Laboratories, Inc., located in Burlington, Vermont. The samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by USEPA Method 8260B, TCL semivolatile organic compounds (SVOCs) by USEPA Method 8270C, target analyte list (TAL) metals by USEPA Methods 6010B, and mercury by USEPA Methods 7471A/7470A. Not all samples were analyzed for all parameters. All methods are referenced in NYSDEC Analytical Services Protocol (ASP), 6/2000. Table 1 summarizes the samples collected and the requested analytical parameters. The validated analytical results are presented in Tables 2 and 3.

A limited data validation was performed following the guidelines in United States Environmental Protection Agency (USEPA) Standard Operation Procedure (SOP) for the Validation of Organic Data Acquired Using SW-846 Method 8260B, SOP No. HW-24, Revision I, June 1999; USEPA Region II SOP for the Validation of Organic Data Acquired Using SW-846 Method 8270C, SOP No. HW-22, Revision II, June 2001; and USEPA Region II Evaluation of Metals Data for the Contract Laboratory Program, SOP No. HW-2, Revision XI, January 1992. Qualifications applied to the data include "J/UJ" (estimated concentration/estimated quantitation limit), "U" (not detected), and "R" (rejected). Support documentation for the qualification of data is presented in Attachment A.

III. DATA DELIVERABLE COMPLETENESS

The laboratory deliverable data packages were in accordance with NYSDEC ASP, Superfund Category requirements.

IV. PRESERVATION/HOLDING TIMES

The VOC analyses of samples UCC-TT-5 (5-6), UCC-TT-12 (3-3.5), UCC-TT-16 (0.5-1), and UCC-TT-28 (1-1.5) were performed outside of the 10 day technical holding time. All compounds were qualified as estimated ("J" or "UJ") unless otherwise rejected ("R") due to severe QC non-conformances. All other holding times and preservation requirements were met.

V. QUALITY CONTROL DATA

A. QC Blanks

Methylene chloride was detected in all samples at concentrations less than the reporting limit (i.e., "J" values). The detected concentrations were also less than ten times the amount detected in the associated method blanks. In accordance with USEPA Region II validation guidelines, the sample results for this compound were elevated to the reporting limit and qualified ("U"). Support documentation (i.e., Form 4s and method blank Form Is) is presented in Attachment A.

Naphthalene was detected in samples UCC-TT-28 (1-1.5) and UCC-TT-5 (5-6) at concentrations less than the reporting limit (i.e., "J" values). The detected concentrations were also less than five times the amount detected in the associated method blanks. In accordance with USEPA Region II validation guidelines, the sample results for this compound were elevated to the reporting limit and qualified ("U"). Support documentation (i.e., Form 4s and method blank Form Is) is presented in Attachment A.

Benzoic acid was detected in sample UCC-TT-5 at a concentration less than the reporting limit (i.e., "J" value). The detected concentration was also less than five times the amount detected in the associated method blank. In accordance with USEPA Region II validation guidelines, the sample result for this compound was elevated to the reporting limit and qualified ("U"). Support documentation (i.e., Form 4 and method blank Form I) is presented in Attachment A.

No other qualifications were made because of blank contamination.

B. Instrument Tuning Criteria

All NYSDEC ASP instrument tuning criteria were met for the VOC and SVOC analyses.

C. Initial and Continuing Calibrations

The VOC initial calibration (ICAL) exhibited a very poor (i.e., <0.05) relative response factor (RRF) for 1,4-dioxane, acrolein, 2-butanone, propionitrile, and isobutyl alcohol. In accordance with USEPA Region II validation guidelines, the undetected results for these compounds were rejected ("R") in all samples.

The VOC percent difference (%D) between the ICAL and continuing calibration (CCAL) standard RRF exceeded the USEPA Region II QC limit (i.e., >20%) for acetone, methyl iodide, and methylene chloride. The results for these compounds were previously flagged as estimated ("UJ") in all samples due to the holding time violation.

The SVOC relative standard deviation (%RSD) in the ICAL exceeded the USEPA Region II QC limit (i.e., >15%) for benzo(k)fluoranthene. In accordance with USEPA Region II validation guidelines, the results for this compound were flagged as estimated ("J") in sample UCC-TT-16 (0.5-1).

The SVOC %D between the ICAL and CCAL standard RRF exceeded the USEPA Region II QC limit (i.e., >20%) for benzidine. In accordance with USEPA Region II validation guidelines, the results for this compound in samples UCC-TT-5 (5-6), UCC-TT-12 (3-3.5), and UCC-TT-16 (0.5-1) were qualified as estimated ("UJ").

The SVOC %D between the ICAL and CCAL standard RRF exceeded the USEPA Region II QC limit (i.e., >20%) for 2,4-dimethylphenol and benzidine. In accordance with USEPA Region II validation guidelines, the results for these compounds in sample UCC-TT-28 (1-1.5) were qualified as estimated ("UJ").

Documentation supporting the qualification of data (i.e., Form VI for the ICAL, Form VII for the CCAL) is presented in Attachment A. All other initial and continuing calibration data were compliant with USEPA Region II validation criteria.

D. Surrogate/Internal Standard Recoveries

Sample UCC-TT-12 (3-3.5) exhibited recoveries for VOC surrogates toluene-d8 and bromofluorobenzene that were above the upper QC limits (i.e., >117% and >121%, respectively). This sample was re-analyzed and exhibited similar recoveries for both surrogates. The original analysis has been reported on Table 2. All detected compounds were already qualified as estimated ("J") due to the holding time violation. Support documentation (i.e., Form 2 - surrogate recoveries) is presented in Attachment A.

No other data qualification was necessary based on surrogate and internal standard recoveries.

E. Matrix Spike/Matrix Spike Duplicate/Laboratory Control Sample/Laboratory Control Sample Duplicate

The recovery of SVOC spiking compound aniline exhibited a very poor recovery (i.e. <10%) in the laboratory control sample (LCS) and laboratory control sample

duplicate (LCSD). In accordance with the USEPA Region II validation guidelines the aniline results were rejected ("R") in samples UCC-TT-5 (5-6), UCC-TT-12 (3.-3.5), and UCC-TT-16 (0.5-1). Support documentation (i.e., Form 3) is presented in Attachment A.

The recovery of SVOC spiking compound 2,4-dimethylphenol was below the QC limit (i.e., <33%) in the LCS. In accordance with the USEPA Region II validation guidelines the 2,4-dimethylphenol results in samples UCC-TT-5 (5-6), UCC-TT-12 (3-3.5), and UCC-TT-16 (0.5-1) were qualified as estimated ("UJ"). Support documentation (i.e., Form 3) is presented in Attachment A.

The recovery of SVOC spiking compound pentachlorophenol was below the QC limit (i.e., <72%) in the LCS/LCSD. In accordance with the USEPA Region II validation guidelines the result for this compound in sample UCC-TT-28 (1-1.5) was qualified as estimated ("UJ"). Support documentation (i.e., Form 3) is presented in Attachment A.

All other LCS/LCSD results were within the applicable QC limits, therefore no additional qualification of data was necessary. A MS/MSD was not requested for this sampling event.

F. Matrix Duplicates

Matrix duplicates were not requested for this sampling event.

G. Serial Dilutions

The %D between the sample UCC-TT-4 (5-5.5) and the serial dilution result was greater than 10% for aluminum, arsenic, barium, chromium, cobalt, copper, iron, lead (Pb), nickel (Ni), potassium (K), vanadium, and zinc. In accordance with Region II validation guidelines, the detected results for these metals in samples UCC-TT-4 (5-5.5), UCC-TT-5 (5-6), UCC-TT-12 (3-3.5), and UCC-TT-16 (0.5-1) were qualified

as estimated ("J"). Support documentation (i.e., Form IX for serial dilution) is presented in Attachment A.

The %D between the sample UCC-TT-28 (1-1.5) and the serial dilution result was greater than 10% for cadmium, Pb, Ni, and K. In accordance with Region II validation guidelines, these metals in sample UCC-TT-28 (1-1.5) were qualified as estimated ("J"). Support documentation (i.e., Form IX for serial dilution) is presented in Attachment A.

The %D between the sample UCC-TT-28 (1-1.5) and the serial dilution result grossly exceeded the QC limit (i.e., >100%D) for selenium. In accordance with Region II validation guidelines, the selenium result in sample UCC-TT-28 (1-1.5) was rejected ("R"). Support documentation (i.e., Form IX for serial dilution) is presented in Attachment A.

All other serial dilution results were within the applicable QC limits, and no other qualification of data was necessary.

VI. SAMPLE RESULTS

A. Raw Data vs. Reporting Forms

The final results as listed on the reporting forms were in agreement with the raw data, and no transcription/calculation errors were detected.

B. Quantitation Limits

All quantitation limits were reported in accordance with method requirements, and were adjusted for dilution factors and moisture content. Several organic sample results were qualified "J" by the laboratory indicating estimated concentrations below the quantitation limits. Several metal sample results were qualified "B" by the

laboratory indicating the concentration was above the instrument detection limit (IDL) but below the contract required detection limit (CRDL).

C. Chromatography

No chromatography problems were encountered.

