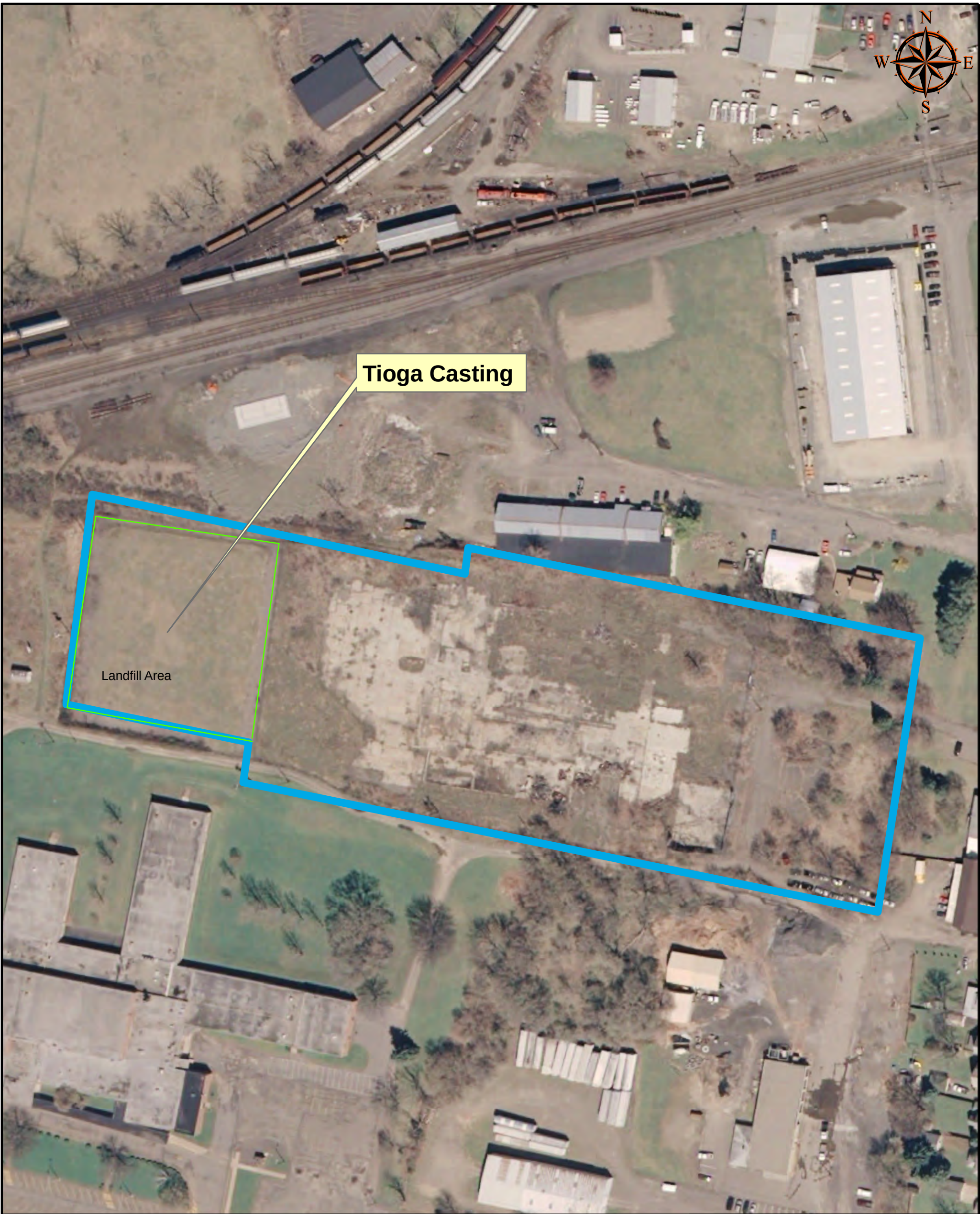




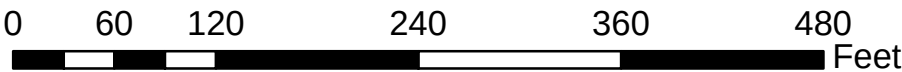
Site Reclassification and Boundry Redefinition

March 27, 2009



Tioga Casting 754012
Foundry Street
Owego, NY

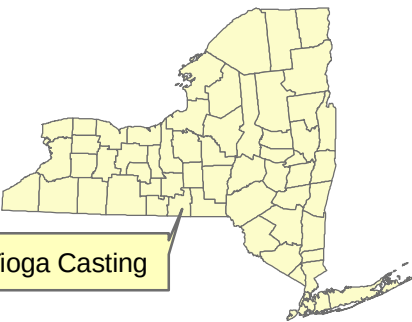
Project Manager: Payson Long
Map Arranged by: Payson Long

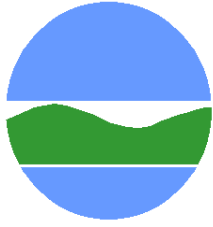


C:\Documents and Settings\pdlong\My Documents\GIS Projects\Tioga Casting SiteReclass.mxd

Legend

-  Current Tioga Casting Site Boundary
-  Proposed Tioga Casting Site Boundry





New York State Department of Environmental Conservation

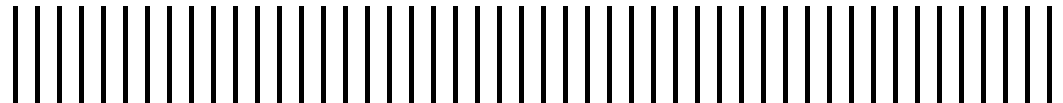
Department of Environmental Remediation • 625 Broadway • Albany, New York 12233

Site Number 7-54-012

Investigation Report Tioga Castings Site

New York State Department of Environmental
Conservation Work Assignment D004443-8

August 2008



Report Prepared By:

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**MALCOLM
PIRNIÉ**

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1. Introduction

1.1. Introduction

The New York State Department of Environmental Conservation (NYSDEC) has issued a Work Assignment (# D004443-8) to Malcolm Pirnie, Inc. (Malcolm Pirnie) for Operation, Maintenance, and Monitoring at the Tioga Casting Site in Owego, New York (Figure 1-1). Malcolm Pirnie has prepared this Preliminary Assessment Report to summarize additional site investigation activities conducted between July 15 and 17, 2008, at the request of the NYSDEC.

1.2. Site Description

The Tioga Casting site is located on Foundry Street, Owego, Broome County, New York (Figure 2-1). The former foundry buildings have been razed, leaving the concrete slabs in-place. A capped, closed landfill is present at the western end of the site.

2. Site Investigation Activities

2.1. Drilling

Subsurface soil samples were collected to evaluate the horizontal and vertical distribution of site-related contaminants within the vicinity of the former foundry building and the on-site closed, capped landfill cell. Figure 2-1 shows the drilling locations. Soil boring logs are provided in Appendix A.

2.1.1. Foundry Area Drilling and Sampling

Eighteen borings were advanced using a track-mounted direct-push (Geoprobe®) drilling rig (A). Continuous soil cores (MacroCore®) were collected from ground surface to the total depth of each boring. Upon collection, the core was screened for VOCs using a photoionization detector (PID) and visually inspected for signs of contaminants (e.g., staining and/or sheens) and buried debris, and classified by the on-site geologist. Each boring was advanced to the water table (approximately 15 feet below ground surface (bgs)). In general, two samples were collected from each boring. One sample was collected from the zone with the greatest evidence of contaminants, and one sample was collected from the zone immediately above the water table. However, due to limited soil recovery in some soil cores, several sampling locations could not be sampled at both intervals. Following sample collection, drill cuttings were returned to their respective bore holes. The remainder of each bore hole was backfilled with bentonite.

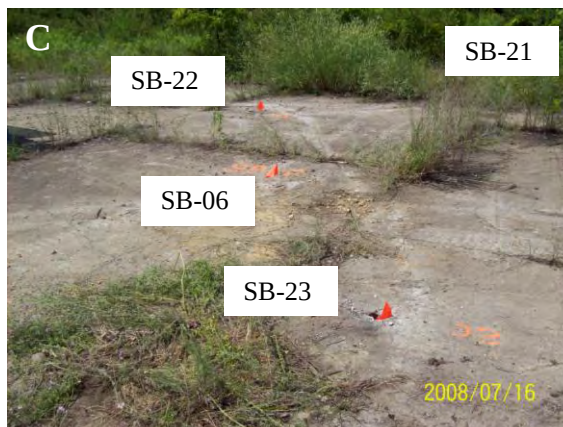


Subsurface soil beneath the site generally consisted of fill materials containing a multitude of colored sands including, black fine sand with a “greasy” texture, reddish-brown fine sand, and tan, brown, pink, and yellow sands (B). Metal fragments, slag, glass, ash, concrete, and wood were also commonly present in the fill materials. If present, the thickness of the fill materials ranged from 0.5 feet (SB-20) in the south east area of the former foundry building to



14.5 feet (SB-08) in the southwest area of the former foundry building. The thickness of the fill materials generally decreased from west to east across the site. Some borings (SB-10, SB-17, and SB-18) did not contain any of the above-mentioned fill materials.

Two soil borings (SB-06 and SB-14) contained evidence of VOCs in the fill materials. The soil samples from SB-06 produced a PID reading of 225 parts per million (ppm) at 7.5 feet bgs. The PID reading in SB-14 was 108 ppm at 7.5 feet bgs. The water table in both of these borings was approximately 15 feet bgs. Additional soil borings (SB-21, SB-22, and SB-23) were advanced in the vicinity of SB-06 to evaluate the vertical and horizontal extent of the VOC-containing soil (C). However, no field evidence of VOCs was found in these borings.



Soil beneath the fill materials generally consisted of light brown silty sand and gravel. No evidence of VOCs (staining and/or sheens) was observed in any of the samples collected beneath the fill material.

Soil samples were submitted to Test America in Shelton, Connecticut following chain-of-custody procedures for analysis of Target Compound List (TCL) VOCs by USEPA Method ILM0.4.3, Target Analyte List (TAL) metals by USEPA Method ILM05.3, and polychlorinated biphenyls (PCBs) by USEPA Method 8082.

2.1.2. Landfill Area Drilling and Sampling

Five borings were advanced at the landfill to evaluate the concentrations of VOCs, metals, and PCBs in the landfill cell. Figure 2-1 shows the drilling locations. Soil borings were advanced through the engineered cap and liner, landfill cell, and to the water table. No liner was observed at the base of the landfill cell in any of the soil borings.

One composite sample was collected from each boring for analysis of metals and PCBs. A sample for VOCs analysis was also collected from the zone with the greatest evidence of contamination. Following sample collection, each borehole was backfilled with bentonite.

Drill cuttings were placed in a United Nations (UN)-approved 55-gallon steel drum. One composite soil sample was collected from the drum and is being held by the laboratory pending the waste characterization analysis required by the disposal facility.

Based on soil core samples, the average thickness of the engineered liner system was approximately three feet. The landfill cell material generally consisted of black fine sand with a “greasy” texture and the multitude of other colored sand and debris similar to those observed in the fill material from soil borings advanced in the vicinity of the former foundry. The total landfill thickness (liner membrane to the bottom of landfill cell material) was approximately 12 feet in soil borings SB-04 and SB-05; approximately 13 feet in SB-01 and SB-02; and approximately 16 feet in SB-03.

Soil beneath the landfill cell generally consisted of brown and light brown silty sand and gravel. No evidence of VOCs (staining and/or sheens) was observed in any of the soil cores from beneath the landfill cell.

2.2. Landfill Cap Repair

Holes in the landfill cap resulting from the soil boring activities were repaired by excavating to the top of the HDPE cap liner material to expose each borehole. The landfill cap material (topsoil and liner cover) was segregated during excavation for later restoration (D). The liner was repaired by cleaning the area of the borehole and placing an approximately 18 inch x 18 inch patch of 60 mil HDPE material over the perforation in the liner (E). A two-inch strip of double-sided butyl rubber tape was used to secure the patch to the landfill liner and a roller was used to improve the contact between the patch and liner (F).



Adhesive caulk was used to seal the perimeter seam of the patch (G).



The excavation was then backfilled with the previously excavated soil. The soil was compacted with bucket of the excavator and the cap surface was restored with grass seed (H).



2.3. Soil Vapor Intrusion Sampling

Five sub-slab soil vapor intrusion sampling points were installed in the foundry slab to evaluate the potential soil vapor intrusion pathways in the event the site is redeveloped. The locations of the vapor points were based PID readings in soil cores, field observations from soil borings, and to provide even spatial distribution across the site. Figure 2-1 shows the locations of the locations of the sub-slab vapor points.

Sub-slab soil vapor sampling points were installed using a hammer drill equipped with a one-inch diameter drill bit. The drill bit was advanced approximately six-inches below the bottom of the concrete slab. A six-inch long 3/8-inch diameter stainless-steel screen with 1/4-inch Teflon tubing was then lowered to the bottom of the hole (I). The screened interval was then backfilled with sand. The remainder of the drill hole was backfilled with bentonite and



hydrated with potable water.

Prior to collecting the samples, three volumes of air were purged from each sub-slab vapor point using a syringe. The purged air was vented into a Tedlar bag and screened with a PID for the presence of VOCs. However, the PID malfunctioned before all of the sample points could be evaluated. The sample location that was tested with the PID (SV-2) contained no measureable concentrations of VOCs.

Vapor points were sampled using 6-liter Summa canisters equipped with two-hour flow controllers (J). One ambient air sample was collected concurrently with the sub-slab samples to provide information on ambient air quality at the time of sampling. Sub-slab and ambient air samples were sent to Con-Test Analytical Laboratories, East Longmeadow, Massachusetts following chain-of-custody procedures for analysis of VOCs by Method TO-15.



2.4. Groundwater Sampling

Groundwater samples were collected from the monitoring well network in accordance with the Tioga Castings Site Work Plan (K). Water levels were measured in each well prior to sampling. No light non-aqueous phase liquid (LNAPL) or sheens were present in any of the purged groundwater. As in previous sampling events, groundwater monitoring wells MW-1 and MW-3 purged dry and could not be sampled. Groundwater samples were sent to Test America in Shelton, Connecticut following chain-of-custody procedures for analysis of TCL VOCs (USEPA Method ILM04.3) and total TAL Metals (USEPA Method ILM05.3).



3. Analytical Results

Analytical results for the investigation are summarized in Table 1 (Groundwater VOCs), Table 2 (Groundwater Metals), Table 3 (Soil VOCs), Table 4 (Soil Metals and PCBs), and Table 5 (Soil Vapor Intrusion). Analytical reporting forms (Form I) are provided in Appendix B.

3.1. Groundwater

3.1.1. VOCs

Table 1 shows that VOCs were not detected in any of the groundwater samples collected during the investigation at concentrations greater than the indicated reporting limit (10 micrograms per liter (ug/L)). Although the NYSDEC Class GA Standards for most of the VOCs listed in Table 1 are less than the laboratory reporting limit, the laboratory method detection limit for each of these compounds is 0.1 ug/L, which is less than the corresponding NYSDEC Class GA Standards. This means that, if present, VOCs would have been detected at concentrations less than the applicable NYSDEC Class GA Standards.

3.1.2. Metals

Table 2 shows that none of the groundwater samples contained concentrations of metals greater than the applicable NYSDEC Class GA Standards. As shown in Table 2, the sodium concentration in the sample from MW-2 decreased from 36,100 ug/L in the sample from the previous sampling event (August 2007) to 18,700 ug/L, which is less than the NYSDEC Class GA Standard of 20,000 ug/L.

3.2. Soil

3.2.1. VOCs

Table 3 shows that VOCs were not detected in any of the soil samples at concentrations greater than the corresponding 6NYCRR Part 375 Commercial Soil Cleanup Objectives (SCOs).

3.2.2. Metals

As shown in Table 4, only three of the soil borings contained concentrations of metals greater than the applicable 6NYCRR Part 375 Commercial SCOs. The sample from SB-09(4-5) contained manganese at an estimated concentration (based on “E” qualifier) of 12,700 milligrams per kilogram (mg/kg) or parts per million (ppm) which is greater than 6NYCRR Part 375 Commercial SCO of 10,000 ppm. The concentration of copper in the sample from SB-14(7-8) was 528 ppm which exceeds the 6NYCRR Part 375 Commercial

SCO of 270 ppm. The lead concentration in the sample from SB-19 (3.5-4.5) was 2,330 ppm. The 6NYCRR Part 375 Commercial SCO for lead is 1,000 ppm.

3.2.3. PCBs

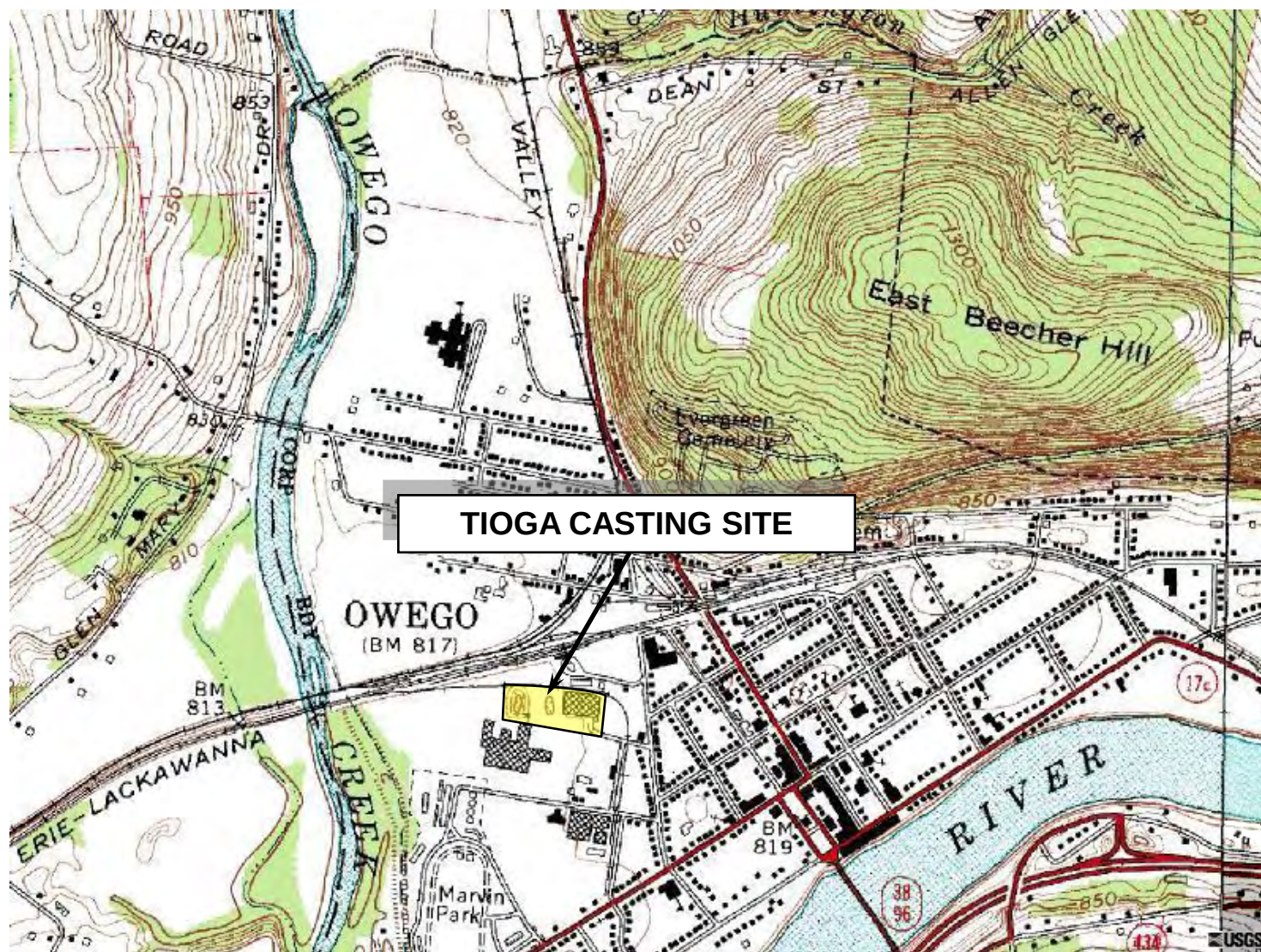
Table 4 shows that none of the soil samples contained concentrations of PCBs greater than the corresponding 6NYCRR Part 375 Commercial SCO of 1 ppm.

3.3. Soil Vapor Intrusion

Soil vapor intrusion sample results are summarized in Table 5. As shown in Table 5, sub-slab soil vapor sample SV-02 contained 1,1,1-trichloroethane at a concentration of 1,100 micrograms per cubic meter (ug/m^3). This result is greater than the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH Guidance) Soil Vapor / Indoor Air Matrix 2 mitigation value of 1,000 ug/m^3 . None of the other samples contained VOCs at concentrations greater than the applicable NYSDOH Guidance values.

4. Summary

Three groundwater monitoring wells, 20 soil borings, and five sub-slab soil vapor sampling points were sampled to evaluate for the presence of VOCs, metals and PCBs at the former metal foundry. No VOCs were detected in soil or groundwater at concentrations greater than the applicable 6NYCRR Part 375 Commercial SCOs or NYSDEC Class GA Standards, respectively. Only one sub-slab soil vapor sample contained VOCs at a concentration greater than the NYSDOH Guidance value for mitigation. None of the groundwater samples contained metals greater than the corresponding NYSDEC Class GA Standards. Soil samples from three soil borings contained concentrations of metals that exceeded the 6NYCRR Part 375 Commercial SCOs for manganese, copper, or lead. None of the soil borings contained PCBs at concentrations greater than the applicable 6NYCRR Part 375 Commercial SCOs.



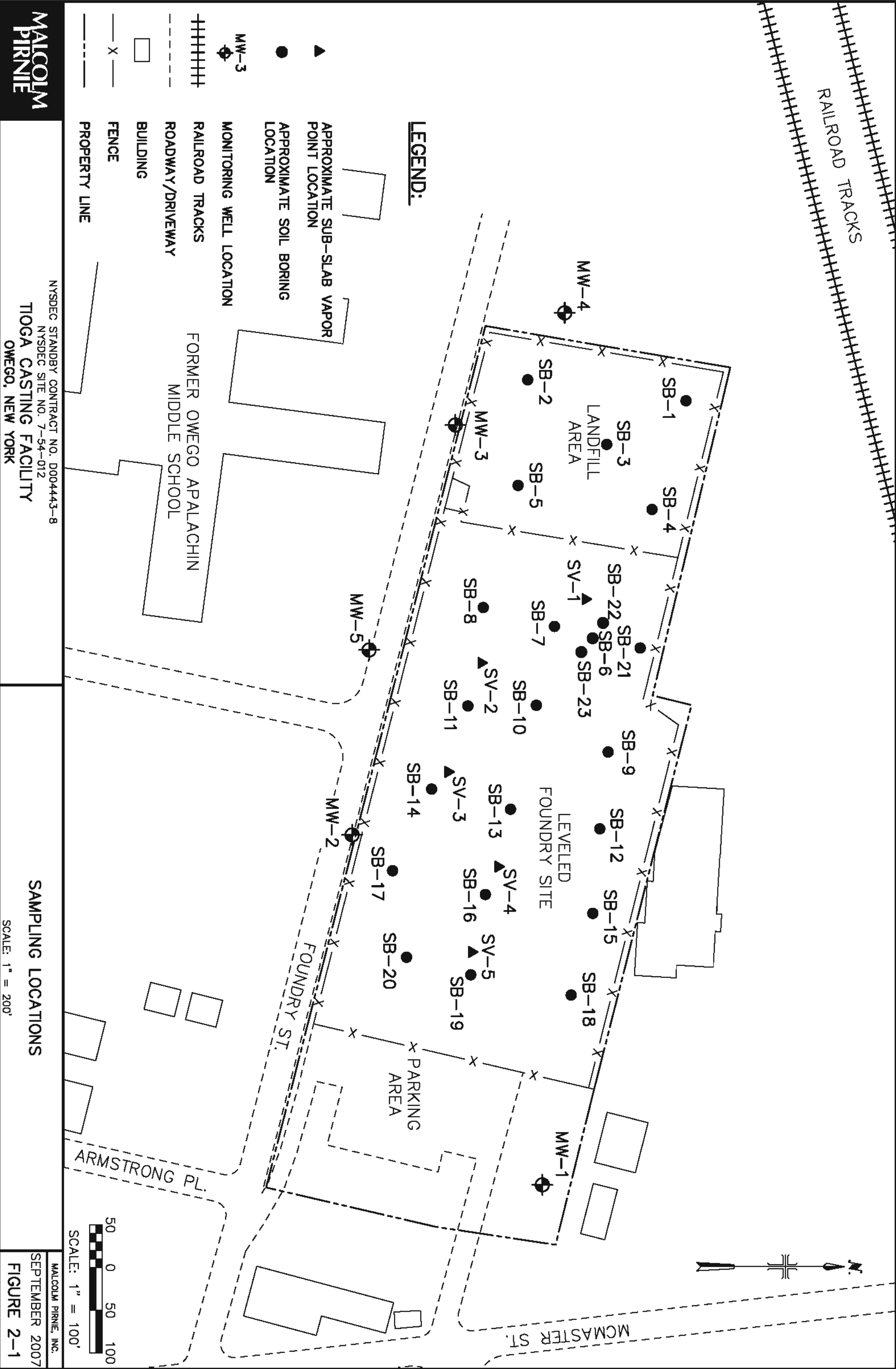
SOURCE: U.S.G.S 7.5 MIN. OWEGO QUAD, 1990

SCALE IN FEET
0 500 1000 2000

**MALCOLM
PIRNIE**

NYSDEC STANDBY CONTRACT NO. D004443
TIOGA CASTING FACILITIES
OWEGO, NEW YORK
TIOGA CASTING SITE LOCATION

FIGURE 1-1



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PIRNIÉ**

NYSDEC STANDBY CONTRACT NO. D004443-8
NYSDEC SITE NO. 7-54-012
TIOGA CASTING FACILITY
OWEGO, NEW YORK

SAMPLING LOCATIONS

MALCOLM PIRNIE, INC.

SEPTMBER 2007
FIGURE 2-1

Table 1
Summary of Groundwater Sampling Results - VOCs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Well Date Units	NYSDEC Class GA Standard or Guidance Value (ug/L)	MW-2 7/17/2008 ug/L	MW-4 7/17/2008 ug/L	MW-X ⁽¹⁾ 7/17/2008 ug/L	MW-5 7/17/2008 ug/L
Volatiles					
1,1,1-Trichloroethane	5	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	5	10 U	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane		10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	1	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5	10 U	10 U	10 U	10 U
1,1-Dichloroethene	5	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	5	10 U	10 U	10 U	10 U
1,2-Dibromo-3-Chloropropane	0.04	10 U	10 U	10 U	10 U
1,2-Dibromoethane	5	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	3	10 U	10 U	10 U	10 U
1,2-Dichloroethane	0.6	10 U	10 U	10 U	10 U
1,2-Dichloropropane	1	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	3	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	3	10 U	10 U	10 U	10 U
2-Hexanone		10 U	10 U	10 U	10 U
Acetone	50*	10 U	10 U	10 U	10 U
Benzene	1	10 U	10 U	10 U	10 U
Bromodichloromethane	50*	10 U	10 U	10 U	10 U
Bromoform	50*	10 U	10 U	10 U	10 U
Bromomethane	5	10 U	10 U	10 U	10 U
Carbon disulfide		10 U	10 U	10 U	10 U
Carbon tetrachloride	5	10 U	10 U	10 U	10 U
Chlorobenzene	5	10 U	10 U	10 U	10 U
Chloroethane	5	10 U	10 U	10 U	10 U
Chloroform	7	10 U	10 U	10 U	10 U
Chloromethane		10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	5	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	0.4**	10 U	10 U	10 U	10 U
Cyclohexane		10 U	10 U	10 U	10 U
Dibromochloromethane	50	10 U	10 U	10 U	10 U
Dichlorodifluoromethane	5	10 U	10 U	10 U	10 U
Ethylbenzene	5	10 U	10 U	10 U	10 U
Isopropylbenzene	5	10 U	10 U	10 U	10 U
Methyl acetate		10 U	10 U	10 U	10 U
Methyl Ethyl Ketone		10 U	10 U	10 U	10 U
methyl isobutyl ketone		10 U	10 U	10 U	10 U
Methyl tert-butyl ether		10 U	10 U	10 U	10 U
Methylcyclohexane		10 U	10 U	10 U	10 U
Methylene Chloride	5	10 U	10 U	10 U	10 U
Styrene	5	10 U	10 U	10 U	10 U
Tetrachloroethene		10 U	10 U	10 U	10 U
Toluene	5	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	5	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	0.4**	10 U	10 U	10 U	10 U
Trichloroethene	5	10 U	10 U	10 U	10 U
Trichlorofluoromethane	5	10 U	10 U	10 U	10 U
Vinyl chloride	2	10 U	10 U	10 U	10 U
Xylenes, Total	5	10 U	10 U	10 U	10 U

Notes:

U - Analyte not detected at the indicated quantitation limit

(1) - MW-X is a duplicate sample collected at MW-4

* Guidance Value

**Sum of these compounds can not exceed 0.4 ug/L.

***Sum of these compounds can not exceed 300 ug/L.

Table 2
Summary of Groundwater Sampling Results - Metals
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-2 8/2/2007 ug/L	MW-2 7/17/2008 ug/L	MW-4 8/2/2007 ug/L	MW-4 7/17/2008 ug/L	MW-X ⁽¹⁾ 7/17/2008 ug/L	MW-5 8/2/2007 ug/L	MW-5 7/17/2008 ug/L
Metals (total)								
Aluminum		60.2 B	23.6 U	40.0 U	32.6 B	32.8 B	79.0 B	28.9 B
Antimony		5.6 U	5.5 U	5.6 U	5.5 U	5.5 U	5.6 U	5.5 U
Arsenic	25	4.2 U	3.7 U	4.2 U	3.7 U	3.7 U	4.2 U	3.7 U
Barium	1000	61.6 B	54.3 B	40.0 B	38.3 B	38.1 B	56.4 B	55.7 B
Beryllium		0.40 B	0.3 U	0.27 U	0.3 U	0.3 U	0.51 B	0.3 U
Cadmium	5	0.36 U	0.3 U	0.36 U	0.7 B	0.6 B	0.36 U	0.3 U
Calcium		54500 E	48800	42700 E	42400	42400	44400 E	45200
Chromium	50	0.84 U	0.9 U	0.84 U	0.9 U	0.9 U	0.84 U	0.9 U
Cobalt		1.1 B	1.1 U	0.89 U	1.1 U	1.1 U	0.89 U	1.1 U
Copper		1.3 U	1.3 U	1.4 B	1.3 U	1.3 U	1.3 U	1.3 U
Iron		19.3 U	19.3 U	47.6 B	34.0 B	34.0 B	19.3 U	19.3 U
Lead	25	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U
Magnesium		8650 E	7670	8190 E	7830	7820	7600 E	7570
Manganese		2.8 B	8.2 B	0.79 B	1.2 B	1.1 B	0.90 B	0.7 B
Mercury	0.7	0.12 U	0.1 U	0.12 U	0.1 U	0.1 U	0.12 U	0.1 U
Nickel		1.2 U	1.0 U	1.2 U	1.0 U	1.3 B	1.2 U	1.4 B
Potassium		4710 BE	3900 B	1020 BE	1860 B	2420 B	3330 BE	3340 B
Selenium	10	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U
Silver	50	1.7 B	1.3 U	1.0 U	1.3 U	1.3 U	1.6 B	1.3 U
Sodium	20000	36100 E	18700	12000 E	12800	12800	14200 E	15400
Thallium		7.0 U	5.9 U	7.0 U	5.9 U	5.9 U	7.0 U	5.9 U
Vanadium		0.80 B	1.0 U	0.78 U	1.0 U	1.0 U	0.80 B	1.0 U
Zinc		3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U

Notes:

 - Concentration exceeds corresponding NYSDEC Class GA Standard

U - Analyte not detected at the indicated quantitation limit

B - Value greater than or equal to the instrument detection limit but less than the quantitation limit

E - Estimated concentration

(1) - MW-X is a duplicate sample collected at MW-4

Table 3
Summary of Soil Sampling Results - VOCs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Soil Boring Sample Interval (feet bgs) Date Units	Commercial Soil Cleanup Objective ppm	SB-01 12-13 7/15/2008 mg/kg	SB-02 17-17.5 7/15/2008 mg/kg	SB-03 19-19.5 7/15/2008 mg/kg	SB-04 14.5-15 7/15/2008 mg/kg	SB-05 14.5-15 7/15/2008 mg/kg
VOCs						
1,1,1-Trichloroethane	500	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,1,2,2-Tetrachloroethane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,1,2-Trichloroethane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,1-Dichloroethane	240	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,1-Dichloroethene	500	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,2,4-Trichlorobenzene	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,2-Dibromo-3-Chloropropane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,2-Dibromoethane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,2-Dichlorobenzene	500	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,2-Dichloroethane	30	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,2-Dichloropropane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,3-Dichlorobenzene	280	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
1,4-Dichlorobenzene	130	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
2-Hexanone	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Acetone	500	0.008 J B	0.021 B	0.014 B	0.016 B	0.075 B
Benzene	44	0.001 J	0.002 J	0.001 J	0.005 J	0.000 J
Bromodichloromethane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Bromoform	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Bromomethane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Carbon disulfide	NS	0.011 U	0.001 J	0.012 U	0.011 U	0.012 U
Carbon tetrachloride	22	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Chlorobenzene	500	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Chloroethane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Chloroform	350	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Chloromethane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
cis-1,2-Dichloroethene	500	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
cis-1,3-Dichloropropene	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Cyclohexane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Dibromochloromethane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Dichlorodifluoromethane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Ethylbenzene	390	0.001 J	0.002 J	0.001 J	0.004 J	0.012 U
Isopropylbenzene	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Methyl acetate	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Methyl Ethyl Ketone	500	0.011 U	0.012 U	0.012 U	0.011 U	0.018
Methyl isobutyl ketone	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Methyl tert-butyl ether	500	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Methylcyclohexane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Methylene Chloride	500	0.009 J B	0.010 J B	0.002 J B	0.016 B	0.007 J B
Styrene	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Tetrachloroethene	150	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Toluene	500	0.002 J B	0.003 J B	0.003 J B	0.005 J B	0.001 J B
trans-1,2-Dichloroethene	500	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
trans-1,3-Dichloropropene	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Trichloroethene	200	0.022	0.023	0.070	0.080	0.003 J
Trichlorofluoromethane	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Vinyl chloride	13	0.011 U	0.012 U	0.012 U	0.011 U	0.012 U
Xylenes, Total	500	0.004 J	0.005 J	0.003 J	0.009 J	0.012 U

Notes

U - Analyte not detected at indicated quantitation limit

J - Estimated value

B - Analyte detected in blank and sample

NS - Not specified.

ppm - Parts per million / mg/kg - milligrams per kilogram

Table 3
Summary of Soil Sampling Results - VOCs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Soil Boring Sample Interval (feet bgs) Date Units	Commercial Soil Cleanup Objective ppm	SB-06 7.5-8.5 7/15/2008 mg/kg	SB-06 14-15 7/15/2008 mg/kg	SB-07 14.5-15.5 7/15/2008 mg/kg	SB-08 9.5-10 7/15/2008 mg/kg	SB-09 7.5-8.5 7/16/2008 mg/kg
VOCs						
1,1,1-Trichloroethane	500	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,1,2,2-Tetrachloroethane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,1,2-Trichloroethane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,1-Dichloroethane	240	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,1-Dichloroethene	500	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,2,4-Trichlorobenzene	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,2-Dibromo-3-Chloropropane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,2-Dibromoethane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,2-Dichlorobenzene	500	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,2-Dichloroethane	30	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,2-Dichloropropane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,3-Dichlorobenzene	280	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
1,4-Dichlorobenzene	130	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
2-Hexanone	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Acetone	500	0.250 B	0.006 J B	0.011 U	0.043 B	0.015 B
Benzene	44	0.001 J	0.0003 J	0.011 U	0.002 J	0.012 U
Bromodichloromethane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Bromoform	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Bromomethane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Carbon disulfide	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Carbon tetrachloride	22	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Chlorobenzene	500	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Chloroethane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Chloroform	350	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Chloromethane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
cis-1,2-Dichloroethene	500	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
cis-1,3-Dichloropropene	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Cyclohexane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Dibromochloromethane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Dichlorodifluoromethane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Ethylbenzene	390	0.002 J	0.0003 J	0.011 U	0.003 J	0.012 U
Isopropylbenzene	NS	0.004 J	0.011 U	0.011 U	0.012 U	0.012 U
Methyl acetate	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Methyl Ethyl Ketone	500	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Methyl isobutyl ketone	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Methyl tert-butyl ether	500	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Methylcyclohexane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Methylene Chloride	500	0.005 J B	0.007 J B	0.003 J B	0.007 J B	0.005 J B
Styrene	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Tetrachloroethene	150	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Toluene	500	0.006 J B	0.001 J B	0.011 U	0.005 J B	0.012 U
trans-1,2-Dichloroethene	500	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
trans-1,3-Dichloropropene	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Trichloroethene	200	0.012 J	0.009 J	0.011 U	0.008 J	0.001 J
Trichlorofluoromethane	NS	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Vinyl chloride	13	0.023 U	0.011 U	0.011 U	0.012 U	0.012 U
Xylenes, Total	500	0.011 J	0.001 J	0.011 U	0.009 J	0.012 U

Notes

U - Analyte not detected at indicated quantitation limit

J - Estimated value

B - Analyte detected in blank and sample

NS - Not specified.

ppm - Parts per million / mg/kg - milligrams per kilogram

Table 3
Summary of Soil Sampling Results - VOCs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Soil Boring Sample Interval (feet bgs) Date Units	Commercial Soil Cleanup Objective ppm	SGB-11 14-15 7/16/2008 mg/kg	SB-13 4-5 7/16/2008 mg/kg	SB-14 7-8 7/16/2008 mg/kg
VOCs				
1,1,1-Trichloroethane	500	0.012 U	0.012 U	0.012 U
1,1,2,2-Tetrachloroethane	NS	0.012 U	0.012 U	0.012 U
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	0.012 U	0.012 U	0.012 U
1,1,2-Trichloroethane	NS	0.012 U	0.012 U	0.012 U
1,1-Dichloroethane	240	0.012 U	0.012 U	0.012 U
1,1-Dichloroethene	500	0.012 U	0.012 U	0.012 U
1,2,4-Trichlorobenzene	NS	0.012 U	0.012 U	0.012 U
1,2-Dibromo-3-Chloropropane	NS	0.012 U	0.012 U	0.012 U
1,2-Dibromoethane	NS	0.012 U	0.012 U	0.012 U
1,2-Dichlorobenzene	500	0.012 U	0.012 U	0.012 U
1,2-Dichloroethane	30	0.012 U	0.012 U	0.012 U
1,2-Dichloropropane	NS	0.012 U	0.012 U	0.012 U
1,3-Dichlorobenzene	280	0.012 U	0.012 U	0.012 U
1,4-Dichlorobenzene	130	0.012 U	0.012 U	0.012 U
2-Hexanone	NS	0.012 U	0.012 U	0.012 U
Acetone	500	0.012 U	0.012 U	0.012 U
Benzene	44	0.012 U	0.012 U	0.001 J
Bromodichloromethane	NS	0.012 U	0.012 U	0.012 U
Bromoform	NS	0.012 U	0.012 U	0.012 U
Bromomethane	NS	0.012 U	0.012 U	0.012 U
Carbon disulfide	NS	0.012 U	0.012 U	0.012 U
Carbon tetrachloride	22	0.012 U	0.012 U	0.012 U
Chlorobenzene	500	0.012 U	0.012 U	0.012 U
Chloroethane	NS	0.012 U	0.012 U	0.012 U
Chloroform	350	0.012 U	0.012 U	0.012 U
Chloromethane	NS	0.012 U	0.012 U	0.012 U
cis-1,2-Dichloroethene	500	0.012 U	0.012 U	0.012 U
cis-1,3-Dichloropropene	NS	0.012 U	0.012 U	0.012 U
Cyclohexane	NS	0.012 U	0.012 U	0.012 U
Dibromochloromethane	NS	0.012 U	0.012 U	0.012 U
Dichlorodifluoromethane	NS	0.012 U	0.012 U	0.012 U
Ethylbenzene	390	0.012 U	0.012 U	0.001 J
Isopropylbenzene	NS	0.012 U	0.012 U	0.001 J
Methyl acetate	NS	0.012 U	0.012 U	0.012 U
Methyl Ethyl Ketone	500	0.012 U	0.012 U	0.012 U
Methyl isobutyl ketone	NS	0.012 U	0.012 U	0.012 U
Methyl tert-butyl ether	500	0.012 U	0.012 U	0.012 U
Methylcyclohexane	NS	0.012 U	0.012 U	0.003 J
Methylene Chloride	500	0.005 J B	0.002 J B	0.003 J B
Styrene	NS	0.012 U	0.012 U	0.012 U
Tetrachloroethene	150	0.012 U	0.012 U	0.012 U
Toluene	500	0.001 J B	0.012 U	0.002 J B
trans-1,2-Dichloroethene	500	0.012 U	0.012 U	0.012 U
trans-1,3-Dichloropropene	NS	0.012 U	0.012 U	0.012 U
Trichloroethene	200	0.010 J	0.012 U	0.012 U
Trichlorofluoromethane	NS	0.012 U	0.012 U	0.012 U
Vinyl chloride	13	0.012 U	0.012 U	0.012 U
Xylenes, Total	500	0.001 J	0.012 U	0.001 J

Notes

U - Analyte not detected at indicated quantitation limit

J - Estimated value

B - Analyte detected in blank and sample

NS - Not specified.

ppm - Parts per million / mg/kg - milligrams per kilogram

Table 4
Summary of Soil Sampling Results - Metals/PCBs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Soil Boring Sample Interval (feet bgs) Date Units	Commercial Soil Cleanup Objective ppm	SB-01 3.8-18 7/15/2008 mg/kg	SB-02 3.5-17.5 7/15/2008 mg/kg	SB-03 4.5-20 7/15/2008 mg/kg	SB-04 3.5-15 7/15/2008 mg/kg
Metals -Total					
Aluminum		5830	4550	4840	5560
Antimony		0.69 B	0.80 B	1.10 B	0.54 U
Arsenic	16	4.9	3.5	4.8	2.9
Barium	400	47.8	62.6	53.1	42.4
Beryllium	590	0.44 B	0.36 B	0.29 B	0.52 B
Cadmium	9.3	0.50 B	0.80	0.80	0.50 B
Calcium		19500	15000	11900	18200
Chromium (hexavalent/trivalent)	400**/1500**	60.1	47.6	50.3	49.3
Cobalt		4.0 B	3.0 B	4.5 B	2.8 B
Copper	270	83.5	43.9	50.0	32.6
Iron		27200	28100	37700	23100
Lead	1,000	142	168	273	196
Magnesium		1840	1570	1620	1680
Manganese	10,000	985	1180	890	1660
Mercury	2.8	0.018 B	0.014 B	0.068 B	0.013 B
Nickel	310	51.6	30.4	49.7	23.2
Potassium		543 B	394 B	534 B	555 B
Selenium	1,500	0.59 U	0.59 U	0.59 U	0.59 U
Silver	1,500	0.14 B	0.18 B	0.23 B	0.18 B
Sodium		283 B	189 B	176 B	202 B
Thallium		0.30 U	0.30 U	0.30 U	0.51 B
Vanadium		7.3	5.3	7.1	7.0
Zinc	10,000	84.6	86.1	126.0	92.5
PCBs					
PCB-1016	NS	0.019 U	0.019 U	0.019 U	0.019 U
PCB-1221	NS	0.037 U	0.036 U	0.037 U	0.036 U
PCB-1232	NS	0.019 U	0.019 U	0.019 U	0.019 U
PCB-1242	NS	0.019 U	0.019 U	0.019 U	0.019 U
PCB-1248	NS	0.019 U	0.019 U	0.019 U	0.019 U
PCB-1254	NS	0.019 U	0.021	0.016 J	0.019 U
PCB-1260	NS	0.019 U	0.018 J	0.009 J	0.019 U
Total PCBs	1		0.021	0.025	

Notes

J/B - value greater than or equal to the instrument detection limit, but less than the quantitation limit

E - value estimated or not reported due to the presence of interferences

ppm - parts per million / mg/kg - milligrams per kilogram

** - Total species concentration must be below each SCO

Table 4
Summary of Soil Sampling Results - Metals/PCBs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Soil Boring Sample Interval (feet bgs) Date Units	Commercial Soil Cleanup Objective ppm	SB-05 4-15 7/15/2008 mg/kg	SB-06 7.5-8.5 7/15/2008 mg/kg	SB-07 4-5 7/15/2008 mg/kg	SB-07 14.5-15.5 7/15/2008 mg/kg
Metals -Total					
Aluminum		5020	21600	7250	8150
Antimony		1.30 B	0.54 U	0.54 U	0.54 U
Arsenic	16	4.4	2.4	2.9	4.0
Barium	400	47.6	266.0	74.2	74.3
Beryllium	590	0.34 B	1.40	0.50 B	0.25 B
Cadmium	9.3	1.20	0.04 U	0.04 U	0.04 U
Calcium		17600	80800	30300	1640
Chromium (hexavalent/trivalent)	400**/1500**	43.7	32.3	19.5	8.8
Cobalt		3.8 B	6.9	2.9 B	6.4
Copper	270	56.8	13.2	56.2	11.0
Iron		28800	11900	25100	18200
Lead	1,000	264	6	12	5
Magnesium		1880	4100	1760	2140
Manganese	10,000	1160	5250	1500	385
Mercury	2.8	0.046 B	0.014 B	0.025 B	0.008 U
Nickel	310	22.7	5.7	15.8	15.3
Potassium		500 B	2970	620	562 B
Selenium	1,500	0.59 U	0.59 U	0.59 U	0.59 U
Silver	1,500	0.25 B	0.10 B	0.07 U	0.07 U
Sodium		124 B	640	427 B	70 B
Thallium		0.30 U	1.30 B	0.30 U	0.30 U
Vanadium		8.1	35.8	9.5	9.5
Zinc	10,000	128.0	14.5	37.2	46.0
PCBs					
PCB-1016	NS	0.019 U	0.019 U	0.019 U	0.019 U
PCB-1221	NS	0.036 U	0.037 U	0.036 U	0.037 U
PCB-1232	NS	0.019 U	0.019 U	0.019 U	0.019 U
PCB-1242	NS	0.019 U	0.019 U	0.019 U	0.019 U
PCB-1248	NS	0.019 U	0.019 U	0.019 U	0.019 U
PCB-1254	NS	0.016 J	0.012 J	0.004 J	0.019 U
PCB-1260	NS	0.011 J	0.034	0.013 J	0.019 U
Total PCBs	1	0.027	0.046	0.017	

Notes

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E - value estimated or not reported due to the presence of interferences

ppm - parts per million / mg/kg - milligrams per kilogram

** - Total species concentration must be below each SCO

Table 4
Summary of Soil Sampling Results - Metals/PCBs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Soil Boring Sample Interval (feet bgs) Date Units	Commercial Soil Cleanup Objective ppm	SB-08 9.5-10 7/15/2008 mg/kg	SB-08 14.5-15 7/16/2008 mg/kg	SB-09 4-5 7/16/2008 mg/kg	SB-09 7.5-8.5 7/16/2008 mg/kg
Metals -Total					
Aluminum		9390	3930	40700	14600
Antimony		0.54 U	1.30 B	0.54 N,U	0.54 N,U
Arsenic	16	2.7	6.4	1.9	7.7
Barium	400	62.1	189.0	214.0	202.0
Beryllium	590	0.42 B	0.14 B	3.20	0.73
Cadmium	9.3	0.05 B	0.20 B	0.04 U	0.30 B
Calcium		1640	2190	94800	2820
Chromium (hexavalent/trivalent)	400**/1500**	18.9	46.9	32.0	19.3
Cobalt		8.4	4.3 B	5.4	10.9
Copper	270	24.6	92.3	28.3	19.6
Iron		21500	59600	15900	27600
Lead	1,000	14	64	6	28
Magnesium		2810	912	2070	3320
Manganese	10,000	246	727	12700 E,*	1630 E,*
Mercury	2.8	0.017 B	0.033 B	0.008 U	0.052 B
Nickel	310	27.1	173.0	3.6 B	25.1
Potassium		704	667	2570	961
Selenium	1,500	0.59 U	0.59 U	0.59 U	0.59 U
Silver	1,500	0.07 U	0.08 B	0.33 B	0.07 U
Sodium		155 B	624	528	67 B
Thallium		0.30 U	0.30 U	0.30 U	0.30 U
Vanadium		12.7	9.5	29.9	17.5
Zinc	10,000	59.3	80.1	6.1 B	80.0
PCBs					
PCB-1016	NS	0.020 U	0.020 U	0.018 U	0.021 U
PCB-1221	NS	0.039 U	0.039 U	0.036 U	0.041 U
PCB-1232	NS	0.020 U	0.020 U	0.018 U	0.021 U
PCB-1242	NS	0.020 U	0.020 U	0.018 U	0.021 U
PCB-1248	NS	0.020 U	0.020 U	0.018 U	0.021 U
PCB-1254	NS	0.033	0.020 U	0.018 U	0.021 U
PCB-1260	NS	0.023	0.020 U	0.018 U	0.021 U
Total PCBs	1	0.056			

Notes

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Table 4
Summary of Soil Sampling Results - Metals/PCBs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Soil Boring Sample Interval (feet bgs) Date Units	Commercial Soil Cleanup Objective ppm	SB-10 17-18 7/16/2008 mg/kg	SB-11 4-5 7/16/2008 mg/kg	SB-12 14-15 7/16/2008 mg/kg	SB-13 4-5 7/16/2008 mg/kg
Metals -Total					
Aluminum		8330	5350	8790	10300
Antimony		0.54 N,U	0.54 N,U	0.54 N,U	0.54 N,U
Arsenic	16	3.7	2.3	5.3	4.3
Barium	400	54.9	17.6 B	72.4	71.5
Beryllium	590	0.33 B	0.22 B	0.34 B	0.54 B
Cadmium	9.3	0.10 B	0.10 B	0.10 B	0.40 B
Calcium		7570	1560	1320	16700
Chromium (hexavalent/trivalent)	400**/1500**	16.7	7.6	13.0	18.0
Cobalt		6.7	1.1 B	6.5	4.9 B
Copper	270	26.2	14.1	12.4	83.1
Iron		19900	18100	19400	27600
Lead	1,000	10	42	5	18
Magnesium		2960	795	2420	1450
Manganese	10,000	343 E,*	105 E,*	500 E,*	1010 E,*
Mercury	2.8	0.008 U	0.008 U	0.020 B	0.030 B
Nickel	310	17.5	3.1 B	16.9	14.5
Potassium		676	688	620	1050
Selenium	1,500	0.59 U	0.59 U	0.59 U	0.59 U
Silver	1,500	0.07 U	0.07 U	0.07 U	0.07 U
Sodium		59 B	351 B	60 B	197 B
Thallium		0.30 U	0.30 U	0.30 U	0.30 U
Vanadium		11.4	5.9	11.3	17.5
Zinc	10,000	51.4	18.5	46.5	34.1
PCBs					
PCB-1016	NS	0.019 U	0.021 U	0.019 U	0.020 U
PCB-1221	NS	0.037 U	0.040 U	0.036 U	0.039 U
PCB-1232	NS	0.019 U	0.021 U	0.019 U	0.020 U
PCB-1242	NS	0.019 U	0.021 U	0.019 U	0.020 U
PCB-1248	NS	0.019 U	0.021 U	0.019 U	0.020 U
PCB-1254	NS	0.019 U	0.021 U	0.019 U	0.020 U
PCB-1260	NS	0.019 U	0.021 U	0.019 U	0.020 U
Total PCBs	1				

Notes

J/B - value greater than or equal to the instrument detection limit, but less than the quantitation limit

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Table 4
Summary of Soil Sampling Results - Metals/PCBs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Soil Boring Sample Interval (feet bgs) Date Units	Commercial Soil Cleanup Objective ppm	SB-14 7-8 7/16/2008 mg/kg	SB-15 3-4 7/16/2008 mg/kg	SB-16 4-5 7/16/2008 mg/kg	SB-17 14-15 7/16/2008 mg/kg
Metals -Total					
Aluminum		11800	5130	4730	8160
Antimony		0.54 N,U	0.85 B,N	1.10 B,N	0.54 N,U
Arsenic	16	4.1	9.1	7.8	4.2
Barium	400	101.0	179.0	48.9	57.9
Beryllium	590	0.62	0.47 B	0.30 B	0.25 B
Cadmium	9.3	0.30 B	0.60	3.00	0.08 B
Calcium		11600	4560	2540	3610
Chromium (hexavalent/trivalent)	400**/1500**	21.7	12.0	22.5	11.6
Cobalt		7.0	7.3	5.2 B	6.2
Copper	270	528	37.8	96.3	17.7
Iron		39600	42900	60900	18600
Lead	1,000	140	592	96	11
Magnesium		4490	1040	828	2530
Manganese	10,000	745 E,*	543 E,*	3100 E,*	409 E,*
Mercury	2.8	0.248	0.271	0.198	0.008 U
Nickel	310	21.2	14.2	21.5	16.0
Potassium		926	808	732	611
Selenium	1,500	0.59 U	0.59 U	0.59 U	0.59 U
Silver	1,500	0.07 U	0.22 B	0.24 B	0.07 U
Sodium		148 B	133 B	125 B	98 B
Thallium		0.30 U	0.30 U	0.30 U	0.30 U
Vanadium		18.3	23.0	22.1	10.3
Zinc	10,000	93.9	197.0	256.0	48.8
PCBs					
PCB-1016	NS	0.019 U	0.021 U	0.019 U	0.018 U
PCB-1221	NS	0.037 U	0.041 U	0.037 U	0.034 U
PCB-1232	NS	0.019 U	0.021 U	0.019 U	0.018 U
PCB-1242	NS	0.019 U	0.021 U	0.019 U	0.018 U
PCB-1248	NS	0.019 U	0.021 U	0.019 U	0.018 U
PCB-1254	NS	0.019 U	0.021 U	0.019 U	0.018 U
PCB-1260	NS	0.019 U	0.021 U	0.019 U	0.018 U
Total PCBs	1				

Notes

J/B - value greater than or equal to the instrument detection limit, but less than the quantitation limit

E - value estimated or not reported due to the presence of interferences

ppm - parts per million / mg/kg - milligrams per kilogram

** - Total species concentration must be below each SCO

Table 4
Summary of Soil Sampling Results - Metals/PCBs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Soil Boring Sample Interval (feet bgs) Date Units	Commercial Soil Cleanup Objective ppm	SB-18 14-15 7/16/2008 mg/kg	SB-19 3.5-4.5 7/16/2008 mg/kg	SB-20 14-15 7/16/2008 mg/kg
Metals -Total				
Aluminum		9660	6040	10800
Antimony		0.54 N,U	1.80 B,N	0.54 N,U
Arsenic	16	3.9	6.8	5.6
Barium	400	22.3	89.0	99.9
Beryllium	590	0.44 B	0.41 B	0.43 B
Cadmium	9.3	0.10 B	1.30	0.20 B
Calcium		2780	12300	1210
Chromium (hexavalent/trivalent)	400**/1500**	11.6	17.5	14.0
Cobalt		8.6	5.1 B	8.8
Copper	270	14.4	166.0	23.4
Iron		19700	38900	24500
Lead	1,000	11	2330	11
Magnesium		3100	1380	3170
Manganese	10,000	269 E,*	975 E,*	948 E,*
Mercury	2.8	0.018 B	0.163	0.014 B
Nickel	310	18.4	16.1	22.4
Potassium		619	547 B	670
Selenium	1,500	0.59 U	0.59 U	0.59 U
Silver	1,500	0.07 U	0.33 B	0.07 U
Sodium		42 B	206 B	55 B
Thallium		0.30 U	0.30 U	0.30 U
Vanadium		11.9	16.2	14.2
Zinc	10,000	46.6	401.0	80.8
PCBs				
PCB-1016	NS	0.018 U	0.019 U	0.017 U
PCB-1221	NS	0.035 U	0.037 U	0.033 U
PCB-1232	NS	0.018 U	0.019 U	0.017 U
PCB-1242	NS	0.018 U	0.019 U	0.017 U
PCB-1248	NS	0.018 U	0.019 U	0.017 U
PCB-1254	NS	0.018 U	0.019 U	0.017 U
PCB-1260	NS	0.008 J	0.016 J	0.017 U
Total PCBs	1	0.008	0.016	

Notes

J/B - value greater than or equal to the instrument detection limit, but less than the quantitation limit

E - value estimated or not reported due to the presence of interferences

ppm - parts per million / mg/kg - milligrams per kilogram

** - Total species concentration must be below each SCO

Table 5
Summary of Soil Vapor Intursion Sampling Results - VOCs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Sample ID Sample Type Sample Date Units	NYSDOH Soil Vapor Intrusion Guidance	AA-1 Ambient Air 7/17/2008 ug/m ³	SV-1 Soil Vapor 7/18/2008 ug/m ³	SV-2 Soil Vapor 7/18/2008 ug/m ³	SV-3 Soil Vapor 7/18/2008 ug/m ³	SV-4 Soil Vapor 7/18/2008 ug/m ³	SV-5 Soil Vapor 7/18/2008 ug/m ³
TO-15 Volatiles							
Acetone		22	20	240	29	20	160
Benzene		2.9	6.5	19	8.8	8.1	12
Benzyl Chloride		0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromodichloromethane		0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Bromoform		0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
Bromomethane		0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,3-Butadiene		0.08 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
2-Butanone (MEK)		4.1	6.3	31	14	4.2	17
Carbon Disulfide		0.12 U	14	71	19	2.7	28
Carbon Tetrachloride	5	0.56	0.31 U	0.31 U	0.82	0.31 U	0.31 U
Chlorobenzene		0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Chlorodibromomethane		0.31 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Chloroethane		0.1 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chloroform		0.17 U	0.24 U	0.24 U	0.24 U	0.24 U	0.79
Chloromethane		1	0.19	0.5	0.11	0.1 U	0.1 U
Cyclohexane		0.99	2.6	8	0.17 U	8.6	0.17 U
1,2-Dibromoethane		0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene		0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,3-Dichlorobenzene		0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene		0.21 U	0.42	0.3 U	1	1.2	1.2
Dichlorodifluoromethane		3	7.1	5	4.1	3.8	21
1,1-Dichloroethane		0.14 U	0.2 U	20	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane		0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethylene	100	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethylene	100	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
t-1,2-Dichloroethylene		0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane		0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
cis-1,3-Dichloropropene		0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
trans-1,3-Dichloropropene		0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichlorotetrafluoroethane (114)		0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Ethanol		80	14	30	30	14	14
Ethyl Acetate		0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Ethylbenzene		3.7	5.4	16	8.6	2.9	6
4-Ethyl Toluene		2.4	3.1	5.2	3.3	0.88	1.6
n-Heptane		2.1	48	140	300	13	47
Hexachlorobutadiene		0.75 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Hexane		8.3	90	290	380	14	60
2-Hexanone		0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Isopropanol		1.8	1.8	5.3	1.8	0.75	2.7
Methyl tert-Butyl Ether (MTBE)		0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Methylene Chloride	60	3.6	2.6	2.4	2.1	2.3	4.9
4-Methyl-2-Pentanone (MIBK)		0.44	0.2 U	0.2 U	0.2 U	0.2 U	1.1
Propene		0.13 U	0.18 U	0.18 U	0.18 U	16	0.18 U
Styrene		0.15 U	0.41	0.79	0.54	0.28	0.45
1,1,2,2-Tetrachloroethane		0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Tetrachloroethylene	100	0.24 U	2.7	5.7	0.84	1.3	4.6
Tetrahydrofuran		0.23	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Toluene		13	23	350	41	80	130
1,2,4-Trichlorobenzene		0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,1,1-Trichloroethane		0.19 U	1.1	1100	54	13	5
1,1,2-Trichloroethane		0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Trichloroethylene	5	0.19 U	0.88	0.4	0.27 U	0.27 U	0.27 U
Trichlorofluoromethane		2.2	2.3	1.9	15	11	21
1,1,2-Trichloro-1,2,2-Trifluoroethane		0.71	1.2	0.87	2	1.7	1.4
1,2,4-Trimethylbenzene		9	12	17	10	5.1	6.1
1,3,5-Trimethylbenzene		2.6	3.2	5.4	3.6	1.9	2.5
Vinyl Acetate		0.5 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Vinyl Chloride	5	0.1 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
m/p-Xylene		13	17	48	18	13	22
o-Xylene		5.5	8.5	21	8.6	7.9	9.7

Notes

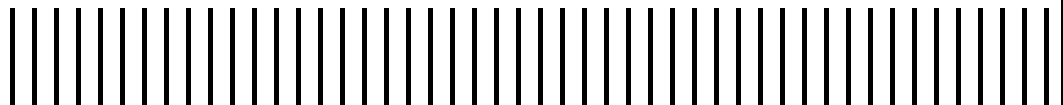
U - Analyte not detected at indicated quantitation limit

Yellow "Mitigate" based on NYSDOH Guidance for Evaluating Soil Vapor Intrusion (Soil Vapor / Indoor Air Matrix 2)

ug/m³ - micrograms per cubic meter

Appendix A

Soil Boring Logs



PROJECT		Tioga Castings		LOCATION		Owego, NY		SHEET		1 OF 1		
CLIENT		NYSDEC						PROJECT No.		0266362		
DRILLING CONTRACTOR		Aztech						MEAS. PT. ELEV.				
PURPOSE		Site Investigation						GROUND ELEV.				
WELL MATERIAL								DATUM				
DRILLING METHOD(S)		Geoprobe		SAMPLE		CORE		CASING		DATE STARTED		7/15/08
DRILL RIG TYPE		6610		TYPE		MacroCore				DATE FINISHED		7/15/08
GROUND WATER DEPTH		'		DIA.		2"				DRILLER		Ron
MEASURING POINT				WEIGHT		#				PIRNIE STAFF		J.R.W
DATE OF MEASUREMENT				FALL		"						

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	4.5		0		Reddish-brown fine sandy silt. Loose, dry.			
					Fine-med Sand and Gravel with some silt. Gravel up to .75 in. Loose, dry.	1.0		
4					Fine-med Sand with some v. coarse sand and pea gravel. Loose, dry. Landfill liner at 3 ft bgs.	2.0		
					SAA.	3.0		
					Black v. fine sand, slag, metal fragments, concrete.	3.8		Collect composite sample 3.8-18 ft bgs (Metals and PCBs).
6					Lt brown-gray sand and gravel with some silt.	5.0		
					Black sand, slag, metal fragments, concrete, zones of copper-red fine sand. Loose, slightly moist.	6.5		
8	4.5		0					
10					SAA, without copper-reddish sand.	10.0		
12	4.5		0					Collect sample 12-13 ft bgs (VOCs).
14								
16					SAA, wood fragments at 16.5 ft bgs.	15.0		
18	2.5		0		Lt brown Sand and Gravel with some silt. Moist, slightly cohesive.	16.5		
						18.0		Refusal at 18 ft bgs.

PROJECT **Tioga Castings**

LOCATION **Owego, NY**

SHEET **1 OF 1**

CLIENT **NYSDEC**

PROJECT No. **0266362**

DRILLING CONTRACTOR **Aztech**

MEAS. PT. ELEV.

PURPOSE **Site Investigation**

GROUND ELEV.

WELL MATERIAL

DATUM

DRILLING METHOD(S) **Geoprobe**

SAMPLE

CORE

CASING

DRILL RIG TYPE **6610**

TYPE

MacroCore

GROUND WATER DEPTH **17.0'**

DIA.

2"

DATE STARTED **7/15/08**

MEASURING POINT

WEIGHT

#

DRILLER **Ron**

DATE OF MEASUREMENT

FALL

"

PIRNE STAFF **J.R.W**

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	4.5		0		Reddish-brown fine sandy silt. Loose, dry.			
					Fine-med Sand and Gravel with some silt. Gravel up to .75 in. Loose, dry.	1.0		
4					Fine-med Sand with some v. coarse sand and pea gravel. Loose, dry. Landfill liner at 3 ft bgs.	2.0		
					SAA.	3.0		
					Black sand, concrete, metal	3.5		
6					Black, tan, dk brown, and red sands, slag. Loose, slightly moist.	5.0		
8	3		0		Sand and gravel, slag. Black, brown, and tan sands, plastic and metal fragments.			
10					Sand and gravel, slag. Black, brown, and tan sands, plastic and metal fragments.	10.0		
12	4.5		0		SAA, wet at 17-17.5 ft bgs.			
14					SAA, wet at 17-17.5 ft bgs.	15.0		
16					SAA, wet at 17-17.5 ft bgs.			
18	4.5		0		Brown Sand and Gravel with trace silt, some gravel larger than sample core. Moist, slightly cohesive.	17.0		
20					Brown Sand and Gravel with trace silt, some gravel larger than sample core. Moist, slightly cohesive.			
					Brown Sand and Gravel with trace silt, some gravel larger than sample core. Moist, slightly cohesive.	20.0		

Collect composite sample 3.5-17.5 (Metals and PCBs).

Wet at 17 ft bgs.
Collect sample 17-17.5 (VOCs).

BORING No.SB-03

SHEET 1 OF 1

PROJECT No. 0266362

MEAS. PT. ELEV.

GROUND ELEV.

DATUM

DATE STARTED 7/15/08

DATE FINISHED 7/15/08

DRILLER **Ron**

PIRNIE STAFF J.R.W

PG

Collect sample 19-19.5 ft bgs (VOCs).

MALCOLM PIRNIE						TEST BORING LOG	BORING No.SB-04
PROJECT Tioga Castings			LOCATION Owego, NY			SHEET 1 OF 1	
CLIENT NYSDEC						PROJECT No. 0266362	
DRILLING CONTRACTOR Aztech						MEAS. PT. ELEV.	
PURPOSE Site Investigation						GROUND ELEV.	
WELL MATERIAL						DATUM	
DRILLING METHOD(S) Geoprobe			SAMPLE	CORE	CASING	DATE STARTED 7/15/08	
DRILL RIG TYPE 6610			TYPE MacroCore			DATE FINISHED 7/15/08	
GROUND WATER DEPTH '			DIA. 2"			DRILLER Ron	
MEASURING POINT			WEIGHT #			PIRNIE STAFF J.R.W	
DATE OF MEASUREMENT			FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
0			0		Reddish-brown fine sandy Silt. Loose, dry.			
1.0					Fine-med Sand and Gravel with some silt. Gravel up to .75 in. Loose, dry.	1.0		
2.0	4.5				Fine-med Sand with some v. coarse sand and pea gravel. Loose, dry. Landfill liner at 2.5 ft bgs.	2.0		
2.5					SAA.	2.5		
3.5					Metal, brick, silty gravel, concrete, slag. Firm, slightly cohesive. Plastic sheeting at 4.5 ft bgs.	3.5		
5.0					SAA, loose.	5.0		
7.0	4.5		0		Black, dk red, and tan sands, slag. Black sand has greasy texture.	7.0		
10.0					SAA, with zone of pink sand at 14 ft bgs.	10.0		
14.7	3		0		Brown fine Sand with Silt. Moist, slightly cohesive.	14.7		
15.0						15.0		

Collect sample 3.5-15 ft bgs.
(Metals and PCBs).

Collect sample 14.5-15 ft bgs.
(VOCs).

PROJECT **Tioga Castings**

LOCATION **Owego, NY**

SHEET **1** OF **1**

CLIENT **NYSDEC**

PROJECT No. **0266362**

DRILLING CONTRACTOR **Aztech**

MEAS. PT. ELEV.

PURPOSE **Site Investigation**

GROUND ELEV.

WELL MATERIAL

DATUM

DRILLING METHOD(S) **Geoprobe**

SAMPLE

CORE

CASING

DRILL RIG TYPE **6610**

TYPE **MacroCore**

GROUND WATER DEPTH **14.8'**

DIA. **2"**

MEASURING POINT

WEIGHT **#**

DATE OF MEASUREMENT

FALL **"**

DRILLER **Ron**

PIRNIE STAFF **J.R.W**

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	4.5		0		Reddish-brown fine sandy Silt. Loose, dry.			
					Fine-med Sand and Gravel with some silt.	1.0		
					Gravel up to .75 in. Loose, dry.			
4					Fine-med Sand with some v. coarse	2.0		
					Sand and pea Gravel. Loose, dry.			
					Landfill liner at 3 ft bgs.	3.0		
					SAA, plastic sheeting at base of sand.	4.0		
6					Black, wood, gravel, sand, slag. Slightly cohesive, firm, dry.	5.0		
					Tan and brown sand and gravel, slag, glass, plastic sheeting at 6.5 ft bgs.	6.5		
8	5		0		Black and brown sand, slag, glass and some concrete.			
10					SAA, with some dk red sand. Loose and moist. Wet at 14.8 ft bgs.	10.0		
12	4		0					
14								
					Brown Sand and Gravel with trace silt, some gravel larger than sample core.	14.8		
					Moist, cohesive, firm.	15.0		

Collect sample 4-15 ft bgs (Metals and PCBs).

Collect sample 14.5-15 ft bgs (VOCs).

MALCOLM PIRNIE				TEST BORING LOG			BORING No.SB-06	
PROJECT Tioga Castings			LOCATION Owego, NY			SHEET 1 OF 1		
CLIENT NYSDEC						PROJECT No. 0266362		
DRILLING CONTRACTOR Aztech						MEAS. PT. ELEV.		
PURPOSE Site Investigation						GROUND ELEV.		
WELL MATERIAL						DATUM		
DRILLING METHOD(S) Geoprobe		SAMPLE		CORE		CASING		
DRILL RIG TYPE 6610		TYPE MacroCore				DATE STARTED 7/15/08		
GROUND WATER DEPTH 14.5'		DIA. 2"				DATE FINISHED 7/15/08		
MEASURING POINT		WEIGHT #				DRILLER Ron		
DATE OF MEASUREMENT		FALL		"		PIRNIE STAFF J.R.W		
DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
0	3		0		Concrete slab, drill with star bit.			
2					Black sand, slag, ash and gravel. Loose, moist.	0.5		
4								
6	2.5		225		SAA.	5.0		
8					Gray sand. Loose, very moist. Slight petro odors. PID=225 ppm.	7.5		Collect samples 7.5-8 ft bgs (VOCs, Metals, and PCBs).
10					Brown Sand and Gravel with Silt. Moist.	8.0		
12	2		0		SAA. Wet at 14.5 ft bgs.	10.0		
14								
						15.0		Collect samples 14-15 ft bgs (VOCs only) very little matrix.

BORING No.SB-07

PROJECT Tioga Castings

LOCATION Owego, NY

SHEET 1 OF 1

CLIENT **NYSDEC**

PROJECT No. 0266362

DRILLING CONTRACTOR **Aztech**

MEAS. PT. ELEV.

PURPOSE	Site Investigation

GROUND ELEV.

WELL MATERIAL

DATUM

DRILLING METHOD(S)	Geoprobe

SAMPLE

CORE

CASING

DRILL RIG TYPE 6610

TYPE

MacroCore

GROUND WATER DEPTH 14.8'

DIA.

2"

MEASURING POINT

WEIGHT

#

DATE OF MEASUREMENT

FALL

88

DRILLER **Ron**

PIRNIE STAFF J.R.W

[illegible]

MALCOLM PIRNIE				TEST BORING LOG			BORING No.SB-08	
PROJECT Tioga Castings				LOCATION Owego, NY			SHEET 1 OF 1	
CLIENT NYSDEC							PROJECT No. 0266362	
DRILLING CONTRACTOR Aztech							MEAS. PT. ELEV.	
PURPOSE Site Investigation							GROUND ELEV.	
WELL MATERIAL							DATUM	
DRILLING METHOD(S) Geoprobe				SAMPLE	CORE	CASING	DATE STARTED 7/15/08	
DRILL RIG TYPE 6610				TYPE MacroCore			DATE FINISHED 7/15/08	
GROUND WATER DEPTH 9.5'				DIA. 2"			DRILLER Ron	
MEASURING POINT				WEIGHT #			PIRNIE STAFF J.R.W	
DATE OF MEASUREMENT				FALL	"			
DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	4.5		0		Lt brown fine sand and gravel with some silt. Gravel up to 1.5 in. Loose, dry.			
4					Red and black sand with zones of pink sand at 4.5 ft bgs. Ash and slag.	2.5		
6	2.5		0		SAA, with out pink sand. Wet at 9.5-10 ft bgs.	5.0		
8								
10					Black sand, some gravel, metal fragments. Wet	10.0		Collect samples 9.5-10 (VOCs, Metals, PCBs).
12	1.5		0					
14					Lt. brown Sand and Gravel with trace of silt.	14.5		Collect samples 14-14.5 (Metals and PCBs).
						15.0		

MALCOLM PIRNIE				TEST BORING LOG		BORING No.SB-09		
PROJECT Tioga Castings			LOCATION Owego, NY			SHEET 1 OF 1		
CLIENT NYSDEC			PROJECT No. 0266362					
DRILLING CONTRACTOR Aztech			MEAS. PT. ELEV.					
PURPOSE Site Investigation			GROUND ELEV.					
WELL MATERIAL			DATUM					
DRILLING METHOD(S) Geoprobe		SAMPLE	CORE	CASING	DATE STARTED 7/16/08			
DRILL RIG TYPE 6610	TYPE MacroCore				DATE FINISHED 7/16/08			
GROUND WATER DEPTH 12.0'	DIA. 2"				DRILLER Ron			
MEASURING POINT	WEIGHT #				PIRNIE STAFF J.R.W			
DATE OF MEASUREMENT	FALL	"						
DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	2		0		Brown and black sand, slag, gravel, ash, and glass. Loose, moist.			Collect samples 4-5 ft bgs (Metals and PCBs).
4								
6					SAA.	5.0		
8	2.5		0		Gray and dk brown Clayey Silt. Firm, moist, cohesive.	7.5		
10					Brown Sand and Gravel with Silt	8.5		
12					SAA. Wet at 12 ft bgs.	10.0		Collect samples 7.5-8.5 ft bgs (Metals, PCBs, and VOCs).
14	2.5		0					
						15.0		

PROJECT **Tioga Castings**

LOCATION **Owego, NY**

SHEET **1 OF 1**

CLIENT **NYSDEC**

PROJECT No. **0266362**

DRILLING CONTRACTOR **Aztech**

MEAS. PT. ELEV.

PURPOSE **Site Investigation**

GROUND ELEV.

WELL MATERIAL

DATUM

DRILLING METHOD(S) **Geoprobe**

SAMPLE

CORE

CASING

DRILL RIG TYPE **6610**

TYPE **MacroCore**

GROUND WATER DEPTH **18.0'**

DIA.

2"

DATE STARTED **7/16/08**

DATE FINISHED **7/16/08**

MEASURING POINT

WEIGHT

#

DRILLER **Ron**

DATE OF MEASUREMENT

FALL

"

PIRNIE STAFF **J.R.W**

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
0					Concrete slab, drill with star bit.			
2	1		0		Lt brown Sand and Gravel with Silt.	0.5		
4								
6	2		0		SAA, moist.	5.0		
8								
10					SAA, wet at 15 ft bgs.	10.0		
12	2.5		0					
14								
16					SAA, saturated at 18 ft bgs.	15.0		
18	2.5		0					Collect samples 17-18 ft bgs (Metals and PCBs) not enough matrix for VOCs.
20						20.0		

PROJECT	Tioga Castings	LOCATION	Owego, NY	SHEET	1 OF 1
CLIENT	NYSDEC	PROJECT No.	0266362	MEAS. PT. ELEV.	
DRILLING CONTRACTOR	Aztech	GROUND ELEV.		DATUM	
PURPOSE	Site Investigation	DATE STARTED	7/16/08	DATE FINISHED	7/16/08
WELL MATERIAL		DRILLER	Ron	PIRNIE STAFF	J.R.W
DRILLING METHOD(S)	Geoprobe	SAMPLE	CORE	CASING	
DRILL RIG TYPE	6610	TYPE	MacroCore		
GROUND WATER DEPTH	15.0'	DIA.	2"		
MEASURING POINT		WEIGHT	#		
DATE OF MEASUREMENT		FALL	"		

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
0					Concrete slab. Drill with star bit.			
2	2.5		0		Black and brown sand, slag, ash, glass, some gravel. Black sand has greasy texture. Moist.	0.5		
4								Collect samples 4-5 ft bgs (Metals and PCBs).
6	2.5		0		SAA, with some wood.	5.0		
8								
10					Lt gray and brown Clayey silt. Firm, moist, cohesive.	8.0		
12	2		0		Brown Sand and Gravel with some silt.	9.0		
14					SAA, wet at 15 ft bgs.	10.0		
						15.0		Collect samples 14-15 ft bgs (VOC only) very little matrix.