D. Sample Dilutions

Sample UCC-TT-12 SVOCs was analyzed utilizing a dilution. As noted in the laboratory case narrative, the presence of non-target compounds caused internal standard failures when the sample was analyzed undiluted. Support documentation (i.e., laboratory case narrative) is presented in Attachment A.

VII. SUMMARY

All sample analyses were found to be compliant with the method criteria, except where previously noted. Those results qualified "J/UJ"(estimated) are considered conditionally usable. Those results qualified "R"(rejected) are unusable. All other sample results are usable as reported.

TABLE 1

SAMPLE AND ANALYSIS SUMMARY

NIACET VCP

Sample ID	Sample Date	TCL VOCs (8260B) [1]	TCL SVOCS (8270C) [1]	TAL METALS (6010B,7471A) [1]	MERCURY ONLY (7470A/7471A) [1]	Comments
SOIL SAMPLES						
UCC-SS-1+10	5/21/02	---	---	---	X	---
UCC-TT-2(2-3)	5/6/02	---	---	---	X	---
UCC-TT-3(3-3.5)	5/7/02	---	---	---	X	---
UCC-TT-4(5-5.5)	5/7/02	---	---	X	---	---
UCC-TT-5(5-6)	5/7/02	X	X	X	---	---
UCC-TT-7(2.5-3)	5/7/02	---	---	---	X	---
UCC-TT-8(6-6.5)	5/8/02	---	---	---	X	---
UCC-TT-9(4.5-5)	5/8/02	---	---	---	X	---
UCC-TT-11(2.5-3)	5/8/02	---	---	---	X	---
UCC-TT-12(3-3.5)	5/8/02	X	X	X	---	---
UCC-TT-16(0.5-1)	5/9/02	X	X	X	---	---
UCC-TT-22(3-4)	5/21/02	---	---	---	X	---
UCC-TT-23(2-3)	5/21/02	---	---	---	X	---
UCC-TT-26(1.5-2)	5/21/02	---	---	---	X	---
UCC-TT-28(1-1.5)	5/21/02	X	X	X	---	---
UCC-TT-31(2-3)	5/22/02	---	---	---	X	---
UCC-TT-33(6-7)	5/22/02	---	---	---	X	---
GROUNDWATER SAMPLES						
UCC-TT-2	5/7/02	---	---	---	X	---
UCC-TT-12	5/8/02	---	---	---	X	---
UCC-TT-24	5/21/02	---	---	---	X	---
UCC-TT-28	5/21/02	---	---	---	X	---

1 - Method referenced in New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP), June 2000.

TCL - Target Compound List
TAL - Target Analyte List
VOC - Volatile Organic Compound
SVOC - Semivolatile Organic Compound

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		TT-04
Sample ID		UCC-TT-4 (5-5.5)
Matrix		Soil
Depth Interval (ft)		5.0-5.5
Date Sampled		05/07/02
Parameter	**Units**	
Metals		
Aluminum	MG/KG	22,700 J
Antimony	MG/KG	4.2 B
Arsenic	MG/KG	6.5
Barium	MG/KG	136 J
Beryllium	MG/KG	1.2
Cadmium	MG/KG	1.3
Calcium	MG/KG	12,200
Chromium	MG/KG	32 J
Cobalt	MG/KG	20.3 J
Copper	MG/KG	33.2 J
Iron	MG/KG	35,300 J
Lead	MG/KG	22.3 J
Magnesium	MG/KG	9,220
Manganese	MG/KG	382
Mercury	MG/KG	0.077
Nickel	MG/KG	43 J
Potassium	MG/KG	3,960 J
Selenium	MG/KG	0.92
Silver	MG/KG	0.29 B
Sodium	MG/KG	186 B
Thallium	MG/KG	0.40 U
Vanadium	MG/KG	44.1 J
Zinc	MG/KG	203 J

Flags assigned during chemistry validation are shown.

MADE BY:__AMK 7/16/02_____
CHECKED BY:__GEK 7/16/02____

Detection Limits shown are PQL

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		SS-1+10	TT-02	TT-03	TT-07	TT-08
Sample ID		UCC-SS-1+10	UCC-TT-2 (2-3)	UCC-TT-3 (3-3.5)	UCC-TT-7 (2.5-3)	UCC-TT-8 (6-6.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		0.0-0.5	2.0-3.0	3.0-3.5	2.5-3.0	6.0-6.5
Date Sampled		05/21/02	05/06/02	05/07/02	05/07/02	05/08/02
Parameter	Units					
Metals						
Mercury	MG/KG	649	1,320	0.058	192	43.1

Flags assigned during chemistry validation are shown.

MADE BY:__AMK 7/16/02_____
CHECKED BY:__GEK 7/16/02____

Detection Limits shown are PQL

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Printed: 7/16/02 4:11:54 PM
([LOCID] <> 'TT-05' AND [LOCID] <> 'TT-12' AND [LOCID] <> 'TT-16' AND [LOCID] <> 'TT-28' AND [LOCID] <> 'TT-04') AND [MATRIX] = 'SO'

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		TT-09	TT-11	TT-22	TT-23	TT-26
Sample ID		UCC-TT-9 (4.5-5)	UCC-TT-11 (2.5-3)	UCC-TT-22(3-4)	UCC-TT-23(2-3)	UCC-TT-26(1.5-2)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		4.5-5.0	2.5-3.0	3.0-4.0	2.0-3.0	1.5-2.0
Date Sampled		05/08/02	05/08/02	05/21/02	05/21/02	05/21/02
Parameter	Units					
Metals						
Mercury	MG/KG	33.1	20.3	4.9	3.3	111

Flags assigned during chemistry validation are shown.

MADE BY:__AMK 7/16/02_____
CHECKED BY:__GEK 7/16/02____

Detection Limits shown are PQL

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([LOCID] <> 'TT-05' AND [LOCID] <> 'TT-12' AND [LOCID] <> 'TT-16' AND [LOCID] <> 'TT-28' AND [LOCID] <> 'TT-04') AND [MATRIX] = 'SO'

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		TT-31	TT-33
Sample ID		UCC-TT-31(2-3)	UCC-TT-33(6-7)
Matrix		Soil	Soil
Depth Interval (ft)		2.0-3.0	6.0-7.0
Date Sampled		05/22/02	05/22/02
Parameter	**Units**		
Metals			
Mercury	MG/KG	134	117

Flags assigned during chemistry validation are shown.

MADE BY:__AMK 7/16/02_____
CHECKED BY:__GEK 7/16/02____

Detection Limits shown are PQL

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([LOCID] <> 'TT-05' AND [LOCID] <> 'TT-12' AND [LOCID] <> 'TT-16' AND [LOCID] <> 'TT-28' AND [LOCID] <> 'TT-04') AND [MATRIX] = 'SO'

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		TT-05	TT-12	TT-16	TT-28
Sample ID		UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix		Soil	Soil	Soil	Soil
Depth Interval (ft)		5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled		05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**				
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1,1-Trichloroethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1,2,2-Tetrachloroethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1,2-Trichloroethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1-Dichloroethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1-Dichloroethene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,1-Dichloropropene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2,3-Trichlorobenzene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2,3-Trichloropropane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2,4-Trichlorobenzene	UG/KG	6.7 UJ	7.7 J	5.6 UJ	6 UJ
1,2,4-Trimethylbenzene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dibromo-3-chloropropane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dibromoethane (Ethylene dibromide)	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dichlorobenzene	UG/KG	6.7 UJ	7.5 J	5.6 UJ	6 UJ
1,2-Dichloroethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dichloroethene (cis)	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dichloroethene (trans)	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,2-Dichloropropane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,3,5-Trimethylbenzene (Mesitylene)	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,3-Dichlorobenzene	UG/KG	6.7 UJ	2.9 J	5.6 UJ	6 UJ
1,3-Dichloropropane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,3-Dichloropropene (cis)	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,3-Dichloropropene (trans)	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
1,4-Dichloro-2-butene (trans)	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		TT-05	TT-12	TT-16	TT-28
Sample ID		UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix		Soil	Soil	Soil	Soil
Depth Interval (ft)		5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled		05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**				
Volatile Organic Compounds					
1,4-Dichlorobenzene	UG/KG	6.7 UJ	5.7 J	5.6 UJ	6 UJ
1,4-Dioxane	UG/KG	R	R	R	R
2,2-Dichloropropane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
2-Chlorotoluene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
2-Hexanone	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
4-Chlorotoluene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
4-Isopropyltoluene (p-Cymene)	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
4-Methyl-2-pentanone	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Acetone	UG/KG	12	160 J	10 J	6 UJ
Acrolein	UG/KG	R	R	R	R
Acrylonitrile	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Allyl chloride	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Benzene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Bromobenzene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Bromochloromethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Bromodichloromethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Bromoform	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Bromomethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Carbon disulfide	UG/KG	6.7 UJ	14 J	5.6 UJ	6 UJ
Carbon tetrachloride	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Chlorobenzene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Chloroethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Chloroform	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Chloromethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ

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([LOCID] = 'TT-05' OR [LOCID] = 'TT-12' OR [LOCID] = 'TT-16' OR [LOCID] = 'TT-28') AND [MATRIX] = 'SO'

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		TT-05	TT-12	TT-16	TT-28
Sample ID		UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix		Soil	Soil	Soil	Soil
Depth Interval (ft)		5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled		05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**				
Volatile Organic Compounds					
Chloroprene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Dibromochloromethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Dibromomethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Dichlorodifluoromethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Ethyl methacrylate	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Ethylbenzene	UG/KG	6.7 UJ	1.4 J	5.6 UJ	6 UJ
Freon TF	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Hexachlorobutadiene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Iodomethane (Methyl iodide)	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Isobutyl alcohol	UG/KG	R	R	R	R
Isopropylbenzene (Cumene)	UG/KG	6.7 UJ	2.8 J	5.6 UJ	6 UJ
Methacrylonitrile	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Methyl ethyl ketone (2-Butanone)	UG/KG	R	33 J	R	R
Methyl methacrylate	UG/KG	6.7 UJ	2.6 J	5.6 UJ	6 UJ
Methyl tert-butyl ether	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Methylene chloride	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Naphthalene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
n-Butylbenzene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
n-Propylbenzene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Propionitrile	UG/KG	R	R	R	R
sec-Butylbenzene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Styrene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
tert-Butylbenzene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Tetrachloroethene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ

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Detection Limits shown are PQL

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		TT-05	TT-12	TT-16	TT-28
Sample ID		UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix		Soil	Soil	Soil	Soil
Depth Interval (ft)		5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled		05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**				
Volatile Organic Compounds					
Tetrahydrofuran	UG/KG	67 UJ	60 UJ	56 UJ	60 UJ
Toluene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Trichloroethene	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Trichlorofluoromethane	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Vinyl acetate	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Vinyl chloride	UG/KG	6.7 UJ	6 UJ	5.6 UJ	6 UJ
Xylene (total)	UG/KG	6.7 UJ	1.9 J	5.6 UJ	6 UJ
Semivolatile Organic Compounds					
1,2,4-Trichlorobenzene	UG/KG	440 U	430 J	530 U	24 J
1,2-Dichlorobenzene	UG/KG	440 U	130 J	530 U	400 U
1,3-Dichlorobenzene	UG/KG	440 U	2,000 U	530 U	400 U
1,4-Dichlorobenzene	UG/KG	440 U	2,000 U	530 U	400 U
2,2'-oxybis(1-Chloropropane)	UG/KG	440 U	2,000 U	530 U	400 U
2,4,5-Trichlorophenol	UG/KG	1,100 U	5,000 U	1,300 U	1,000 U
2,4,6-Trichlorophenol	UG/KG	440 U	2,000 U	530 U	400 U
2,4-Dichlorophenol	UG/KG	440 U	2,000 U	530 U	400 U
2,4-Dimethylphenol	UG/KG	440 UJ	2,000 UJ	530 UJ	400 UJ
2,4-Dinitrophenol	UG/KG	1,100 U	5,000 U	1,300 U	1,000 U
2,4-Dinitrotoluene	UG/KG	440 U	2,000 U	530 U	400 U
2,6-Dinitrotoluene	UG/KG	440 U	2,000 U	530 U	400 U
2-Chloronaphthalene	UG/KG	440 U	92 J	530 U	400 UJ
2-Chlorophenol	UG/KG	440 U	2,000 U	530 U	400 U
2-Methylnaphthalene	UG/KG	440 U	2,000 U	41 J	1,100
2-Methylphenol (o-cresol)	UG/KG	440 U	2,000 U	530 U	400 U

Flags assigned during chemistry validation are shown.

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TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		TT-05	TT-12	TT-16	TT-28
Sample ID		UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix		Soil	Soil	Soil	Soil
Depth Interval (ft)		5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled		05/07/02	05/08/02	05/09/02	05/21/02
Parameter	Units				
Semivolatile Organic Compounds					
2-Nitroaniline	UG/KG	1,100 U	5,000 U	1,300 U	1,000 U
2-Nitrophenol	UG/KG	440 U	2,000 U	530 U	400 U
3,3'-Dichlorobenzidine	UG/KG	440 U	2,000 U	530 U	400 U
3-Nitroaniline	UG/KG	1,100 U	5,000 U	1,300 U	1,000 U
4,6-Dinitro-2-methylphenol	UG/KG	1,100 U	5,000 U	1,300 U	1,000 U
4-Bromophenyl-phenylether	UG/KG	440 U	2,000 U	530 U	400 U
4-Chloro-3-methylphenol	UG/KG	440 U	2,000 U	530 U	400 U
4-Chloroaniline	UG/KG	440 U	2,000 U	530 U	400 U
4-Chlorophenyl-phenylether	UG/KG	440 U	2,000 U	530 U	400 U
4-Methylphenol (p-cresol)	UG/KG	440 U	2,000 U	530 U	400 U
4-Nitroaniline	UG/KG	1,100 U	5,000 U	1,300 U	1,000 U
4-Nitrophenol	UG/KG	1,100 U	5,000 U	1,300 U	1,000 U
Acenaphthene	UG/KG	33 J	240 J	260 J	160 J
Acenaphthylene	UG/KG	440 U	2,000 U	530 U	400 U
Aniline	UG/KG	R	R	R	1,000 U
Anthracene	UG/KG	76 J	2,300	660	290 J
Azobenzene	UG/KG	440 U	2,000 U	530 U	400 U
Benzidine	UG/KG	1,100 UJ	5,000 UJ	1,300 UJ	1,000 UJ
Benzo(a)anthracene	UG/KG	280 J	1,800 J	1,800	1,000
Benzo(a)pyrene	UG/KG	280 J	930 J	1,600	1,000
Benzo(b)fluoranthene	UG/KG	240 J	1,300 J	2,200	2,200
Benzo(g,h,i)perylene	UG/KG	200 J	240 J	550	360 J
Benzo(k)fluoranthene	UG/KG	340 J	2,000 U	1,500 J	400 U
Benzoic acid	UG/KG	1,100 U	5,000 U	1,300 U	220 J

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Detection Limits shown are PQL

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		TT-05	TT-12	TT-16	TT-28
Sample ID		UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix		Soil	Soil	Soil	Soil
Depth Interval (ft)		5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled		05/07/02	05/08/02	05/09/02	05/21/02
Parameter	Units				
Semivolatile Organic Compounds					
Benzyl alcohol	UG/KG	440 U	2,000 U	530 U	400 U
bis(2-Chloroethoxy)methane	UG/KG	440 U	2,000 U	530 U	400 U
bis(2-Chloroethyl)ether	UG/KG	440 U	2,000 U	530 U	400 U
bis(2-Ethylhexyl)phthalate	UG/KG	24 J	2,000 U	530 U	72 J
Butylbenzylphthalate	UG/KG	440 U	2,000 U	530 U	400 U
Carbazole	UG/KG	43 J	2,000 U	130 J	200 J
Chrysene	UG/KG	330 J	2,000 J	1,800	1,100
Dibenz(a,h)anthracene	UG/KG	45 J	170 J	200 J	220 J
Dibenzofuran	UG/KG	440 U	290 J	120 J	530
Diethylphthalate	UG/KG	440 U	2,000 U	530 U	400 U
Dimethylphthalate	UG/KG	440 U	2,000 U	530 U	400 U
Di-n-butylphthalate	UG/KG	440 U	2,000 U	530 U	400 U
Di-n-octylphthalate	UG/KG	440 U	2,000 U	530 U	400 U
Fluoranthene	UG/KG	510	1,800 J	3,700	1,800
Fluorene	UG/KG	27 J	900 J	240 J	150 J
Hexachlorobenzene	UG/KG	440 U	2,000 U	530 U	400 U
Hexachlorobutadiene	UG/KG	440 U	2,000 U	530 U	400 U
Hexachlorocyclopentadiene	UG/KG	440 U	2,000 U	530 U	400 U
Hexachloroethane	UG/KG	440 U	2,000 U	530 U	400 U
Indeno(1,2,3-cd)pyrene	UG/KG	180 J	220 J	640	360 J
Isophorone	UG/KG	440 U	2,000 U	530 U	400 U
Naphthalene	UG/KG	24 J	2,000 U	46 J	1,200
Nitrobenzene	UG/KG	440 U	2,000 U	530 U	400 U
N-Nitrosodimethylamine	UG/KG	440 U	2,000 U	530 U	400 U

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		TT-05	TT-12	TT-16	TT-28
Sample ID		UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix		Soil	Soil	Soil	Soil
Depth Interval (ft)		5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled		05/07/02	05/08/02	05/09/02	05/21/02
Parameter	**Units**				
Semivolatile Organic Compounds					
N-Nitroso-di-n-propylamine	UG/KG	440 U	2,000 U	530 U	400 U
N-Nitrosodiphenylamine	UG/KG	440 U	2,000 U	530 U	400 U
Pentachlorophenol	UG/KG	1,100 U	5,000 U	1,300 U	1,000 U
Phenanthrene	UG/KG	340 J	770 J	2,600	1,800
Phenol	UG/KG	440 U	2,000 U	530 U	400 U
Pyrene	UG/KG	510	4,300	3,000	1,600
Pyridine	UG/KG	440 U	2,000 U	530 U	400 U
Metals					
Aluminum	MG/KG	13,800 J	13,200 J	11,200 J	5,010
Antimony	MG/KG	3.9 B	4 B	1.6 B	5.4 B
Arsenic	MG/KG	42.3 J	22.9 J	18.4 J	73.1
Barium	MG/KG	132 J	156 J	68.4 J	193
Beryllium	MG/KG	0.74	0.78	0.6	0.51 B
Cadmium	MG/KG	1.4	1.2	1.1	2.1 J
Calcium	MG/KG	58,100	27,400	45,900	59,800
Chromium	MG/KG	336 J	222 J	122 J	73.1
Cobalt	MG/KG	19.1 J	14.6 J	7.4 J	77.6
Copper	MG/KG	135 J	476 J	34.4 J	269
Iron	MG/KG	23,900 J	26,900 J	20,600 J	24,400
Lead	MG/KG	90.1 J	150 J	253 J	362 J
Magnesium	MG/KG	16,100	12,200	22,400	17,500
Manganese	MG/KG	4,170	483	891	1,060
Mercury	MG/KG	251	1,460	5,870	230
Nickel	MG/KG	39.7 J	26.8 J	16.7 J	25.7 J