PROJECT **Tioga Castings**

LOCATION **Owego, NY**

SHEET **1 OF 1**

CLIENT **NYSDEC**

PROJECT No. **0266362**

DRILLING CONTRACTOR **Aztech**

MEAS. PT. ELEV.

PURPOSE **Site Investigation**

GROUND ELEV.

WELL MATERIAL

DATUM

DRILLING METHOD(S) **Geoprobe**

SAMPLE

CORE

CASING

DRILL RIG TYPE **6610**

TYPE

MacroCore

GROUND WATER DEPTH

DIA.

2"

DATE STARTED **7/16/08**

DATE FINISHED **7/16/08**

MEASURING POINT

WEIGHT

#

DRILLER **Ron**

DATE OF MEASUREMENT

FALL

"

PIRNIE STAFF **J.R.W**

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	4		0		Brown med-fn Sand and Silt with some Gravel. Lt. brown Sand and Gravel with some Silt. Firm, moist.	0.5		
4								
6					SAA.	5.0		
8	2.5		0					
10					SAA.	10.0		
12	3.5		0					
14								
						15.0		
								Collect samples 10-15 ft bgs (Metals and PCBs) not enough matrix for VOCs.

MALCOLM PIRNIE				TEST BORING LOG			BORING No.SB-13	
PROJECT Tioga Castings				LOCATION Owego, NY			SHEET 1 OF 1	
CLIENT NYSDEC							PROJECT No. 0266362	
DRILLING CONTRACTOR Aztech							MEAS. PT. ELEV.	
PURPOSE Site Investigation							GROUND ELEV.	
WELL MATERIAL							DATUM	
DRILLING METHOD(S) Geoprobe				SAMPLE	CORE	CASING	DATE STARTED 7/16/08	
DRILL RIG TYPE 6610				TYPE MacroCore			DATE FINISHED 7/16/08	
GROUND WATER DEPTH 15.0'				DIA. 2"			DRILLER Ron	
MEASURING POINT				WEIGHT #				PIRNIE STAFF J.R.W
DATE OF MEASUREMENT				FALL				
DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
0					Concrete slab. Drill with star bit.			
2	2.5		0		Black and dk reddish-brown sand, slag, gravel, glass. Bottom 3 inches is brown sandy Silt with trace Gravel. Moist, cohesive.	0.5		
4								
6	2		0		Lt brown Sand and Gravel with Silt. Moist.	5.0		
8								
10								
12	3		0		SAA, wet at 15 ft bgs.	10.0		
14								
						15.0		

PROJECT **Tioga Castings**

LOCATION **Owego, NY**

SHEET **1 OF 1**

CLIENT **NYSDEC**

PROJECT No. **0266362**

DRILLING CONTRACTOR **Aztech**

MEAS. PT. ELEV.

PURPOSE **Site Investigation**

GROUND ELEV.

WELL MATERIAL

DATUM

DRILLING METHOD(S) **Geoprobe**

SAMPLE

CORE

CASING

DATE STARTED **7/16/08**

DRILL RIG TYPE **6610**

TYPE

MacroCore

DATE FINISHED **7/16/08**

GROUND WATER DEPTH **15.0'**

DIA.

2"

DRILLER **Ron**

MEASURING POINT

WEIGHT

#

PIRNIE STAFF **J.R.W**

DATE OF MEASUREMENT

FALL

"

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
0					Concrete slab. Drill with star bit.			
2	2		0		Black and dk reddish-brown sand, slag, gravel, and glass. Firm, moist.	0.5		
4								
6					SAA, slight petro odors. PID=108 PPM.	5.0		
8	2.5		108		Gray and tan Silt with occasional Gravel. Firm, moist. Becomes plastic at 8-8.5 ft bgs.	7.5		
10					Lt brown Sand and Gravel with some Silt.	8.5		
12	2.5		0		SAA, wet at 15 ft bgs.	10.0		
14								
						15.0		Collect samples 7-8 ft bgs (VOC, Metals, and PCBs).

PROJECT **Tioga Castings**

LOCATION **Owego, NY**

SHEET **1 OF 1**

CLIENT **NYSDEC**

PROJECT No. **0266362**

DRILLING CONTRACTOR **Aztech**

MEAS. PT. ELEV.

PURPOSE **Site Investigation**

GROUND ELEV.

WELL MATERIAL

DATUM

DRILLING METHOD(S) **Geoprobe**

SAMPLE

CORE

CASING

DRILL RIG TYPE **6610**

TYPE **MacroCore**

GROUND WATER DEPTH **15.0'**

DIA. **2"**

MEASURING POINT

WEIGHT **#**

DATE OF MEASUREMENT

FALL **"**

DRILLER **Ron**

PIRNIE STAFF **J.R.W**

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	4		0		Lt brown Sand and Gravel with silt. Moist			
4					Ash, slag, glass.	3.0		
					Brown Silt with fn Sand. Firm, moist.	4.0		
6	3.5		0		SAA, with trace Clay.	5.0		
8								
10					Lt brown Sand and Gravel with Silt.	9.0		
12	2.5		0		SAA, wet at 15 ft bgs.	10.0		
14								
						15.0		

Collect samples 3-4 ft bgs (Metals and PCBs).



PROJECT Tioga Castings	LOCATION Owego, NY	SHEET 1 OF 1
CLIENT NYSDEC	PROJECT No. 0266362	
DRILLING CONTRACTOR Aztech	MEAS. PT. ELEV.	
PURPOSE Site Investigation	GROUND ELEV.	
WELL MATERIAL	DATUM	
DRILLING METHOD(S) Geoprobe	SAMPLE	CORE
DRILL RIG TYPE 6610	TYPE MacroCore	
GROUND WATER DEPTH 15.0'	DIA. 2"	
MEASURING POINT	WEIGHT #	
DATE OF MEASUREMENT	FALL	
	DRILLER Ron	
	PIRNIE STAFF J.R.W	

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	2		0		Concrete slab. Drill with star bit.	0.5		
4					Dk brown-reddish sand, slag, ash, and glass. Bottom 3 inches is green-brown fn Sand and Silt with Gravel. Moist, cohesive.			
6	1		0		Lt brown Sand and Gravel with Silt. Very moist.	5.0		
8								
10					SAA, wet at 15 ft bgs.	10.0		
12	3.5		0					
14								
						15.0		

Collect samples 4-5 ft bgs (Metals and PCBs). Not enough matrix for VOCs sample.



PROJECT **Tioga Castings**

LOCATION **Owego, NY**

SHEET **1** OF **1**

CLIENT **NYSDEC**

PROJECT No. **0266362**

DRILLING CONTRACTOR **Aztech**

MEAS. PT. ELEV.

PURPOSE **Site Investigation**

GROUND ELEV.

WELL MATERIAL

DATUM

DRILLING METHOD(S) **Geoprobe**

SAMPLE

CORE

CASING

DRILL RIG TYPE **6610**

TYPE

MacroCore

DATE STARTED **7/16/08**

GROUND WATER DEPTH **15.0'**

DIA.

2"

DATE FINISHED **7/16/08**

MEASURING POINT

WEIGHT

#

DRILLER **Ron**

DATE OF MEASUREMENT

FALL

"

PIRNIE STAFF **J.R.W**

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
0					Asphalt	0.2		
2	2.5		0		Lt brown Sand and Gravel with Silt. Moist.			
4								
6					SAA.	5.0		
8	3.5		0					
10					SAA, wet at 15 ft bgs.	10.0		
12	2		0					
14								
						15.0		Collect samples 14-15 ft bgs (Metals and PCBs). Not enough matrix for VOCs.

PROJECT **Tioga Castings**

LOCATION **Owego, NY**

SHEET **1 OF 1**

CLIENT **NYSDEC**

PROJECT No. **0266362**

DRILLING CONTRACTOR **Aztech**

MEAS. PT. ELEV.

PURPOSE **Site Investigation**

GROUND ELEV.

WELL MATERIAL

DATUM

DRILLING METHOD(S) **Geoprobe**

SAMPLE

CORE

CASING

DRILL RIG TYPE **6610**

TYPE

MacroCore

GROUND WATER DEPTH **14.0'**

DIA.

2"

DATE STARTED **7/16/08**

DATE FINISHED **7/16/08**

MEASURING POINT

WEIGHT

#

DRILLER **Ron**

DATE OF MEASUREMENT

FALL

"

PIRNIE STAFF **J.R.W**

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	3		0		Lt brown Sand and Gravel with Silt.			
4								
6					SAA with wet Silty Sand zone at 8.5-9.5 ft bgs.	5.0		
8	2.5		0					
10					SAA, wet at 14 ft bgs.	10.0		
12	2		0					
14								
						15.0		▼ Collect samples 14-15 ft bgs (Metals and PCBs). Not enough matrix for VOCs.

PROJECT **Tioga Castings**

LOCATION **Owego, NY**

SHEET **1** OF **1**

CLIENT **NYSDEC**

PROJECT No. **0266362**

DRILLING CONTRACTOR **Aztech**

MEAS. PT. ELEV.

PURPOSE **Site Investigation**

GROUND ELEV.

WELL MATERIAL

DATUM

DRILLING METHOD(S) **Geoprobe**

SAMPLE

CORE

CASING

DRILL RIG TYPE **6610**

TYPE **MacroCore**

GROUND WATER DEPTH **17.0'**

DIA. **2"**

DATE STARTED **7/16/08**

DATE FINISHED **7/16/08**

MEASURING POINT

WEIGHT **#**

DRILLER **Ron**

DATE OF MEASUREMENT

FALL **"**

PIRNIE STAFF **J.R.W**

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	2.5		0		Lt brown Sand and Gravel with Silt. Loose, dry.			
4					Dk brown-reddish sand, gravel, ash, slag, and glass. Loose, moist.	1.0		
6					SAA.	5.0		
8	3.5		0		Brown sandy Silt. Firm	6.0		
10					Lt brown Sand and Gravel with Silt.	8.0		
12					SAA.	10.0		
14	3		0					
16					SAA, saturated at 17 ft bgs.	15.0		
18	2		0					
20						20.0		

Collect samples 3.5-4.5 (Metals
and PCBs).



MALCOLM PIRNE						TEST BORING LOG	BORING No.SB-20
PROJECT Tioga Castings			LOCATION Owego, NY			SHEET 1 OF 1	
CLIENT NYSDEC						PROJECT No. 0266362	
DRILLING CONTRACTOR Aztech						MEAS. PT. ELEV.	
PURPOSE Site Investigation						GROUND ELEV.	
WELL MATERIAL						DATUM	
DRILLING METHOD(S) Geoprobe			SAMPLE	CORE	CASING	DATE STARTED 7/16/08	
DRILL RIG TYPE 6610		TYPE MacroCore				DATE FINISHED 7/16/08	
GROUND WATER DEPTH '		DIA. 2"				DRILLER Ron	
MEASURING POINT		WEIGHT #				PIRNE STAFF J.R.W	
DATE OF MEASUREMENT		FALL	"				

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
					Concrete slab. Drill with star bit.			
					Dk brown-red silty sand, glass, and slag.	0.5		
2	2		0		Lt brown fn Sand and Silt with some gravel. Firm, cohesive.	1.0		
4								
6	2.5		0		Lt brown Sand and Gravel with silt.	5.0		
8								
10					SAA.	10.0		
12	3.5		0					
14								
						15.0		Collect samples 14-15 ft bgs. Not enough matrix for VOCs.

MALCOLM PIRNIE				TEST BORING LOG		BORING No.SB-21		
PROJECT Tioga Castings			LOCATION Owego, NY			SHEET 1 OF 1		
CLIENT NYSDEC			PROJECT No. 0266362					
DRILLING CONTRACTOR Aztech			MEAS. PT. ELEV.					
PURPOSE Site Investigation			GROUND ELEV.					
WELL MATERIAL			DATUM					
DRILLING METHOD(S) Geoprobe		SAMPLE	CORE	CASING	DATE STARTED 7/16/08			
DRILL RIG TYPE 6610	TYPE MacroCore				DATE FINISHED 7/16/08			
GROUND WATER DEPTH 15.0'	DIA. 2"				DRILLER Ron			
MEASURING POINT	WEIGHT #				PIRNIE STAFF J.R.W			
DATE OF MEASUREMENT	FALL	"						
DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
0			0		Dk brown fn-med sand. Loose.			
0.5					Lt brown sand and gravel with trace coal.	0.5		
3.5					Lt brown fine Silty Sand with some Gravel. Firm, moist.	3.5		
5.0					Lt brown Sand and Gravel with Silt. Moist.	5.0		
10.0					SAA, wet at 15 ft bgs.	10.0		
15.0						15.0		

MALCOLM PIRNIE				TEST BORING LOG			BORING No.SB-22	
PROJECT Tioga Castings			LOCATION Owego, NY			SHEET 1 OF 1		
CLIENT NYSDEC						PROJECT No. 0266362		
DRILLING CONTRACTOR Aztech						MEAS. PT. ELEV.		
PURPOSE Site Investigation						GROUND ELEV.		
WELL MATERIAL						DATUM		
DRILLING METHOD(S) Geoprobe			SAMPLE	CORE	CASING	DATE STARTED 7/16/08		
DRILL RIG TYPE 6610		TYPE MacroCore				DATE FINISHED 7/16/08		
GROUND WATER DEPTH '		DIA. 2"				DRILLER Ron		
MEASURING POINT		WEIGHT #				PIRNIE STAFF J.R.W		
DATE OF MEASUREMENT		FALL	"					
DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
0			0		Concrete slab. Drill with Star bit.			
2	2.5		0		Black and red sand, slag, concrete, gravel. Moist.	0.5		
4								
6					SAA.	5.0		
8	3		0		Brown fn-med Sand and Silt with some Gravel. Wet, slightly cohesive.	7.0		
10					Lt brown Sand and Gravel with Silt.	8.0		
						10.0		

PROJECT **Tioga Castings**LOCATION **Owego, NY**SHEET **1** OF **1**CLIENT **NYSDEC**PROJECT No. **0266362**DRILLING CONTRACTOR **Aztech**

MEAS. PT. ELEV.

PURPOSE **Site Investigation**

GROUND ELEV.

WELL MATERIAL

DATUM

DRILLING METHOD(S) **Geoprobe**

SAMPLE

CORE

CASING

DATE STARTED **7/16/08**DRILL RIG TYPE **6610**TYPE **MacroCore**DATE FINISHED **7/16/08**GROUND WATER DEPTH **'**DIA. **2"**DRILLER **Ron**

MEASURING POINT

WEIGHT

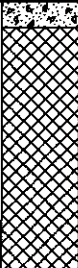
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PIRNE STAFF **J.R.W**

DATE OF MEASUREMENT

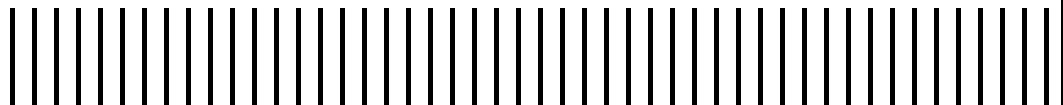
FALL

"

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	2.5		0		Concrete slab. Drill with star bit.	0.5		
4					Black and lt red sands, ash, slag, glass. Loose, moist.			
6	2.5		0		Lt brown Sand and Gravel with Silt.	5.0		
8								
10						10.0		

Appendix B

Analytical Reporting Forms



ANALYTICAL REPORT

Job Number: 220-5884-1

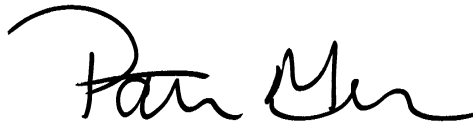
SDG Number: 220-5884

Job Description: NYSDEC Standby - Tioga Castings

For:

Malcolm Pirnie, Inc.
43 British American Boulevard
1st Floor
Latham, NY 12110

Attention: Mr. Bruce Nelson



Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
08/05/2008

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

TestAmerica Connecticut Certifications and Approvals: CTDOH PH-047, MADEP CT023, RIDOH A43, NYDOH 10602, NY NELAP 10602, NHDES 2528, NJDEP CT410, ME DOH CT023, UT DOH 2032614458

Case Narrative for Job: 220-5884-1

Client: **Malcolm Pirnie, Inc.**
Date: August 5, 2008

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.



Lawrence Decker
Laboratory Director

August 5, 2008
Date

Job Narrative
220-J5884-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC/MS VOA

Method(s) OLM04.2/Vol: Surrogate recovery for the following sample was outside control limits: SB-13 (4-5) (220-5884-7). A second run confirmed matrix interference. One set of data was submitted.

No other analytical or quality issues were noted.

GC Semi VOA

No analytical or quality issues were noted.

Metals

No analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

FORMULAS FOR NYSDEC SAMPLE CALCULATIONS

Volatiles

$$\frac{(AX)(IS)(DF)}{(AIS)(RRF)(V)(\% \text{ solids})} = C$$

$$\frac{(AX)(IS)(VT)(1000)(DF)}{(AIS)(RRF)(VA)(V)(\% \text{ solids})} = C \quad (\text{for medium level soils})$$

SemiVolatiles

$$\frac{(AX)(IS)(VE)(DF)(\text{GPC factor is 2 if needed})}{(AIS)(RRF)(\text{volume injected})(V)(\% \text{ solids})} = C$$

Pesticides

$$\frac{(AX)(VE)(DF)}{(RRF)(V)(\% \text{ solids})(\text{volume injected})} = C$$

PCBs for compound/retention time

$$\frac{(AX)(VE)(DF)}{(RRF \text{ of compound at the stated retention time})(V)(\% \text{ solids})(\text{volume injected})} = C$$

DRO/CTETPH

$$\frac{(AX)(VE)(DF)}{(RRF)(V)(\% \text{ solids})(\text{volume injected})} = C$$

AX = area of the target Ion

AIS = Area of Internal standard

C = concentration as ug/L or ug/Kg

DF = dilution

IS = Internal standard concentration (ng)

RRF = average RF (from initial cal except CLP methods from continuing cal)

V = sample volume for liquids in mls or sample weight for solids in grams

VA = volume of aliquot for medium level soils

VE = volume of concentrated extract

VT = volume of methanol for volatile medium level soils

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-5884-1	SB-09 (7.5-8.5)	Solid	07/16/2008 0758	07/17/2008 0951
220-5884-2	SB-09 (4-5)	Solid	07/16/2008 0805	07/17/2008 0951
220-5884-3	SB-10 (17-18)	Solid	07/16/2008 1418	07/17/2008 0951
220-5884-4	SB-11 (4-5)	Solid	07/16/2008 0730	07/17/2008 0951
220-5884-5	SB-11 (14-15)	Solid	07/16/2008 0730	07/17/2008 0951
220-5884-6	SB-12 (14-15)	Solid	07/16/2008 1435	07/17/2008 0951
220-5884-7	SB-13 (4-5)	Solid	07/16/2008 0855	07/17/2008 0951
220-5884-8	SB-14 (7-8)	Solid	07/16/2008 0830	07/17/2008 0951
220-5884-9	SB-15 (3-4)	Solid	07/16/2008 0920	07/17/2008 0951
220-5884-10	SB-16 4-5)	Solid	07/16/2008 1013	07/17/2008 0951
220-5884-11	SB-17 (14-15)	Solid	07/16/2008 1348	07/17/2008 0951
220-5884-12	SB-18 (14-15)	Solid	07/16/2008 1450	07/17/2008 0951
220-5884-13	SB-19 (3.5-4.5)	Solid	07/16/2008 1036	07/17/2008 0951
220-5884-14	SB-20 (14-15)	Solid	07/16/2008 1445	07/17/2008 0951
220-5884-15TB	TRIP BLANK	Water	07/16/2008 0000	07/17/2008 0951

METHOD SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Description	Lab Location	Method	Preparation Method
Matrix Solid			
CLP Volatile Organic Compounds	TAL CT	OLM04.2 OLM04.2/Vol	
Purge-and-Trap	TAL CT		SW846 5030B
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL CT	SW846 8082	
Ultrasonic Extraction	TAL CT		SW846 3550B
ILM05.3 Metals	TAL BUF	ILM05.3 ILM05.3	
Matrix Water			
CLP Volatile Organic Compounds	TAL CT	OLM04.2 OLM04.2/Vol	
Purge-and-Trap	TAL CT		SW846 5030B

Lab References:

TAL BUF = TestAmerica Buffalo

TAL CT = TestAmerica Connecticut

Method References:

ILM05.3 = U.S. Environmental Protection Agency

OLM04.2 = "Statement of Work for Organic Analysis", Multi-Media, Multi-Concentration September 1998

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Method	Analyst	Analyst ID
OLM04.2 OLM04.2/Vol	Humbert, Dave	DH
SW846 8082	Smith, Karli	KS
EPA PercentMoisture	Culik, Marie E	MEC

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-09 (7.5-8.5)

Lab Sample ID: 220-5884-1

Date Sampled: 07/16/2008 0758

Client Matrix: Solid

% Moisture: 19.8

Date Received: 07/17/2008 0951

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5187.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1609

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1609

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		12	U	0.12	12
Vinyl chloride		12	U	0.12	12
Bromomethane		12	U	0.12	12
Chloroethane		12	U	0.12	12
1,1-Dichloroethene		12	U	0.12	12
Carbon disulfide		12	U	0.12	12
Acetone		15	B	0.12	12
Methylene Chloride		4.6	J B	0.12	12
1,1-Dichloroethane		12	U	0.12	12
Methyl Ethyl Ketone		12	U	0.12	12
Chloroform		12	U	0.12	12
1,1,1-Trichloroethane		12	U	0.12	12
Carbon tetrachloride		12	U	0.12	12
Benzene		12	U	0.12	12
1,2-Dichloroethane		12	U	0.12	12
Trichloroethene		1.1	J	0.12	12
1,2-Dichloropropane		12	U	0.12	12
Bromodichloromethane		12	U	0.12	12
cis-1,3-Dichloropropene		12	U	0.12	12
methyl isobutyl ketone		12	U	0.12	12
Toluene		12	U	0.12	12
trans-1,3-Dichloropropene		12	U	0.12	12
1,1,2-Trichloroethane		12	U	0.12	12
Tetrachloroethene		12	U	0.12	12
2-Hexanone		12	U	0.12	12
Dibromochloromethane		12	U	0.12	12
Chlorobenzene		12	U	0.12	12
Ethylbenzene		12	U	0.12	12
Styrene		12	U	0.12	12
Bromoform		12	U	0.12	12
1,1,2,2-Tetrachloroethane		12	U	0.12	12
Xylenes, Total		12	U	0.12	12
cis-1,2-Dichloroethene		12	U	0.12	12
trans-1,2-Dichloroethene		12	U	0.12	12
Dichlorodifluoromethane		12	U	0.12	12
Trichlorofluoromethane		12	U	0.12	12
1,1,2-Trichloro-1,2,2-trifluoroethane		12	U	0.12	12
Methyl tert-butyl ether		12	U	0.12	12
1,2-Dibromoethane		12	U	0.12	12
Isopropylbenzene		12	U	0.12	12
1,3-Dichlorobenzene		12	U	0.12	12
1,4-Dichlorobenzene		12	U	0.12	12
1,2-Dichlorobenzene		12	U	0.12	12
1,2-Dibromo-3-Chloropropane		12	U	0.12	12

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-09 (7.5-8.5)

Lab Sample ID: 220-5884-1

Date Sampled: 07/16/2008 0758

Client Matrix: Solid

% Moisture: 19.8

Date Received: 07/17/2008 0951

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5187.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1609

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1609

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		12	U	0.12	12
Methyl acetate		12	U	0.12	12
Cyclohexane		12	U	0.12	12
Methylcyclohexane		12	U	0.12	12
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		100		70 - 121	
4-Bromofluorobenzene		102		59 - 113	
Toluene-d8 (Surr)		103		84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-11 (14-15)

Lab Sample ID: 220-5884-5

Date Sampled: 07/16/2008 0730

Client Matrix: Solid

% Moisture: 13.4

Date Received: 07/17/2008 0951

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5164.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1904

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1904

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		12	U	0.12	12
Vinyl chloride		12	U	0.12	12
Bromomethane		12	U	0.12	12
Chloroethane		12	U	0.12	12
1,1-Dichloroethene		12	U	0.12	12
Carbon disulfide		12	U	0.12	12
Acetone		12	U	0.12	12
Methylene Chloride		5.2	J B	0.12	12
1,1-Dichloroethane		12	U	0.12	12
Methyl Ethyl Ketone		12	U	0.12	12
Chloroform		12	U	0.12	12
1,1,1-Trichloroethane		12	U	0.12	12
Carbon tetrachloride		12	U	0.12	12
Benzene		12	U	0.12	12
1,2-Dichloroethane		12	U	0.12	12
Trichloroethene		9.7	J	0.12	12
1,2-Dichloropropane		12	U	0.12	12
Bromodichloromethane		12	U	0.12	12
cis-1,3-Dichloropropene		12	U	0.12	12
methyl isobutyl ketone		12	U	0.12	12
Toluene		0.72	J B	0.12	12
trans-1,3-Dichloropropene		12	U	0.12	12
1,1,2-Trichloroethane		12	U	0.12	12
Tetrachloroethene		12	U	0.12	12
2-Hexanone		12	U	0.12	12
Dibromochloromethane		12	U	0.12	12
Chlorobenzene		12	U	0.12	12
Ethylbenzene		12	U	0.12	12
Styrene		12	U	0.12	12
Bromoform		12	U	0.12	12
1,1,2,2-Tetrachloroethane		12	U	0.12	12
Xylenes, Total		0.63	J	0.12	12
cis-1,2-Dichloroethene		12	U	0.12	12
trans-1,2-Dichloroethene		12	U	0.12	12
Dichlorodifluoromethane		12	U	0.12	12
Trichlorofluoromethane		12	U	0.12	12
1,1,2-Trichloro-1,2,2-trifluoroethane		12	U	0.12	12
Methyl tert-butyl ether		12	U	0.12	12
1,2-Dibromoethane		12	U	0.12	12
Isopropylbenzene		12	U	0.12	12
1,3-Dichlorobenzene		12	U	0.12	12
1,4-Dichlorobenzene		12	U	0.12	12
1,2-Dichlorobenzene		12	U	0.12	12
1,2-Dibromo-3-Chloropropane		12	U	0.12	12

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-11 (14-15)

Lab Sample ID: 220-5884-5

Date Sampled: 07/16/2008 0730

Client Matrix: Solid

% Moisture: 13.4

Date Received: 07/17/2008 0951

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5164.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1904

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1904

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		12	U	0.12	12
Methyl acetate		12	U	0.12	12
Cyclohexane		12	U	0.12	12
Methylcyclohexane		12	U	0.12	12
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		118		70 - 121	
4-Bromofluorobenzene		107		59 - 113	
Toluene-d8 (Surr)		110		84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-13 (4-5)

Lab Sample ID: 220-5884-7

Date Sampled: 07/16/2008 0855

Client Matrix: Solid

% Moisture: 17.1

Date Received: 07/17/2008 0951

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5165.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1929

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1929

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		12	U	0.12	12
Vinyl chloride		12	U	0.12	12
Bromomethane		12	U	0.12	12
Chloroethane		12	U	0.12	12
1,1-Dichloroethene		12	U	0.12	12
Carbon disulfide		12	U	0.12	12
Acetone		12	U	0.12	12
Methylene Chloride		2.4	J B	0.12	12
1,1-Dichloroethane		12	U	0.12	12
Methyl Ethyl Ketone		12	U	0.12	12
Chloroform		12	U	0.12	12
1,1,1-Trichloroethane		12	U	0.12	12
Carbon tetrachloride		12	U	0.12	12
Benzene		12	U	0.12	12
1,2-Dichloroethane		12	U	0.12	12
Trichloroethene		12	U	0.12	12
1,2-Dichloropropane		12	U	0.12	12
Bromodichloromethane		12	U	0.12	12
cis-1,3-Dichloropropene		12	U	0.12	12
methyl isobutyl ketone		12	U	0.12	12
Toluene		12	U	0.12	12
trans-1,3-Dichloropropene		12	U	0.12	12
1,1,2-Trichloroethane		12	U	0.12	12
Tetrachloroethene		12	U	0.12	12
2-Hexanone		12	U	0.12	12
Dibromochloromethane		12	U	0.12	12
Chlorobenzene		12	U	0.12	12
Ethylbenzene		12	U	0.12	12
Styrene		12	U	0.12	12
Bromoform		12	U	0.12	12
1,1,2,2-Tetrachloroethane		12	U	0.12	12
Xylenes, Total		12	U	0.12	12
cis-1,2-Dichloroethene		12	U	0.12	12
trans-1,2-Dichloroethene		12	U	0.12	12
Dichlorodifluoromethane		12	U	0.12	12
Trichlorofluoromethane		12	U	0.12	12
1,1,2-Trichloro-1,2,2-trifluoroethane		12	U	0.12	12
Methyl tert-butyl ether		12	U	0.12	12
1,2-Dibromoethane		12	U	0.12	12
Isopropylbenzene		12	U	0.12	12
1,3-Dichlorobenzene		12	U	0.12	12
1,4-Dichlorobenzene		12	U	0.12	12
1,2-Dichlorobenzene		12	U	0.12	12
1,2-Dibromo-3-Chloropropane		12	U	0.12	12

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-13 (4-5)

Lab Sample ID: 220-5884-7

Date Sampled: 07/16/2008 0855

Client Matrix: Solid

% Moisture: 17.1

Date Received: 07/17/2008 0951

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5165.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1929

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1929

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		12	U	0.12	12
Methyl acetate		12	U	0.12	12
Cyclohexane		12	U	0.12	12
Methylcyclohexane		12	U	0.12	12
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		84		70 - 121	
4-Bromofluorobenzene		46	*	59 - 113	
Toluene-d8 (Surr)		71	*	84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-14 (7-8)

Lab Sample ID: 220-5884-8

Date Sampled: 07/16/2008 0830

Client Matrix: Solid

% Moisture: 13.1

Date Received: 07/17/2008 0951

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5166.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1954

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1954

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		12	U	0.12	12
Vinyl chloride		12	U	0.12	12
Bromomethane		12	U	0.12	12
Chloroethane		12	U	0.12	12
1,1-Dichloroethene		12	U	0.12	12
Carbon disulfide		12	U	0.12	12
Acetone		12	U	0.12	12
Methylene Chloride		2.7	J B	0.12	12
1,1-Dichloroethane		12	U	0.12	12
Methyl Ethyl Ketone		12	U	0.12	12
Chloroform		12	U	0.12	12
1,1,1-Trichloroethane		12	U	0.12	12
Carbon tetrachloride		12	U	0.12	12
Benzene		0.80	J	0.12	12
1,2-Dichloroethane		12	U	0.12	12
Trichloroethene		12	U	0.12	12
1,2-Dichloropropane		12	U	0.12	12
Bromodichloromethane		12	U	0.12	12
cis-1,3-Dichloropropene		12	U	0.12	12
methyl isobutyl ketone		12	U	0.12	12
Toluene		2.0	J B	0.12	12
trans-1,3-Dichloropropene		12	U	0.12	12
1,1,2-Trichloroethane		12	U	0.12	12
Tetrachloroethene		12	U	0.12	12
2-Hexanone		12	U	0.12	12
Dibromochloromethane		12	U	0.12	12
Chlorobenzene		12	U	0.12	12
Ethylbenzene		0.83	J	0.12	12
Styrene		12	U	0.12	12
Bromoform		12	U	0.12	12
1,1,2,2-Tetrachloroethane		12	U	0.12	12
Xylenes, Total		1.3	J	0.12	12
cis-1,2-Dichloroethene		12	U	0.12	12
trans-1,2-Dichloroethene		12	U	0.12	12
Dichlorodifluoromethane		12	U	0.12	12
Trichlorofluoromethane		12	U	0.12	12
1,1,2-Trichloro-1,2,2-trifluoroethane		12	U	0.12	12
Methyl tert-butyl ether		12	U	0.12	12
1,2-Dibromoethane		12	U	0.12	12
Isopropylbenzene		0.92	J	0.12	12
1,3-Dichlorobenzene		12	U	0.12	12
1,4-Dichlorobenzene		12	U	0.12	12
1,2-Dichlorobenzene		12	U	0.12	12
1,2-Dibromo-3-Chloropropane		12	U	0.12	12

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-14 (7-8)

Lab Sample ID: 220-5884-8

Date Sampled: 07/16/2008 0830

Client Matrix: Solid

% Moisture: 13.1

Date Received: 07/17/2008 0951

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5166.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1954

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1954

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		12	U	0.12	12
Methyl acetate		12	U	0.12	12
Cyclohexane		12	U	0.12	12
Methylcyclohexane		3.3	J	0.12	12
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		100		70 - 121	
4-Bromofluorobenzene		76		59 - 113	
Toluene-d8 (Surr)		100		84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: TRIP BLANK

Lab Sample ID: 220-5884-15TB

Client Matrix: Water

Date Sampled: 07/16/2008 0000

Date Received: 07/17/2008 0951

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18355

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4804.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/22/2008 1546

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1546

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	10	U	0.10	10
Methylene Chloride	10	U	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	10	U	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: TRIP BLANK

Lab Sample ID: 220-5884-15TB

Client Matrix: Water

Date Sampled: 07/16/2008 0000

Date Received: 07/17/2008 0951

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18355

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4804.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/22/2008 1546

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1546

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10
Surrogate	%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	99		76 - 114	
4-Bromofluorobenzene	93		86 - 115	
Toluene-d8 (Surr)	100		88 - 110	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-09 (7.5-8.5)

Lab Sample ID: 220-5884-1

Date Sampled: 07/16/2008 0758

Client Matrix: Solid

% Moisture: 19.8

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18252

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18172

Lab File ID: D4716124.d

Dilution: 1.0

Initial Weight/Volume: 30.36 g

Date Analyzed: 07/22/2008 2108

Final Weight/Volume: 10 mL

Date Prepared: 07/21/2008 1909

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		21	U	5.7	21
PCB-1221		41	U	1.4	41
PCB-1232		21	U	5.7	21
PCB-1242		21	U	5.7	21
PCB-1248		21	U	5.7	21
PCB-1254		21	U	1.9	21
PCB-1260		21	U	4.3	21

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	120	24 - 154
DCB Decachlorobiphenyl	99	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-09 (4-5)

Lab Sample ID: 220-5884-2

Date Sampled: 07/16/2008 0805

Client Matrix: Solid

% Moisture: 9.3

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18252

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18172

Lab File ID: D4716125.d

Dilution: 1.0

Initial Weight/Volume: 30.48 g

Date Analyzed: 07/22/2008 2125

Final Weight/Volume: 10 mL

Date Prepared: 07/21/2008 1909

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		18	U	5.0	18
PCB-1221		36	U	1.2	36
PCB-1232		18	U	5.0	18
PCB-1242		18	U	5.0	18
PCB-1248		18	U	5.0	18
PCB-1254		18	U	1.7	18
PCB-1260		18	U	3.7	18

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	83	24 - 154
DCB Decachlorobiphenyl	83	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-10 (17-18)

Lab Sample ID: 220-5884-3

Date Sampled: 07/16/2008 1418

Client Matrix: Solid

% Moisture: 10.0

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18252

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18172

Lab File ID: D4716126.d

Dilution: 1.0

Initial Weight/Volume: 30.13 g

Date Analyzed: 07/22/2008 2141

Final Weight/Volume: 10 mL

Date Prepared: 07/21/2008 1909

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.1	19
PCB-1221		37	U	1.2	37
PCB-1232		19	U	5.1	19
PCB-1242		19	U	5.1	19
PCB-1248		19	U	5.1	19
PCB-1254		19	U	1.7	19
PCB-1260		19	U	3.8	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	90	24 - 154
DCB Decachlorobiphenyl	104	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-11 (4-5)

Lab Sample ID: 220-5884-4

Date Sampled: 07/16/2008 0730

Client Matrix: Solid

% Moisture: 17.7

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18252

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18172

Lab File ID: D4716127.d

Dilution: 1.0

Initial Weight/Volume: 30.19 g

Date Analyzed: 07/22/2008 2158

Final Weight/Volume: 10 mL

Date Prepared: 07/21/2008 1909

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		21	U	5.6	21
PCB-1221		40	U	1.3	40
PCB-1232		21	U	5.6	21
PCB-1242		21	U	5.6	21
PCB-1248		21	U	5.6	21
PCB-1254		21	U	1.8	21
PCB-1260		21	U	4.2	21

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	99	24 - 154
DCB Decachlorobiphenyl	93	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-12 (14-15)

Lab Sample ID: 220-5884-6

Date Sampled: 07/16/2008 1435

Client Matrix: Solid

% Moisture: 10.8

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18252

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18172

Lab File ID: D4716128.d

Dilution: 1.0

Initial Weight/Volume: 30.58 g

Date Analyzed: 07/22/2008 2215

Final Weight/Volume: 10 mL

Date Prepared: 07/21/2008 1909

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.1	19
PCB-1221		36	U	1.2	36
PCB-1232		19	U	5.1	19
PCB-1242		19	U	5.1	19
PCB-1248		19	U	5.1	19
PCB-1254		19	U	1.7	19
PCB-1260		19	U	3.8	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	82	24 - 154
DCB Decachlorobiphenyl	96	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-13 (4-5)

Lab Sample ID: 220-5884-7

Date Sampled: 07/16/2008 0855

Client Matrix: Solid

% Moisture: 17.1

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18252

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18172

Lab File ID: D4716129.d

Dilution: 1.0

Initial Weight/Volume: 30.37 g

Date Analyzed: 07/22/2008 2232

Final Weight/Volume: 10 mL

Date Prepared: 07/21/2008 1909

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		20	U	5.5	20
PCB-1221		39	U	1.3	39
PCB-1232		20	U	5.5	20
PCB-1242		20	U	5.5	20
PCB-1248		20	U	5.5	20
PCB-1254		20	U	1.8	20
PCB-1260		20	U	4.1	20

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	70	24 - 154
DCB Decachlorobiphenyl	93	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-14 (7-8)