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

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([LOCID] = 'TT-05' OR [LOCID] = 'TT-12' OR [LOCID] = 'TT-16' OR [LOCID] = 'TT-28') AND [MATRIX] = 'SO'

TABLE 2
ANALYTICAL SOIL SAMPLE RESULTS
NIACET VCP

Location ID		TT-05	TT-12	TT-16	TT-28
Sample ID		UCC-TT-5 (5-6)	UCC-TT-12 (3-3.5)	UCC-TT-16(0.5-1)	UCC-TT-28(1-1.5)
Matrix		Soil	Soil	Soil	Soil
Depth Interval (ft)		5.0-6.0	3.0-3.5	0.5-1.0	1.0-1.5
Date Sampled		05/07/02	05/08/02	05/09/02	05/21/02
Parameter	Units				
Metals					
Potassium	MG/KG	2,390 J	2,140 J	1,730 J	721 J
Selenium	MG/KG	2.5	1.6	0.78	R
Silver	MG/KG	0.99 B	0.45 B	0.39 B	0.47 B
Sodium	MG/KG	208 B	266 B	325 B	244 B
Thallium	MG/KG	0.38 U	0.40 U	0.34 U	0.68 U
Vanadium	MG/KG	37.6 J	24.8 J	26.5 J	20.6
Zinc	MG/KG	311 J	229 J	197 J	346

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

TABLE 3
ANALYTICAL GROUNDWATER SAMPLE RESULTS
NIACET VCP

Location ID		TT-02	TT-12	TT-24	TT-28
Sample ID		UCC-TT-2	UCC-TT-12	UCC-TT-24	UCC-TT-28
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	2.5-3.0	-	-
Date Sampled		05/07/02	05/08/02	05/21/02	05/21/02
Parameter	Units				
Metals					
Mercury	UG/L	122	12,300	574,000	20,900

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

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[MATRIX] = 'WG'

ATTACHMENT A

SUPPORT DOCUMENTATION

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKT2

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 88054

Lab File ID: NTMB01E Lab Sample ID: VBLKT2

Date Analyzed: 06/03/02 Time Analyzed: 0232

GC Column: CAP ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	NTME LCS	NTME LCS	NTM50EQ	0133
02	NTME LCSD	NTME LCSD	NTM50EQ2	0202
03	UCCTT281-1.5	488800	488800I2	0319
04				
05				
06				
07				
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COMMENTS:

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VBLKT2

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 88054

Matrix: (soil/water) SOIL Lab Sample ID: VBLKT2

Sample wt/vol: 5.0 (g/mL) G Lab File ID: NTMB01E

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 06/03/02

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	5.0	U
76-13-1	Freon TF	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
67-64-1	Acetone	5.0	U
74-88-4	Methyl Iodide	5.0	U
75-15-0	Carbon Disulfide	5.0	U
107-05-1	Allyl Chloride	5.0	U
75-09-2	Methylene Chloride	0.97	J
107-13-1	Acrylonitrile	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
540-59-0	1,2-Dichloroethene (total)	5.0	U
1634-04-4	Methyl-t-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
108-05-4	Vinyl Acetate	5.0	U
126-99-8	Chloroprene	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
107-12-0	Propionitrile	20	U
126-98-7	Methacrylonitrile	5.0	U
74-97-5	Bromochloromethane	5.0	U
109-99-9	Tetrahydrofuran	50	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
78-83-1	Isobutyl Alcohol	250	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VBLKT2

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 88054

Matrix: (soil/water) SOIL Lab Sample ID: VBLKT2

Sample wt/vol: 5.0 (g/mL) G Lab File ID: NTMB01E

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 06/03/02

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
120-82-1	1,2,4-Trichlorobenzene	1.6	J
87-68-3	Hexachlorobutadiene	5.0	U
91-20-3	Naphthalene	3.8	J
594-20-7	2,2-Dichloropropane	5.0	U
563-58-6	1,1-Dichloropropene	5.0	U
142-28-9	1,3-Dichloropropane	5.0	U
108-86-1	Bromobenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
95-49-8	2-Chlorotoluene	5.0	U
106-43-4	4-Chlorotoluene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	1.7	J

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKO7

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Lab File ID: NTMB01C Lab Sample ID: VBLKO7

Date Analyzed: 05/20/02 Time Analyzed: 1514

GC Column: CAP ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	NTMC LCS	NTMC LCS	NTM50CQ2	1415
02	NTMC LCSD	NTMC LCSD	NTM50CQ3	1444
03	UCC-TT-5	487113	487113I2	1558
04	UCC-TT-12	487120	487120I2	1627
05	UCC-TT-16	487259	487259I2	1757
06	UCC-TT-12RE	487120R1	487120I3	1927
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COMMENTS:

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VBLKO7

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Matrix: (soil/water) SOIL Lab Sample ID: VBLKO7

Sample wt/vol: 5.0 (g/mL) G Lab File ID: NTMB01C

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/20/02

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
107-02-8	Acrolein	5.0	U
76-13-1	Freon TF	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
67-64-1	Acetone	5.0	U
74-88-4	Methyl Iodide	5.0	U
75-15-0	Carbon Disulfide	5.0	U
107-05-1	Allyl Chloride	5.0	U
75-09-2	Methylene Chloride	2.0	J
107-13-1	Acrylonitrile	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
540-59-0	1,2-Dichloroethene (total)	5.0	U
1634-04-4	Methyl-t-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
108-05-4	Vinyl Acetate	5.0	U
126-99-8	Chloroprene	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
107-12-0	Propionitrile	20	U
126-98-7	Methacrylonitrile	5.0	U
74-97-5	Bromochloromethane	5.0	U
109-99-9	Tetrahydrofuran	50	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
78-83-1	Isobutyl Alcohol	250	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VBLKO7

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Matrix: (soil/water) SOIL Lab Sample ID: VBLKO7

Sample wt/vol: 5.0 (g/mL) G Lab File ID: NTMB01C

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/20/02

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
120-82-1	1,2,4-Trichlorobenzene	1.2	J
87-68-3	Hexachlorobutadiene	5.0	U
91-20-3	Naphthalene	2.6	J
594-20-7	2,2-Dichloropropane	5.0	U
563-58-6	1,1-Dichloropropene	5.0	U
142-28-9	1,3-Dichloropropane	5.0	U
108-86-1	Bromobenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
95-49-8	2-Chlorotoluene	5.0	U
106-43-4	4-Chlorotoluene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	1.4	J

FORM 2
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Level: (low/med) LOW

	CLIENT SAMPLE NO.	SMC1 (TOL) #	SMC2 (DCE) #	SMC3 (BFB) #	OTHER (DCB) #	TOT OUT
01	NTMC LCS	102	102	102	99	0
02	NTMC LCSD	99	101	99	97	0
03	VBLK07	100	102	101	97	0
04	UCC-TT-5	105	98	109	98	0
05	UCC-TT-12	122*	107	149*	100	2
06	UCC-TT-16	113	106	118	104	0
07	UCC-TT-12RE	118*	105	143*	94	2
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		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(81-117)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(80-120)
SMC3 (BFB)	= Bromofluorobenzene	(74-121)
OTHER (DCB)	= 1,2-Dichlorobenzene-d4	(80-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Instrument ID: N Calibration Date(s): 05/07/02 05/07/02

Heated Purge: (Y/N) Y Calibration Time(s): 0922 1120

GC Column: CAP ID: 0.53 (mm)