Lab Sample ID: 220-5884-8

Date Sampled: 07/16/2008 0830

Client Matrix: Solid

% Moisture: 13.1

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18252

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18172

Lab File ID: D4716130.d

Dilution: 1.0

Initial Weight/Volume: 30.41 g

Date Analyzed: 07/22/2008 2249

Final Weight/Volume: 10 mL

Date Prepared: 07/21/2008 1909

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.2	19
PCB-1221		37	U	1.3	37
PCB-1232		19	U	5.2	19
PCB-1242		19	U	5.2	19
PCB-1248		19	U	5.2	19
PCB-1254		19	U	1.7	19
PCB-1260		19	U	3.9	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	74	24 - 154
DCB Decachlorobiphenyl	65	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-15 (3-4)

Lab Sample ID: 220-5884-9

Date Sampled: 07/16/2008 0920

Client Matrix: Solid

% Moisture: 19.0

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18252

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18172

Lab File ID: D4716131.d

Dilution: 1.0

Initial Weight/Volume: 30.04 g

Date Analyzed: 07/22/2008 2305

Final Weight/Volume: 10 mL

Date Prepared: 07/21/2008 1909

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		21	U	5.7	21
PCB-1221		41	U	1.4	41
PCB-1232		21	U	5.7	21
PCB-1242		21	U	5.7	21
PCB-1248		21	U	5.7	21
PCB-1254		21	U	1.9	21
PCB-1260		21	U	4.3	21

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	57	24 - 154
DCB Decachlorobiphenyl	62	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-16 4-5)

Lab Sample ID: 220-5884-10

Date Sampled: 07/16/2008 1013

Client Matrix: Solid

% Moisture: 13.3

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18252

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18172

Lab File ID: D4716132.d

Dilution: 1.0

Initial Weight/Volume: 30.72 g

Date Analyzed: 07/22/2008 2322

Final Weight/Volume: 10 mL

Date Prepared: 07/21/2008 1909

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.2	19
PCB-1221		37	U	1.2	37
PCB-1232		19	U	5.2	19
PCB-1242		19	U	5.2	19
PCB-1248		19	U	5.2	19
PCB-1254		19	U	1.7	19
PCB-1260		19	U	3.9	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	71	24 - 154
DCB Decachlorobiphenyl	65	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-17 (14-15)

Lab Sample ID: 220-5884-11

Date Sampled: 07/16/2008 1348

Client Matrix: Solid

% Moisture: 5.9

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18252

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18172

Lab File ID: D4716133.d

Dilution: 1.0

Initial Weight/Volume: 30.68 g

Date Analyzed: 07/22/2008 2339

Final Weight/Volume: 10 mL

Date Prepared: 07/21/2008 1909

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		18	U	4.8	18
PCB-1221		34	U	1.1	34
PCB-1232		18	U	4.8	18
PCB-1242		18	U	4.8	18
PCB-1248		18	U	4.8	18
PCB-1254		18	U	1.6	18
PCB-1260		18	U	3.6	18

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	73	24 - 154
DCB Decachlorobiphenyl	85	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-18 (14-15)

Lab Sample ID: 220-5884-12

Date Sampled: 07/16/2008 1450

Client Matrix: Solid

% Moisture: 7.0

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 220-18252	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18172	Lab File ID:	C4716134.d
Dilution:	1.0		Initial Weight/Volume:	30.79 g
Date Analyzed:	07/22/2008 2356		Final Weight/Volume:	10 mL
Date Prepared:	07/21/2008 1909		Injection Volume:	1.0 uL
			Column ID:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		18	U	4.8	18
PCB-1221		35	U	1.2	35
PCB-1232		18	U	4.8	18
PCB-1242		18	U	4.8	18
PCB-1248		18	U	4.8	18
PCB-1254		18	U	1.6	18
PCB-1260		7.7	J	3.6	18

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	81	24 - 154
DCB Decachlorobiphenyl	95	25 - 159

Method:	8082	Analysis Batch: 220-18252	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18172	Lab File ID:	C4716134.d
Dilution:	1.0		Initial Weight/Volume:	30.79 g
Date Analyzed:	07/22/2008 2356		Final Weight/Volume:	10 mL
Date Prepared:	07/21/2008 1909		Injection Volume:	1.0 uL
			Column ID:	SECONDARY

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	76	24 - 154
DCB Decachlorobiphenyl	88	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-19 (3.5-4.5)

Lab Sample ID: 220-5884-13

Date Sampled: 07/16/2008 1036

Client Matrix: Solid

% Moisture: 11.3

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 220-18252	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18172	Lab File ID:	C4716135.d
Dilution:	1.0		Initial Weight/Volume:	30.43 g
Date Analyzed:	07/23/2008 0012		Final Weight/Volume:	10 mL
Date Prepared:	07/21/2008 1909		Injection Volume:	1.0 uL
			Column ID:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.1	19
PCB-1221		37	U	1.2	37
PCB-1232		19	U	5.1	19
PCB-1242		19	U	5.1	19
PCB-1248		19	U	5.1	19
PCB-1254		19	U	1.7	19
PCB-1260		16	J	3.8	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	65	24 - 154
DCB Decachlorobiphenyl	62	25 - 159

Method:	8082	Analysis Batch: 220-18252	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18172	Lab File ID:	D4716135.d
Dilution:	1.0		Initial Weight/Volume:	30.43 g
Date Analyzed:	07/23/2008 0012		Final Weight/Volume:	10 mL
Date Prepared:	07/21/2008 1909		Injection Volume:	1.0 uL
			Column ID:	SECONDARY

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	52	24 - 154
DCB Decachlorobiphenyl	56	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Client Sample ID: SB-20 (14-15)

Lab Sample ID: 220-5884-14

Date Sampled: 07/16/2008 1445

Client Matrix: Solid

% Moisture: 2.5

Date Received: 07/17/2008 0951

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18252

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18172

Lab File ID: D4716136.d

Dilution: 1.0

Initial Weight/Volume: 30.72 g

Date Analyzed: 07/23/2008 0029

Final Weight/Volume: 10 mL

Date Prepared: 07/21/2008 1909

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		17	U	4.6	17
PCB-1221		33	U	1.1	33
PCB-1232		17	U	4.6	17
PCB-1242		17	U	4.6	17
PCB-1248		17	U	4.6	17
PCB-1254		17	U	1.5	17
PCB-1260		17	U	3.5	17

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	95	24 - 154
DCB Decachlorobiphenyl	113	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

General Chemistry

Client Sample ID: SB-09 (7.5-8.5)

Lab Sample ID: 220-5884-1

Client Matrix: Solid

Date Sampled: 07/16/2008 0758

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	19.8		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	80.2		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Client Sample ID: SB-09 (4-5)

Lab Sample ID: 220-5884-2

Client Matrix: Solid

Date Sampled: 07/16/2008 0805

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	9.34		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	90.7		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Client Sample ID: SB-10 (17-18)

Lab Sample ID: 220-5884-3

Client Matrix: Solid

Date Sampled: 07/16/2008 1418

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.0		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	90.0		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

General Chemistry

Client Sample ID: SB-11 (4-5)

Lab Sample ID: 220-5884-4

Client Matrix: Solid

Date Sampled: 07/16/2008 0730

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	17.7		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	82.3		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Client Sample ID: SB-11 (14-15)

Lab Sample ID: 220-5884-5

Client Matrix: Solid

Date Sampled: 07/16/2008 0730

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	13.4		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	86.6		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Client Sample ID: SB-12 (14-15)

Lab Sample ID: 220-5884-6

Client Matrix: Solid

Date Sampled: 07/16/2008 1435

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.8		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	89.2		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Client Sample ID: SB-13 (4-5)

Lab Sample ID: 220-5884-7

Client Matrix: Solid

Date Sampled: 07/16/2008 0855

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	17.1		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	82.9		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

General Chemistry

Client Sample ID: SB-14 (7-8)

Lab Sample ID: 220-5884-8

Client Matrix: Solid

Date Sampled: 07/16/2008 0830

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	13.1		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	86.9		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Client Sample ID: SB-15 (3-4)

Lab Sample ID: 220-5884-9

Client Matrix: Solid

Date Sampled: 07/16/2008 0920

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	19.0		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	81.0		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Client Sample ID: SB-16 4-5)

Lab Sample ID: 220-5884-10

Client Matrix: Solid

Date Sampled: 07/16/2008 1013

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	13.3		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	86.7		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Client Sample ID: SB-17 (14-15)

Lab Sample ID: 220-5884-11

Client Matrix: Solid

Date Sampled: 07/16/2008 1348

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	5.89		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	94.1		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

General Chemistry

Client Sample ID: SB-18 (14-15)

Lab Sample ID: 220-5884-12

Client Matrix: Solid

Date Sampled: 07/16/2008 1450

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	7.00		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	93.0		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Client Sample ID: SB-19 (3.5-4.5)

Lab Sample ID: 220-5884-13

Client Matrix: Solid

Date Sampled: 07/16/2008 1036

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	11.3		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	88.7		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Client Sample ID: SB-20 (14-15)

Lab Sample ID: 220-5884-14

Client Matrix: Solid

Date Sampled: 07/16/2008 1445

Date Received: 07/17/2008 0951

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	2.48		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			
Percent Solids	97.5		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18119	Date Analyzed		07/18/2008 1325			

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Surrogate Recovery Report

OLM04.2/Vol CLP Volatile Organic Compounds

Client Matrix: Solid

Lab Sample ID	Client Sample ID	12DCE %Rec	TOL %Rec	BFB %Rec
220-5884-1	SB-09 (7.5-8.5)	100	103	102
220-5884-5	SB-11 (14-15)	118	110	107
220-5884-7	SB-13 (4-5)	84	71*	46*
220-5884-8	SB-14 (7-8)	100	100	76
MB 220-18283/2		98	97	106
MB 220-18353/2		95	99	103
LCS 220-18283/3		100	98	97
LCS 220-18353/3		96	97	99
MSB 220-18283/11		102	100	98
220-5884-1 MS	SB-09 (7.5-8.5) MS	93	107	81
220-5884-1 MSD	SB-09 (7.5-8.5) MSD	80	92	70

Surrogate	Acceptance Limits
12DCE = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	84-138
BFB = 4-Bromofluorobenzene	59-113

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Surrogate Recovery Report

OLM04.2/Vol CLP Volatile Organic Compounds

Client Matrix: Water

Lab Sample ID	Client Sample ID	12DCE %Rec	TOL %Rec	BFB %Rec
220-5884-15	TRIP BLANK	99	100	93
MB 220-18355/2		94	103	94
LCS 220-18355/3		98	101	99

Surrogate	Acceptance Limits
12DCE = 1,2-Dichloroethane-d4 (Surr)	76-114
TOL = Toluene-d8 (Surr)	88-110
BFB = 4-Bromofluorobenzene	86-115

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TCX1 %Rec	TCX2 %Rec	DCB1 %Rec	DCB2 %Rec
220-5884-1	SB-09 (7.5-8.5)		120		99
220-5884-2	SB-09 (4-5)		83		83
220-5884-3	SB-10 (17-18)		90		104
220-5884-4	SB-11 (4-5)		99		93
220-5884-6	SB-12 (14-15)		82		96
220-5884-7	SB-13 (4-5)		70		93
220-5884-8	SB-14 (7-8)		74		65
220-5884-9	SB-15 (3-4)		57		62
220-5884-10	SB-16 (4-5)		71		65
220-5884-11	SB-17 (14-15)		73		85
220-5884-12	SB-18 (14-15)	76	81	95	88
220-5884-13	SB-19 (3.5-4.5)	65	52	62	56
220-5884-14	SB-20 (14-15)		95		113
MB 220-18172/1-A		99	92	107	101
LCS 220-18172/2-A		98	89	109	103

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	24-154
DCB = DCB Decachlorobiphenyl	25-159

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Method Blank - Batch: 220-18283

Method: OLM04.2/Vol Preparation: 5030B

Lab Sample ID: MB 220-18283/2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2008 1038
Date Prepared: 07/23/2008 1038

Analysis Batch: 220-18283
Prep Batch: N/A
Units: ug/Kg

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5178.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	2.2	J	0.10	10
Methylene Chloride	1.7	J	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	0.41	J	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Method Blank - Batch: 220-18283

Method: OLM04.2/Vol Preparation: 5030B

Lab Sample ID: MB 220-18283/2

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Client Matrix: Solid

Prep Batch: N/A

Lab File ID: O5178.D

Dilution: 1.0

Units: ug/Kg

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1038

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1038

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10
Surrogate	% Rec	Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	98	70 - 121		
4-Bromofluorobenzene	106	59 - 113		
Toluene-d8 (Surr)	97	84 - 138		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Lab Control Spike - Batch: 220-18283

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: LCS 220-18283/3
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2008 1126
Date Prepared: 07/23/2008 1126

Analysis Batch: 220-18283
Prep Batch: N/A
Units: ug/Kg

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5179.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethene	20.0	20.1	101	59 - 172	
Benzene	20.0	19.7	98	66 - 142	
Trichloroethene	20.0	19.7	98	62 - 137	
Toluene	20.0	20.4	102	59 - 139	
Chlorobenzene	20.0	19.6	98	60 - 133	
Surrogate	% Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	100		70 - 121		
4-Bromofluorobenzene	97		59 - 113		
Toluene-d8 (Surr)	98		84 - 138		

Matrix Spike Blank - Batch: 220-18283

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: MSB 220-18283/11
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2008 1855
Date Prepared: 07/23/2008 1855

Analysis Batch: 220-18283
Prep Batch: N/A
Units: ug/Kg

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5193.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethene	50.0	57.4	115	59 - 172	
Benzene	50.0	49.9	100	66 - 142	
Trichloroethene	50.0	49.9	100	62 - 137	
Toluene	50.0	50.7	101	59 - 139	
Chlorobenzene	50.0	49.1	98	60 - 133	
Surrogate	% Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	102		70 - 121		
4-Bromofluorobenzene	98		59 - 113		
Toluene-d8 (Surr)	100		84 - 138		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 220-18283

Method: OLM04.2/Vol
Preparation: 5030B

MS Lab Sample ID: 220-5884-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2008 1920
Date Prepared: 07/23/2008 1920

Analysis Batch: 220-18283
Prep Batch: N/A

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5194.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 220-5884-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2008 1945
Date Prepared: 07/23/2008 1945

Analysis Batch: 220-18283
Prep Batch: N/A

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5195.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,1-Dichloroethene	120	104	59 - 172	14	22		
Benzene	108	97	66 - 142	10	21		
Trichloroethene	117	92	62 - 137	24	24		
Toluene	114	99	59 - 139	14	21		
Chlorobenzene	100	87	60 - 133	13	21		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
1,2-Dichloroethane-d4 (Surr)	93		80	70 - 121			
4-Bromofluorobenzene	81		70	59 - 113			
Toluene-d8 (Surr)	107		92	84 - 138			

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Method Blank - Batch: 220-18353

Method: OLM04.2/Vol Preparation: 5030B

Lab Sample ID: MB 220-18353/2

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Client Matrix: Solid

Prep Batch: N/A

Lab File ID: O5149.D

Dilution: 1.0

Units: ug/Kg

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1047

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1047

Analyte	Result	Qual	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	2.1	J	0.10	10
Methylene Chloride	1.5	J	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	0.24	J	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Method Blank - Batch: 220-18353

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: MB 220-18353/2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2008 1047
Date Prepared: 07/22/2008 1047

Analysis Batch: 220-18353
Prep Batch: N/A
Units: ug/Kg

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5149.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95	70 - 121
4-Bromofluorobenzene	103	59 - 113
Toluene-d8 (Surr)	99	84 - 138

Lab Control Spike - Batch: 220-18353

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: LCS 220-18353/3
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2008 1247
Date Prepared: 07/22/2008 1247

Analysis Batch: 220-18353
Prep Batch: N/A
Units: ug/Kg

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5151.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethene	20.0	21.5	108	59 - 172	
Benzene	20.0	21.0	105	66 - 142	
Trichloroethene	20.0	20.4	102	62 - 137	
Toluene	20.0	21.4	107	59 - 139	
Chlorobenzene	20.0	21.2	106	60 - 133	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	70 - 121
4-Bromofluorobenzene	99	59 - 113
Toluene-d8 (Surr)	97	84 - 138

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Method Blank - Batch: 220-18355

Method: OLM04.2/Vol Preparation: 5030B

Lab Sample ID: MB 220-18355/2

Analysis Batch: 220-18355

Instrument ID: HP 6890/5973 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: Y4797.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 07/22/2008 1112

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1112

Analyte	Result	Qual	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	10	U	0.10	10
Methylene Chloride	0.82	J	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	10	U	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Method Blank - Batch: 220-18355

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: MB 220-18355/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/22/2008 1112
Date Prepared: 07/22/2008 1112

Analysis Batch: 220-18355
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: Y4797.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	76 - 114
4-Bromofluorobenzene	94	86 - 115
Toluene-d8 (Surr)	103	88 - 110

Lab Control Spike - Batch: 220-18355

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: LCS 220-18355/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/22/2008 1334
Date Prepared: 07/22/2008 1334

Analysis Batch: 220-18355
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: Y4800.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethene	20.0	21.7	108	61 - 145	
Benzene	20.0	21.2	106	76 - 127	
Trichloroethene	20.0	21.8	109	71 - 120	
Toluene	20.0	20.7	104	76 - 125	
Chlorobenzene	20.0	20.6	103	75 - 130	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	76 - 114
4-Bromofluorobenzene	99	86 - 115
Toluene-d8 (Surr)	101	88 - 110

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Method Blank - Batch: 220-18172

Method: 8082

Preparation: 3550B

Lab Sample ID: MB 220-18172/1-A

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/22/2008 1238

Date Prepared: 07/21/2008 1909

Analysis Batch: 220-18252

Prep Batch: 220-18172

Units: ug/Kg

Instrument ID: HP 5890 with dual ECD

Lab File ID: C4716106.d

Initial Weight/Volume: 30.0 g

Final Weight/Volume: 10 mL

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
PCB-1016	17	U	4.6	17
PCB-1221	33	U	1.1	33
PCB-1232	17	U	4.6	17
PCB-1242	17	U	4.6	17
PCB-1248	17	U	4.6	17
PCB-1254	17	U	1.5	17
PCB-1260	17	U	3.5	17

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	99	24 - 154
DCB Decachlorobiphenyl	107	25 - 159

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	92	24 - 154
DCB Decachlorobiphenyl	101	25 - 159

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Lab Control Spike - Batch: 220-18172

Method: 8082

Preparation: 3550B

Lab Sample ID: LCS 220-18172/2-A

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/22/2008 1255

Date Prepared: 07/21/2008 1909

Analysis Batch: 220-18252

Prep Batch: 220-18172

Units: ug/Kg

Instrument ID: HP 5890 with dual ECD

Lab File ID: C4716107.d

Initial Weight/Volume: 30.0 g

Final Weight/Volume: 10 mL

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
PCB-1016	167	160	96	42 - 130	
PCB-1260	167	137	82	50 - 128	
Surrogate	% Rec		Acceptance Limits		
Tetrachloro-m-xylene	98		24 - 154		
DCB Decachlorobiphenyl	109		25 - 159		
Surrogate	% Rec		Acceptance Limits		
Tetrachloro-m-xylene	89		24 - 154		
DCB Decachlorobiphenyl	103		25 - 159		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Duplicate - Batch: 220-18119

Method: PercentMoisture
Preparation: N/A

Lab Sample ID: 220-5884-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/18/2008 1325
Date Prepared: N/A

Analysis Batch: 220-18119
Prep Batch: N/A
Units: %

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	19.8	22.3	12	20	
Percent Solids	80.2	77.7	3	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc.

Job Number: 220-5884-1

Sdg Number: 220-5884

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.
GC Semi VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.

ANALYTICAL REPORT

Job Number: 220-5867-1

SDG Number: 220-5867

Job Description: NYSDEC Standby - Tioga Castings

For:

Malcolm Pirnie, Inc.
43 British American Boulevard
1st Floor
Latham, NY 12110

Attention: Mr. Bruce Nelson



Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
07/30/2008

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

TestAmerica Connecticut Certifications and Approvals: CTDOH PH-047, MADEP CT023, RIDOH A43, NYDOH 10602, NY NELAP 10602, NHDES 2528, NJDEP CT410, ME DOH CT023, UT DOH 2032614458

Case Narrative for Job: 220-5867-1

Client: Malcolm Pirnie, Inc.
Date: July 30, 2008

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.



Lawrence Decker
Laboratory Director

July 30, 2008
Date

Job Narrative
220-J5867-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC/MS VOA

Method(s) OLM04.2/Vol: Surrogate recovery for the following sample was outside control limits: SB-01 (12-13) (220-5867-1). A second run confirmed matrix interference. One set of data was reported.

Method(s) OLM04.2/Vol: Surrogate recovery for the following sample was outside control limits: SB-08 (9.5-10) (220-5867-11). A second run confirmed matrix interference. One set of data was reported.

No other analytical or quality issues were noted.

GC Semi VOA

Method(s) 8082: The capping continuing calibration verification (CCV) analyzed on 7/23/08 did not meet control limits for Decachlorobiphenyl on the RTX-CLP2 column.

Method(s) 8082: The continuing calibration verifications (CCV) analyzed on 7/22/08 and 7/23/08 did not meet control limits for Aroclor-1016 on the RTX-CLP column. These were both beginning and ending verifications. Early PCB's were not detected in any of the associated samples, SB-02 (3.5-17.5) (220-5867-7), SB-03 (4.5-20) (220-5867-10), SB-05 (4-15) (220-5867-8), SB-06 (7.5-8.5) (220-5867-15), SB-07 (4-5) (220-5867-13), SB-08 (9.5-10) (220-5867-11), therefore there should be no impact on the data.

No other analytical or quality issues were noted.

Metals

No analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

FORMULAS FOR NYSDEC SAMPLE CALCULATIONS

Volatiles

$$\frac{(AX)(IS)(DF)}{(AIS)(RRF)(V)(\% \text{ solids})} = C$$

$$\frac{(AX)(IS)(VT)(1000)(DF)}{(AIS)(RRF)(VA)(V)(\% \text{ solids})} = C \quad (\text{for medium level soils})$$

SemiVolatiles

$$\frac{(AX)(IS)(VE)(DF)(\text{GPC factor is 2 if needed})}{(AIS)(RRF)(\text{volume injected})(V)(\% \text{ solids})} = C$$

Pesticides

$$\frac{(AX)(VE)(DF)}{(RRF)(V)(\% \text{ solids})(\text{volume injected})} = C$$

PCBs for compound/retention time

$$\frac{(AX)(VE)(DF)}{(RRF \text{ of compound at the stated retention time})(V)(\% \text{ solids})(\text{volume injected})} = C$$

DRO/CTETPH

$$\frac{(AX)(VE)(DF)}{(RRF)(V)(\% \text{ solids})(\text{volume injected})} = C$$

AX = area of the target Ion

AIS = Area of Internal standard

C = concentration as ug/L or ug/Kg

DF = dilution

IS = Internal standard concentration (ng)

RRF = average RF (from initial cal except CLP methods from continuing cal)

V = sample volume for liquids in mls or sample weight for solids in grams

VA = volume of aliquot for medium level soils

VE = volume of concentrated extract

VT = volume of methanol for volatile medium level soils

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-5867-1	SB-01 (12-13)	Solid	07/15/2008 1055	07/16/2008 0944
220-5867-2	SB-02 (17-17.5)	Solid	07/15/2008 1120	07/16/2008 0944
220-5867-3	SB-05 (14.5-15)	Solid	07/15/2008 1145	07/16/2008 0944
220-5867-4	SB-04 (14.5-15)	Solid	07/15/2008 1230	07/16/2008 0944
220-5867-5	SB-03 (19-19.5)	Solid	07/15/2008 1345	07/16/2008 0944
220-5867-6	SB-01 (3.8-18)	Solid	07/15/2008 1055	07/16/2008 0944
220-5867-7	SB-02 (3.5-17.5)	Solid	07/15/2008 1120	07/16/2008 0944
220-5867-8	SB-05 (4-15)	Solid	07/15/2008 1145	07/16/2008 0944
220-5867-9	SB-04 (3.5-15)	Solid	07/15/2008 1230	07/16/2008 0944
220-5867-10	SB-03 (4.5-20)	Solid	07/15/2008 1345	07/16/2008 0944
220-5867-11	SB-08 (9.5-10)	Solid	07/15/2008 1416	07/16/2008 0944
220-5867-12	SB-08 (14.5-15)	Solid	07/15/2008 1435	07/16/2008 0944
220-5867-13	SB-07 (4-5)	Solid	07/15/2008 1500	07/16/2008 0944
220-5867-14	SB-07 (14.5-15.5)	Solid	07/15/2008 1500	07/16/2008 0944
220-5867-15	SB-06 (7.5-8.5)	Solid	07/15/2008 1530	07/16/2008 0944
220-5867-16	SB-06 (14-15)	Solid	07/15/2008 1535	07/16/2008 0944
220-5867-17TB	TRIP BLANK	Water	07/15/2008 0000	07/16/2008 0944

METHOD SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
CLP Volatile Organic Compounds	TAL CT	OLM04.2	OLM04.2/Vol
Purge-and-Trap	TAL CT		SW846 5030B
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL CT	SW846 8082	
Ultrasonic Extraction	TAL CT		SW846 3550B
ILM05.3 Metals	TAL BUF	ILM05.3	ILM05.3
Matrix: Water			
CLP Volatile Organic Compounds	TAL CT	OLM04.2	OLM04.2/Vol
Purge-and-Trap	TAL CT		SW846 5030B

Lab References:

TAL BUF = TestAmerica Buffalo

TAL CT = TestAmerica Connecticut

Method References:

ILM05.3 = U.S. Environmental Protection Agency

OLM04.2 = "Statement of Work for Organic Analysis", Multi-Media, Multi-Concentration September 1998

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Method	Analyst	Analyst ID
OLM04.2 OLM04.2/Vol	Humbert, Dave	DH
SW846 8082	Smith, Karli	KS
EPA PercentMoisture	Culik, Marie E	MEC

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-01 (12-13)

Lab Sample ID: 220-5867-1

Date Sampled: 07/15/2008 1055

Client Matrix: Solid

% Moisture: 7.8

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5153.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1400

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1400

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		11	U	0.11	11
Vinyl chloride		11	U	0.11	11
Bromomethane		11	U	0.11	11
Chloroethane		11	U	0.11	11
1,1-Dichloroethene		11	U	0.11	11
Carbon disulfide		11	U	0.11	11
Acetone		8.2	J B	0.11	11
Methylene Chloride		8.7	J B	0.11	11
1,1-Dichloroethane		11	U	0.11	11
Methyl Ethyl Ketone		11	U	0.11	11
Chloroform		11	U	0.11	11
1,1,1-Trichloroethane		11	U	0.11	11
Carbon tetrachloride		11	U	0.11	11
Benzene		1.2	J	0.11	11
1,2-Dichloroethane		11	U	0.11	11
Trichloroethene		22		0.11	11
1,2-Dichloropropane		11	U	0.11	11
Bromodichloromethane		11	U	0.11	11
cis-1,3-Dichloropropene		11	U	0.11	11
methyl isobutyl ketone		11	U	0.11	11
Toluene		1.6	J B	0.11	11
trans-1,3-Dichloropropene		11	U	0.11	11
1,1,2-Trichloroethane		11	U	0.11	11
Tetrachloroethene		11	U	0.11	11
2-Hexanone		11	U	0.11	11
Dibromochloromethane		11	U	0.11	11
Chlorobenzene		11	U	0.11	11
Ethylbenzene		1.4	J	0.11	11
Styrene		11	U	0.11	11
Bromoform		11	U	0.11	11
1,1,2,2-Tetrachloroethane		11	U	0.11	11
Xylenes, Total		3.6	J	0.11	11
cis-1,2-Dichloroethene		11	U	0.11	11
trans-1,2-Dichloroethene		11	U	0.11	11
Dichlorodifluoromethane		11	U	0.11	11
Trichlorofluoromethane		11	U	0.11	11
1,1,2-Trichloro-1,2,2-trifluoroethane		11	U	0.11	11
Methyl tert-butyl ether		11	U	0.11	11
1,2-Dibromoethane		11	U	0.11	11
Isopropylbenzene		11	U	0.11	11
1,3-Dichlorobenzene		11	U	0.11	11
1,4-Dichlorobenzene		11	U	0.11	11
1,2-Dichlorobenzene		11	U	0.11	11
1,2-Dibromo-3-Chloropropane		11	U	0.11	11

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-01 (12-13)

Lab Sample ID: 220-5867-1

Date Sampled: 07/15/2008 1055

Client Matrix: Solid

% Moisture: 7.8

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5153.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1400

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1400

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		11	U	0.11	11
Methyl acetate		11	U	0.11	11
Cyclohexane		11	U	0.11	11
Methylcyclohexane		11	U	0.11	11
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		85		70 - 121	
4-Bromofluorobenzene		44	*	59 - 113	
Toluene-d8 (Surr)		86		84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-02 (17-17.5)

Lab Sample ID: 220-5867-2

Date Sampled: 07/15/2008 1120

Client Matrix: Solid

% Moisture: 15.7

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5181.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1301

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1301

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		12	U	0.12	12
Vinyl chloride		12	U	0.12	12
Bromomethane		12	U	0.12	12
Chloroethane		12	U	0.12	12
1,1-Dichloroethene		12	U	0.12	12
Carbon disulfide		1.4	J	0.12	12
Acetone		21	B	0.12	12
Methylene Chloride		9.5	J B	0.12	12
1,1-Dichloroethane		12	U	0.12	12
Methyl Ethyl Ketone		12	U	0.12	12
Chloroform		12	U	0.12	12
1,1,1-Trichloroethane		12	U	0.12	12
Carbon tetrachloride		12	U	0.12	12
Benzene		2.2	J	0.12	12
1,2-Dichloroethane		12	U	0.12	12
Trichloroethene		23		0.12	12
1,2-Dichloropropane		12	U	0.12	12
Bromodichloromethane		12	U	0.12	12
cis-1,3-Dichloropropene		12	U	0.12	12
methyl isobutyl ketone		12	U	0.12	12
Toluene		2.9	J B	0.12	12
trans-1,3-Dichloropropene		12	U	0.12	12
1,1,2-Trichloroethane		12	U	0.12	12
Tetrachloroethene		12	U	0.12	12
2-Hexanone		12	U	0.12	12
Dibromochloromethane		12	U	0.12	12
Chlorobenzene		12	U	0.12	12
Ethylbenzene		1.9	J	0.12	12
Styrene		12	U	0.12	12
Bromoform		12	U	0.12	12
1,1,2,2-Tetrachloroethane		12	U	0.12	12
Xylenes, Total		4.6	J	0.12	12
cis-1,2-Dichloroethene		12	U	0.12	12
trans-1,2-Dichloroethene		12	U	0.12	12
Dichlorodifluoromethane		12	U	0.12	12
Trichlorofluoromethane		12	U	0.12	12
1,1,2-Trichloro-1,2,2-trifluoroethane		12	U	0.12	12
Methyl tert-butyl ether		12	U	0.12	12
1,2-Dibromoethane		12	U	0.12	12
Isopropylbenzene		12	U	0.12	12
1,3-Dichlorobenzene		12	U	0.12	12
1,4-Dichlorobenzene		12	U	0.12	12
1,2-Dichlorobenzene		12	U	0.12	12
1,2-Dibromo-3-Chloropropane		12	U	0.12	12

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-02 (17-17.5)

Lab Sample ID: 220-5867-2

Date Sampled: 07/15/2008 1120

Client Matrix: Solid

% Moisture: 15.7

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5181.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1301

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1301

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		12	U	0.12	12
Methyl acetate		12	U	0.12	12
Cyclohexane		12	U	0.12	12
Methylcyclohexane		12	U	0.12	12
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		94		70 - 121	
4-Bromofluorobenzene		63		59 - 113	
Toluene-d8 (Surr)		98		84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-05 (14.5-15)

Lab Sample ID: 220-5867-3

Date Sampled: 07/15/2008 1145

Client Matrix: Solid

% Moisture: 16.1

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5155.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1450

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1450

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		12	U	0.12	12
Vinyl chloride		12	U	0.12	12
Bromomethane		12	U	0.12	12
Chloroethane		12	U	0.12	12
1,1-Dichloroethene		12	U	0.12	12
Carbon disulfide		12	U	0.12	12
Acetone		75	B	0.12	12
Methylene Chloride		7.0	J B	0.12	12
1,1-Dichloroethane		12	U	0.12	12
Methyl Ethyl Ketone		18		0.12	12
Chloroform		12	U	0.12	12
1,1,1-Trichloroethane		12	U	0.12	12
Carbon tetrachloride		12	U	0.12	12
Benzene		0.16	J	0.12	12
1,2-Dichloroethane		12	U	0.12	12
Trichloroethene		3.2	J	0.12	12
1,2-Dichloropropane		12	U	0.12	12
Bromodichloromethane		12	U	0.12	12
cis-1,3-Dichloropropene		12	U	0.12	12
methyl isobutyl ketone		12	U	0.12	12
Toluene		0.68	J B	0.12	12
trans-1,3-Dichloropropene		12	U	0.12	12
1,1,2-Trichloroethane		12	U	0.12	12
Tetrachloroethene		12	U	0.12	12
2-Hexanone		12	U	0.12	12
Dibromochloromethane		12	U	0.12	12
Chlorobenzene		12	U	0.12	12
Ethylbenzene		12	U	0.12	12
Styrene		12	U	0.12	12
Bromoform		12	U	0.12	12
1,1,2,2-Tetrachloroethane		12	U	0.12	12
Xylenes, Total		12	U	0.12	12
cis-1,2-Dichloroethene		12	U	0.12	12
trans-1,2-Dichloroethene		12	U	0.12	12
Dichlorodifluoromethane		12	U	0.12	12
Trichlorofluoromethane		12	U	0.12	12
1,1,2-Trichloro-1,2,2-trifluoroethane		12	U	0.12	12
Methyl tert-butyl ether		12	U	0.12	12
1,2-Dibromoethane		12	U	0.12	12
Isopropylbenzene		12	U	0.12	12
1,3-Dichlorobenzene		12	U	0.12	12
1,4-Dichlorobenzene		12	U	0.12	12
1,2-Dichlorobenzene		12	U	0.12	12
1,2-Dibromo-3-Chloropropane		12	U	0.12	12

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-05 (14.5-15)

Lab Sample ID: 220-5867-3

Date Sampled: 07/15/2008 1145

Client Matrix: Solid

% Moisture: 16.1

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5155.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1450

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1450

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		12	U	0.12	12
Methyl acetate		12	U	0.12	12
Cyclohexane		12	U	0.12	12
Methylcyclohexane		12	U	0.12	12
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		94		70 - 121	
4-Bromofluorobenzene		81		59 - 113	
Toluene-d8 (Surr)		97		84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-04 (14.5-15)

Lab Sample ID: 220-5867-4

Date Sampled: 07/15/2008 1230

Client Matrix: Solid

% Moisture: 9.9

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5182.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1326

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1326

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		11	U	0.11	11
Vinyl chloride		11	U	0.11	11
Bromomethane		11	U	0.11	11
Chloroethane		11	U	0.11	11
1,1-Dichloroethene		11	U	0.11	11
Carbon disulfide		11	U	0.11	11
Acetone		16	B	0.11	11
Methylene Chloride		16	B	0.11	11
1,1-Dichloroethane		11	U	0.11	11
Methyl Ethyl Ketone		11	U	0.11	11
Chloroform		11	U	0.11	11
1,1,1-Trichloroethane		11	U	0.11	11
Carbon tetrachloride		11	U	0.11	11
Benzene		4.5	J	0.11	11
1,2-Dichloroethane		11	U	0.11	11
Trichloroethene		80		0.11	11
1,2-Dichloropropane		11	U	0.11	11
Bromodichloromethane		11	U	0.11	11
cis-1,3-Dichloropropene		11	U	0.11	11
methyl isobutyl ketone		11	U	0.11	11
Toluene		5.2	J B	0.11	11
trans-1,3-Dichloropropene		11	U	0.11	11
1,1,2-Trichloroethane		11	U	0.11	11
Tetrachloroethene		11	U	0.11	11
2-Hexanone		11	U	0.11	11
Dibromochloromethane		11	U	0.11	11
Chlorobenzene		11	U	0.11	11
Ethylbenzene		4.2	J	0.11	11
Styrene		11	U	0.11	11
Bromoform		11	U	0.11	11
1,1,2,2-Tetrachloroethane		11	U	0.11	11
Xylenes, Total		9.4	J	0.11	11
cis-1,2-Dichloroethene		11	U	0.11	11
trans-1,2-Dichloroethene		11	U	0.11	11
Dichlorodifluoromethane		11	U	0.11	11
Trichlorofluoromethane		11	U	0.11	11
1,1,2-Trichloro-1,2,2-trifluoroethane		11	U	0.11	11
Methyl tert-butyl ether		11	U	0.11	11
1,2-Dibromoethane		11	U	0.11	11
Isopropylbenzene		11	U	0.11	11
1,3-Dichlorobenzene		11	U	0.11	11
1,4-Dichlorobenzene		11	U	0.11	11
1,2-Dichlorobenzene		11	U	0.11	11
1,2-Dibromo-3-Chloropropane		11	U	0.11	11

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-04 (14.5-15)

Lab Sample ID: 220-5867-4

Date Sampled: 07/15/2008 1230

Client Matrix: Solid

% Moisture: 9.9

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5182.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1326

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1326

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		11	U	0.11	11
Methyl acetate		11	U	0.11	11
Cyclohexane		11	U	0.11	11
Methylcyclohexane		11	U	0.11	11
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		91		70 - 121	
4-Bromofluorobenzene		66		59 - 113	
Toluene-d8 (Surr)		107		84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-03 (19-19.5)

Lab Sample ID: 220-5867-5

Client Matrix: Solid

% Moisture: 19.0

Date Sampled: 07/15/2008 1345

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5157.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1553