LAB FILE ID: RRF5 =NTM05V RRF20 =NTM20V
RRF50 =NTM50V RRF100=NTM100V RRF200=NTM200V

	COMPOUND	RRF5	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
	Dichlorodifluoromethane	0.500	0.475	0.496	0.497	0.494	0.492	2.0
*	Chloromethane	0.393	0.368	0.385	0.384	0.382	0.382	2.3*
	Vinyl Chloride	0.341	0.329	0.348	0.353	0.350	0.344	2.8
	Bromomethane	0.180	0.153	0.163	0.176	0.183	0.171	7.4
	Chloroethane	0.183	0.190	0.162	0.142	0.143	0.164	13.5
	Trichlorofluoromethane	0.550	0.526	0.551	0.549	0.433	0.522	9.7
	Acrolein	0.028	0.028	0.025	0.022	0.020	0.025	14.5
	Freon TF	0.565	0.592	0.582	0.534	0.499	0.554	6.9
	1,1-Dichloroethene	0.317	0.312	0.309	0.291	0.274	0.301	5.9
	Acetone	0.080	0.078	0.066	0.059	0.058	0.068	15.4
	Methyl Iodide	0.198	0.272	0.388	0.418	0.402	0.336	28.6
	Carbon Disulfide	0.822	0.864	0.866	0.811	0.759	0.824	5.4
	Allyl Chloride	0.462	0.495	0.495	0.469	0.445	0.473	4.6
	Methylene Chloride	0.543	0.355	0.332	0.302	0.292	0.365	28.1
	Acrylonitrile	0.079	0.082	0.077	0.067	0.062	0.073	11.5
	trans-1,2-Dichloroethene	0.332	0.352	0.351	0.324	0.311	0.334	5.3
	1,2-Dichloroethene (total)	0.338	0.354	0.351	0.324	0.310	0.335	5.5
	Methyl-t-Butyl Ether	0.633	0.661	0.662	0.608	0.590	0.631	5.1
*	1,1-Dichloroethane	0.614	0.643	0.662	0.608	0.587	0.623	4.8*
	Vinyl Acetate	0.485	0.528	0.518	0.463	0.410	0.481	9.8
	Chloroprene	0.423	0.445	0.456	0.431	0.409	0.433	4.2
	cis-1,2-Dichloroethene	0.345	0.356	0.351	0.325	0.310	0.337	5.8
	2-Butanone	0.026	0.031	0.028	0.026	0.027	0.028	7.5
	Propionitrile	0.029	0.030	0.029	0.025	0.025	0.028	9.4
	Methacrylonitrile	0.082	0.094	0.088	0.075	0.072	0.082	10.8
	Bromochloromethane	0.227	0.244	0.247	0.229	0.220	0.233	5.1
	Tetrahydrofuran	0.082	0.086	0.078	0.064	0.059	0.074	15.7
	Chloroform	0.539	0.570	0.571	0.528	0.494	0.540	5.9
	1,1,1-Trichloroethane	0.459	0.494	0.497	0.469	0.439	0.472	5.2
	Carbon Tetrachloride	0.463	0.483	0.490	0.461	0.436	0.467	4.6
	Isobutyl Alcohol	0.014	0.016	0.014	0.012	0.012	0.014	13.1
	Benzene	0.862	0.865	0.874	0.825	0.781	0.841	4.6
	1,2-Dichloroethane	0.282	0.290	0.290	0.266	0.250	0.276	6.2
	Trichloroethene	0.351	0.361	0.364	0.340	0.322	0.348	5.0
	1,2-Dichloropropane	0.367	0.379	0.382	0.360	0.342	0.366	4.4
	Methyl Methacrylate	0.250	0.266	0.271	0.256	0.238	0.256	5.0
	Dibromomethane	0.319	0.312	0.326	0.302	0.269	0.306	7.3

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Instrument ID: N Calibration Date(s): 05/07/02 05/07/02

Heated Purge: (Y/N) Y Calibration Time(s): 0922 1120

GC Column: CAP ID: 0.53 (mm)

LAB FILE ID: RRF5 =NTM05V RRF20 =NTM20V
RRF50 =NTM50V RRF100=NTM100V RRF200=NTM200V

COMPOUND	RRF5	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD	
1,4-Dioxane	0.004	0.004	0.004	0.003	0.003	0.004	4.7	<-
Bromodichloromethane	0.546	0.580	0.584	0.545	0.507	0.552	5.7	
cis-1,3-Dichloropropene	0.579	0.608	0.614	0.578	0.540	0.584	5.1	
4-Methyl-2-pentanone	0.418	0.459	0.419	0.389	0.383	0.414	7.3	
Toluene	0.686	0.721	0.734	0.699	0.657	0.699	4.3	
trans-1,3-Dichloropropene	0.452	0.495	0.512	0.482	0.459	0.480	5.2	
Ethyl Methacrylate	0.496	0.544	0.548	0.502	0.474	0.513	6.3	
1,1,2-Trichloroethane	0.296	0.311	0.315	0.293	0.280	0.299	4.7	
Tetrachloroethene	0.512	0.511	0.524	0.511	0.535	0.519	2.1	
2-Hexanone	0.289	0.313	0.289	0.280	0.285	0.291	4.3	
Dibromochloromethane	0.577	0.618	0.653	0.627	0.603	0.616	4.6	
1,2-Dibromoethane	0.534	0.580	0.588	0.548	0.518	0.554	5.4	
Chlorobenzene *	0.877	0.900	0.939	0.888	0.845	0.890	3.8*	
1,1,1,2-Tetrachloroethane	0.433	0.468	0.495	0.472	0.447	0.463	5.1	
Ethylbenzene	1.295	1.324	1.346	1.260	1.160	1.277	5.7	
Xylene (m,p)	0.540	0.553	0.558	0.523	0.486	0.532	5.4	
Xylene (total)	0.507	0.532	0.552	0.527	0.499	0.523	4.1	
Xylene (o)	0.507	0.532	0.552	0.527	0.499	0.523	4.1	
Styrene	0.869	0.902	0.933	0.883	0.824	0.882	4.6	
Bromoform *	0.405	0.470	0.495	0.472	0.453	0.459	7.3*	
Isopropylbenzene	2.852	2.967	3.045	2.882	2.688	2.887	4.7	
cis-1,4-Dichloro-2-butene	0.220	0.263	0.281	0.260	0.254	0.256	8.8	
1,1,2,2-Tetrachloroethane *	1.170	1.271	1.286	1.173	1.098	1.200	6.5*	
1,2,3-Trichloropropane	0.309	0.330	0.341	0.319	0.305	0.321	4.6	
trans-1,4-Dichloro-2-butene	0.221	0.260	0.265	0.250	0.239	0.247	7.1	
1,3-Dichlorobenzene	1.518	1.535	1.576	1.463	1.368	1.492	5.4	
1,4-Dichlorobenzene	1.523	1.533	1.549	1.455	1.346	1.481	5.7	
1,2-Dichlorobenzene	1.408	1.393	1.404	1.304	1.194	1.341	6.9	
1,2-Dibromo-3-Chloropropane	0.206	0.239	0.249	0.236	0.223	0.231	7.3	
1,2,4-Trichlorobenzene	1.072	1.028	1.081	0.999	0.922	1.020	6.3	
Hexachlorobutadiene	0.782	0.796	0.849	0.780	0.733	0.788	5.3	
Naphthalene	1.992	1.782	1.910	1.827	1.719	1.846	5.8	
2,2-Dichloropropane	0.409	0.426	0.432	0.404	0.384	0.411	4.6	
1,1-Dichloropropene	0.432	0.441	0.442	0.415	0.385	0.423	5.6	
1,3-Dichloropropane	0.556	0.586	0.602	0.557	0.523	0.565	5.4	
Bromobenzene	0.908	0.942	0.985	0.938	0.896	0.934	3.7	
n-Propylbenzene	0.768	0.786	0.812	0.780	0.743	0.778	3.2	

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Instrument ID: N Calibration Date: 05/20/02 Time: 1316

Lab File ID: NTM50CV Init. Calib. Date(s): 05/07/02 05/07/02

Heated Purge: (Y/N) Y Init. Calib. Times: 0922 1120

GC Column: CAP ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D	
Dichlorodifluoromethane	0.492	0.513	0.01	4.3	20.0	
Chloromethane	0.382	0.372	0.1	2.6	20.0	
Vinyl Chloride	0.344	0.342	0.01	0.6	20.0	
Bromomethane	0.171	0.184	0.01	7.6	20.0	
Chloroethane	0.164	0.207	0.01	26.2	20.0	<-
Trichlorofluoromethane	0.522	0.542	0.01	3.8	20.0	
Acrolein	0.025	0.031	0.01	24.0	20.0	<-
Freon TF	0.554	0.584	0.01	5.4	20.0	
1,1-Dichloroethene	0.301	0.308	0.01	2.3	20.0	
Acetone	0.068	0.068	0.01	0.0	20.0	
Methyl Iodide	0.336	0.620	0.01	84.5	20.0	<-
Carbon Disulfide	0.824	0.855	0.01	3.8	20.0	
Allyl Chloride	0.473	0.499	0.01	5.5	20.0	
Methylene Chloride	0.365	0.315	0.01	13.7	20.0	
Acrylonitrile	0.073	0.076	0.01	4.1	20.0	
trans-1,2-Dichloroethene	0.334	0.351	0.01	5.1	20.0	
1,2-Dichloroethene (total)	0.335	0.346	0.01	3.3	20.0	
Methyl-t-Butyl Ether	0.631	0.630	0.01	0.2	20.0	
1,1-Dichloroethane	0.623	0.640	0.1	2.7	20.0	
Vinyl Acetate	0.481	0.477	0.01	0.8	20.0	
Chloroprene	0.433	0.448	0.01	3.5	20.0	
cis-1,2-Dichloroethene	0.337	0.341	0.01	1.2	20.0	
2-Butanone	0.028	0.032	0.01	14.3	20.0	
Propionitrile	0.028	0.028	0.01	0.0	20.0	
Methacrylonitrile	0.082	0.083	0.01	1.2	20.0	
Bromochloromethane	0.233	0.232	0.01	0.4	20.0	
Tetrahydrofuran	0.074	0.074	0.01	0.0	20.0	
Chloroform	0.540	0.546	0.01	1.1	20.0	
1,1,1-Trichloroethane	0.472	0.484	0.01	2.5	20.0	
Carbon Tetrachloride	0.467	0.473	0.01	1.3	20.0	
Isobutyl Alcohol	0.014	0.014	0.01	0.0	20.0	
Benzene	0.841	0.843	0.01	0.2	20.0	
1,2-Dichloroethane	0.276	0.275	0.01	0.4	20.0	
Trichloroethene	0.348	0.390	0.01	12.1	20.0	
1,2-Dichloropropane	0.366	0.428	0.01	16.9	20.0	
Methyl Methacrylate	0.256	0.251	0.01	2.0	20.0	
Dibromomethane	0.306	0.313	0.01	2.3	20.0	