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1553

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		12	U	0.12	12
Vinyl chloride		12	U	0.12	12
Bromomethane		12	U	0.12	12
Chloroethane		12	U	0.12	12
1,1-Dichloroethene		12	U	0.12	12
Carbon disulfide		12	U	0.12	12
Acetone		14	B	0.12	12
Methylene Chloride		2.3	J B	0.12	12
1,1-Dichloroethane		12	U	0.12	12
Methyl Ethyl Ketone		12	U	0.12	12
Chloroform		12	U	0.12	12
1,1,1-Trichloroethane		12	U	0.12	12
Carbon tetrachloride		12	U	0.12	12
Benzene		1.2	J	0.12	12
1,2-Dichloroethane		12	U	0.12	12
Trichloroethene		70		0.12	12
1,2-Dichloropropane		12	U	0.12	12
Bromodichloromethane		12	U	0.12	12
cis-1,3-Dichloropropene		12	U	0.12	12
methyl isobutyl ketone		12	U	0.12	12
Toluene		2.7	J B	0.12	12
trans-1,3-Dichloropropene		12	U	0.12	12
1,1,2-Trichloroethane		12	U	0.12	12
Tetrachloroethene		12	U	0.12	12
2-Hexanone		12	U	0.12	12
Dibromochloromethane		12	U	0.12	12
Chlorobenzene		12	U	0.12	12
Ethylbenzene		1.3	J	0.12	12
Styrene		12	U	0.12	12
Bromoform		12	U	0.12	12
1,1,2,2-Tetrachloroethane		12	U	0.12	12
Xylenes, Total		2.5	J	0.12	12
cis-1,2-Dichloroethene		12	U	0.12	12
trans-1,2-Dichloroethene		12	U	0.12	12
Dichlorodifluoromethane		12	U	0.12	12
Trichlorofluoromethane		12	U	0.12	12
1,1,2-Trichloro-1,2,2-trifluoroethane		12	U	0.12	12
Methyl tert-butyl ether		12	U	0.12	12
1,2-Dibromoethane		12	U	0.12	12
Isopropylbenzene		12	U	0.12	12
1,3-Dichlorobenzene		12	U	0.12	12
1,4-Dichlorobenzene		12	U	0.12	12
1,2-Dichlorobenzene		12	U	0.12	12
1,2-Dibromo-3-Chloropropane		12	U	0.12	12

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-03 (19-19.5)

Lab Sample ID: 220-5867-5

Date Sampled: 07/15/2008 1345

Client Matrix: Solid

% Moisture: 19.0

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5157.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1553

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1553

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		12	U	0.12	12
Methyl acetate		12	U	0.12	12
Cyclohexane		12	U	0.12	12
Methylcyclohexane		12	U	0.12	12
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		105		70 - 121	
4-Bromofluorobenzene		73		59 - 113	
Toluene-d8 (Surr)		124		84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-08 (9.5-10)

Lab Sample ID: 220-5867-11

Date Sampled: 07/15/2008 1416

Client Matrix: Solid

% Moisture: 17.1

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5188.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1634

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1634

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		12	U	0.12	12
Vinyl chloride		12	U	0.12	12
Bromomethane		12	U	0.12	12
Chloroethane		12	U	0.12	12
1,1-Dichloroethene		12	U	0.12	12
Carbon disulfide		12	U	0.12	12
Acetone		43	B	0.12	12
Methylene Chloride		6.6	J B	0.12	12
1,1-Dichloroethane		12	U	0.12	12
Methyl Ethyl Ketone		12	U	0.12	12
Chloroform		12	U	0.12	12
1,1,1-Trichloroethane		12	U	0.12	12
Carbon tetrachloride		12	U	0.12	12
Benzene		1.9	J	0.12	12
1,2-Dichloroethane		12	U	0.12	12
Trichloroethene		8.4	J	0.12	12
1,2-Dichloropropane		12	U	0.12	12
Bromodichloromethane		12	U	0.12	12
cis-1,3-Dichloropropene		12	U	0.12	12
methyl isobutyl ketone		12	U	0.12	12
Toluene		5.4	J B	0.12	12
trans-1,3-Dichloropropene		12	U	0.12	12
1,1,2-Trichloroethane		12	U	0.12	12
Tetrachloroethene		12	U	0.12	12
2-Hexanone		12	U	0.12	12
Dibromochloromethane		12	U	0.12	12
Chlorobenzene		12	U	0.12	12
Ethylbenzene		2.5	J	0.12	12
Styrene		12	U	0.12	12
Bromoform		12	U	0.12	12
1,1,2,2-Tetrachloroethane		12	U	0.12	12
Xylenes, Total		9.1	J	0.12	12
cis-1,2-Dichloroethene		12	U	0.12	12
trans-1,2-Dichloroethene		12	U	0.12	12
Dichlorodifluoromethane		12	U	0.12	12
Trichlorofluoromethane		12	U	0.12	12
1,1,2-Trichloro-1,2,2-trifluoroethane		12	U	0.12	12
Methyl tert-butyl ether		12	U	0.12	12
1,2-Dibromoethane		12	U	0.12	12
Isopropylbenzene		12	U	0.12	12
1,3-Dichlorobenzene		12	U	0.12	12
1,4-Dichlorobenzene		12	U	0.12	12
1,2-Dichlorobenzene		12	U	0.12	12
1,2-Dibromo-3-Chloropropane		12	U	0.12	12

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-08 (9.5-10)

Lab Sample ID: 220-5867-11

Date Sampled: 07/15/2008 1416

Client Matrix: Solid

% Moisture: 17.1

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5188.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1634

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1634

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		12	U	0.12	12
Methyl acetate		12	U	0.12	12
Cyclohexane		12	U	0.12	12
Methylcyclohexane		12	U	0.12	12
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		95		70 - 121	
4-Bromofluorobenzene		66		59 - 113	
Toluene-d8 (Surr)		148	*	84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-07 (14.5-15.5)

Lab Sample ID: 220-5867-14

Date Sampled: 07/15/2008 1500

Client Matrix: Solid

% Moisture: 11.9

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5159.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1643

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1643

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		11	U	0.11	11
Vinyl chloride		11	U	0.11	11
Bromomethane		11	U	0.11	11
Chloroethane		11	U	0.11	11
1,1-Dichloroethene		11	U	0.11	11
Carbon disulfide		11	U	0.11	11
Acetone		11	U	0.11	11
Methylene Chloride		2.7	J B	0.11	11
1,1-Dichloroethane		11	U	0.11	11
Methyl Ethyl Ketone		11	U	0.11	11
Chloroform		11	U	0.11	11
1,1,1-Trichloroethane		11	U	0.11	11
Carbon tetrachloride		11	U	0.11	11
Benzene		11	U	0.11	11
1,2-Dichloroethane		11	U	0.11	11
Trichloroethene		11	U	0.11	11
1,2-Dichloropropane		11	U	0.11	11
Bromodichloromethane		11	U	0.11	11
cis-1,3-Dichloropropene		11	U	0.11	11
methyl isobutyl ketone		11	U	0.11	11
Toluene		11	U	0.11	11
trans-1,3-Dichloropropene		11	U	0.11	11
1,1,2-Trichloroethane		11	U	0.11	11
Tetrachloroethene		11	U	0.11	11
2-Hexanone		11	U	0.11	11
Dibromochloromethane		11	U	0.11	11
Chlorobenzene		11	U	0.11	11
Ethylbenzene		11	U	0.11	11
Styrene		11	U	0.11	11
Bromoform		11	U	0.11	11
1,1,2,2-Tetrachloroethane		11	U	0.11	11
Xylenes, Total		11	U	0.11	11
cis-1,2-Dichloroethene		11	U	0.11	11
trans-1,2-Dichloroethene		11	U	0.11	11
Dichlorodifluoromethane		11	U	0.11	11
Trichlorofluoromethane		11	U	0.11	11
1,1,2-Trichloro-1,2,2-trifluoroethane		11	U	0.11	11
Methyl tert-butyl ether		11	U	0.11	11
1,2-Dibromoethane		11	U	0.11	11
Isopropylbenzene		11	U	0.11	11
1,3-Dichlorobenzene		11	U	0.11	11
1,4-Dichlorobenzene		11	U	0.11	11
1,2-Dichlorobenzene		11	U	0.11	11
1,2-Dibromo-3-Chloropropane		11	U	0.11	11

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-07 (14.5-15.5)

Lab Sample ID: 220-5867-14

Date Sampled: 07/15/2008 1500

Client Matrix: Solid

% Moisture: 11.9

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5159.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 1643

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1643

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		11	U	0.11	11
Methyl acetate		11	U	0.11	11
Cyclohexane		11	U	0.11	11
Methylcyclohexane		11	U	0.11	11
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		96		70 - 121	
4-Bromofluorobenzene		86		59 - 113	
Toluene-d8 (Surr)		93		84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-06 (7.5-8.5)

Lab Sample ID: 220-5867-15

Date Sampled: 07/15/2008 1530

Client Matrix: Solid

% Moisture: 11.9

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5168.D

Dilution: 2.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 2051

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 2051

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		23	U	0.23	23
Vinyl chloride		23	U	0.23	23
Bromomethane		23	U	0.23	23
Chloroethane		23	U	0.23	23
1,1-Dichloroethene		23	U	0.23	23
Carbon disulfide		23	U	0.23	23
Acetone		250	B	0.23	23
Methylene Chloride		4.6	J B	0.23	23
1,1-Dichloroethane		23	U	0.23	23
Methyl Ethyl Ketone		23	U	0.23	23
Chloroform		23	U	0.23	23
1,1,1-Trichloroethane		23	U	0.23	23
Carbon tetrachloride		23	U	0.23	23
Benzene		0.62	J	0.23	23
1,2-Dichloroethane		23	U	0.23	23
Trichloroethene		12	J	0.23	23
1,2-Dichloropropane		23	U	0.23	23
Bromodichloromethane		23	U	0.23	23
cis-1,3-Dichloropropene		23	U	0.23	23
methyl isobutyl ketone		23	U	0.23	23
Toluene		5.8	J B	0.23	23
trans-1,3-Dichloropropene		23	U	0.23	23
1,1,2-Trichloroethane		23	U	0.23	23
Tetrachloroethene		23	U	0.23	23
2-Hexanone		23	U	0.23	23
Dibromochloromethane		23	U	0.23	23
Chlorobenzene		23	U	0.23	23
Ethylbenzene		1.9	J	0.23	23
Styrene		23	U	0.23	23
Bromoform		23	U	0.23	23
1,1,2,2-Tetrachloroethane		23	U	0.23	23
Xylenes, Total		11	J	0.23	23
cis-1,2-Dichloroethene		23	U	0.23	23
trans-1,2-Dichloroethene		23	U	0.23	23
Dichlorodifluoromethane		23	U	0.23	23
Trichlorofluoromethane		23	U	0.23	23
1,1,2-Trichloro-1,2,2-trifluoroethane		23	U	0.23	23
Methyl tert-butyl ether		23	U	0.23	23
1,2-Dibromoethane		23	U	0.23	23
Isopropylbenzene		4.0	J	0.23	23
1,3-Dichlorobenzene		23	U	0.23	23
1,4-Dichlorobenzene		23	U	0.23	23
1,2-Dichlorobenzene		23	U	0.23	23
1,2-Dibromo-3-Chloropropane		23	U	0.23	23

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-06 (7.5-8.5)

Lab Sample ID: 220-5867-15

Date Sampled: 07/15/2008 1530

Client Matrix: Solid

% Moisture: 11.9

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18353

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5168.D

Dilution: 2.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/22/2008 2051

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 2051

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		23	U	0.23	23
Methyl acetate		23	U	0.23	23
Cyclohexane		23	U	0.23	23
Methylcyclohexane		23	U	0.23	23
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		108		70 - 121	
4-Bromofluorobenzene		93		59 - 113	
Toluene-d8 (Surr)		106		84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-06 (14-15)

Lab Sample ID: 220-5867-16

Date Sampled: 07/15/2008 1535

Client Matrix: Solid

% Moisture: 11.4

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5185.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1441

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1441

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Chloromethane		11	U	0.11	11
Vinyl chloride		11	U	0.11	11
Bromomethane		11	U	0.11	11
Chloroethane		11	U	0.11	11
1,1-Dichloroethene		11	U	0.11	11
Carbon disulfide		11	U	0.11	11
Acetone		6.3	J B	0.11	11
Methylene Chloride		7.0	J B	0.11	11
1,1-Dichloroethane		11	U	0.11	11
Methyl Ethyl Ketone		11	U	0.11	11
Chloroform		11	U	0.11	11
1,1,1-Trichloroethane		11	U	0.11	11
Carbon tetrachloride		11	U	0.11	11
Benzene		0.25	J	0.11	11
1,2-Dichloroethane		11	U	0.11	11
Trichloroethene		8.5	J	0.11	11
1,2-Dichloropropane		11	U	0.11	11
Bromodichloromethane		11	U	0.11	11
cis-1,3-Dichloropropene		11	U	0.11	11
methyl isobutyl ketone		11	U	0.11	11
Toluene		0.69	J B	0.11	11
trans-1,3-Dichloropropene		11	U	0.11	11
1,1,2-Trichloroethane		11	U	0.11	11
Tetrachloroethene		11	U	0.11	11
2-Hexanone		11	U	0.11	11
Dibromochloromethane		11	U	0.11	11
Chlorobenzene		11	U	0.11	11
Ethylbenzene		0.29	J	0.11	11
Styrene		11	U	0.11	11
Bromoform		11	U	0.11	11
1,1,2,2-Tetrachloroethane		11	U	0.11	11
Xylenes, Total		1.1	J	0.11	11
cis-1,2-Dichloroethene		11	U	0.11	11
trans-1,2-Dichloroethene		11	U	0.11	11
Dichlorodifluoromethane		11	U	0.11	11
Trichlorofluoromethane		11	U	0.11	11
1,1,2-Trichloro-1,2,2-trifluoroethane		11	U	0.11	11
Methyl tert-butyl ether		11	U	0.11	11
1,2-Dibromoethane		11	U	0.11	11
Isopropylbenzene		11	U	0.11	11
1,3-Dichlorobenzene		11	U	0.11	11
1,4-Dichlorobenzene		11	U	0.11	11
1,2-Dichlorobenzene		11	U	0.11	11
1,2-Dibromo-3-Chloropropane		11	U	0.11	11

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-06 (14-15)

Lab Sample ID: 220-5867-16

Date Sampled: 07/15/2008 1535

Client Matrix: Solid

% Moisture: 11.4

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Preparation: 5030B

Lab File ID: O5185.D

Dilution: 1.0

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1441

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1441

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene		11	U	0.11	11
Methyl acetate		11	U	0.11	11
Cyclohexane		11	U	0.11	11
Methylcyclohexane		11	U	0.11	11
Surrogate		%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		96		70 - 121	
4-Bromofluorobenzene		96		59 - 113	
Toluene-d8 (Surr)		96		84 - 138	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: TRIP BLANK

Lab Sample ID: 220-5867-17TB

Client Matrix: Water

Date Sampled: 07/15/2008 0000

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18355

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4803.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/22/2008 1519

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1519

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	1.2	J	0.10	10
Methylene Chloride	0.48	J B	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	10	U	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: TRIP BLANK

Lab Sample ID: 220-5867-17TB

Date Sampled: 07/15/2008 0000

Client Matrix: Water

Date Received: 07/16/2008 0944

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18355

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4803.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/22/2008 1519

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1519

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10
Surrogate	%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	99		76 - 114	
4-Bromofluorobenzene	93		86 - 115	
Toluene-d8 (Surr)	99		88 - 110	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-01 (3.8-18)

Lab Sample ID: 220-5867-6

Date Sampled: 07/15/2008 1055

Client Matrix: Solid

% Moisture: 10.5

Date Received: 07/16/2008 0944

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18314

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18170

Lab File ID: D4716144.d

Dilution: 1.0

Initial Weight/Volume: 30.11 g

Date Analyzed: 07/23/2008 1136

Final Weight/Volume: 10.0 mL

Date Prepared: 07/21/2008 1659

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.1	19
PCB-1221		37	U	1.2	37
PCB-1232		19	U	5.1	19
PCB-1242		19	U	5.1	19
PCB-1248		19	U	5.1	19
PCB-1254		19	U	1.7	19
PCB-1260		19	U	3.8	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	45	24 - 154
DCB Decachlorobiphenyl	43	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-02 (3.5-17.5)

Lab Sample ID: 220-5867-7

Date Sampled: 07/15/2008 1120

Client Matrix: Solid

% Moisture: 9.5

Date Received: 07/16/2008 0944

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	C4716145.d
Dilution:	1.0		Initial Weight/Volume:	30.09 g
Date Analyzed:	07/23/2008 1152		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.1	19
PCB-1221		36	U	1.2	36
PCB-1232		19	U	5.1	19
PCB-1242		19	U	5.1	19
PCB-1248		19	U	5.1	19
PCB-1254		21		1.7	19
PCB-1260		18	J	3.8	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	160	24 - 154
DCB Decachlorobiphenyl	154	25 - 159

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	C4716145.d
Dilution:	1.0		Initial Weight/Volume:	30.09 g
Date Analyzed:	07/23/2008 1152		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	SECONDARY

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	120	24 - 154
DCB Decachlorobiphenyl	140	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-05 (4-15)

Lab Sample ID: 220-5867-8

Date Sampled: 07/15/2008 1145

Client Matrix: Solid

% Moisture: 9.4

Date Received: 07/16/2008 0944

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	C4716146.d
Dilution:	1.0		Initial Weight/Volume:	30.21 g
Date Analyzed:	07/23/2008 1209		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.1	19
PCB-1221		36	U	1.2	36
PCB-1232		19	U	5.1	19
PCB-1242		19	U	5.1	19
PCB-1248		19	U	5.1	19
PCB-1254		16	J	1.7	19
PCB-1260		11	J	3.8	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	102	24 - 154
DCB Decachlorobiphenyl	121	25 - 159

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	C4716146.d
Dilution:	1.0		Initial Weight/Volume:	30.21 g
Date Analyzed:	07/23/2008 1209		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	SECONDARY

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	88	24 - 154
DCB Decachlorobiphenyl	101	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-04 (3.5-15)

Lab Sample ID: 220-5867-9

Date Sampled: 07/15/2008 1230

Client Matrix: Solid

% Moisture: 9.6

Date Received: 07/16/2008 0944

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18314

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18170

Lab File ID: D4716147.d

Dilution: 1.0

Initial Weight/Volume: 30.25 g

Date Analyzed: 07/23/2008 1226

Final Weight/Volume: 10.0 mL

Date Prepared: 07/21/2008 1659

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.1	19
PCB-1221		36	U	1.2	36
PCB-1232		19	U	5.1	19
PCB-1242		19	U	5.1	19
PCB-1248		19	U	5.1	19
PCB-1254		19	U	1.7	19
PCB-1260		19	U	3.8	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	88	24 - 154
DCB Decachlorobiphenyl	88	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-03 (4.5-20)

Lab Sample ID: 220-5867-10

Date Sampled: 07/15/2008 1345

Client Matrix: Solid

% Moisture: 10.7

Date Received: 07/16/2008 0944

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	D4716148.d
Dilution:	1.0		Initial Weight/Volume:	30.16 g
Date Analyzed:	07/23/2008 1243		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.1	19
PCB-1221		37	U	1.2	37
PCB-1232		19	U	5.1	19
PCB-1242		19	U	5.1	19
PCB-1248		19	U	5.1	19
PCB-1254		16	J	1.7	19
PCB-1260		9.2	J	3.8	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	89	24 - 154
DCB Decachlorobiphenyl	97	25 - 159

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	C4716148.d
Dilution:	1.0		Initial Weight/Volume:	30.16 g
Date Analyzed:	07/23/2008 1243		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	SECONDARY

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	70	24 - 154
DCB Decachlorobiphenyl	83	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-08 (9.5-10)

Lab Sample ID: 220-5867-11

Date Sampled: 07/15/2008 1416

Client Matrix: Solid

% Moisture: 17.1

Date Received: 07/16/2008 0944

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	C4716149.d
Dilution:	1.0		Initial Weight/Volume:	30.39 g
Date Analyzed:	07/23/2008 1259		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		20	U	5.5	20
PCB-1221		39	U	1.3	39
PCB-1232		20	U	5.5	20
PCB-1242		20	U	5.5	20
PCB-1248		20	U	5.5	20
PCB-1254		33		1.8	20
PCB-1260		23		4.1	20

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	153	24 - 154
DCB Decachlorobiphenyl	196	25 - 159

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	C4716149.d
Dilution:	1.0		Initial Weight/Volume:	30.39 g
Date Analyzed:	07/23/2008 1259		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	SECONDARY

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	131	24 - 154
DCB Decachlorobiphenyl	208	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-08 (14.5-15)

Lab Sample ID: 220-5867-12

Date Sampled: 07/15/2008 1435

Client Matrix: Solid

% Moisture: 15.5

Date Received: 07/16/2008 0944

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18314

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18170

Lab File ID: D4716150.d

Dilution: 1.0

Initial Weight/Volume: 30.04 g

Date Analyzed: 07/23/2008 1316

Final Weight/Volume: 10.0 mL

Date Prepared: 07/21/2008 1659

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		20	U	5.5	20
PCB-1221		39	U	1.3	39
PCB-1232		20	U	5.5	20
PCB-1242		20	U	5.5	20
PCB-1248		20	U	5.5	20
PCB-1254		20	U	1.8	20
PCB-1260		20	U	4.1	20

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	99	24 - 154
DCB Decachlorobiphenyl	107	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-07 (4-5)

Lab Sample ID: 220-5867-13

Date Sampled: 07/15/2008 1500

Client Matrix: Solid

% Moisture: 11.1

Date Received: 07/16/2008 0944

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	C4716151.d
Dilution:	1.0		Initial Weight/Volume:	30.66 g
Date Analyzed:	07/23/2008 1333		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.1	19
PCB-1221		36	U	1.2	36
PCB-1232		19	U	5.1	19
PCB-1242		19	U	5.1	19
PCB-1248		19	U	5.1	19
PCB-1254		4.1	J	1.7	19
PCB-1260		13	J	3.8	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	114	24 - 154
DCB Decachlorobiphenyl	134	25 - 159

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	D4716151.d
Dilution:	1.0		Initial Weight/Volume:	30.66 g
Date Analyzed:	07/23/2008 1333		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	SECONDARY

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	115	24 - 154
DCB Decachlorobiphenyl	124	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-07 (14.5-15.5)

Lab Sample ID: 220-5867-14

Date Sampled: 07/15/2008 1500

Client Matrix: Solid

% Moisture: 11.9

Date Received: 07/16/2008 0944

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082

Analysis Batch: 220-18314

Instrument ID: HP 5890 with dual ECD

Preparation: 3550B

Prep Batch: 220-18170

Lab File ID: D4716152.d

Dilution: 1.0

Initial Weight/Volume: 30.53 g

Date Analyzed: 07/23/2008 1350

Final Weight/Volume: 10.0 mL

Date Prepared: 07/21/2008 1659

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.1	19
PCB-1221		37	U	1.2	37
PCB-1232		19	U	5.1	19
PCB-1242		19	U	5.1	19
PCB-1248		19	U	5.1	19
PCB-1254		19	U	1.7	19
PCB-1260		19	U	3.9	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	80	24 - 154
DCB Decachlorobiphenyl	103	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Client Sample ID: SB-06 (7.5-8.5)

Lab Sample ID: 220-5867-15

Date Sampled: 07/15/2008 1530

Client Matrix: Solid

% Moisture: 11.9

Date Received: 07/16/2008 0944

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	D4716153.d
Dilution:	1.0		Initial Weight/Volume:	30.23 g
Date Analyzed:	07/23/2008 1407		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
PCB-1016		19	U	5.2	19
PCB-1221		37	U	1.2	37
PCB-1232		19	U	5.2	19
PCB-1242		19	U	5.2	19
PCB-1248		19	U	5.2	19
PCB-1254		12	J	1.7	19
PCB-1260		34		3.9	19

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	155	24 - 154
DCB Decachlorobiphenyl	150	25 - 159

Method:	8082	Analysis Batch: 220-18314	Instrument ID:	HP 5890 with dual ECD
Preparation:	3550B	Prep Batch: 220-18170	Lab File ID:	D4716153.d
Dilution:	1.0		Initial Weight/Volume:	30.23 g
Date Analyzed:	07/23/2008 1407		Final Weight/Volume:	10.0 mL
Date Prepared:	07/21/2008 1659		Injection Volume:	1.0 uL
			Column ID:	SECONDARY

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	131	24 - 154
DCB Decachlorobiphenyl	141	25 - 159

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1
Sdg Number: 220-5867

General Chemistry

Client Sample ID: SB-01 (12-13)

Lab Sample ID: 220-5867-1
Client Matrix: Solid

Date Sampled: 07/15/2008 1055
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	7.80		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	92.2		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Client Sample ID: SB-02 (17-17.5)

Lab Sample ID: 220-5867-2
Client Matrix: Solid

Date Sampled: 07/15/2008 1120
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	15.7		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	84.3		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Client Sample ID: SB-05 (14.5-15)

Lab Sample ID: 220-5867-3
Client Matrix: Solid

Date Sampled: 07/15/2008 1145
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	16.1		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	83.9		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1
Sdg Number: 220-5867

General Chemistry

Client Sample ID: SB-04 (14.5-15)

Lab Sample ID: 220-5867-4
Client Matrix: Solid

Date Sampled: 07/15/2008 1230
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	9.91		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	90.1		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Client Sample ID: SB-03 (19-19.5)

Lab Sample ID: 220-5867-5
Client Matrix: Solid

Date Sampled: 07/15/2008 1345
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	19.0		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	81.0		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Client Sample ID: SB-01 (3.8-18)

Lab Sample ID: 220-5867-6
Client Matrix: Solid

Date Sampled: 07/15/2008 1055
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.5		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	89.5		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Client Sample ID: SB-02 (3.5-17.5)

Lab Sample ID: 220-5867-7
Client Matrix: Solid

Date Sampled: 07/15/2008 1120
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	9.53		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	90.5		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1
Sdg Number: 220-5867

General Chemistry

Client Sample ID: SB-05 (4-15)

Lab Sample ID: 220-5867-8
Client Matrix: Solid

Date Sampled: 07/15/2008 1145
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	9.39		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	90.6		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Client Sample ID: SB-04 (3.5-15)

Lab Sample ID: 220-5867-9
Client Matrix: Solid

Date Sampled: 07/15/2008 1230
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	9.55		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	90.4		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Client Sample ID: SB-03 (4.5-20)

Lab Sample ID: 220-5867-10
Client Matrix: Solid

Date Sampled: 07/15/2008 1345
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.7		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	89.3		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Client Sample ID: SB-08 (9.5-10)

Lab Sample ID: 220-5867-11
Client Matrix: Solid

Date Sampled: 07/15/2008 1416
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	17.1		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	82.9		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1
Sdg Number: 220-5867

General Chemistry

Client Sample ID: SB-08 (14.5-15)

Lab Sample ID: 220-5867-12
Client Matrix: Solid

Date Sampled: 07/15/2008 1435
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	15.5		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	84.5		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Client Sample ID: SB-07 (4-5)

Lab Sample ID: 220-5867-13
Client Matrix: Solid

Date Sampled: 07/15/2008 1500
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	11.1		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	88.9		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Client Sample ID: SB-07 (14.5-15.5)

Lab Sample ID: 220-5867-14
Client Matrix: Solid

Date Sampled: 07/15/2008 1500
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	11.9		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	88.1		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Client Sample ID: SB-06 (7.5-8.5)

Lab Sample ID: 220-5867-15
Client Matrix: Solid

Date Sampled: 07/15/2008 1530
Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	11.9		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			
Percent Solids	88.1		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed		07/16/2008 1400			

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

General Chemistry

Client Sample ID: SB-06 (14-15)

Lab Sample ID: 220-5867-16

Date Sampled: 07/15/2008 1535

Client Matrix: Solid

Date Received: 07/16/2008 0944

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	11.4		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed	07/16/2008	1400			
Percent Solids	88.6		%	0.100	0.100	1.0	PercentMoisture
	Any Batch: 220-18053	Date Analyzed	07/16/2008	1400			

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Surrogate Recovery Report

OLM04.2/Vol CLP Volatile Organic Compounds

Client Matrix: Solid

Lab Sample ID	Client Sample ID	12DCE %Rec	TOL %Rec	BFB %Rec
220-5867-1	SB-01 (12-13)	85	86	44*
220-5867-2	SB-02 (17-17.5)	94	98	63
220-5867-3	SB-05 (14.5-15)	94	97	81
220-5867-4	SB-04 (14.5-15)	91	107	66
220-5867-5	SB-03 (19-19.5)	105	124	73
220-5867-11	SB-08 (9.5-10)	95	148*	66
220-5867-14	SB-07 (14.5-15.5)	96	93	86
220-5867-15	SB-06 (7.5-8.5)	108	106	93
220-5867-16	SB-06 (14-15)	96	96	96
MB 220-18283/2		98	97	106
MB 220-18353/2		95	99	103
LCS 220-18283/3		100	98	97
LCS 220-18353/3		96	97	99

Surrogate	Acceptance Limits
12DCE = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	84-138
BFB = 4-Bromofluorobenzene	59-113

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Surrogate Recovery Report

OLM04.2/Vol CLP Volatile Organic Compounds

Client Matrix: Water

Lab Sample ID	Client Sample ID	12DCE %Rec	TOL %Rec	BFB %Rec
220-5867-17	TRIP BLANK	99	99	93
MB 220-18355/2		94	103	94
LCS 220-18355/3		98	101	99

Surrogate	Acceptance Limits
12DCE = 1,2-Dichloroethane-d4 (Surr)	76-114
TOL = Toluene-d8 (Surr)	88-110
BFB = 4-Bromofluorobenzene	86-115

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TCX1 %Rec	TCX2 %Rec	DCB1 %Rec	DCB2 %Rec
220-5867-6	SB-01 (3.8-18)		45		43
220-5867-7	SB-02 (3.5-17.5)	120	160*	154	140
220-5867-8	SB-05 (4-15)	88	102	121	101
220-5867-9	SB-04 (3.5-15)		88		88
220-5867-10	SB-03 (4.5-20)	70	89	97	83
220-5867-11	SB-08 (9.5-10)	131	153	196*	208*
220-5867-12	SB-08 (14.5-15)		99		107
220-5867-13	SB-07 (4-5)	114	115	134	124
220-5867-14	SB-07 (14.5-15.5)		80		103
220-5867-15	SB-06 (7.5-8.5)	155*	131	150	141
MB 220-18170/1-A		83	78	100	96
LCS 220-18170/22-A		95	90	114	104

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	24-154
DCB = DCB Decachlorobiphenyl	25-159

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Method Blank - Batch: 220-18283

Method: OLM04.2/Vol Preparation: 5030B

Lab Sample ID: MB 220-18283/2

Analysis Batch: 220-18283

Instrument ID: HP 5890/5971A GC/MS

Client Matrix: Solid

Prep Batch: N/A

Lab File ID: O5178.D

Dilution: 1.0

Units: ug/Kg

Initial Weight/Volume: 5 g

Date Analyzed: 07/23/2008 1038

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1038

Analyte	Result	Qual	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	2.2	J	0.10	10
Methylene Chloride	1.7	J	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	0.41	J	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Method Blank - Batch: 220-18283

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: MB 220-18283/2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2008 1038
Date Prepared: 07/23/2008 1038

Analysis Batch: 220-18283
Prep Batch: N/A
Units: ug/Kg

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5178.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	70 - 121
4-Bromofluorobenzene	106	59 - 113
Toluene-d8 (Surr)	97	84 - 138

Lab Control Spike - Batch: 220-18283

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: LCS 220-18283/3
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2008 1126
Date Prepared: 07/23/2008 1126

Analysis Batch: 220-18283
Prep Batch: N/A
Units: ug/Kg

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5179.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethene	20.0	20.1	101	59 - 172	
Benzene	20.0	19.7	98	66 - 142	
Trichloroethene	20.0	19.7	98	62 - 137	
Toluene	20.0	20.4	102	59 - 139	
Chlorobenzene	20.0	19.6	98	60 - 133	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100	70 - 121
4-Bromofluorobenzene	97	59 - 113
Toluene-d8 (Surr)	98	84 - 138

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Method Blank - Batch: 220-18353

Method: OLM04.2/Vol Preparation: 5030B

Lab Sample ID: MB 220-18353/2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2008 1047
Date Prepared: 07/22/2008 1047

Analysis Batch: 220-18353
Prep Batch: N/A
Units: ug/Kg

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5149.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	2.1	J	0.10	10
Methylene Chloride	1.5	J	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	0.24	J	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Method Blank - Batch: 220-18353

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: MB 220-18353/2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2008 1047
Date Prepared: 07/22/2008 1047

Analysis Batch: 220-18353
Prep Batch: N/A
Units: ug/Kg

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5149.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95	70 - 121
4-Bromofluorobenzene	103	59 - 113
Toluene-d8 (Surr)	99	84 - 138

Lab Control Spike - Batch: 220-18353

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: LCS 220-18353/3
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2008 1247
Date Prepared: 07/22/2008 1247

Analysis Batch: 220-18353
Prep Batch: N/A
Units: ug/Kg

Instrument ID: HP 5890/5971A GC/MS
Lab File ID: O5151.D
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethene	20.0	21.5	108	59 - 172	
Benzene	20.0	21.0	105	66 - 142	
Trichloroethene	20.0	20.4	102	62 - 137	
Toluene	20.0	21.4	107	59 - 139	
Chlorobenzene	20.0	21.2	106	60 - 133	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	70 - 121
4-Bromofluorobenzene	99	59 - 113
Toluene-d8 (Surr)	97	84 - 138

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Method Blank - Batch: 220-18355

Method: OLM04.2/Vol Preparation: 5030B

Lab Sample ID: MB 220-18355/2

Analysis Batch: 220-18355

Instrument ID: HP 6890/5973 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: Y4797.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 07/22/2008 1112

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1112

Analyte	Result	Qual	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	10	U	0.10	10
Methylene Chloride	0.82	J	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	10	U	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Method Blank - Batch: 220-18355

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: MB 220-18355/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/22/2008 1112
Date Prepared: 07/22/2008 1112

Analysis Batch: 220-18355
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: Y4797.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	76 - 114
4-Bromofluorobenzene	94	86 - 115
Toluene-d8 (Surr)	103	88 - 110

Lab Control Spike - Batch: 220-18355

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: LCS 220-18355/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/22/2008 1334
Date Prepared: 07/22/2008 1334

Analysis Batch: 220-18355
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: Y4800.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethene	20.0	21.7	108	61 - 145	
Benzene	20.0	21.2	106	76 - 127	
Trichloroethene	20.0	21.8	109	71 - 120	
Toluene	20.0	20.7	104	76 - 125	
Chlorobenzene	20.0	20.6	103	75 - 130	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	76 - 114
4-Bromofluorobenzene	99	86 - 115
Toluene-d8 (Surr)	101	88 - 110

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Method Blank - Batch: 220-18170

Method: 8082

Preparation: 3550B

Lab Sample ID: MB 220-18170/1-A

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/22/2008 1656

Date Prepared: 07/21/2008 1659

Analysis Batch: 220-18252

Prep Batch: 220-18170

Units: ug/Kg

Instrument ID: HP 5890 with dual ECD

Lab File ID: D4716109.d

Initial Weight/Volume: 30.0 g

Final Weight/Volume: 10.0 mL

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
PCB-1016	17	U	4.6	17
PCB-1221	33	U	1.1	33
PCB-1232	17	U	4.6	17
PCB-1242	17	U	4.6	17
PCB-1248	17	U	4.6	17
PCB-1254	17	U	1.5	17
PCB-1260	17	U	3.5	17

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	83	24 - 154
DCB Decachlorobiphenyl	100	25 - 159

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	78	24 - 154
DCB Decachlorobiphenyl	96	25 - 159

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Lab Control Spike - Batch: 220-18170

Method: 8082

Preparation: 3550B

Lab Sample ID: LCS 220-18170/22-A

Client Matrix: Solid

Dilution: 1.0

Date Analyzed: 07/22/2008 1713

Date Prepared: 07/21/2008 1659

Analysis Batch: 220-18252

Prep Batch: 220-18170

Units: ug/Kg

Instrument ID: HP 5890 with dual ECD

Lab File ID: C4716110.d

Initial Weight/Volume: 30.0 g

Final Weight/Volume: 10.0 mL

Injection Volume: 1.0 uL

Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
PCB-1016	167	162	97	42 - 130	
PCB-1260	167	142	85	50 - 128	
Surrogate	% Rec		Acceptance Limits		
Tetrachloro-m-xylene	95		24 - 154		
DCB Decachlorobiphenyl	114		25 - 159		
Surrogate	% Rec		Acceptance Limits		
Tetrachloro-m-xylene	90		24 - 154		
DCB Decachlorobiphenyl	104		25 - 159		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Duplicate - Batch: 220-18053

Method: PercentMoisture
Preparation: N/A

Lab Sample ID: 220-5867-9
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/16/2008 1400
Date Prepared: N/A

Analysis Batch: 220-18053
Prep Batch: N/A
Units: %

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	9.55	9.43	1	20	
Percent Solids	90.4	90.6	0	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc.

Job Number: 220-5867-1

Sdg Number: 220-5867

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.
GC Semi VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	Surrogate exceeds the control limit

ANALYTICAL REPORT

Job Number: 220-5904-1

SDG Number: 220-5904

Job Description: NYSDEC Standby - Tioga Castings

For:

Malcolm Pirnie, Inc.
43 British American Boulevard
1st Floor
Latham, NY 12110

Attention: Mr. Bruce Nelson



Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
08/04/2008

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

TestAmerica Connecticut Certifications and Approvals: CTDOH PH-047, MADEP CT023, RIDOH A43, NYDOH 10602, NY NELAP 10602, NHDES 2528, NJDEP CT410, ME DOH CT023, UT DOH 2032614458

Case Narrative for Job: 220-5904-1

Client: Malcolm Pirnie, Inc.
Date: August 4, 2008

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.



Lawrence Decker
Laboratory Director

August 4, 2008
Date

Job Narrative
220-J5904-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC/MS VOA

No analytical or quality issues were noted.

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-5904-1	MW-4	Water	07/17/2008 1215	07/18/2008 0930
220-5904-2	MW-5	Water	07/17/2008 1400	07/18/2008 0930
220-5904-3	MW-X	Water	07/17/2008 1445	07/18/2008 0930
220-5904-4	MW-2	Water	07/17/2008 1515	07/18/2008 0930
220-5904-5TB	TRIP BLANK	Water	07/17/2008 0000	07/18/2008 0930

METHOD SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Description	Lab Location	Method	Preparation Method
Matrix: Water			
CLP Volatile Organic Compounds	TAL CT	OLM04.2	OLM04.2/Vol
Purge-and-Trap	TAL CT		SW846 5030B
ILM05.3 Metals	TAL BUF	ILM05.3	ILM05.3

Lab References:

TAL BUF = TestAmerica Buffalo

TAL CT = TestAmerica Connecticut

Method References:

ILM05.3 = U.S. Environmental Protection Agency

OLM04.2 = "Statement of Work for Organic Analysis", Multi-Media, Multi-Concentration September 1998

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Method	Analyst	Analyst ID
OLM04.2 OLM04.2/Vol	Humbert, Dave	DH

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Client Sample ID: MW-4

Lab Sample ID: 220-5904-1

Client Matrix: Water

Date Sampled: 07/17/2008 1215

Date Received: 07/18/2008 0930

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18379

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4834.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/23/2008 1658

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1658

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	10	U	0.10	10
Methylene Chloride	10	U	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	10	U	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Client Sample ID: MW-4

Lab Sample ID: 220-5904-1

Date Sampled: 07/17/2008 1215

Client Matrix: Water

Date Received: 07/18/2008 0930

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18379

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4834.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/23/2008 1658

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1658

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10
Surrogate	%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	102		76 - 114	
4-Bromofluorobenzene	91		86 - 115	
Toluene-d8 (Surr)	104		88 - 110	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Client Sample ID: MW-5

Lab Sample ID: 220-5904-2

Client Matrix: Water

Date Sampled: 07/17/2008 1400

Date Received: 07/18/2008 0930

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18379

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4835.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/23/2008 1724

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1724

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	10	U	0.10	10
Methylene Chloride	10	U	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	10	U	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Client Sample ID: MW-5

Lab Sample ID: 220-5904-2

Date Sampled: 07/17/2008 1400

Client Matrix: Water

Date Received: 07/18/2008 0930

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18379

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4835.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/23/2008 1724

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1724

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10
Surrogate	%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	100		76 - 114	
4-Bromofluorobenzene	91		86 - 115	
Toluene-d8 (Surr)	101		88 - 110	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Client Sample ID: MW-X

Lab Sample ID: 220-5904-3

Date Sampled: 07/17/2008 1445

Client Matrix: Water

Date Received: 07/18/2008 0930

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18379

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4836.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/23/2008 1751

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1751

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	10	U	0.10	10
Methylene Chloride	10	U	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	10	U	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Client Sample ID: MW-X

Lab Sample ID: 220-5904-3

Date Sampled: 07/17/2008 1445

Client Matrix: Water

Date Received: 07/18/2008 0930

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18379

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4836.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/23/2008 1751

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1751

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10
Surrogate	%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	102		76 - 114	
4-Bromofluorobenzene	87		86 - 115	
Toluene-d8 (Surr)	102		88 - 110	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Client Sample ID: MW-2

Lab Sample ID: 220-5904-4

Client Matrix: Water

Date Sampled: 07/17/2008 1515

Date Received: 07/18/2008 0930

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18379

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4837.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/23/2008 1818

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1818

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	10	U	0.10	10
Methylene Chloride	10	U	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	10	U	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Client Sample ID: MW-2

Lab Sample ID: 220-5904-4

Date Sampled: 07/17/2008 1515

Client Matrix: Water

Date Received: 07/18/2008 0930

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18379

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4837.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/23/2008 1818

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1818

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10
Surrogate	%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	99		76 - 114	
4-Bromofluorobenzene	89		86 - 115	
Toluene-d8 (Surr)	101		88 - 110	

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Client Sample ID: TRIP BLANK

Lab Sample ID: 220-5904-5TB

Client Matrix: Water

Date Sampled: 07/17/2008 0000

Date Received: 07/18/2008 0930

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18355

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4805.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/22/2008 1618

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1618

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	10	U	0.10	10
Methylene Chloride	10	U	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	10	U	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10

Analytical Data

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Client Sample ID: TRIP BLANK

Lab Sample ID: 220-5904-5TB

Client Matrix: Water

Date Sampled: 07/17/2008 0000

Date Received: 07/18/2008 0930

OLM04.2/Vol CLP Volatile Organic Compounds

Method: OLM04.2/Vol

Analysis Batch: 220-18355

Instrument ID: HP 6890/5973 GC/MS

Preparation: 5030B

Lab File ID: Y4805.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/22/2008 1618

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1618

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10
Surrogate	%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	99		76 - 114	
4-Bromofluorobenzene	92		86 - 115	
Toluene-d8 (Surr)	102		88 - 110	

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Surrogate Recovery Report

OLM04.2/Vol CLP Volatile Organic Compounds

Client Matrix: Water

Lab Sample ID	Client Sample ID	12DCE %Rec	TOL %Rec	BFB %Rec
220-5904-1	MW-4	102	104	91
220-5904-2	MW-5	100	101	91
220-5904-3	MW-X	102	102	87
220-5904-4	MW-2	99	101	89
220-5904-5	TRIP BLANK	99	102	92
MB 220-18355/2		94	103	94
MB 220-18379/3		102	104	92
LCS 220-18355/3		98	101	99
LCS 220-18379/2		100	101	99
MSB 220-18379/9		101	98	99

Surrogate	Acceptance Limits
12DCE = 1,2-Dichloroethane-d4 (Surr)	76-114
TOL = Toluene-d8 (Surr)	88-110
BFB = 4-Bromofluorobenzene	86-115

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Method Blank - Batch: 220-18355

Method: OLM04.2/Vol Preparation: 5030B

Lab Sample ID: MB 220-18355/2

Analysis Batch: 220-18355

Instrument ID: HP 6890/5973 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: Y4797.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 07/22/2008 1112

Final Weight/Volume: 5 mL

Date Prepared: 07/22/2008 1112

Analyte	Result	Qual	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	10	U	0.10	10
Methylene Chloride	0.82	J	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	10	U	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Method Blank - Batch: 220-18355

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: MB 220-18355/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/22/2008 1112
Date Prepared: 07/22/2008 1112

Analysis Batch: 220-18355
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: Y4797.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	76 - 114
4-Bromofluorobenzene	94	86 - 115
Toluene-d8 (Surr)	103	88 - 110

Lab Control Spike - Batch: 220-18355

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: LCS 220-18355/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/22/2008 1334
Date Prepared: 07/22/2008 1334

Analysis Batch: 220-18355
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: Y4800.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethene	20.0	21.7	108	61 - 145	
Benzene	20.0	21.2	106	76 - 127	
Trichloroethene	20.0	21.8	109	71 - 120	
Toluene	20.0	20.7	104	76 - 125	
Chlorobenzene	20.0	20.6	103	75 - 130	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	76 - 114
4-Bromofluorobenzene	99	86 - 115
Toluene-d8 (Surr)	101	88 - 110

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Method Blank - Batch: 220-18379

Method: OLM04.2/Vol Preparation: 5030B

Lab Sample ID: MB 220-18379/3

Analysis Batch: 220-18379

Instrument ID: HP 6890/5973 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: Y4824.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 07/23/2008 1137

Final Weight/Volume: 5 mL

Date Prepared: 07/23/2008 1137

Analyte	Result	Qual	MDL	RL
Chloromethane	10	U	0.10	10
Vinyl chloride	10	U	0.10	10
Bromomethane	10	U	0.10	10
Chloroethane	10	U	0.10	10
1,1-Dichloroethene	10	U	0.10	10
Carbon disulfide	10	U	0.10	10
Acetone	10	U	0.10	10
Methylene Chloride	0.73	J	0.10	10
1,1-Dichloroethane	10	U	0.10	10
Methyl Ethyl Ketone	10	U	0.10	10
Chloroform	10	U	0.10	10
1,1,1-Trichloroethane	10	U	0.10	10
Carbon tetrachloride	10	U	0.10	10
Benzene	10	U	0.10	10
1,2-Dichloroethane	10	U	0.10	10
Trichloroethene	10	U	0.10	10
1,2-Dichloropropane	10	U	0.10	10
Bromodichloromethane	10	U	0.10	10
cis-1,3-Dichloropropene	10	U	0.10	10
methyl isobutyl ketone	10	U	0.10	10
Toluene	10	U	0.10	10
trans-1,3-Dichloropropene	10	U	0.10	10
1,1,2-Trichloroethane	10	U	0.10	10
Tetrachloroethene	10	U	0.10	10
2-Hexanone	10	U	0.10	10
Dibromochloromethane	10	U	0.10	10
Chlorobenzene	10	U	0.10	10
Ethylbenzene	10	U	0.10	10
Styrene	10	U	0.10	10
Bromoform	10	U	0.10	10
1,1,2,2-Tetrachloroethane	10	U	0.10	10
Xylenes, Total	10	U	0.10	10
cis-1,2-Dichloroethene	10	U	0.10	10
trans-1,2-Dichloroethene	10	U	0.10	10
Dichlorodifluoromethane	10	U	0.10	10
Trichlorofluoromethane	10	U	0.10	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	0.10	10
Methyl tert-butyl ether	10	U	0.10	10
1,2-Dibromoethane	10	U	0.10	10
Isopropylbenzene	10	U	0.10	10
1,3-Dichlorobenzene	10	U	0.10	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Method Blank - Batch: 220-18379

Method: OLM04.2/Vol Preparation: 5030B

Lab Sample ID: MB 220-18379/3

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 07/23/2008 1137

Date Prepared: 07/23/2008 1137

Analysis Batch: 220-18379

Prep Batch: N/A

Units: ug/L

Instrument ID: HP 6890/5973 GC/MS

Lab File ID: Y4824.D

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	10	U	0.10	10
1,2-Dichlorobenzene	10	U	0.10	10
1,2-Dibromo-3-Chloropropane	10	U	0.10	10
1,2,4-Trichlorobenzene	10	U	0.10	10
Methyl acetate	10	U	0.10	10
Cyclohexane	10	U	0.10	10
Methylcyclohexane	10	U	0.10	10
Surrogate	% Rec	Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	102	76 - 114		
4-Bromofluorobenzene	92	86 - 115		
Toluene-d8 (Surr)	104	88 - 110		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Lab Control Spike - Batch: 220-18379

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: LCS 220-18379/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/23/2008 1043
Date Prepared: 07/23/2008 1043

Analysis Batch: 220-18379
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: Y4822.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethene	20.0	21.4	107	61 - 145	
Benzene	20.0	21.2	106	76 - 127	
Trichloroethene	20.0	21.2	106	71 - 120	
Toluene	20.0	21.4	107	76 - 125	
Chlorobenzene	20.0	21.1	105	75 - 130	
Surrogate	% Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	100		76 - 114		
4-Bromofluorobenzene	99		86 - 115		
Toluene-d8 (Surr)	101		88 - 110		

Matrix Spike Blank - Batch: 220-18379

Method: OLM04.2/Vol
Preparation: 5030B

Lab Sample ID: MSB 220-18379/9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/23/2008 1445
Date Prepared: 07/23/2008 1445

Analysis Batch: 220-18379
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: Y4830.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethene	50.0	46.1	92	61 - 145	
Benzene	50.0	47.9	96	76 - 127	
Trichloroethene	50.0	47.5	95	71 - 120	
Toluene	50.0	47.8	96	76 - 125	
Chlorobenzene	50.0	47.5	95	75 - 130	
Surrogate	% Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	101		76 - 114		
4-Bromofluorobenzene	99		86 - 115		
Toluene-d8 (Surr)	98		88 - 110		

Calculations are performed before rounding to avoid round-off errors in calculated results.

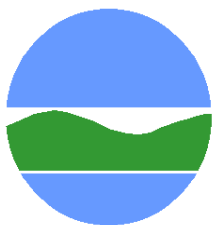
DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc.

Job Number: 220-5904-1

Sdg Number: 220-5904

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	Surrogate exceeds the control limit



New York State Department of Environmental Conservation

Department of Environmental Remediation • 625 Broadway • Albany, New York 12233

Site Number 7-54-012

Tioga Castings Site Quarterly Report First Quarter 2010

New York State Department of Environmental
Conservation Work Assignment D004443-8

October 2010



Report Prepared By:

Malcolm Pirnie, Inc.

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Clifton Park, New York 12065
518-250-7300

0266362

**MALCOLM
PIRNIÉ**

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- A. Well Inspection Forms
- B. Water Level Data Form
- C. Groundwater Sampling Purge Logs
- D. Analytical Reporting Forms

1. Introduction

The New York State Department of Environmental Conservation (NYSDEC) has issued a Work Assignment (# D004443-8) to Malcolm Pirnie, Inc. (Malcolm Pirnie) for Operation, Maintenance, and Monitoring at the Tioga Castings Site (NYSDEC site number 7-54-012) in New York State. Malcolm Pirnie has prepared this Quarterly Report in accordance with the NYSDEC-approved Site Management Plan (SMP) to summarize site activities, including first quarter 2010 operation and maintenance (O&M) activities and groundwater sampling results.



2. Site Description

The Tioga Castings site is located on Foundry Street, Owego, Broome County, New York (Figure 2-1). The former foundry buildings have been razed, leaving the concrete slabs in-place. A capped, closed landfill is present at the western end of the site.

3. Operation and Maintenance

The O&M activities at the Tioga Castings are performed in accordance with the NYSDEC-approved SMP. As indicated in the SMP, the O&M activities will be completed on a semi-annual basis (late spring and fall). The O&M activities will be completed during the second quarter and fourth quarter, 2010, respectively.

4. Groundwater Monitoring

Groundwater samples are collected to provide information on groundwater quality, monitor contaminant migration in the groundwater at the site, and assess hydrogeologic site conditions, including groundwater flow and velocity. Figure 4-1 shows the location of the groundwater monitoring wells. First quarter groundwater monitoring program activities were conducted in accordance with the SMP between March 18 and 19, 2010.

4.1.1. Well Inspection

Existing on-site groundwater monitoring wells were evaluated for integrity and suitability for groundwater monitoring and water levels. The condition of each well was recorded on a well inspection form, provided in Appendix A. As shown on the well inspection forms, the integrity of each well is generally acceptable and no significant repair or maintenance is required at this time.

4.1.2. Water Level Survey

Prior to collecting groundwater samples, water levels were measured to the nearest hundredth of a foot and recorded on a groundwater level data form (Appendix B).

Table 4-1 summarizes the groundwater levels and elevations from the site. As shown in Table 4-1, groundwater elevations ranged from 796.99 (MW-2) feet above mean sea level (amsl) to 798.52 (MW-4) feet amsl. Based on these data the water levels in wells in the vicinity of the landfill (MW-3 and MW-4) are greater than those in MW-2 and MW-5, indicating a general groundwater flow direction from east-northeast to west-southwest. Groundwater monitoring wells MW-1R, MW-3D, MW-7, and MW-8 were installed in 2008 and have not been surveyed; therefore, the groundwater elevations at these locations cannot be calculated. Since the distribution of wells with known elevations is generally parallel to the southern boundary of the site, there is insufficient data to prepare a potentiometric map that encompasses the site.

4.1.3. Groundwater Sampling

Groundwater samples were collected from eight groundwater monitoring wells (MW-1R, MW-2, MW-3, MW-3D, MW-4, MW-5, MW-7, and MW-8) using low-flow groundwater purging and sampling procedures in accordance with the SMP. Prior to collecting groundwater samples, pH, conductivity, turbidity, dissolved oxygen (DO), temperature, salinity, total dissolved solids (TDS), and oxidation-reduction potential (REDOX) were measured using a Horiba U-22 water quality meter and recorded on

groundwater sampling purge logs. Groundwater sampling purge logs are presented in Appendix C.

Groundwater samples collected during the groundwater monitoring program were sent to Test America – Connecticut (formerly STL-Connecticut) by chain-of-custody procedures and analyzed for Target Analyte List (TAL) metals by USEPA Method ILM05.3. Analytical data packages are provided in Appendix D.

4.1.4. Groundwater Sampling Results

Groundwater sample results for the first quarter 2010 groundwater sampling event are summarized in Table 4-2. As shown in Table 4-2, sodium was detected in samples from groundwater monitoring wells MW-1R (25,100 ug/L), MW-2 (24,000 ug/L), MW-7 (58,900 ug/L), and MW-8 (23,300 ug/L) at concentrations greater than the NYSDEC Class GA Standard of 20,000 ug/L . These results suggest that road de-icing agents may be the source for the sodium.

Table 4-2 shows that no other metals were detected at concentrations greater than the applicable NYSDEC Class GA Standards during the March 2010 sampling event. These data indicate that the iron and/or manganese and lead exceedances reported in samples MW-1R, MW-2, MW-3D, MW-4, MW-7, and MW-8 collected in April 2009 were likely anomalous.

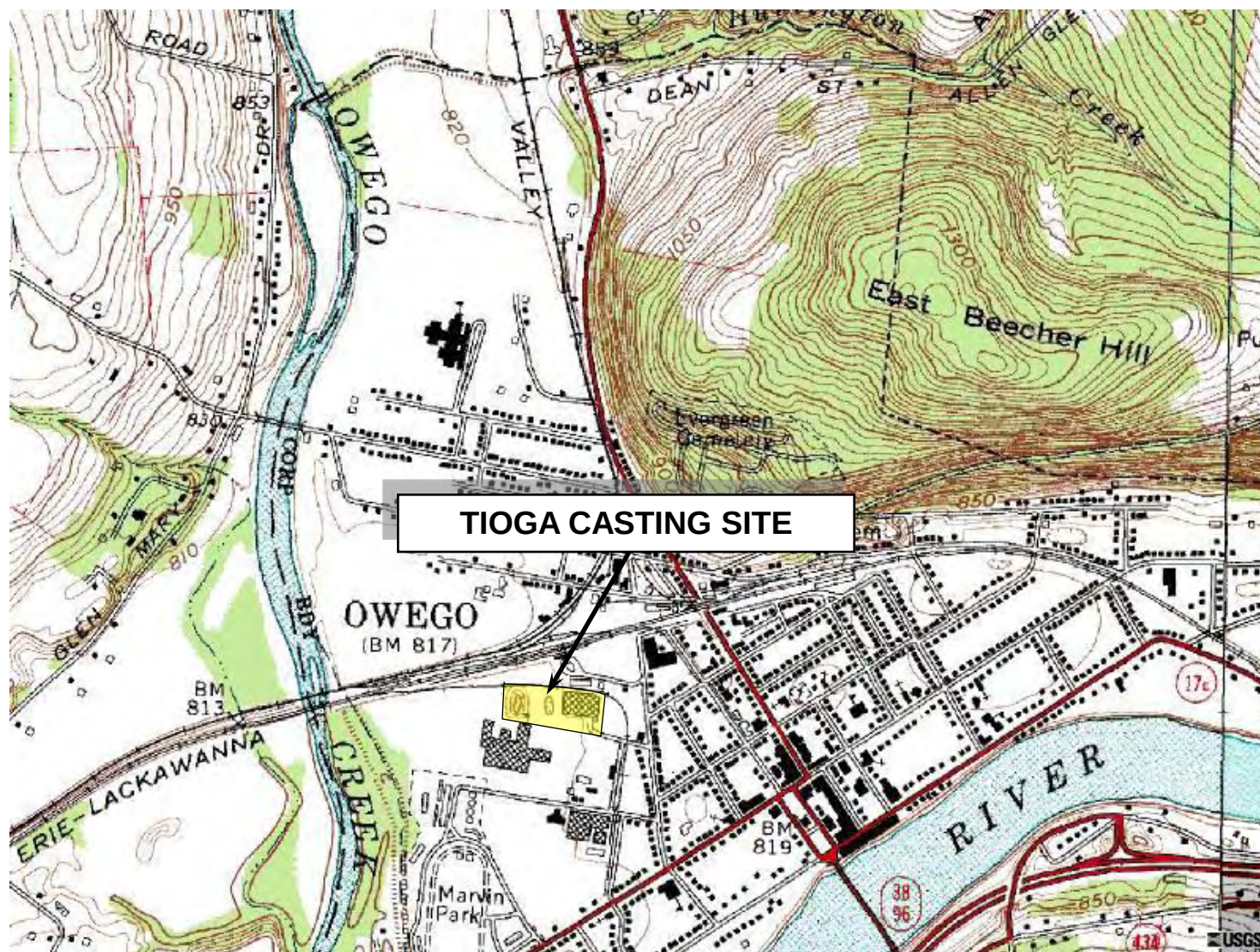
5. Summary

2010 O&M activities will be conducted in accordance with the SMP during the second quarter 2010.

Current groundwater elevation data are insufficient to evaluate the direction of groundwater flow across the site.

Groundwater samples were collected in accordance with the SMP in March 2010. With the exception of sodium, none of the samples contained concentrations of metals greater than the applicable NYSDEC Class GA Standards. Sodium concentrations exceeded the NYSDEC Class GA Standard in four of the eight samples collected during the first quarter groundwater monitoring event. The sodium exceedances may be related to the localized application of road de-icing agents.

Previous (April 2009) exceedances of iron, manganese, and lead appear to be anomalous.



SOURCE: U.S.G.S 7.5 MIN. OWEGO QUAD, 1990

SCALE IN FEET
0 500 1000 2000

**MALCOLM
PIRNIE**

NYSDEC STANDBY CONTRACT NO. D004443
TIOGA CASTING FACILITIES
OWEGO, NEW YORK
TIOGA CASTING SITE LOCATION

FIGURE 2-1

XREFS: I:\ACAD\PROJ\0266\362\X-REFS\BASEMAP.dwg IMAGES: None
User: Hausmann Spec: PIRNIE STANDARD File: I:\ACAD\PROJ\0266\362\Figures\FIGURE 4-1.DWG Scale: 1:1 Date: 05/19/2010 Time: 10:18 Layout: Layout1

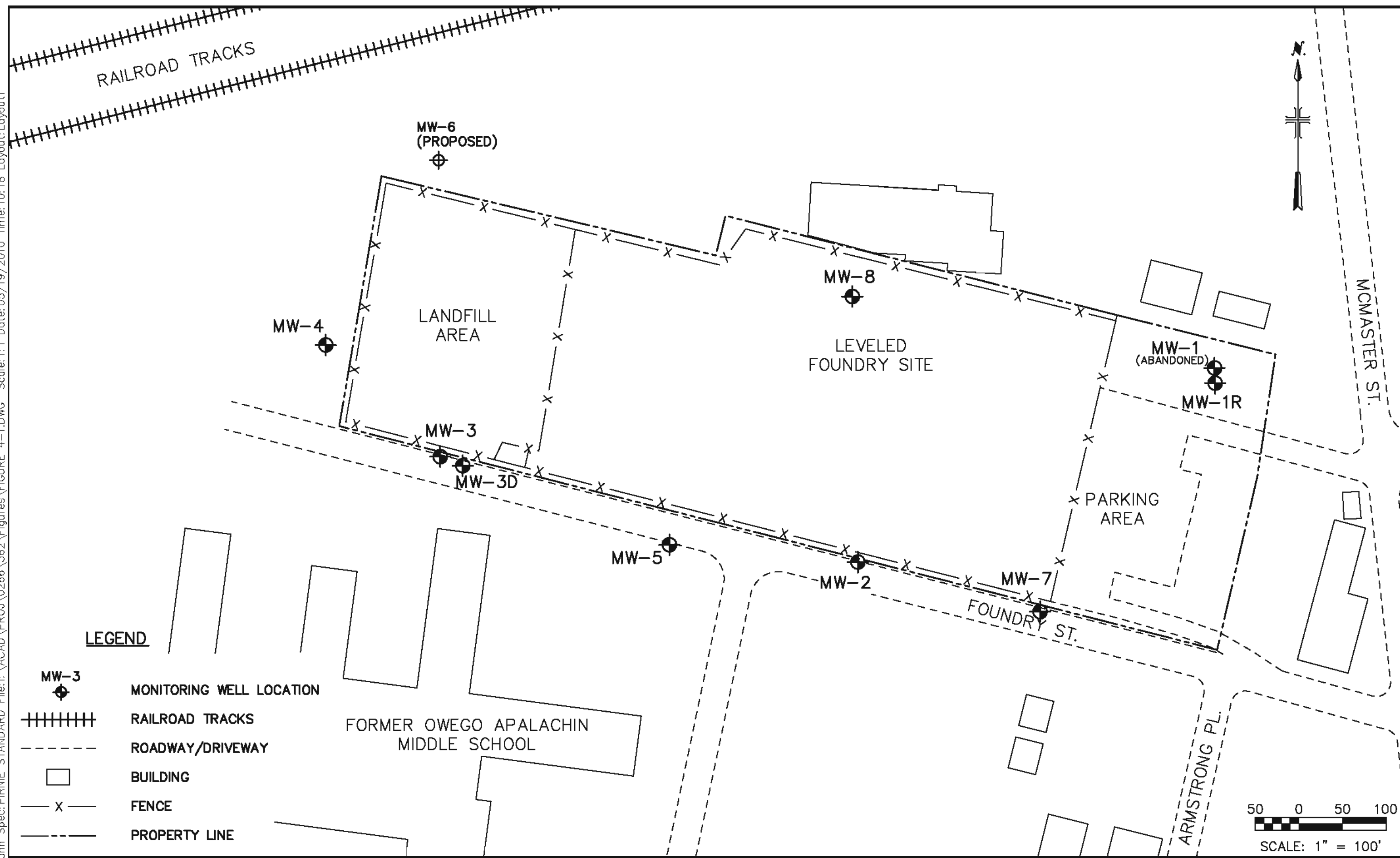


Table 4-1
Summary of Groundwater Elevations
Tioga Casting
Owego, New York
NYSDEC Site No. 7-54-012

Well	Measuring Point Elevation ⁽¹⁾ (feet)	11/24/2008		5/18/2010	
		DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)
MW-1R		20.90		17.03	
MW-2	807.68	14.56	793.12	10.69	796.99
MW-3	812.61	17.51	795.10	14.35	798.26
MW-3D		17.52		14.17	
MW-4	806.33	10.87	795.46	7.81	798.52
MW-5	803.89	10.74	793.15	6.60	797.29
MW-7		14.17		10.30	
MW-8		20.98		17.05	

(1) - Source: *Monitoring Plan: Tioga Casting (NYSDEC, April 25, 2005)*

Table 4-2

Summary of Groundwater Sample Results - Metals

Tioga Castings Site

Owego, New York

NYSDEC Site Number 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-1R 4/13/2009 ug/L	MW-1R 3/18/2010 ug/L	MW-2 8/2/2007 ug/L	MW-2 7/17/2008 ug/L	MW-2 4/13/2009 ug/L	MW-2 3/19/2010 ug/L	MW-3 4/13/2009 ug/L	MW-3 3/19/201 ug/L
Aluminum		1050	41.0 BE	60.2 B	23.6 U	632	57.8 BE	195.0	39.8
Antimony	3	6.7 U	6.8 U	5.6 U	5.5 U	6.7 U	6.8 U	6.7 U	6.8
Arsenic	25	3.0 U	5.6 U	4.2 U	3.7 U	3.0 U	5.6 U	3.0 U	5.6
Barium	1000	59.8 B	51.9 BE	61.6 B	54.3 B	102	48.8 BE	38.3 B	46.5
Beryllium	3*	0.5 U	0.2 BE	0.40 B	0.3 U	0.5 U	0.2 U	0.5 U	0.2
Cadmium	5 [10]	0.3 U	0.6 BE	0.36 U	0.3 U	0.3 U	0.3 BE	0.3 U	0.3
Calcium		61200	63700	54500 E	48800	50900	51400	42900	51300
Chromium	50 [50]	10.4 B	0.9 U	0.84 U	0.9 U	5.8 B	0.9 U	3.5 B	0.9
Cobalt		3.8 U	0.6 U	1.1 B	1.1 U	3.8 U	0.6 U	3.8 U	0.6
Copper	200	181	1.3 U	1.3 U	1.3 U	105	1.3 U	71.3	1.3
Iron	300	1410	48.9 BE	19.3 U	19 U	532	28.6 BE	144 B	19.3
Lead	25 [25]	1.4 U	3.0 U	2.9 U	2.9 U	1.4 U	3.0 U	1.5 B	3.0
Magnesium		11500	12100	8650 E	7670	8320	8290	7450	9270
Manganese	300	106	16.5	2.8 B	8.2 B	211	54.2	14.0 B	0.3
Mercury	0.7	NA	0.1 U	0.12 U	0.1 U	NA	0.1 U	NA	0.1
Molybdenum		5.5 B	NA	NA	NA	5.0 U	NA	5.0 U	NA
Nickel	100	6.9 B	1.4 BE	1.2 U	1.0 U	7.3 B	1.3 U	4.2 B	1.3
Potassium		2070 B	1640 BE	4710 BE	3900 B	4550	4550 BE	1430 B	1890
Selenium	10	11.4 U	8.7 U	6.1 U	6.1 U	11.4 U	8.7 U	11.4 U	8.7
Silver	50	2.2 U	1.2 U	1.7 B	1.3 U	2.2 U	1.2 U	2.2 U	1.2
Sodium	20000	25600	25100	36100 E	18700	25200	24000	17000	16900
Thallium	0.5*	3.0 U	10.2 U	7.0 U	5.9 U	3.0 U	10.2 U	3.0 U	10.2
Tin		5.0 U	NA	NA	NA	5.0 U	NA	5.0 U	NA
Titanium		8.8 B	NA	NA	NA	5.0 U	NA	5.0 U	NA
Vanadium		4.7 U	1.1 U	0.80 B	1.0 U	4.7 U	1.1 U	4.7 U	1.1
Zinc	2000*	13.5 U	4.1 BE	3.6 U	3.6 U	13.5 U	2.3 BE	13.5 U	1.5

* - NYSDEC Guidance Value.

NA - Not analyzed.

U - Analyte not detected.

B - Greater than MDL but less than RL.

MDL - Method detection limit.

RL - Reporting limit.

E - Estimated value.

[25] - Site-specific cleanup goal.

Table 4-2

Summary of Groundwater Sample Results - Metals

Tioga Castings Site

Owego, New York

NYSDEC Site Number 7-54-012

Well Date Units	NYSDEC Class GA Standards	0	MW-3D 4/13/2009 ug/L	MW-3D 3/18/2010 ug/L	MW-4 8/2/2007 ug/L	MW-4 7/17/2008 ug/L	MW-4 4/13/2009 ug/L	MW-4 3/18/2010 ug/L	MW-5 8/2/2007 ug/L
Aluminum		U	668	39.8 U	40.0 U	32.6 B	754	39.8 U	79.0 B
Antimony	3	U	6.7 U	6.8 U	5.6 U	5.5 U	6.7 U	6.8 U	5.6 U
Arsenic	25	U	3.0 U	5.6 U	4.2 U	3.7 U	3.0 U	5.6 U	4.2 U
Barium	1000	BE	39.2 B	45.3 BE	40.0 B	38.3 B	60.9 B	42.6 BE	56.4 B
Beryllium	3*	U	0.5 U	0.2 U	0.27 U	0.3 U	0.5 U	0.2 U	0.51 B
Cadmium	5 [10]	U	0.3 U	0.3 U	0.36 U	0.7 B	0.3 U	0.5 BE	0.36 U
Calcium			42300	50000	42700 E	42400	40500	48000	44400 E
Chromium	50 [50]	U	3.8 B	0.9 U	0.84 U	0.9 U	3.4 B	0.9 U	0.84 U
Cobalt		U	3.8 U	0.6 U	0.89 U	1.1 U	3.8 U	0.6 U	0.89 U
Copper	200	U	56.6	1.3 U	1.4 B	1.3 U	49.7	1.3 U	1.3 U
Iron	300	U	558	19.3 U	47.6 B	34 B	667	22.2 BE	19.3 U
Lead	25 [25]	U	1.4 U	3.0 U	2.9 U	2.9 U	1.4 U	3.0 U	2.9 U
Magnesium			7490	9120	8190 E	7830	7080	8820	7600 E
Manganese	300	BE	40.3 B	0.9 BE	0.79 B	1.2 B	79.4	1.5 BE	0.90 B
Mercury	0.7	U	NA	0.1 U	0.12 U	0.1 U	NA	0.1 U	0.12 U
Molybdenum			5.0 U	NA	NA	NA	5.0 U	NA	NA
Nickel	100	U	3.9 B	1.3 U	1.2 U	1.0 U	4.5 B	1.3 U	1.2 U
Potassium		BE	1550 B	1610 BE	1020 BE	1860 B	1190 B	1130 BE	3330 BE
Selenium	10	U	11.4 U	8.7 U	6.1 U	6.1 U	11.4 U	8.7 U	6.1 U
Silver	50	U	2.2 U	1.2 U	1.0 U	1.3 U	2.2 U	1.2 U	1.6 B
Sodium	20000		17300	16900	12000 E	12800	15200	16100	14200 E
Thallium	0.5*	U	3.0 U	10.2 U	7.0 U	5.9 U	3.0 U	10.2 U	7.0 U
Tin			5.0 U	NA	NA	NA	5.0 U	NA	NA
Titanium			5.0 U	NA	NA	NA	5.0 U	NA	NA
Vanadium		U	4.7 U	1.1 U	0.78 U	1.0 U	4.7 U	1.1 U	0.80 B
Zinc	2000*	U	13.5 U	1.5 U	3.6 U	3.6 U	13.5 U	1.5 U	3.6 U

* - NYSDEC Guidance Value.

NA - Not analyzed.

U - Analyte not detected.

B - Greater than MDL but less than RL.

MDL - Method detection limit.

RL - Reporting limit.

E - Estimated value.

[25] - Site-specific cleanup goal.

Table 4-2

Summary of Groundwater Sample Results - Metals

Tioga Castings Site

Owego, New York

NYSDEC Site Number 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-5 7/17/2008 ug/L	MW-5 4/13/2009 ug/L	MW-5 3/18/2010 ug/L	MW-7 4/13/2009 ug/L	MW-7 3/18/2010 ug/L	MW-8 4/13/2009 ug/L	MW-8 3/18/2010 ug/L
Aluminum		28.9 B	102 B	39.8 U	1810	140 BE	6190	39.8 U
Antimony	3	5.5 U	6.7 U	6.8 U	6.7 U	6.8 U	6.7 U	6.8 U
Arsenic	25	3.7 U	3.0 U	5.6 U	3.0 U	5.6 U	3.0 U	5.6 U
Barium	1000	55.7 B	47.1 B	47.4 BE	165	133 BE	219	64.6 BE
Beryllium	3*	0.3 U	0.5 U	0.2 U	0.5 U	0.2 U	0.5 U	0.2 U
Cadmium	5 [10]	0.3 U	0.3 U	0.3 U	0.3 U	0.4 BE	0.3 U	0.3 BE
Calcium		45200	44000	45100	64300	85600	52400	52600
Chromium	50 [50]	0.9 U	3.9 B	0.9 U	10.4 B	0.9 U	8.9 B	0.9 U
Cobalt		1.1 U	3.8 U	0.6 U	5.8 B	0.6 U	3.8 U	0.6 U
Copper	200	1.3 U	89.3	1.3 U	178	3.1 BE	66.3	1.3 U
Iron	300	19 U	246	19.3 U	2880	192	4530	40.2 BE
Lead	25 [25]	2.9 U	6.0 B	3.0 U	30.2 B	3.0 U	17.3 B	3.0 U
Magnesium		7570	7440	7330	10000	13600	8740	8870
Manganese	300	0.7 B	10.1 B	0.8 BE	989	115	524	2.7 BE
Mercury	0.7	0.1 U	NA	0.1 U	NA	0.1 U	NA	0.1 U
Molybdenum		NA	5.0 U	NA	5.0 B	NA	5.0 U	NA
Nickel	100	1.4 B	5.0 B	1.3 U	10.6 B	2.8 BE	9.5 B	1.3 U
Potassium		3340 B	2880 B	3530 BE	4510	5190	3770	2440 BE
Selenium	10	6.1 U	11.4 U	8.7 U	11.4 U	8.7 U	11.4 U	8.7 U
Silver	50	1.3 U	2.2 U	1.2 U	2.2 U	1.2 U	2.2 U	1.2 U
Sodium	20000	15400	13300	8320	57500	58900	26700	23300
Thallium	0.5*	5.9 U	3.0 U	10.2 U	3.0 U	10.2 U	3.0 U	10.2 U
Tin		NA	5.0 U	NA	5.0 U	NA	5.0 U	NA
Titanium		NA	5.0 U	NA	5.0 U	NA	34.4 B	NA
Vanadium		1.0 U	4.7 U	1.1 U	7.2 B	1.1 U	9.8 B	1.1 U
Zinc	2000*	3.6 U	13.5 U	3.6 BE	40.4 B	10.4 BE	40.2 B	3.0 BE

* - NYSDEC Guidance Value.

NA - Not analyzed.

U - Analyte not detected.

B - Greater than MDL but less than RL.

MDL - Method detection limit.

RL - Reporting limit.

E - Estimated value.

[25] - Site-specific cleanup goal.