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Instrument ID: N Calibration Date: 05/20/02 Time: 1316

Lab File ID: NTM50CV Init. Calib. Date(s): 05/07/02 05/07/02

Heated Purge: (Y/N) Y Init. Calib. Times: 0922 1120

GC Column: CAP ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D	
1,4-Dioxane	0.004	0.004	0.01	0.0	20.0	<-
Bromodichloromethane	0.552	0.544	0.01	1.4	20.0	
cis-1,3-Dichloropropene	0.584	0.584	0.01	0.0	20.0	
4-Methyl-2-pentanone	0.414	0.403	0.01	2.6	20.0	
Toluene	0.699	0.700	0.01	0.1	20.0	
trans-1,3-Dichloropropene	0.480	0.478	0.01	0.4	20.0	
Ethyl Methacrylate	0.513	0.507	0.01	1.2	20.0	
1,1,2-Trichloroethane	0.299	0.287	0.01	4.0	20.0	
Tetrachloroethene	0.519	0.552	0.01	6.4	20.0	
2-Hexanone	0.291	0.302	0.01	3.8	20.0	
Dibromochloromethane	0.616	0.595	0.01	3.4	20.0	
1,2-Dibromoethane	0.554	0.544	0.01	1.8	20.0	
Chlorobenzene	0.890	0.893	0.3	0.3	20.0	
1,1,1,2-Tetrachloroethane	0.463	0.460	0.01	0.6	20.0	
Ethylbenzene	1.277	1.322	0.01	3.5	20.0	
Xylene (m,p)	0.532	0.554	0.01	4.1	20.0	
Xylene (total)	0.523	0.542	0.01	3.6	20.0	
Xylene (o)	0.523	0.542	0.01	3.6	20.0	
Styrene	0.882	0.905	0.01	2.6	20.0	
Bromoform	0.459	0.448	0.1	2.4	20.0	
Isopropylbenzene	2.887	2.911	0.01	0.8	20.0	
cis-1,4-Dichloro-2-butene	0.256	0.260	0.01	1.6	20.0	
1,1,2,2-Tetrachloroethane	1.200	1.132	0.3	5.7	20.0	
1,2,3-Trichloropropane	0.321	0.306	0.01	4.7	20.0	
trans-1,4-Dichloro-2-butene	0.247	0.250	0.01	1.2	20.0	
1,3-Dichlorobenzene	1.492	1.510	0.01	1.2	20.0	
1,4-Dichlorobenzene	1.481	1.496	0.01	1.0	20.0	
1,2-Dichlorobenzene	1.341	1.310	0.01	2.3	20.0	
1,2-Dibromo-3-Chloropropane	0.231	0.219	0.01	5.2	20.0	
1,2,4-Trichlorobenzene	1.020	1.048	0.01	2.7	20.0	
Hexachlorobutadiene	0.788	0.786	0.01	0.2	20.0	
Naphthalene	1.846	1.632	0.01	11.6	20.0	
2,2-Dichloropropane	0.411	0.435	0.01	5.8	20.0	
1,1-Dichloropropene	0.423	0.447	0.01	5.7	20.0	
1,3-Dichloropropane	0.565	0.554	0.01	1.9	20.0	
Bromobenzene	0.934	0.914	0.01	2.1	20.0	
n-Propylbenzene	0.778	0.789	0.01	1.4	20.0	

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SW846 Method 8260B Volatiles:
The original volatile organic analysis of the field sample identified as UCC-TT-12 area responses for the internal standard 1,4-Dichlorobenzene-d4, which were outside the control limits. The analysis of this sample also yielded percent recoveries of the surrogate monitoring compounds Toluene-d8 and Bromofluorobenzene that exceeded the control limits. This sample was subsequently re-analyzed and exhibited similar internal standard area responses and surrogate percent recoveries. Both sets of data have been presented in this case submittal. The laboratory suspects that this anomaly is due to the nature of the sample matrix.

The volatile organic analyses of the blank spike sample identified as NTMC LCS and the associated blank spike duplicate sample, NTMC LCSD exhibited percent recoveries of the target compounds Methyl Iodide, Trichloroethene and 1,2-Dichloropropane, which exceeded the control limits. These exceedences can be found on the associated form IIIs.

A select continuing calibration standard exhibited percent difference relative to the nominal concentrations that exceeded the established 20 percent difference criteria for the target compounds Chloroethane, Acrolein, Methyl Iodide and 1,4-Dioxane. These compounds were not detected in the field samples of this delivery group.

The analysis of the method blank identified as VBLKO7 exhibited the presence of the target compounds 1,2,4-Trichlorobenzene, Naphthalene and 1,2,3-Trichlorobenzene. However the concentrations detected in the method blank sample was below the method reporting limit. These compounds were not detected in the field samples of this delivery group. All associated results have been identified with the qualifier "B".

Please note that manual integrations were performed for the processing of volatile organic data files. Documentation of these integrations can be found in supporting documentation section of the data package.

SW846 Method 8270C Semivolatiles:
The semivolatile organic analysis of the field sample UCC-TT-12 was accomplished at a dilution due to the presence of non-target Tentatively Identified Compounds (TICs), which results in internal standard failures in the full strength acquisition.

The analysis of the sample UCC-TT-16 was accomplished at a dilution due to the presence of select target analytes which would have exceeded the calibration range of the instrument in a full strength acquisition.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Instrument ID: Q Calibration Date(s): 06/07/02 06/07/02

Calibration Time(s): 1217 1627

LAB FILE ID: RRF20 =QUQ020 RRF50 =QUQ050
RRF80 =QUQ080 RRF120=QUQ120 RRF160=QUQ160

COMPOUND		RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Acenaphthene	*	1.153	1.125	1.034	1.003	0.976	1.058	7.3*
2,4-Dinitrophenol	*		0.111	0.144	0.175	0.188	0.154	22.2*
Dibenzofuran	*	1.691	1.583	1.499	1.477	1.398	1.530	7.3*
4-Nitrophenol	*		0.128	0.141	0.148	0.154	0.143	7.8*
2,4-Dinitrotoluene	*	0.434	0.449	0.434	0.438	0.423	0.436	2.1*
Diethylphthalate		1.519	1.347	1.239	1.191	1.111	1.281	12.3
Fluorene	*	1.300	1.216	1.177	1.136	1.080	1.182	7.0*
4-Chlorophenyl-phenylether	*	0.596	0.557	0.511	0.505	0.469	0.528	9.4*
4-Nitroaniline			0.388	0.394	0.370	0.369	0.380	3.3
4,6-Dinitro-2-methylphenol			0.140	0.152	0.166	0.163	0.155	7.6
N-nitrosodiphenylamine (1)		0.602	0.557	0.515	0.485	0.459	0.524	10.9
Azobenzene		1.274	1.153	1.064	1.025	0.962	1.096	11.1
4-Bromophenyl-phenylether	*	0.225	0.215	0.209	0.209	0.196	0.211	5.1*
Hexachlorobenzene	*	0.246	0.240	0.228	0.226	0.215	0.231	5.3*
Pentachlorophenol	*		0.126	0.134	0.143	0.143	0.136	6.2*
Phenanthrene	*	1.184	1.102	1.054	1.041	0.992	1.075	6.8*
Anthracene	*	1.166	1.063	1.030	1.011	0.982	1.050	6.8*
Carbazole		1.158	1.130	1.062	1.047	0.993	1.078	6.2
Di-n-butylphthalate		1.802	1.680	1.574	1.542	1.482	1.616	7.8
Fluoranthene	*	1.209	1.168	1.100	1.087	1.042	1.121	5.9*
Benzidine			0.406	0.728	0.467	0.566	0.542	26.0
Pyrene	*	1.656	1.581	1.448	1.437	1.364	1.497	7.9*
Butylbenzylphthalate		1.005	1.002	0.950	0.952	0.921	0.966	3.8
Benzo(a)anthracene	*	1.378	1.320	1.284	1.276	1.239	1.299	4.1*
3,3'-Dichlorobenzidine		0.338	0.354	0.369	0.332	0.325	0.344	5.2
Chrysene	*	1.302	1.191	1.139	1.120	1.071	1.165	7.6*
bis(2-Ethylhexyl)phthalate		1.418	1.358	1.248	1.224	1.171	1.284	7.9
Di-n-octylphthalate		2.424	2.316	2.125	2.078	1.965	2.182	8.5
Benzo(b)fluoranthene	*	1.612	1.570	1.577	1.709	1.659	1.625	3.6*
Benzo(k)fluoranthene	*	1.929	2.002	1.662	1.298	1.297	1.638	20.5*
Benzo(a)pyrene	*	1.558	1.547	1.471	1.350	1.340	1.453	7.2*
Indeno(1,2,3-cd)pyrene	*	1.586	1.675	1.636	1.633	1.602	1.626	2.1*
Dibenz(a,h)anthracene	*	1.269	1.343	1.311	1.307	1.231	1.292	3.4*
Benzo(g,h,i)perylene	*	1.409	1.484	1.392	1.409	1.366	1.412	3.1*
2-Fluorophenol	*	1.607	1.633	1.614	1.587	1.554	1.599	1.9*
Phenol-d5	*	2.040	1.854	1.758	1.680	1.571	1.781	10.0*

(1) Cannot be seperated from Diphenylamine

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 88054

Instrument ID: Q Calibration Date: 06/10/02 Time: 0544

Lab File ID: QUQ050A Init. Calib. Date(s): 06/07/02 06/07/02

Init. Calib. Times: 1217 1627

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
N-Nitrosodimethylamine	1.325	1.472	0.01	11.1	25.0
Pyridine	1.786	1.776	0.01	0.6	25.0
Aniline	1.953	2.311	0.01	18.3	25.0
Phenol	1.845	2.148	0.8	16.4	20.0
bis(2-Chloroethyl)Ether	1.488	1.770	0.7	19.0	25.0
2-Chlorophenol	1.456	1.615	0.8	10.9	25.0
1,3-Dichlorobenzene	1.526	1.669	0.6	9.4	25.0
1,4-Dichlorobenzene	1.528	1.657	0.5	8.4	20.0
Benzyl Alcohol	0.927	0.980	0.01	5.7	25.0
1,2-Dichlorobenzene	1.411	1.566	0.4	11.0	25.0
2-Methylphenol	1.149	1.240	0.7	7.9	25.0
2,2'-oxybis(1-Chloropropane)	2.607	3.006	0.01	15.3	25.0
4-Methylphenol	1.652	1.929	0.6	16.8	25.0
N-Nitroso-di-n-propylamine	1.080	1.178	0.05	9.1	25.0
Hexachloroethane	0.721	0.788	0.3	9.3	25.0
Nitrobenzene	0.429	0.480	0.2	11.9	25.0
Isophorone	0.841	0.947	0.4	12.6	25.0
2-Nitrophenol	0.232	0.246	0.1	6.0	20.0
2,4-Dimethylphenol	0.299	0.363	0.2	21.4	25.0
bis(2-Chloroethoxy)methane	0.520	0.598	0.3	15.0	25.0
Benzoic Acid	0.192	0.187	0.01	2.6	25.0
2,4-Dichlorophenol	0.275	0.302	0.2	9.8	20.0
1,2,4-Trichlorobenzene	0.305	0.342	0.2	12.1	25.0
Naphthalene	1.018	1.141	0.7	12.1	25.0
4-Chloroaniline	0.443	0.500	0.01	12.9	25.0
Hexachlorobutadiene	0.167	0.184	0.01	10.2	20.0
4-Chloro-3-methylphenol	0.266	0.282	0.01	6.0	20.0
2-Methylnaphthalene	0.819	0.937	0.01	14.4	25.0
Hexachlorocyclopentadiene	0.294	0.323	0.05	9.9	25.0
2,4,6-Trichlorophenol	0.385	0.420	0.2	9.1	20.0
2,4,5-Trichlorophenol	0.389	0.417	0.2	7.2	25.0
2-Chloronaphthalene	1.013	1.132	0.8	11.7	25.0
2-Nitroaniline	0.422	0.465	0.01	10.2	25.0
Dimethylphthalate	1.298	1.458	0.01	12.3	25.0
Acenaphthylene	1.904	2.108	0.9	10.7	25.0
2,6-Dinitrotoluene	0.332	0.372	0.2	12.0	25.0
3-Nitroaniline	0.374	0.410	0.01	9.6	25.0

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Instrument ID: Q Calibration Date: 06/10/02 Time: 0544

Lab File ID: QUQ050A Init. Calib. Date(s): 06/07/02 06/07/02

Init. Calib. Times: 1217 1627

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D	
Acenaphthene	1.058	1.188	0.9	12.3	20.0	
2,4-Dinitrophenol	0.154	0.133	0.05	13.6	25.0	
Dibenzofuran	1.530	1.738	0.8	13.6	25.0	
4-Nitrophenol	0.143	0.131	0.05	8.4	25.0	
2,4-Dinitrotoluene	0.436	0.470	0.2	7.8	25.0	
Diethylphthalate	1.281	1.467	0.01	14.5	25.0	
Fluorene	1.182	1.342	0.9	13.5	25.0	
4-Chlorophenyl-phenylether	0.528	0.590	0.4	11.7	25.0	
4-Nitroaniline	0.380	0.420	0.01	10.5	25.0	
4,6-Dinitro-2-methylphenol	0.155	0.152	0.01	1.9	25.0	
N-nitrosodiphenylamine	0.524	0.594	0.01	13.4	20.0	
Azobenzene	1.096	1.241	0.01	13.2	25.0	
4-Bromophenyl-phenylether	0.211	0.226	0.1	7.1	25.0	
Hexachlorobenzene	0.231	0.249	0.1	7.8	25.0	
Pentachlorophenol	0.136	0.135	0.04	0.7	20.0	
Phenanthrene	1.075	1.188	0.7	10.5	25.0	
Anthracene	1.050	1.148	0.7	9.3	25.0	
Carbazole	1.078	1.166	0.01	8.2	25.0	
Di-n-butylphthalate	1.616	1.777	0.01	10.0	25.0	
Fluoranthene	1.121	1.184	0.6	5.6	20.0	
Benzidine	0.542	0.377	0.01	30.4	25.0	<-
Pyrene	1.497	1.692	0.6	13.0	25.0	
Butylbenzylphthalate	0.966	1.042	0.01	7.9	25.0	
Benzo(a)anthracene	1.299	1.404	0.8	8.1	25.0	
3,3'-Dichlorobenzidine	0.344	0.376	0.01	9.3	25.0	
Chrysene	1.165	1.300	0.7	11.6	25.0	
bis(2-Ethylhexyl)phthalate	1.284	1.451	0.01	13.0	25.0	
Di-n-octylphthalate	2.182	2.468	0.01	13.1	20.0	
Benzo(b)fluoranthene	1.625	1.837	0.7	13.0	25.0	
Benzo(k)fluoranthene	1.638	1.832	0.7	11.8	25.0	
Benzo(a)pyrene	1.453	1.650	0.7	13.6	20.0	
Indeno(1,2,3-cd)pyrene	1.626	1.756	0.5	8.0	25.0	
Dibenz(a,h)anthracene	1.292	1.386	0.4	7.3	25.0	
Benzo(g,h,i)perylene	1.412	1.541	0.5	9.1	25.0	
2-Fluorophenol	1.599	1.727	0.6	8.0	25.0	
Phenol-d5	1.781	1.895	0.8	6.4	25.0	

FORM 3
SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Matrix Spike - STLVT Sample No.: P3LCS Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
N-Nitrosodimethylamine	1000	850	85	12	40	51-119
Pyridine	1000	340	34	12	40	15-102
Aniline	2000	140	7*	15	40	10- 73
Phenol	1000	990	99	12	40	59-117
bis(2-Chloroethyl)Ether	1000	980	98	13	40	57-116
2-Chlorophenol	1000	980	98	12	40	61-102
1,3-Dichlorobenzene	1000	870	87	10	40	60-103
1,4-Dichlorobenzene	1000	910	91	10	40	65- 99
Benzyl Alcohol	1000	1100	110	24	40	68-117
1,2-Dichlorobenzene	1000	890	89	11	40	65-101
2-Methylphenol	1000	930	93	20	40	66- 98
2,2'-oxybis(1-Chloropro	1000	980	98	11	40	64-111
4-Methylphenol	2000	1600	80	13	40	56-112
N-Nitroso-di-n-prop.(1)	1000	950	95	10	40	50-116
Hexachloroethane	1000	990	99	11	40	52-117
Nitrobenzene	1000	940	94	12	40	58-111
Isophorone	1000	950	95	15	40	52-119
2-Nitrophenol	1000	990	99	15	40	62-115
2,4-Dimethylphenol	1000	390	39	36	40	33-120
bis(2-Chloroethoxy)meth	1000	1000	100	13	40	39-103
Benzoic Acid	2000	1800	90	5	40	10-146
2,4-Dichlorophenol	1000	1100	110	18	40	56-115
1,2,4-Trichlorobenzene	1000	1000	100	16	40	63-111
Naphthalene	1000	960	96	14	40	61-104
4-Chloroaniline	2000	520	26	26	40	10- 81
Hexachlorobutadiene	1000	920	92	13	40	52-121
4-Chloro-3-methylphenol	1000	1100	110	21	40	61-116
2-Methylnaphthalene	1000	1000	100	9	40	64-110