Appendix A

Well Inspection Forms



GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: TIOGA CASTINGS PROJECT NUMBER: 0266362
 DATE OF INSPECTION: 3/18/2010 INSPECTOR: JSR/GB
 WELL DESIGNATION: MW-1R
 WELL LOCATION: _____

Outward Appearance

Flushmount Diameter 3 inches N/A []
 Approximate Stickup Height 3 feet N/A []
 Integrity of Protective Casing Describe: GOOD
 Protective Casing Material Steel [✓] Stainless Steel [] Other _____
 Protective Casing Width or Dia. 4 inches
 Weep Hole in Protective Casing Yes [] No [✓]
 Surface Seal/Apron Material Cement [✓] Bentonite [] Not apparent [] Other _____
 Integrity of Surface Seal/Apron Describe: GOOD
 Surface Drainage Away from Wellhead [✓] Toward Wellhead []
 Bollards Present? Yes [] No [✓] Describe: _____
 Well ID. Visible? Yes [✓] No [] Describe: _____
 Lock Present and Functional? Yes [✓] No [] Describe: _____
 Photograph Taken? Photo # Yes [] No [✓] Describe: _____

Inner Appearance

Integrity of Well Casing Describe: GOOD
 Integrity of Cap Seal Describe: GOOD
 Surface Water in Casing? Yes [] No [✓] Describe: _____
 Well Casing Diameter 2 inches
 Well Casing Material PVC [✓] Steel [] Stainless Steel []
 Inner Cap Threaded [] Slip [] Expansion Plug [✓] None []
 Reference/Measuring Point Groove [] Indelible Mark [✓] None []
 Evidence of Double Casing? Yes [] No [✓] Describe: _____

Downhole

Odor Yes [] No [✓] Describe: _____
 PID Reading 0 ppm
 Depth to Water (to top of casing) 17.03 feet (nearest 0.01) Depth to LNAPL _____ feet (nearest 0.01) N/A []
 Total Well Depth (to top of casing) 25.43 feet (nearest 0.1)
 Sediment (Hard/Soft Bottom) Describe: HARD

Additional Comments:

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: TIOGA CASTINGS PROJECT NUMBER: 0266362
 DATE OF INSPECTION: 3/18/2010 INSPECTOR: JSR/GB
 WELL DESIGNATION: MW-2
 WELL LOCATION: _____

Outward Appearance

Flushmount Diameter _____ inches N/A []
 Approximate Stickup Height 3 feet N/A []
 Integrity of Protective Casing Describe: GOOD
 Protective Casing Material Steel [✓] Stainless Steel [] Other _____
 Protective Casing Width or Dia. 4 inches
 Weep Hole in Protective Casing Yes [] No [✓]
 Surface Seal/Apron Material Cement [✓] Bentonite [] Not apparent [] Other _____
 Integrity of Surface Seal/Apron Describe: GOOD
 Surface Drainage Away from Wellhead [] Toward Wellhead [✓]
 Bollards Present? Yes [] No [✓] Describe: _____
 Well ID. Visible? Yes [✓] No [] Describe: _____
 Lock Present and Functional? Yes [] No [✓] Describe: LOCK RUSTED - REPLACED WITH NEW
 Photograph Taken? Photo # Yes [] No [✓] Describe: _____

Inner Appearance

Integrity of Well Casing Describe: GOOD
 Integrity of Cap Seal Describe: GOOD
 Surface Water in Casing? Yes [] No [✓] Describe: _____
 Well Casing Diameter 2 inches
 Well Casing Material PVC [✓] Steel [] Stainless Steel []
 Inner Cap Threaded [] Slip [✓] Expansion Plug [] None []
 Reference/Measuring Point Groove [] Indelible Mark [✓] None []
 Evidence of Double Casing? Yes [] No [✓] Describe: _____

Downhole

Odor Yes [] No [✓] Describe: _____
 PID Reading 0 ppm
 Depth to Water (to top of casing) 10.69 feet (nearest 0.01) Depth to LNAPL _____ feet (nearest 0.01) N/A []
 Total Well Depth (to top of casing) 19.82 feet (nearest 0.1)
 Sediment (Hard/Soft Bottom) Describe: HARD

Additional Comments:

NEW LOCK

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: T106A CASTINGS PROJECT NUMBER: 0266362
 DATE OF INSPECTION: 3/18/2010 INSPECTOR: JSR/GB
 WELL DESIGNATION: MW-3
 WELL LOCATION: _____

Outward Appearance

Flushmount Diameter _____ inches N/A []
 Approximate Stickup Height 3 feet N/A []
 Integrity of Protective Casing Describe: GOOD
 Protective Casing Material Steel [✓] Stainless Steel [] Other _____
 Protective Casing Width or Dia. 4 inches
 Weep Hole in Protective Casing Yes [] No [✓]
 Surface Seal/Apron Material Cement [] Bentonite [] Not apparent [✓] Other _____
 Integrity of Surface Seal/Apron Describe: _____
 Surface Drainage Away from Wellhead [✓] Toward Wellhead []
 Bollards Present? Yes [] No [✓] Describe: _____
 Well ID. Visible? Yes [✓] No [] Describe: _____
 Lock Present and Functional? Yes [✓] No [] Describe: _____
 Photograph Taken? Photo # Yes [] No [✓] Describe: _____

Inner Appearance

Integrity of Well Casing Describe: GOOD
 Integrity of Cap Seal Describe: GOOD
 Surface Water in Casing? Yes [] No [✓] Describe: _____
 Well Casing Diameter 2 inches
 Well Casing Material PVC [✓] Steel [] Stainless Steel []
 Inner Cap Threaded [] Slip [✓] Expansion Plug [] None []
 Reference/Measuring Point Groove [] Indelible Mark [✓] None []
 Evidence of Double Casing? Yes [] No [✓] Describe: _____

Downhole

Odor Yes [] No [✓] Describe: _____
 PID Reading 0 ppm
 Depth to Water (to top of casing) 14.35 feet (nearest 0.01) Depth to LNAPL _____ feet (nearest 0.01) N/A []
 Total Well Depth (to top of casing) 18.79 feet (nearest 0.1)
 Sediment (Hard/Soft Bottom) Describe: HARD

Additional Comments:

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: TIGGA CASTINGS PROJECT NUMBER: 0266362
 DATE OF INSPECTION: 3/18/2010 INSPECTOR: JSR/GB
 WELL DESIGNATION: MW-3D
 WELL LOCATION: _____

Outward Appearance

Flushmount Diameter _____ inches N/A []
 Approximate Stickup Height 3 feet N/A []
 Integrity of Protective Casing Describe: GOOD
 Protective Casing Material Steel [✓] Stainless Steel [] Other _____
 Protective Casing Width or Dia. 4 inches
 Weep Hole in Protective Casing Yes [] No [✓]
 Surface Seal/Apron Material Cement [✓] Bentonite [] Not apparent [] Other _____
 Integrity of Surface Seal/Apron Describe: GOOD
 Surface Drainage Away from Wellhead [✓] Toward Wellhead []
 Bollards Present? Yes [] No [✓] Describe: _____
 Well ID. Visible? Yes [✓] No [] Describe: _____
 Lock Present and Functional? Yes [✓] No [] Describe: _____
 Photograph Taken? Photo # Yes [] No [✓] Describe: _____

Inner Appearance

Integrity of Well Casing Describe: GOOD
 Integrity of Cap Seal Describe: GOOD
 Surface Water in Casing? Yes [] No [✓] Describe: _____
 Well Casing Diameter 2 inches
 Well Casing Material PVC [✓] Steel [] Stainless Steel []
 Inner Cap Threaded [] Slip [] Expansion Plug [✓] None []
 Reference/Measuring Point Groove [] Indelible Mark [✓] None []
 Evidence of Double Casing? Yes [] No [✓] Describe: _____

Downhole

Odor Yes [] No [✓] Describe: _____
 PID Reading 0 ppm
 Depth to Water (to top of casing) 14.17 feet (nearest 0.01) Depth to LNAPL _____ feet (nearest 0.01) N/A []
 Total Well Depth (to top of casing) 25.20 feet (nearest 0.1)
 Sediment (Hard/Soft Bottom) Describe: HARD

Additional Comments:

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: TIOGA CASTINGS PROJECT NUMBER: 0266362
 DATE OF INSPECTION: 3/18/2010 INSPECTOR: JR/GB
 WELL DESIGNATION: MW - 4
 WELL LOCATION: _____

Outward Appearance

Flushmount Diameter 8 inches N/A []
 Approximate Stickup Height _____ feet N/A []
 Integrity of Protective Casing Describe: GOOD
 Protective Casing Material Steel [✓] Stainless Steel [] Other _____
 Protective Casing Width or Dia. 8 inches
 Weep Hole in Protective Casing Yes [] No [✓]
 Surface Seal/Apron Material Cement [✓] Bentonite [] Not apparent [] Other _____
 Integrity of Surface Seal/Apron Describe: POOR - CONCRETE FALLING APART
 Surface Drainage Away from Wellhead [✓] Toward Wellhead []
 Bollards Present? Yes [] No [✓] Describe: _____
 Well ID. Visible? Yes [✓] No [] Describe: _____
 Lock Present and Functional? Yes [✓] No [] Describe: _____
 Photograph Taken? Photo # Yes [] No [✓] Describe: _____

Inner Appearance

Integrity of Well Casing Describe: GOOD
 Integrity of Cap Seal Describe: GOOD
 Surface Water in Casing Yes [✓] No [] Describe: BAILED WATER FROM ROADBOX
 Well Casing Diameter 2 inches
 Well Casing Material PVC [✓] Steel [] Stainless Steel []
 Inner Cap Threaded [] Slip [] Expansion Plug [✓] None []
 Reference/Measuring Point Groove [] Indelible Mark [✓] None []
 Evidence of Double Casing? Yes [] No [✓] Describe: _____

Downhole

Odor Yes [] No [✓] Describe: _____
 PID Reading 0 ppm
 Depth to Water (to top of casing) 7.81 feet (nearest 0.01) Depth to LNAPL _____ feet (nearest 0.01) N/A []
 Total Well Depth (to top of casing) 16.10 feet (nearest 0.1)
 Sediment (Hard/Soft Bottom) Describe: HARD

Additional Comments:

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: TICHA CASTINGS PROJECT NUMBER: 0266362
 DATE OF INSPECTION: 3/18/2010 INSPECTOR: JSR/gb
 WELL DESIGNATION: MW-5
 WELL LOCATION: _____

Outward Appearance

Flushmount Diameter 12 inches N/A []
 Approximate Stickup Height _____ feet N/A []
 Integrity of Protective Casing Describe: GOOD
 Protective Casing Material Steel [☒] Stainless Steel [] Other _____
 Protective Casing Width or Dia. 12 inches
 Weep Hole in Protective Casing Yes [] No [☒]
 Surface Seal/Apron Material Cement [☒] Bentonite [] Not apparent [] Other _____
 Integrity of Surface Seal/Apron Describe: GOOD
 Surface Drainage Away from Wellhead [] Toward Wellhead [☒]
 Bollards Present? Yes [] No [☒] Describe: _____
 Well ID. Visible? Yes [☒] No [] Describe: _____
 Lock Present and Functional? Yes [☒] No [] Describe: _____
 Photograph Taken? Photo # Yes [] No [☒] Describe: _____

Inner Appearance

Integrity of Well Casing Describe: GOOD
 Integrity of Cap Seal Describe: GOOD
 Surface Water in Casing? Yes [☒] No [] Describe: BAILED WATER FROM ROADBOX
 Well Casing Diameter 2 inches
 Well Casing Material PVC [☒] Steel [] Stainless Steel []
 Inner Cap Threaded [] Slip [] Expansion Plug [☒] None []
 Reference/Measuring Point Groove [] Indelible Mark [☒] None []
 Evidence of Double Casing? Yes [] No [☒] Describe: _____

Downhole

Odor Yes [] No [☒] Describe: _____
 PID Reading 0 ppm
 Depth to Water (to top of casing) 6.60 feet (nearest 0.01) Depth to LNAPL _____ feet (nearest 0.01) N/A []
 Total Well Depth (to top of casing) 16.50 feet (nearest 0.1)
 Sediment (Hard/Soft Bottom) Describe: SOFT

Additional Comments:

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: TIOGA CASTINGS PROJECT NUMBER: 0266362
 DATE OF INSPECTION: 3/18/2010 INSPECTOR: JSR/gb
 WELL DESIGNATION: MW-7
 WELL LOCATION: _____

Outward Appearance

Flushmount Diameter 6 inches N/A []
 Approximate Stickup Height _____ feet N/A []
 Integrity of Protective Casing Describe: GOOD
 Protective Casing Material Steel [☒] Stainless Steel [] Other _____
 Protective Casing Width or Dia. 6 inches
 Weep Hole in Protective Casing Yes [] No [☒]
 Surface Seal/Apron Material Cement [☒] Bentonite [] Not apparent [] Other _____
 Integrity of Surface Seal/Apron Describe: GOOD
 Surface Drainage Away from Wellhead [☒] Toward Wellhead []
 Bollards Present? Yes [] No [☒] Describe: _____
 Well ID. Visible? Yes [☒] No [] Describe: _____
 Lock Present and Functional? Yes [☒] No [] Describe: _____
 Photograph Taken? Photo # Yes [] No [☒] Describe: _____

Inner Appearance

Integrity of Well Casing Describe: GOOD
 Integrity of Cap Seal Describe: GOOD
 Surface Water in Casing? Yes [] No [☒] Describe: _____
 Well Casing Diameter 2 inches
 Well Casing Material PVC [☒] Steel [] Stainless Steel []
 Inner Cap Threaded [] Slip [] Expansion Plug [☒] None []
 Reference/Measuring Point Groove [] Indelible Mark [☒] None []
 Evidence of Double Casing? Yes [] No [☒] Describe: _____

Downhole

Odor Yes [] No [☒] Describe: _____
 PID Reading 0.4 ppm
 Depth to Water (to top of casing) 10.30 feet (nearest 0.01) Depth to LNAPL _____ feet (nearest 0.01) N/A []
 Total Well Depth (to top of casing) 22.50 feet (nearest 0.1)
 Sediment (Hard/Soft Bottom) Describe: HARD

Additional Comments:

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: T106A CASTINGS PROJECT NUMBER: 0266362
 DATE OF INSPECTION: 3/18/2010 INSPECTOR: JR/GB
 WELL DESIGNATION: MW-8
 WELL LOCATION: _____

Outward Appearance

Flushmount Diameter _____ inches N/A []
 Approximate Stickup Height 3 feet N/A []
 Integrity of Protective Casing Describe: GOOD
 Protective Casing Material Steel [✓] Stainless Steel [] Other _____
 Protective Casing Width or Dia. 4 inches
 Weep Hole in Protective Casing Yes [] No [✓]
 Surface Seal/Apron Material Cement [✓] Bentonite [] Not apparent [] Other _____
 Integrity of Surface Seal/Apron Describe: GOOD
 Surface Drainage Away from Wellhead [✓] Toward Wellhead []
 Bollards Present? Yes [] No [✓] Describe: _____
 Well ID. Visible? Yes [✓] No [] Describe: _____
 Lock Present and Functional? Yes [✓] No [] Describe: _____
 Photograph Taken? Photo # Yes [] No [✓] Describe: _____

Inner Appearance

Integrity of Well Casing Describe: GOOD
 Integrity of Cap Seal Describe: GOOD
 Surface Water in Casing? Yes [] No [✓] Describe: _____
 Well Casing Diameter 2 inches
 Well Casing Material PVC [✓] Steel [] Stainless Steel []
 Inner Cap Threaded [] Slip [] Expansion Plug [✓] None []
 Reference/Measuring Point Groove [] Indelible Mark [✓] None []
 Evidence of Double Casing? Yes [] No [✓] Describe: _____

Downhole

Odor Yes [] No [✓] Describe: _____
 PID Reading 0 ppm
 Depth to Water (to top of casing) 17.05 feet (nearest 0.01) Depth to LNAPL _____ feet (nearest 0.01) N/A []
 Total Well Depth (to top of casing) 27.82 feet (nearest 0.1)
 Sediment (Hard/Soft Bottom) Describe: SOFT

Additional Comments:

Appendix B

Water Level Data Form



GROUNDWATER LEVEL DATA FORM

PROJECT NAME: Tioga Casting
PROJECT NUMBER: 0266362

DATE: 3/18/2010
PERSONNEL: JSR (MPI), GB (Aztech)

[illegible]

Notes:

Appendix C

Groundwater Sampling Purge Logs





WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-1R

DATE: 3/18/2010

PROJECT NAME: T106A CASTINGS

PROJECT NUMBER: 0266362

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 17.06

D: Volume of Water in Casing: _____

$$v = 0.0408 (B)^2 \times (A-C) = D$$

$$v = 0.0408 (\quad)^2 \times (\quad - \quad) = \quad \text{gal.}$$

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	11:15	11:25	11:35	11:45	11:55	12:00						
Gallons				1.5		2.5						
Well Volume	17.06	17.06	17.06	17.06	17.06	17.06						
pH	6.38	6.31	6.27	6.31	6.27	6.28						
Conductivity (mohm/cm)	.539	.532	.526	.528	.525	.525						
Turbidity	104.0	96.3	77.5	76.5	81.9	76.2						
Dissolved Oxygen	4.44	3.65	3.46	3.45	3.62	3.49						
Temperature (°C)	10.94	10.95	11.17	11.30	11.39	11.50						
Salinity	0	0	0	0	0	0						
TDS	0.34	0.34	0.34	0.34	0.34	0.34						
REDOX (mV)	147	144	142	139	138	138						

Notes: 11:15 START PURGE

12:00 SAMPLED - METALS (FILTERED/UNFILTERED)

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-2

DATE: 3/19/10

PROJECT NAME: Tioga Casting

PROJECT NUMBER: _____

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 10.84

D: Volume of Water in Casing: _____

$$v = 0.0408 (B)^2 \times (A-C) = D$$

$$v = 0.0408 (\quad)^2 \times (\quad - \quad) = \quad \text{gal.}$$

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	0856	0900	0910	0920	0930	0940	0950					
Gallons							79					
Well Volume	10.84	10.84	10.84	10.84	10.84	10.84	10.84					
pH	7.06	6.69	6.60	6.54	6.52	6.49	6.48					
Conductivity (mohm/cm)	0.393	0.376	0.376	0.381	0.384	0.390	0.391					
Turbidity	71.8	54.3	34.3	19.6	13.0	13.7	13.3					
Dissolved Oxygen	14.50	10.91	10.39	10.27	10.43	10.42	10.41					
Temperature (°C)	7.49	6.85	6.80	6.96	6.77	6.91	6.94					
Salinity	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
TDS	0.25	0.24	0.24	0.25	0.25	0.25	0.25					
REDOX (mV)	180	187	188	190	190	191	191					

Notes: Started purging @ 0856
Sampled @ 0950



WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: NW-3

DATE: 3/19/2010

PROJECT NAME: TIDIA CASTINGS

PROJECT NUMBER: 0266362

SAMPLERS: JJR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 14.50

D: Volume of Water in Casing: _____

$$v = 0.0408 (B)^2 \times (A-C) = D$$

$$v = 0.0408 (\quad)^2 \times (\quad - \quad) = \quad \text{gal.}$$

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	0855	0910	0920	0925	0930							
Gallons					2.5							
Well Volume	14.50	14.50	14.50	14.50	14.50							
pH	6.14	6.06	6.06	6.06	6.06							
Conductivity (mohm/cm)	.369	.366	.365	.365	.364							
Turbidity	0	0	0	0	0							
Dissolved Oxygen	9.73	9.86	10.10	10.18	10.25							
Temperature (°C)	7.65	7.79	7.88	7.91	8.02							
Salinity	0	0	0	0	0							
TDS	0.24	0.24	0.24	0.24	0.24							
REDOX (mV)	203	202	201	201	201							

Notes: 0855 START PURGIE

0930 SAMPLED - METALS



WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-30

DATE: 3/19/10

PROJECT NAME: Tiggs Cushing

PROJECT NUMBER: 0266362

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 14.19

D: Volume of Water in Casing: _____

$$v = 0.0408 (B)^2 \times (A-C) = D$$

$$v = 0.0408 (\quad)^2 \times (\quad - \quad) = \quad \text{gal.}$$

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1540	1556	1600	1612	1620	1630						
Gallons						39						
Well Volume	14.19	14.21	14.21	14.21	14.21	14.21						
pH	6.52	6.46	6.45	6.45	6.46	6.46						
Conductivity (mohm/cm)	0.384	0.390	0.379	0.377	0.378	0.376						
Turbidity	60.5	38.5	21.3	27.9	27.7	28.1						
Dissolved Oxygen	9.98	8.90	8.59	8.60	8.58	8.44						
Temperature (°C)	9.79	9.40	9.19	9.22	9.15	9.14						
Salinity	0.0	0.0	0.0	0.0	0.0	0.0						
TDS	0.25	0.25	0.25	0.25	0.25	0.25						
REDOX (mV)	156	157	159	155	160	160						

Notes: Started purging @ 1540
Sampled @ 1630

WELL DEVELOPMENT/ PURGING LOG
WELL NUMBER: MW-4
DATE: 3/18/10
PROJECT NAME: Tioga Casting
PROJECT NUMBER: 0266362
SAMPLERS: GR
A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 7.82
D: Volume of Water in Casing: _____

$$v = 0.0408 (B)^2 \times (A-C) = D$$

$$v = 0.0408 (\quad)^2 \times (\quad - \quad) = \quad \text{gal.}$$

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1345	1355	1405	1415	1425	1435	1440	1445	1450	1455	1500	
Gallons											59	
Well Volume	7.82	7.82	7.82	7.82	7.82	7.82	7.82	7.82	7.82	7.82	7.82	
pH	6.56	6.43	6.39	6.39	6.39	6.40	6.41	6.40	6.41	6.42	6.42	
Conductivity (mohm/cm)	0.383	0.376	0.376	0.375	0.376	0.377	0.377	0.376	0.375	0.375	0.376	
Turbidity	83.9	50.4	29.1	22.5	15	13.4	12.7	6.2	4.1	4.2	3.9	
Dissolved Oxygen	11.20	9.64	9.36	9.26	9.10	9.00	8.97	8.91	8.93	9.08	9.03	
Temperature (°C)	9.14	8.51	8.33	8.38	8.24	8.15	8.37	8.25	8.23	8.12	8.21	
Salinity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TDS	0.25	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.24	
REDOX (mV)	154	157	159	160	160	160	161	161	161	161	161	

Notes: Started purging @ 1345
sampled @ 1500

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-5

DATE: 3/18/2010

PROJECT NAME: TIOGA CASTINGS

PROJECT NUMBER: 0266362

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 6.58

D: Volume of Water in Casing: _____

$$v = 0.0408 (B)^2 \times (A-C) = D$$

$$v = 0.0408 (\quad)^2 \times (\quad - \quad) = \quad \text{gal.}$$

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	15:50	16:10	16:20	16:30	16:40	16:50	16:55	17:00				
Gallons					3		4					
Well Volume	6.63	6.65	6.65	6.65	6.63	6.64	6.64	6.64				
pH	5.98	5.67	5.68	5.68	5.45	5.62	5.64	5.67				
Conductivity (mohm/cm)	326	325	318	321	341	321	319	313				
Turbidity	114	124	33.8	77.0	0	0	0	0				
Dissolved Oxygen	13.25	7.99	7.94	7.79	11.99	10.42	10.42	10.17				
Temperature (°C)	7.51	7.26	8.37	8.52	7.72	7.87	7.65	7.59				
Salinity	0	0	0	0	0	0	0	0				
TDS	0.21	0.21	0.21	0.21	0.22	0.21	0.21	0.20				
REDOX (mV)	162	171	171	171	219	207	205	203				

Notes: 1550 START PURGE
1610 - GW APPEARS CLEAR / LIFTED HORIBA PROBE SLIGHTLY UP OFF BOTTOM OF CYLINDER AND TURBIDITY READINGS REDUCED IN LINE W/ OBSERVATIONS.
1630 - TURBIDITY READING INACCURATE - RE-CALIBRATED HORIBA
1700 - COLLECTED SAMPLE - METALS
COLLECTED DUPLICATE - MW-X
COLLECTED MS/MSD

WELL DEVELOPMENT/ PURGING LOG
WELL NUMBER: MW-7
DATE: 3/18/2010
PROJECT NAME: T106A CASTINGS
PROJECT NUMBER: 0266362
SAMPLERS: JSR
A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 10.33
D: Volume of Water in Casing: _____

$$v = 0.0408 (B)^2 \times (A-C) = D$$

$$v = 0.0408 (\quad)^2 \times (\quad - \quad) = \quad \text{gal.}$$

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1345	1350	1400	1410	1415	1420	1425	1430	1435			
Gallons							2.5		3			
Well Volume	10.33	10.33	10.33	10.33	10.33	10.33	10.33	10.33	10.33			
pH	5.99	5.86	5.78	5.74	5.74	5.72	5.72	5.70	5.68			
Conductivity (mohm/cm)	0.948	0.863	0.843	0.834	0.828	0.827	0.819	0.815	0.816			
Turbidity	135	144	119	120	121	118	123	122	122			
Dissolved Oxygen	4.87	0.61	0	0	0	0	0	0	0			
Temperature (°C)	11.01	10.82	10.61	10.58	10.66	10.50	10.45	10.33	10.51			
Salinity	0	0	0	0	0	0	0	0	0			
TDS	0.60	0.55	0.54	0.53	0.53	0.53	0.52	0.52	0.52			
REDOX (mV)	152	142	136	138	134	134	133	133	133			

Notes: 1345 START PURGE
1435 SAMPLED - METALS (TOTAL & DISSOLVED)
- FILTERED



WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-8

DATE: 3/14/10

PROJECT NAME: Tioga Casting

PROJECT NUMBER: 0266362

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 17.05

D: Volume of Water in Casing: _____

$$v = 0.0408 (B)^2 \times (A-C) = D$$

$$v = 0.0408 (\quad)^2 \times (\quad - \quad) = \quad \text{gal.}$$

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1115	1125	1135	1145	1155	12:00	1205					
Gallons							3 1/2					
Well Volume	17.05	17.05	17.05	17.05	17.05	17.05	17.05					
pH	6.44	6.12	6.08	6.05	6.04	6.04	6.03					
Conductivity (mohm/cm)	0.463	0.440	0.426	0.421	0.421	0.415	0.419					
Turbidity	198	83.9	28.9	1.0	0.0	0.0	0.0					
Dissolved Oxygen	9.82	7.41	7.31	7.24	7.23	7.25	7.25					
Temperature (°C)	10.73	10.06	10.07	9.98	10.04	10.15	10.12					
Salinity	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
TDS	0.30	0.29	0.28	0.27	0.27	0.27	0.27					
REDOX (mV)	142	159	166	171	174	174	176					

Notes: Started purging @ 1115
Sampled @ 1205

Appendix D

Analytical Reporting Forms



ANALYTICAL REPORT

Job Number: 220-11730-1

Job Description: NYSDEC Standby - Tioga Castings

For:
Malcolm Pirnie, Inc.
855 Route 146
Suite 210
Clifton Park, NY 12065
Attention: Mr. Bruce Nelson



Approved for release.
Joan Widomski
Data Review Analyst I
4/1/2010 10:21 AM

Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
04/01/2010

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

TestAmerica Connecticut Certifications and Approvals: CTDOH PH-047, MADEP CT023, RIDOH A43, NYDOH 10602, NY NELAP 10602, NHDES 2528, NJDEP CT410, ME DOH CT023, UT DOH 2032614458

TestAmerica Laboratories, Inc.

TestAmerica Connecticut 128 Long Hill Cross Road, Shelton, CT 06484

Tel (203) 929-8140 Fax (203) 929-8142 www.testamericainc.com



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Job Narrative
220-11730-1

Comments

No additional comments.

Receipt

The following samples were received at the laboratory with no sample collection time documented on the chain of custody: MW-X (220-11730-9). As a result, a sample collection time of 12:00 a.m. on the date of collection has been used.

Trip Blank received with these samples submitted for metals analysis only. Client contacted and the trip blank volatile analysis was cancelled on March 22, 2010.

No other analytical or quality issues were noted.

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-11730-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-11730-1	MW-1R	Water	03/18/2010 1200	03/20/2010 1010
220-11730-2	MW-7	Water	03/18/2010 1435	03/20/2010 1010
220-11730-3	MW-1R	Water	03/18/2010 1200	03/20/2010 1010
220-11730-4	MW-8	Water	03/18/2010 1205	03/20/2010 1010
220-11730-5	MW-7	Water	03/18/2010 1435	03/20/2010 1010
220-11730-6	MW-4	Water	03/18/2010 1500	03/20/2010 1010
220-11730-7	MW-3D	Water	03/18/2010 1630	03/20/2010 1010
220-11730-8	MW-5	Water	03/18/2010 1700	03/20/2010 1010
220-11730-8MS	MW-5	Water	03/18/2010 1700	03/20/2010 1010
220-11730-8MSD	MW-5	Water	03/18/2010 1700	03/20/2010 1010
220-11730-9	MW-X	Water	03/18/2010 0000	03/20/2010 1010
220-11730-10	MW-3	Water	03/19/2010 0930	03/20/2010 1010
220-11730-11	MW-2	Water	03/19/2010 0950	03/20/2010 1010

METHOD SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-11730-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ILM05.3 Metals	TAL BUF	ILM05.3 ILM05.3	

Lab References:

TAL BUF = TestAmerica Buffalo

Method References:

ILM05.3 = U.S. Environmental Protection Agency

SUBCONTRACTED DATA

Analytical Report

SDG Number: 220-11730

Project Description(s)

Work Order RTC1249 - NYSDEC Standby - Tioga Castings

For:

Johanna Dubauskas

TestAmerica Connecticut

128 Long Hill Cross Road

Shelton, CT 06484



Melissa Deyo For Sally Hoffman

Project Manager

melissa.deyo@testamericainc.com

Wednesday, March 31, 2010

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exception to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project manager who has signed this report.

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

TestAmerica Buffalo Current Certifications

As of 12/21/2009

STATE	Program	Cert # / Lab ID
Arkansas	CWA, RCRA, SOIL	88-0686
California*	NELAP CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida*	NELAP CWA, RCRA	E87672
Georgia*	SDWA, NELAP CWA, RCRA	956
Illinois*	NELAP SDWA, CWA, RCRA	200003
Iowa	SW/CS	374
Kansas*	NELAP SDWA, CWA, RCRA	E-10187
Kentucky	SDWA	90029
Kentucky UST	UST	30
Louisiana*	NELAP CWA, RCRA	2031
Maine	SDWA, CWA	NY0044
Maryland	SDWA	294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	SDWA, CWA, RCRA	036-999-337
New Hampshire*	NELAP SDWA, CWA	233701
New Jersey*	NELAP, SDWA, CWA, RCRA,	NY455
New York*	NELAP, AIR, SDWA, CWA, RCRA, CLP	10026
Oklahoma	CWA, RCRA	9421
Pennsylvania*	NELAP CWA, RCRA	68-00281
Tennessee	SDWA	02970
Texas*	NELAP CWA, RCRA	T104704412-08-TX
USDA	FOREIGN SOIL PERMIT	S-41579
Virginia	SDWA	278
Washington*	NELAP CWA, RCRA	C1677
Wisconsin	CWA, RCRA	998310390
West Virginia	CWA, RCRA	252

*As required under the indicated accreditation, the test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report.

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

CASE NARRATIVE

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. field-pH), they were not analyzed immediately, but as soon as possible after laboratory receipt.

There are pertinent documents appended to this report, 2 pages, are included and are an integral part of this report. Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.

TestAmerica Laboratories, Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our Laboratory.

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

DATA QUALIFIERS AND DEFINITIONS

- E** Concentration exceeds the calibration range and therefore result is semi-quantitative.
- J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- NR** Any inclusion of NR indicates that the project specific requirements do not require reporting estimated values below the laboratory reporting limit.

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-1R (RTC1249-01 - Water)						Sampled: 03/18/10 12:00		Recvd: 03/23/10 09:00		
<u>Dissolved CLP Metals</u>										
Aluminum	77.6	J	200	39.8	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Barium	52.3	J	200	0.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Beryllium	0.2	J	5.0	0.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Calcium	64200		5000	100	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Magnesium	12200		5000	43.4	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Manganese	9.7	J	15.0	0.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Potassium	1670	J	5000	50.0	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Sodium	25400		5000	324	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Zinc	1.5	J	60.0	1.5	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Client ID: MW-1R (RTC1249-03 - Water)						Sampled: 03/18/10 12:00		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Aluminum	41.0	J	200	39.8	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Barium	51.9	J	200	0.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Beryllium	0.2	J	5.0	0.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Cadmium	0.6	J	5.0	0.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Calcium	63700		5000	100	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Iron	48.9	J	100	19.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Magnesium	12100		5000	43.4	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Manganese	16.5		15.0	0.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Nickel	1.4	J	40.0	1.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Potassium	1640	J	5000	50.0	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Sodium	25100		5000	324	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Zinc	4.1	J	60.0	1.5	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Client ID: MW-2 (RTC1249-13 - Water)						Sampled: 03/19/10 09:50		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Aluminum	57.8	J	200	39.8	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Barium	48.8	J	200	0.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Calcium	51400		5000	100	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Iron	28.6	J	100	19.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Magnesium	8290		5000	43.4	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Manganese	54.2		15.0	0.2	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Potassium	4550	J	5000	50.0	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Sodium	24000		5000	324	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Zinc	2.3	J	60.0	1.5	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Client ID: MW-3D (RTC1249-07 - Water)						Sampled: 03/18/10 16:30		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Barium	45.3	J	200	0.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Calcium	50000		5000	100	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Magnesium	9120		5000	43.4	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Manganese	0.9	J	15.0	0.2	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Potassium	1610	J	5000	50.0	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-3D (RTC1249-07 - Water) - cont.					Sampled: 03/18/10 16:30			Recvd: 03/23/10 09:00		
<u>CLP Metals - cont.</u>										
Sodium	16900		5000	324	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Client ID: MW-3 (RTC1249-12 - Water)					Sampled: 03/19/10 09:30			Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Barium	46.5	J	200	0.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Calcium	51300		5000	100	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Magnesium	9270		5000	43.4	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Manganese	0.3	J	15.0	0.2	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Potassium	1890	J	5000	50.0	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Sodium	16900		5000	324	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Client ID: MW-4 (RTC1249-06 - Water)					Sampled: 03/18/10 15:00			Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Barium	42.6	J	200	0.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Cadmium	0.5	J	5.0	0.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Calcium	48000		5000	100	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Iron	22.2	J	100	19.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Magnesium	8820		5000	43.4	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Manganese	1.5	J	15.0	0.2	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Potassium	1130	J	5000	50.0	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Sodium	16100		5000	324	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Client ID: MW-5 (RTC1249-08 - Water)					Sampled: 03/18/10 17:00			Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Barium	47.4	J	200	0.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Calcium	45100		5000	100	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Magnesium	7330		5000	43.4	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Manganese	0.8	J	15.0	0.2	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Potassium	3530	J	5000	50.0	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Sodium	8320		5000	324	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Zinc	3.6	J	60.0	1.5	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Client ID: MW-7 (RTC1249-02 - Water)					Sampled: 03/18/10 14:35			Recvd: 03/23/10 09:00		
<u>Dissolved CLP Metals</u>										
Barium	134	J	200	0.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Cadmium	0.4	J	5.0	0.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Calcium	86300		5000	100	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Copper	2.5	J	25.0	1.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Magnesium	13600		5000	43.4	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Manganese	120		15.0	0.2	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Nickel	2.2	J	40.0	1.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Potassium	5250		5000	50.0	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Sodium	59900	E	5000	324	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Zinc	9.3	J	60.0	1.5	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-7 (RTC1249-05 - Water)					Sampled: 03/18/10 14:35			Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Aluminum	140	J	200	39.8	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Barium	133	J	200	0.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Cadmium	0.4	J	5.0	0.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Calcium	85600		5000	100	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Copper	3.1	J	25.0	1.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Iron	192		100	19.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Magnesium	13600		5000	43.4	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Manganese	115		15.0	0.2	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Nickel	2.8	J	40.0	1.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Potassium	5190		5000	50.0	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Sodium	58900		5000	324	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Zinc	10.4	J	60.0	1.5	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Client ID: MW-8 (RTC1249-04 - Water)					Sampled: 03/18/10 12:05			Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Barium	64.6	J	200	0.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Calcium	52600		5000	100	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Iron	40.2	J	100	19.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Magnesium	8870		5000	43.4	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Manganese	2.7	J	15.0	0.2	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Potassium	2440	J	5000	50.0	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Sodium	23300		5000	324	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Zinc	3.0	J	60.0	1.5	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Client ID: MW-X (RTC1249-11 - Water)					Sampled: 03/18/10			Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Barium	49.5	J	200	0.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Calcium	46200		5000	100	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Magnesium	7490		5000	43.4	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Manganese	0.8	J	15.0	0.2	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Nickel	1.4	J	40.0	1.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Potassium	3620	J	5000	50.0	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Sodium	8530		5000	324	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Zinc	3.6	J	60.0	1.5	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

Sample Summary

Sample Identification	Lab Number	Client Matrix	Date/Time Sampled	Date/Time Received	Sample Qualifiers
MW-1R	RTC1249-01	Water	03/18/10 12:00	03/23/10 09:00	
MW-1R	RTC1249-03	Water	03/18/10 12:00	03/23/10 09:00	
MW-2	RTC1249-13	Water	03/19/10 09:50	03/23/10 09:00	
MW-3D	RTC1249-07	Water	03/18/10 16:30	03/23/10 09:00	
MW-3	RTC1249-12	Water	03/19/10 09:30	03/23/10 09:00	
MW-4	RTC1249-06	Water	03/18/10 15:00	03/23/10 09:00	
MW-5	RTC1249-08	Water	03/18/10 17:00	03/23/10 09:00	
MW-7	RTC1249-02	Water	03/18/10 14:35	03/23/10 09:00	
MW-7	RTC1249-05	Water	03/18/10 14:35	03/23/10 09:00	
MW-8	RTC1249-04	Water	03/18/10 12:05	03/23/10 09:00	
MW-X	RTC1249-11	Water	03/18/10	03/23/10 09:00	

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128 Long Hill Cross Road
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SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-1R (RTC1249-01 - Water)						Sampled: 03/18/10 12:00		Recvd: 03/23/10 09:00		
<u>Dissolved CLP Metals</u>										
Aluminum	77.6	J	200	39.8	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Barium	52.3	J	200	0.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Beryllium	0.2	J	5.0	0.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Calcium	64200		5000	100	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Iron	ND		100	19.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Magnesium	12200		5000	43.4	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Manganese	9.7	J	15.0	0.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:07	MXM	10C1854	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Potassium	1670	J	5000	50.0	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Sodium	25400		5000	324	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Zinc	1.5	J	60.0	1.5	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-1R (RTC1249-03 - Water)						Sampled: 03/18/10 12:00		Recvd: 03/23/10 09:00		
CLP Metals										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:53	MXM	10C1857	CLP-HG
Aluminum	41.0	J	200	39.8	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:02	DAN	10C1839	CLP-M
Barium	51.9	J	200	0.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Beryllium	0.2	J	5.0	0.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Cadmium	0.6	J	5.0	0.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Calcium	63700		5000	100	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Iron	48.9	J	100	19.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Magnesium	12100		5000	43.4	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Manganese	16.5		15.0	0.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Nickel	1.4	J	40.0	1.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Potassium	1640	J	5000	50.0	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Sodium	25100		5000	324	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Zinc	4.1	J	60.0	1.5	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-2 (RTC1249-13 - Water)						Sampled: 03/19/10 09:50		Recvd: 03/23/10 09:00		
CLP Metals										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 20:16	MXM	10C1857	CLP-HG
Aluminum	57.8	J	200	39.8	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 11:20	DAN	10C1839	CLP-M
Barium	48.8	J	200	0.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Calcium	51400		5000	100	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Iron	28.6	J	100	19.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Magnesium	8290		5000	43.4	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Manganese	54.2		15.0	0.2	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Potassium	4550	J	5000	50.0	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Sodium	24000		5000	324	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Zinc	2.3	J	60.0	1.5	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-3D (RTC1249-07 - Water)						Sampled: 03/18/10 16:30		Recvd: 03/23/10 09:00		
CLP Metals										
Mercury	ND	J	0.2	0.1	ug/L	1.00	03/25/10 20:00	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:22	DAN	10C1839	CLP-M
Barium	45.3		200	0.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Cadmium	ND		5.0	0.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Calcium	50000		5000	100	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Copper	ND	25.0	1.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M	
Iron	ND	100	19.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M	
Lead	ND	10.0	3.0	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M	
Magnesium	9120	J	5000	43.4	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Manganese	0.9		15.0	0.2	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Potassium	1610		5000	50.0	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Sodium	16900		5000	324	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Zinc	ND		60.0	1.5	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-3 (RTC1249-12 - Water)						Sampled: 03/19/10 09:30		Recvd: 03/23/10 09:00		
CLP Metals										
Mercury	ND	J	0.2	0.1	ug/L	1.00	03/25/10 20:14	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 11:15	DAN	10C1839	CLP-M
Barium	46.5		200	0.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Beryllium	ND	J	5.0	0.2	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Cadmium	ND		5.0	0.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Calcium	51300		5000	100	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Iron	ND		100	19.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Magnesium	9270		5000	43.4	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Manganese	0.3		15.0	0.2	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Potassium	1890		5000	50.0	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Sodium	16900		5000	324	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Zinc	ND		60.0	1.5	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-4 (RTC1249-06 - Water)						Sampled: 03/18/10 15:00		Recvd: 03/23/10 09:00		
CLP Metals										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:58	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:17	DAN	10C1839	CLP-M
Barium	42.6	J	200	0.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Cadmium	0.5	J	5.0	0.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Calcium	48000		5000	100	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Iron	22.2	J	100	19.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Magnesium	8820		5000	43.4	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Manganese	1.5	J	15.0	0.2	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Potassium	1130	J	5000	50.0	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Sodium	16100		5000	324	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Zinc	ND		60.0	1.5	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M