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

FORM 3
SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Matrix Spike - STLVT Sample No.: P3LCS Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC #	QC. LIMITS REC.
N-Nitrosodimethylamine	1000		750	75	51-119
Pyridine	1000		300	30	15-102
Aniline	2000		120	6*	10- 73
Phenol	1000		880	88	59-117
bis(2-Chloroethyl)Ether	1000		860	86	57-116
2-Chlorophenol	1000		870	87	61-102
1,3-Dichlorobenzene	1000		790	79	60-103
1,4-Dichlorobenzene	1000		820	82	65- 99
Benzyl Alcohol	1000		860	86	68-117
1,2-Dichlorobenzene	1000		800	80	65-101
2-Methylphenol	1000		760	76	66- 98
2,2'-oxybis(1-Chloropro	1000		880	88	64-111
4-Methylphenol	2000		1400	70	56-112
N-Nitroso-di-n-prop.(1)	1000		860	86	50-116
Hexachloroethane	1000		890	89	52-117
Nitrobenzene	1000		830	83	58-111
Isophorone	1000		820	82	52-119
2-Nitrophenol	1000		850	85	62-115
2,4-Dimethylphenol	1000		270	27*	33-120
bis(2-Chloroethoxy)meth	1000		880	88	39-103
Benzoic Acid	2000		1900	95	10-146
2,4-Dichlorophenol	1000		920	92	56-115
1,2,4-Trichlorobenzene	1000		850	85	63-111
Naphthalene	1000		830	83	61-104
4-Chloroaniline	2000		390	20	10- 81
Hexachlorobutadiene	1000		810	81	52-121
4-Chloro-3-methylphenol	1000		890	89	61-116
2-Methylnaphthalene	1000		910	91	64-110

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

FORM 3
SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 88054

Matrix Spike - STLVT Sample No.: Q7LCS Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC #	QC. LIMITS REC.
Hexachlorocyclopentadie	2000		1400	70	10-146
2,4,6-Trichlorophenol	2000		1800	90	10-140
2,4,5-Trichlorophenol	2000		1900	95	34-122
2-Chloronaphthalene	1000		690	69*	72-110
2-Nitroaniline	2000		1900	95	60-126
Dimethylphthalate	1000		960	96	62-119
Acenaphthylene	1000		920	92	59-104
2,6-Dinitrotoluene	1000		970	97	71-108
3-Nitroaniline	2000		1100	55	44- 79
Acenaphthene	1000		900	90	59-111
2,4-Dinitrophenol	2000		1400	70	10-208
Dibenzofuran	1000		930	93	67-121
4-Nitrophenol	2000		1900	95	42-147
2,4-Dinitrotoluene	1000		890	89	60-121
Diethylphthalate	1000		910	91	62-118
Fluorene	1000		930	93	61-120
4-Chlorophenyl-phenylet	1000		950	95	67-110
4-Nitroaniline	2000		1400	70	44-105
4,6-Dinitro-2-methylphe	2000		2000	100	30-166
N-nitrosodiphenylamine	1000		910	91	57-116
Azobenzene	1000		970	97	66-132
4-Bromophenyl-phenyleth	1000		910	91	67-101
Hexachlorobenzene	1000		850	85	52-122
Pentachlorophenol	2000		450	22	19- 94
Phenanthrene	1000		930	93	66-111
Anthracene	1000		940	94	59-120
Carbazole	1000		920	92	56-145
Di-n-butylphthalate	1000		930	93	62-118

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

FORM 3
SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 88054

Matrix Spike - STLVT Sample No.: Q7LCS Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorocyclopentadie	2000	1300	65	7	40	10-146
2,4,6-Trichlorophenol	2000	1800	90	0	40	10-140
2,4,5-Trichlorophenol	2000	1900	95	0	40	34-122
2-Chloronaphthalene	1000	700	70*	1	40	72-110
2-Nitroaniline	2000	1900	95	0	40	60-126
Dimethylphthalate	1000	960	96	0	40	62-119
Acenaphthylene	1000	930	93	1	40	59-104
2,6-Dinitrotoluene	1000	950	95	2	40	71-108
3-Nitroaniline	2000	1100	55	0	40	44- 79
Acenaphthene	1000	900	90	0	40	59-111
2,4-Dinitrophenol	2000	1800	90	25	40	10-208
Dibenzofuran	1000	930	93	0	40	67-121
4-Nitrophenol	2000	2000	100	5	40	42-147
2,4-Dinitrotoluene	1000	900	90	1	40	60-121
Diethylphthalate	1000	910	91	0	40	62-118
Fluorene	1000	940	94	1	40	61-120
4-Chlorophenyl-phenylet	1000	970	97	2	40	67-110
4-Nitroaniline	2000	1400	70	0	40	44-105
4,6-Dinitro-2-methylphe	2000	2200	110	10	40	30-166
N-nitrosodiphenylamine	1000	930	93	2	40	57-116
Azobenzene	1000	1000	100	3	40	66-132
4-Bromophenyl-phenyleth	1000	940	94	3	40	67-101
Hexachlorobenzene	1000	870	87	2	40	52-122
Pentachlorophenol	2000	720	36	48*	40	19- 94
Phenanthrene	1000	980	98	5	40	66-111
Anthracene	1000	980	98	4	40	59-120
Carbazole	1000	940	94	2	40	56-145
Di-n-butylphthalate	1000	970	97	4	40	62-118

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

STLVT SAMPLE NO.

SBLKP3

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Lab File ID: B0520P3 Lab Sample ID: SBLKP3

Instrument ID: Q Date Extracted: 05/20/02

Matrix: (soil/water) SOIL Date Analyzed: 05/31/02

Level: (low/med) LOW Time Analyzed: 0212

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	STLVT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	P3LCS	P3LCS	Q0520P3	05/31/02
02	P3LCSD	P3LCSD	Q0520P3D	05/31/02
03	UCC-TT-5 (5-	487113	487113	06/10/02
04	UCC-TT-16(0.	487259	487259D	06/10/02
05	UCC-TT-12 (3	487120	487120D	06/10/02
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COMMENTS:

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

STLVT SAMPLE NO.

SBLKP3

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Matrix: (soil/water) SOIL Lab Sample ID: SBLKP3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: B0520P3

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted:05/20/02

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/31/02

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
62-75-9	N-Nitrosodimethylamine	330	U
110-86-1	Pyridine	330	U
62-53-3	Aniline	830	U
108-95-2	Phenol	500	
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
100-51-6	Benzyl Alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
65-85-0	Benzoic Acid	120	J
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	U

U.S. EPA - CLP

9
ICP SERIAL DILUTIONS

SAMPLE NO.

UCC-TT-28(1-1.5)L

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 88054

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	42530.00		45550.00		7.1		P
Antimony	46.28	B	51.50	B	11.3		P
Arsenic	621.00		672.80		8.3		P
Barium	1637.00		1723.00		5.3		P
Beryllium	4.30	B	4.35	B	1.2		P
Cadmium	18.11		22.22	B	22.7		P
Calcium	508100.00		546100.00		7.5		P
Chromium	621.20		666.00		7.2		P
Cobalt	659.20		721.90		9.5		P
Copper	2284.00		2406.00		5.3		P
Iron	207500.00		223300.00		7.6		P
Lead	3079.00		3476.00		12.9	E	P
Magnesium	149000.00		162200.00		8.9		P
Manganese	9025.00		9700.00		7.5		P
Nickel	218.70		246.40		12.7	E	P
Potassium	6126.00		7914.00	B	29.2		P
Selenium	17.34		10.00	U	100.0		P
Silver	3.98	B	15.64	B	293.0		P
Sodium	2074.00	B	4117.00	B	98.5		P
Thallium	5.80	U	29.00	U			P
Vanadium	175.00		184.40	B	5.4		P
Zinc	2939.00		3230.00		9.9		P

U.S. EPA - CLP

9
ICP SERIAL DILUTIONS

SAMPLE NO.

UCC-TT-4 (5-5.5)L

Lab Name: STL BURLINGTON Contract: 22000

Lab Code: STLVT Case No.: 22000 SAS No.: SDG No.: 87896

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	189500.00		224700.00		18.6	E	P
Antimony	35.27	B	52.20	B	48.0		P
Arsenic	54.53		63.40		16.3		P
Barium	1135.00		1314.00		15.8	E	P
Beryllium	9.71		10.07	B	3.7		P
Cadmium	11.22		11.78	B	5.0		P
Calcium	101600.00		110300.00		8.6		P
Chromium	267.30		310.70		16.2	E	P
Cobalt	169.80		199.10	B	17.3	E	P
Copper	277.50		318.60		14.8	E	P
Iron	294600.00		346100.00		17.5	E	P
Lead	185.80		230.10		23.8	E	P
Magnesium	76990.00		84380.00		9.6		P
Manganese	3188.00		3404.00		6.8		P
Nickel	359.30		430.80		19.9	E	P
Potassium	33050.00		42770.00		29.4	E	P
Selenium	7.68		20.97	B	173.0		P
Silver	2.41	B	6.00	U	100.0		P
Sodium	1550.00	B	4137.00	B	166.9		P
Thallium	3.30	U	16.50	U			P
Vanadium	368.00		412.00		12.0	E	P
Zinc	1699.00		2021.00		19.0	E	P