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Client ID: MW-5 (RTC1249-08 - Water)						Sampled: 03/18/10 17:00		Recvd: 03/23/10 09:00		
CLP Metals										
Mercury	ND	J	0.2	0.1	ug/L	1.00	03/25/10 20:02	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:27	DAN	10C1839	CLP-M
Barium	47.4		200	0.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Cadmium	ND		5.0	0.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Calcium	45100		5000	100	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Copper	ND	25.0	1.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M	
Iron	ND	100	19.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M	
Lead	ND	10.0	3.0	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M	
Magnesium	7330	J	5000	43.4	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Manganese	0.8		15.0	0.2	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Potassium	3530		5000	50.0	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Sodium	8320		5000	324	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Zinc	3.6		J	60.0	1.5	ug/L	1.00	03/26/10 05:40	LMH	10C1839

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-7 (RTC1249-02 - Water)						Sampled: 03/18/10 14:35		Recvd: 03/23/10 09:00		
<u>Dissolved CLP Metals</u>										
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Barium	134	J	200	0.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Cadmium	0.4	J	5.0	0.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Calcium	86300		5000	100	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Copper	2.5	J	25.0	1.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Iron	ND		100	19.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Magnesium	13600		5000	43.4	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Manganese	120		15.0	0.2	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:09	MXM	10C1854	CLP-M
Nickel	2.2	J	40.0	1.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Potassium	5250		5000	50.0	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Sodium	59900	E	5000	324	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Zinc	9.3	J	60.0	1.5	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-7 (RTC1249-05 - Water)						Sampled: 03/18/10 14:35		Recvd: 03/23/10 09:00		
CLP Metals										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:56	MXM	10C1857	CLP-HG
Aluminum	140	J	200	39.8	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:12	DAN	10C1839	CLP-M
Barium	133	J	200	0.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Cadmium	0.4	J	5.0	0.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Calcium	85600		5000	100	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Copper	3.1	J	25.0	1.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Iron	192		100	19.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Magnesium	13600		5000	43.4	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Manganese	115		15.0	0.2	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Nickel	2.8	J	40.0	1.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Potassium	5190		5000	50.0	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Sodium	58900		5000	324	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Zinc	10.4	J	60.0	1.5	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-8 (RTC1249-04 - Water)						Sampled: 03/18/10 12:05		Recvd: 03/23/10 09:00		
CLP Metals										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:54	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:07	DAN	10C1839	CLP-M
Barium	64.6	J	200	0.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Calcium	52600		5000	100	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Iron	40.2	J	100	19.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Magnesium	8870		5000	43.4	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Manganese	2.7	J	15.0	0.2	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Potassium	2440	J	5000	50.0	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Sodium	23300		5000	324	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Zinc	3.0	J	60.0	1.5	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-X (RTC1249-11 - Water)						Sampled: 03/18/10		Recvd: 03/23/10 09:00		
CLP Metals										
Mercury	ND	J	0.2	0.1	ug/L	1.00	03/25/10 20:12	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 11:10	DAN	10C1839	CLP-M
Barium	49.5		200	0.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Cadmium	ND		5.0	0.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Calcium	46200		5000	100	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Copper	ND	25.0	1.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M	
Iron	ND	100	19.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M	
Lead	ND	10.0	3.0	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M	
Magnesium	7490	J	5000	43.4	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Manganese	0.8		15.0	0.2	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Nickel	1.4		40.0	1.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Potassium	3620		5000	50.0	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Sodium	8530		5000	324	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Zinc	3.6		60.0	1.5	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M

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SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracte	Units	Extract Volume	Units	Date Prepared	Lab Tech	Extraction Method
CLP Metals									
CLP-HG	10C1857	RTC1249-03	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-04	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-05	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-06	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-07	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-08	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-11	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-12	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-13	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-M	10C1839	RTC1249-03	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-04	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-05	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-06	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-07	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-08	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-11	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-12	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-13	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-03	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-04	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-05	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-06	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-07	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-08	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-11	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-12	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-13	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
Dissolved CLP Metals									
CLP-M	10C1838	RTC1249-01	50.00	mL	50.00	mL	03/25/10 12:00	AMH	CLP Metals Prep (Water)
CLP-M	10C1838	RTC1249-02	50.00	mL	50.00	mL	03/25/10 12:00	AMH	CLP Metals Prep (Water)
CLP-M	10C1838	RTC1249-01	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1838	RTC1249-02	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1838	RTC1249-01	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1838	RTC1249-02	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1854	RTC1249-01	30.00	mL	50.00	mL	03/25/10 15:30	MXM	CLP Metals Prep (Water)

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SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracte	Units	Extract Volume	Units	Date Prepared	Lab Tech	Extraction Method
CLP-M	10C1854	RTC1249-02	30.00	mL	50.00	mL	03/25/10 15:30	MXM	CLP Metals Prep (Water)

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LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers

CLP Metals

Blank Analyzed: 03/26/10 (Lab Number:10C1839-BLK1, Batch: 10C1839)

Aluminum			200	39.8	ug/L	ND					
Antimony			60.0	6.8	ug/L	ND					
Barium			200	0.3	ug/L	ND					
Beryllium			5.0	0.2	ug/L	ND					
Cadmium			5.0	0.3	ug/L	ND					
Calcium			5000	100	ug/L	ND					
Chromium			10.0	0.9	ug/L	ND					
Cobalt			50.0	0.6	ug/L	ND					
Copper			25.0	1.3	ug/L	ND					
Iron			100	19.3	ug/L	ND					
Lead			10.0	3.0	ug/L	ND					
Magnesium			5000	43.4	ug/L	ND					
Manganese			15.0	0.2	ug/L	ND					
Nickel			40.0	1.3	ug/L	ND					
Potassium			5000	50.0	ug/L	ND					
Selenium			35.0	8.7	ug/L	ND					
Silver			10.0	1.2	ug/L	ND					
Sodium			5000	324	ug/L	ND					
Thallium			25.0	10.2	ug/L	ND					
Vanadium			50.0	1.1	ug/L	ND					
Zinc			60.0	1.5	ug/L	ND					

Blank Analyzed: 03/26/10 (Lab Number:10C1839-BLK2, Batch: 10C1839)

Arsenic			10.0	5.6	ug/L	ND					

LCS Analyzed: 03/26/10 (Lab Number:10C1839-BS1, Batch: 10C1839)

Aluminum	10000	200	39.8	ug/L	10400	104	75-125
Antimony	200	60.0	6.8	ug/L	212	106	75-125
Barium	200	200	0.3	ug/L	207	104	75-125
Beryllium	200	5.0	0.2	ug/L	210	105	75-125
Cadmium	200	5.0	0.3	ug/L	201	101	75-125
Calcium	10000	5000	100	ug/L	10400	104	75-125
Chromium	200	10.0	0.9	ug/L	207	104	75-125
Cobalt	200	50.0	0.6	ug/L	206	103	75-125
Copper	200	25.0	1.3	ug/L	200	100	75-125
Iron	10000	100	19.3	ug/L	10100	101	75-125
Lead	200	10.0	3.0	ug/L	206	103	75-125
Magnesium	10000	5000	43.4	ug/L	10500	105	75-125

TestAmerica Connecticut
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Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers

CLP Metals

LCS Analyzed: 03/26/10 (Lab Number:10C1839-BS1, Batch: 10C1839)

Manganese		200	15.0	0.2	ug/L	204	102	75-125			
Nickel		200	40.0	1.3	ug/L	205	103	75-125			
Potassium		10000	5000	50.0	ug/L	10300	103	75-125			
Selenium		200	35.0	8.7	ug/L	216	108	75-125			
Silver		50.0	10.0	1.2	ug/L	52.7	105	75-125			
Sodium		10000	5000	324	ug/L	10600	106	75-125			
Thallium		200	25.0	10.2	ug/L	209	104	75-125			
Vanadium		200	50.0	1.1	ug/L	205	102	75-125			
Zinc		200	60.0	1.5	ug/L	206	103	75-125			

LCS Analyzed: 03/26/10 (Lab Number:10C1839-BS2, Batch: 10C1839)

Arsenic		200	10.0	5.6	ug/L	214	107	75-125			

Matrix Spike Analyzed: 03/26/10 (Lab Number:10C1839-MS1, Batch: 10C1839)

QC Source Sample: RTC1249-08

Aluminum	ND	2000	200	39.8	ug/L	2120	106	75-125			
Antimony	ND	100	60.0	6.8	ug/L	102	102	75-125			
Barium	47.4	2000	200	0.3	ug/L	2100	102	75-125			
Beryllium	ND	50.0	5.0	0.2	ug/L	52.5	105	75-125			
Cadmium	ND	50.0	5.0	0.3	ug/L	51.6	103	75-125			
Chromium	ND	200	10.0	0.9	ug/L	203	102	75-125			
Cobalt	ND	500	50.0	0.6	ug/L	543	109	75-125			
Copper	ND	250	25.0	1.3	ug/L	256	103	75-125			
Iron	ND	1000	100	19.3	ug/L	1070	107	75-125			
Lead	ND	20.0	10.0	3.0	ug/L	21.2	106	75-125			
Manganese	0.800	500	15.0	0.2	ug/L	522	104	75-125			
Nickel	ND	500	40.0	1.3	ug/L	519	104	75-125			
Selenium	ND	50.0	35.0	8.7	ug/L	55.5	111	75-125			
Silver	ND	50.0	10.0	1.2	ug/L	50.0	100	75-125			
Thallium	ND	50.0	25.0	10.2	ug/L	49.9	100	75-125			
Vanadium	ND	500	50.0	1.1	ug/L	516	103	75-125			
Zinc	3.64	500	60.0	1.5	ug/L	524	104	75-125			

Matrix Spike Analyzed: 03/26/10 (Lab Number:10C1839-MS2, Batch: 10C1839)

QC Source Sample: RTC1249-08

Arsenic	ND	40.0	10.0	5.6	ug/L	43.8	110	75-125			

Matrix Spike Dup Analyzed: 03/26/10 (Lab Number:10C1839-MSD1, Batch: 10C1839)

QC Source Sample: RTC1249-08

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Project Number: 220-11730

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Reported: 03/31/10 09:37

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
CLP Metals											
Matrix Spike Dup Analyzed: 03/26/10 (Lab Number:10C1839-MSD1, Batch: 10C1839)											
QC Source Sample: RTC1249-08											
Aluminum	ND	2000	200	39.8	ug/L	2100	105	75-125	0.8	20	
Antimony	ND	100	60.0	6.8	ug/L	96.3	96	75-125	6	20	
Barium	47.4	2000	200	0.3	ug/L	2090	102	75-125	0.2	20	
Beryllium	ND	50.0	5.0	0.2	ug/L	52.3	105	75-125	0.4	20	
Cadmium	ND	50.0	5.0	0.3	ug/L	50.8	102	75-125	1	20	
Chromium	ND	200	10.0	0.9	ug/L	202	101	75-125	0.8	20	
Cobalt	ND	500	50.0	0.6	ug/L	539	108	75-125	0.8	20	
Copper	ND	250	25.0	1.3	ug/L	254	102	75-125	0.9	20	
Iron	ND	1000	100	19.3	ug/L	1060	106	75-125	0.7	20	
Lead	ND	20.0	10.0	3.0	ug/L	21.2	106	75-125	0.05	20	
Manganese	0.800	500	15.0	0.2	ug/L	518	103	75-125	0.9	20	
Nickel	ND	500	40.0	1.3	ug/L	516	103	75-125	0.5	20	
Selenium	ND	50.0	35.0	8.7	ug/L	56.7	113	75-125	2	20	
Silver	ND	50.0	10.0	1.2	ug/L	49.1	98	75-125	2	20	
Thallium	ND	50.0	25.0	10.2	ug/L	53.3	107	75-125	6	20	
Vanadium	ND	500	50.0	1.1	ug/L	512	102	75-125	0.8	20	
Zinc	3.64	500	60.0	1.5	ug/L	519	103	75-125	0.9	20	

Matrix Spike Dup Analyzed: 03/26/10 (Lab Number:10C1839-MSD2, Batch: 10C1839)

QC Source Sample: RTC1249-08

Arsenic	ND	40.0	10.0	5.6	ug/L	42.6	107	75-125	3	20	

CLP Metals

Blank Analyzed: 03/25/10 (Lab Number:10C1857-BLK1, Batch: 10C1857)

Mercury			0.2	0.1	ug/L	ND					

LCS Analyzed: 03/25/10 (Lab Number:10C1857-BS1, Batch: 10C1857)

Mercury		6.67	0.2	0.1	ug/L	6.93	104	75-125			

Duplicate Analyzed: 03/25/10 (Lab Number:10C1857-DUP1, Batch: 10C1857)

QC Source Sample: RTC1249-08

Mercury	ND		0.2	0.1	ug/L	ND				20	

Matrix Spike Analyzed: 03/25/10 (Lab Number:10C1857-MS1, Batch: 10C1857)

QC Source Sample: RTC1249-08

Mercury	ND	1.67	0.2	0.1	ug/L	1.80	108	75-125			

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LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers

Dissolved CLP Metals

Blank Analyzed: 03/26/10 (Lab Number:10C1838-BLK1, Batch: 10C1838)

Aluminum			200	39.8	ug/L	ND					
Antimony			60.0	6.8	ug/L	ND					
Barium			200	0.3	ug/L	ND					
Beryllium			5.0	0.2	ug/L	ND					
Cadmium			5.0	0.3	ug/L	ND					
Calcium			5000	100	ug/L	ND					
Chromium			10.0	0.9	ug/L	ND					
Cobalt			50.0	0.6	ug/L	ND					
Copper			25.0	1.3	ug/L	ND					
Iron			100	19.3	ug/L	ND					
Lead			10.0	3.0	ug/L	ND					
Magnesium			5000	43.4	ug/L	ND					
Manganese			15.0	0.2	ug/L	ND					
Nickel			40.0	1.3	ug/L	ND					
Potassium			5000	50.0	ug/L	ND					
Selenium			35.0	8.7	ug/L	ND					
Silver			10.0	1.2	ug/L	ND					
Sodium			5000	324	ug/L	ND					
Thallium			25.0	10.2	ug/L	ND					
Vanadium			50.0	1.1	ug/L	ND					
Zinc			60.0	1.5	ug/L	ND					

Blank Analyzed: 03/26/10 (Lab Number:10C1838-BLK2, Batch: 10C1838)

Arsenic			10.0	5.6	ug/L	ND					

LCS Analyzed: 03/26/10 (Lab Number:10C1838-BS1, Batch: 10C1838)

Aluminum	10000	200	39.8	ug/L	10300	103	75-125
Antimony	200	60.0	6.8	ug/L	211	105	75-125
Arsenic	200	10.0	5.6	ug/L	212	106	75-125
Barium	200	200	0.3	ug/L	206	103	75-125
Beryllium	200	5.0	0.2	ug/L	210	105	75-125
Cadmium	200	5.0	0.3	ug/L	201	101	75-125
Calcium	10000	5000	100	ug/L	10300	103	75-125
Chromium	200	10.0	0.9	ug/L	208	104	75-125
Cobalt	200	50.0	0.6	ug/L	206	103	75-125
Copper	200	25.0	1.3	ug/L	200	100	75-125
Iron	10000	100	19.3	ug/L	10200	102	75-125
Lead	200	10.0	3.0	ug/L	205	103	75-125

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Project Number: 220-11730

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Reported: 03/31/10 09:37

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers

Dissolved CLP Metals

LCS Analyzed: 03/26/10 (Lab Number:10C1838-BS1, Batch: 10C1838)

Magnesium		10000	5000	43.4	ug/L	10500	105	75-125			
Manganese		200	15.0	0.2	ug/L	205	103	75-125			
Nickel		200	40.0	1.3	ug/L	205	103	75-125			
Potassium		10000	5000	50.0	ug/L	10300	103	75-125			
Selenium		200	35.0	8.7	ug/L	215	107	75-125			
Silver		50.0	10.0	1.2	ug/L	52.8	106	75-125			
Sodium		10000	5000	324	ug/L	10500	105	75-125			
Thallium		200	25.0	10.2	ug/L	203	102	75-125			
Vanadium		200	50.0	1.1	ug/L	204	102	75-125			
Zinc		200	60.0	1.5	ug/L	207	103	75-125			

Matrix Spike Analyzed: 03/26/10 (Lab Number:10C1838-MS1, Batch: 10C1838)

QC Source Sample: RTC1249-01

Aluminum	77.6	2000	200	39.8	ug/L	2110	102	75-125			
Antimony	ND	100	60.0	6.8	ug/L	105	105	75-125			
Arsenic	ND	40.0	10.0	5.6	ug/L	42.4	106	75-125			
Barium	52.3	2000	200	0.3	ug/L	2070	101	75-125			
Beryllium	ND	50.0	5.0	0.2	ug/L	52.0	104	75-125			
Cadmium	0.340	50.0	5.0	0.3	ug/L	50.6	100	75-125			
Chromium	ND	200	10.0	0.9	ug/L	200	100	75-125			
Cobalt	ND	500	50.0	0.6	ug/L	533	107	75-125			
Copper	ND	250	25.0	1.3	ug/L	251	100	75-125			
Iron	ND	1000	100	19.3	ug/L	1050	105	75-125			
Lead	ND	20.0	10.0	3.0	ug/L	19.5	98	75-125			
Manganese	9.72	500	15.0	0.2	ug/L	523	103	75-125			
Nickel	ND	500	40.0	1.3	ug/L	513	103	75-125			
Selenium	ND	50.0	35.0	8.7	ug/L	53.2	106	75-125			
Silver	ND	50.0	10.0	1.2	ug/L	48.8	98	75-125			
Thallium	ND	50.0	25.0	10.2	ug/L	47.6	95	75-125			
Vanadium	ND	500	50.0	1.1	ug/L	504	101	75-125			
Zinc	ND	500	60.0	1.5	ug/L	516	103	75-125			

Matrix Spike Dup Analyzed: 03/26/10 (Lab Number:10C1838-MSD1, Batch: 10C1838)

QC Source Sample: RTC1249-01

Aluminum	77.6	2000	200	39.8	ug/L	2110	101	75-125	0.3	20	
Antimony	ND	100	60.0	6.8	ug/L	103	103	75-125	2	20	
Arsenic	ND	40.0	10.0	5.6	ug/L	43.0	108	75-125	2	20	
Barium	52.3	2000	200	0.3	ug/L	2060	100	75-125	0.5	20	

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Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
<u>Dissolved CLP Metals</u>											
Matrix Spike Dup Analyzed: 03/26/10 (Lab Number:10C1838-MSD1, Batch: 10C1838)											
QC Source Sample: RTC1249-01											
Beryllium	ND	50.0	5.0	0.2	ug/L	52.2	104	75-125	0.3	20	
Cadmium	0.340	50.0	5.0	0.3	ug/L	50.5	100	75-125	0.1	20	
Chromium	ND	200	10.0	0.9	ug/L	201	101	75-125	0.7	20	
Cobalt	ND	500	50.0	0.6	ug/L	537	107	75-125	0.7	20	
Copper	ND	250	25.0	1.3	ug/L	251	101	75-125	0.1	20	
Iron	ND	1000	100	19.3	ug/L	1050	105	75-125	0.04	20	
Lead	ND	20.0	10.0	3.0	ug/L	19.9	100	75-125	2	20	
Manganese	9.72	500	15.0	0.2	ug/L	526	103	75-125	0.6	20	
Nickel	ND	500	40.0	1.3	ug/L	514	103	75-125	0.3	20	
Selenium	ND	50.0	35.0	8.7	ug/L	51.6	103	75-125	3	20	
Silver	ND	50.0	10.0	1.2	ug/L	49.5	99	75-125	1	20	
Thallium	ND	50.0	25.0	10.2	ug/L	49.8	100	75-125	4	20	
Vanadium	ND	500	50.0	1.1	ug/L	503	101	75-125	0.07	20	
Zinc	ND	500	60.0	1.5	ug/L	515	103	75-125	0.2	20	

Dissolved CLP Metals

Blank Analyzed: 03/25/10 (Lab Number:10C1854-BLK1, Batch: 10C1854)

Mercury		0.2	0.1	ug/L	ND

LCS Analyzed: 03/25/10 (Lab Number:10C1854-BS1, Batch: 10C1854)

Mercury	6.67	0.2	0.1	ug/L	6.92	104	75-125

Duplicate Analyzed: 03/25/10 (Lab Number:10C1854-DUP1, Batch: 10C1854)

QC Source Sample: RTC1249-02

Mercury	ND	0.2	0.1	ug/L	ND		20

Matrix Spike Analyzed: 03/25/10 (Lab Number:10C1854-MS1, Batch: 10C1854)

QC Source Sample: RTC1249-02

Mercury	ND	1.67	0.2	0.1	ug/L	1.77	106	75-125

Chain of Custody Record

Client Information (Sub Contract Lab) Company: TestAmerica Laboratories, Inc. Address: 10 Hazelwood Drive, Amherst, NY 14228-2288 Phone: 716-691-2600(Tel) 716-691-7991(Fax) Email: johanna.dubaukas@testamericainc.com		Lab PM: Dubaukas, Johanna E-Mail: johanna.dubaukas@testamericainc.com		Carrier Tracking No(s): Job #: 220-11730-1		COC No: 220-5190-1 Page: Page 1 of 2	
Analysis Requested Due Date Requested: 4/1/2010 TAT Requested (days): PO #: 22000761 WO #: 55046 Project #: NYSDEC Slanidry - Tioga Castings Site:				Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHCO3 F - NaOH G - Ammonia H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:			
Sample Identification - Client ID (Lab ID)				Special Instructions/Note:			
Sample ID	Sample Date	Sample Time	Sample Type (Q=Grab, Q=Comp)	Matrix (see instructions)	Field Filtered Sample (Yes or No)	Subcontract/LMD-3 Dissolved TAL Metals	Subcontract/LMD-3 TAL Metals
MW-1R (220-11730-1)	3/18/10	12:00	Water	Water	X	X	1
MW-7 (220-11730-2)	3/18/10	14:35	Water	Water	X	X	1
MW-1R (220-11730-3)	3/18/10	12:00	Water	Water	X	X	1
MW-8 (220-11730-4)	3/18/10	12:05	Water	Water	X	X	1
MW-7 (220-11730-5)	3/18/10	14:35	Water	Water	X	X	1
MW-4 (220-11730-6)	3/18/10	15:00	Water	Water	X	X	1
MW-3D (220-11730-7)	3/18/10	16:30	Water	Water	X	X	1
MW-5 (220-11730-8)	3/18/10	17:00	Water	Water	X	X	1
MW-5 (220-11730-8MS)	3/18/10	17:00	MS	Water	X	X	1
MW-5 (220-11730-9MSD)	3/18/10	17:00	MSD	Water	X	X	1
MW-X (220-11730-9)	3/18/10		Water	Water	X	X	1
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological				Sample Disposal / A fee may be assessed if samples are retained longer than 1 month ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months			
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/COC Requirements:			
Empty Kit Returned by:				Method of Shipment:			
Relinquished by: [Signature] Date/Time: 3/22/10 11:28 AM Company: TAT Company				Received by: [Signature] Date/Time: 3/22/10 2:00 PM Company:			
Relinquished by: [Signature] Date/Time: 3/22/10 11:28 AM Company: TAT Company				Received by: [Signature] Date/Time: 3/22/10 2:00 PM Company:			
Relinquished by: [Signature] Date/Time: 3/22/10 11:28 AM Company: TAT Company				Received by: [Signature] Date/Time: 3/22/10 2:00 PM Company:			
Custody Seals Intact: A Yes B No				Cooler Temperature(s) °C and Other Remarks: 20			

Chain of Custody Record

Client Information (Sub Contract Lab) Company: TestAmerica Laboratories, Inc. Address: 10 Hazelwood Drive, City: Anshersl State: NY, 14228-2298 Phone: 716-691-2600 (Tel) 716-691-7991 (Fax) Email:		Lab PM: Dubauskas, Johanna E-Mail: johanna.dubauskas@testamericainc.com		CDC No: 220-5190.2 Page: Page 2 of 2 Job #: 220-11730-1	
Sample Information Due Date Requested: 4/1/2010 TAT Requested (days): PO #: WFO #: Project #: 2200076.1 Site:		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO ₄ F - NaOH G - Ammonia H - Ascorbic Acid I - Ice J - Di Water K - EDTA L - EDA Other:	
Sample Identification - Client ID (Lab ID) MW-3 (220-11730-10) MW-2 (220-11730-11)		Matrix (C=Comp, G=Grab, I=Ice, L=Lead, P=Paint, S=Soil, W=Water) Sample Type (C=Comp, G=Grab) Sample Time Sample Date Preservation Code		Special Instructions/Note:	
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		SUBCONTRACT ILM05.3 Dissolved TAL Metals SUBCONTRACT ILM05.3 TAL Metals Pattern MSMS05.3 TAL Metals Field Filtered Sample (Yes or No)		Total Number of Containers:	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months	
Relinquished by:		Date/Time:		Special Instructions/OC Requirements:	
Relinquished by:		Date/Time:		Method of Shipment:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: A Yes A No		Custody Seal No.:		Cooler Temperature (°C and Other Remarks):	

Analytical Report

SDG Number: 220-11730

Project Description(s)

Work Order RTC1249 - NYSDEC Standby - Tioga Castings

For:

Johanna Dubauskas

TestAmerica Connecticut

128 Long Hill Cross Road

Shelton, CT 06484



Melissa Deyo For Sally Hoffman

Project Manager

melissa.deyo@testamericainc.com

Wednesday, March 31, 2010

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exception to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project manager who has signed this report.

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

TestAmerica Buffalo Current Certifications

As of 12/21/2009

STATE	Program	Cert # / Lab ID
Arkansas	CWA, RCRA, SOIL	88-0686
California*	NELAP CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida*	NELAP CWA, RCRA	E87672
Georgia*	SDWA, NELAP CWA, RCRA	956
Illinois*	NELAP SDWA, CWA, RCRA	200003
Iowa	SW/CS	374
Kansas*	NELAP SDWA, CWA, RCRA	E-10187
Kentucky	SDWA	90029
Kentucky UST	UST	30
Louisiana*	NELAP CWA, RCRA	2031
Maine	SDWA, CWA	NY0044
Maryland	SDWA	294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	SDWA, CWA, RCRA	036-999-337
New Hampshire*	NELAP SDWA, CWA	233701
New Jersey*	NELAP, SDWA, CWA, RCRA,	NY455
New York*	NELAP, AIR, SDWA, CWA, RCRA, CLP	10026
Oklahoma	CWA, RCRA	9421
Pennsylvania*	NELAP CWA, RCRA	68-00281
Tennessee	SDWA	02970
Texas*	NELAP CWA, RCRA	T104704412-08-TX
USDA	FOREIGN SOIL PERMIT	S-41579
Virginia	SDWA	278
Washington*	NELAP CWA, RCRA	C1677
Wisconsin	CWA, RCRA	998310390
West Virginia	CWA, RCRA	252

*As required under the indicated accreditation, the test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report.

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10
Reported: 03/31/10 09:37

CASE NARRATIVE

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. field-pH), they were not analyzed immediately, but as soon as possible after laboratory receipt.

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TestAmerica Laboratories, Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our Laboratory.

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SDG Number: 220-11730

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Project: NYSDEC Standby - Tioga Castings

Project Number: 220-11730

DATA QUALIFIERS AND DEFINITIONS

- E** Concentration exceeds the calibration range and therefore result is semi-quantitative.
- J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- NR** Any inclusion of NR indicates that the project specific requirements do not require reporting estimated values below the laboratory reporting limit.

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Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method

Client ID: MW-1R (RTC1249-01 - Water)

Sampled: 03/18/10 12:00

Recvd: 03/23/10 09:00

Dissolved CLP Metals

Aluminum	77.6	J	200	39.8	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Barium	52.3	J	200	0.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Beryllium	0.2	J	5.0	0.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Calcium	64200		5000	100	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Magnesium	12200		5000	43.4	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Manganese	9.7	J	15.0	0.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Potassium	1670	J	5000	50.0	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Sodium	25400		5000	324	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Zinc	1.5	J	60.0	1.5	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M

Client ID: MW-1R (RTC1249-03 - Water)

Sampled: 03/18/10 12:00

Recvd: 03/23/10 09:00

CLP Metals

Aluminum	41.0	J	200	39.8	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Barium	51.9	J	200	0.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Beryllium	0.2	J	5.0	0.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Cadmium	0.6	J	5.0	0.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Calcium	63700		5000	100	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Iron	48.9	J	100	19.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Magnesium	12100		5000	43.4	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Manganese	16.5		15.0	0.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Nickel	1.4	J	40.0	1.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Potassium	1640	J	5000	50.0	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Sodium	25100		5000	324	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Zinc	4.1	J	60.0	1.5	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M

Client ID: MW-2 (RTC1249-13 - Water)

Sampled: 03/19/10 09:50

Recvd: 03/23/10 09:00

CLP Metals

Aluminum	57.8	J	200	39.8	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Barium	48.8	J	200	0.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Calcium	51400		5000	100	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Iron	28.6	J	100	19.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Magnesium	8290		5000	43.4	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Manganese	54.2		15.0	0.2	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Potassium	4550	J	5000	50.0	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Sodium	24000		5000	324	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Zinc	2.3	J	60.0	1.5	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M

Client ID: MW-3D (RTC1249-07 - Water)

Sampled: 03/18/10 16:30

Recvd: 03/23/10 09:00

CLP Metals

Barium	45.3	J	200	0.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Calcium	50000		5000	100	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Magnesium	9120		5000	43.4	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Manganese	0.9	J	15.0	0.2	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Potassium	1610	J	5000	50.0	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M

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Reported: 03/31/10 09:37

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-3D (RTC1249-07 - Water) - cont.					Sampled: 03/18/10 16:30			Recvd: 03/23/10 09:00		
<u>CLP Metals - cont.</u>										
Sodium	16900		5000	324	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Client ID: MW-3 (RTC1249-12 - Water)					Sampled: 03/19/10 09:30			Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Barium	46.5	J	200	0.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Calcium	51300		5000	100	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Magnesium	9270		5000	43.4	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Manganese	0.3	J	15.0	0.2	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Potassium	1890	J	5000	50.0	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Sodium	16900		5000	324	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Client ID: MW-4 (RTC1249-06 - Water)					Sampled: 03/18/10 15:00			Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Barium	42.6	J	200	0.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Cadmium	0.5	J	5.0	0.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Calcium	48000		5000	100	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Iron	22.2	J	100	19.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Magnesium	8820		5000	43.4	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Manganese	1.5	J	15.0	0.2	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Potassium	1130	J	5000	50.0	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Sodium	16100		5000	324	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Client ID: MW-5 (RTC1249-08 - Water)					Sampled: 03/18/10 17:00			Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Barium	47.4	J	200	0.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Calcium	45100		5000	100	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Magnesium	7330		5000	43.4	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Manganese	0.8	J	15.0	0.2	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Potassium	3530	J	5000	50.0	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Sodium	8320		5000	324	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Zinc	3.6	J	60.0	1.5	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Client ID: MW-7 (RTC1249-02 - Water)					Sampled: 03/18/10 14:35			Recvd: 03/23/10 09:00		
<u>Dissolved CLP Metals</u>										
Barium	134	J	200	0.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Cadmium	0.4	J	5.0	0.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Calcium	86300		5000	100	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Copper	2.5	J	25.0	1.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Magnesium	13600		5000	43.4	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Manganese	120		15.0	0.2	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Nickel	2.2	J	40.0	1.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Potassium	5250		5000	50.0	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Sodium	59900	E	5000	324	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Zinc	9.3	J	60.0	1.5	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M

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Project Number: 220-11730

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-7 (RTC1249-05 - Water)						Sampled: 03/18/10 14:35		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Aluminum	140	J	200	39.8	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Barium	133	J	200	0.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Cadmium	0.4	J	5.0	0.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Calcium	85600		5000	100	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Copper	3.1	J	25.0	1.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Iron	192		100	19.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Magnesium	13600		5000	43.4	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Manganese	115		15.0	0.2	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Nickel	2.8	J	40.0	1.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Potassium	5190		5000	50.0	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Sodium	58900		5000	324	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Zinc	10.4	J	60.0	1.5	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Client ID: MW-8 (RTC1249-04 - Water)						Sampled: 03/18/10 12:05		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Barium	64.6	J	200	0.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Calcium	52600		5000	100	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Iron	40.2	J	100	19.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Magnesium	8870		5000	43.4	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Manganese	2.7	J	15.0	0.2	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Potassium	2440	J	5000	50.0	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Sodium	23300		5000	324	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Zinc	3.0	J	60.0	1.5	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Client ID: MW-X (RTC1249-11 - Water)						Sampled: 03/18/10		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Barium	49.5	J	200	0.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Calcium	46200		5000	100	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Magnesium	7490		5000	43.4	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Manganese	0.8	J	15.0	0.2	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Nickel	1.4	J	40.0	1.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Potassium	3620	J	5000	50.0	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Sodium	8530		5000	324	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Zinc	3.6	J	60.0	1.5	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M

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Sample Summary

Sample Identification	Lab Number	Client Matrix	Date/Time Sampled	Date/Time Received	Sample Qualifiers
MW-1R	RTC1249-01	Water	03/18/10 12:00	03/23/10 09:00	
MW-1R	RTC1249-03	Water	03/18/10 12:00	03/23/10 09:00	
MW-2	RTC1249-13	Water	03/19/10 09:50	03/23/10 09:00	
MW-3D	RTC1249-07	Water	03/18/10 16:30	03/23/10 09:00	
MW-3	RTC1249-12	Water	03/19/10 09:30	03/23/10 09:00	
MW-4	RTC1249-06	Water	03/18/10 15:00	03/23/10 09:00	
MW-5	RTC1249-08	Water	03/18/10 17:00	03/23/10 09:00	
MW-7	RTC1249-02	Water	03/18/10 14:35	03/23/10 09:00	
MW-7	RTC1249-05	Water	03/18/10 14:35	03/23/10 09:00	
MW-8	RTC1249-04	Water	03/18/10 12:05	03/23/10 09:00	
MW-X	RTC1249-11	Water	03/18/10	03/23/10 09:00	

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-1R (RTC1249-01 - Water)						Sampled: 03/18/10 12:00		Recvd: 03/23/10 09:00		
<u>Dissolved CLP Metals</u>										
Aluminum	77.6	J	200	39.8	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Barium	52.3	J	200	0.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Beryllium	0.2	J	5.0	0.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Calcium	64200		5000	100	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Iron	ND		100	19.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Magnesium	12200		5000	43.4	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Manganese	9.7	J	15.0	0.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:07	MXM	10C1854	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Potassium	1670	J	5000	50.0	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Sodium	25400		5000	324	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M
Zinc	1.5	J	60.0	1.5	ug/L	1.00	03/26/10 07:25	LMH	10C1838	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-1R (RTC1249-03 - Water)						Sampled: 03/18/10 12:00		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:53	MXM	10C1857	CLP-HG
Aluminum	41.0	J	200	39.8	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:02	DAN	10C1839	CLP-M
Barium	51.9	J	200	0.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Beryllium	0.2	J	5.0	0.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Cadmium	0.6	J	5.0	0.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Calcium	63700		5000	100	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Iron	48.9	J	100	19.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Magnesium	12100		5000	43.4	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Manganese	16.5		15.0	0.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Nickel	1.4	J	40.0	1.3	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Potassium	1640	J	5000	50.0	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Sodium	25100		5000	324	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M
Zinc	4.1	J	60.0	1.5	ug/L	1.00	03/26/10 05:15	LMH	10C1839	CLP-M

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Received: 03/23/10

Reported: 03/31/10 09:37

Project: NYSDEC Standby - Tioga Castings

Project Number: 220-11730

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-2 (RTC1249-13 - Water)						Sampled: 03/19/10 09:50		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 20:16	MXM	10C1857	CLP-HG
Aluminum	57.8	J	200	39.8	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 11:20	DAN	10C1839	CLP-M
Barium	48.8	J	200	0.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Calcium	51400		5000	100	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Iron	28.6	J	100	19.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Magnesium	8290		5000	43.4	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Manganese	54.2		15.0	0.2	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Potassium	4550	J	5000	50.0	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Sodium	24000		5000	324	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M
Zinc	2.3	J	60.0	1.5	ug/L	1.00	03/26/10 06:33	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-3D (RTC1249-07 - Water)						Sampled: 03/18/10 16:30		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 20:00	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:22	DAN	10C1839	CLP-M
Barium	45.3	J	200	0.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Cadmium	ND		5.0	0.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Calcium	50000		5000	100	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Iron	ND		100	19.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Magnesium	9120		5000	43.4	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Manganese	0.9	J	15.0	0.2	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Potassium	1610	J	5000	50.0	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Sodium	16900		5000	324	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M
Zinc	ND		60.0	1.5	ug/L	1.00	03/26/10 05:35	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-3 (RTC1249-12 - Water)						Sampled: 03/19/10 09:30		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 20:14	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 11:15	DAN	10C1839	CLP-M
Barium	46.5	J	200	0.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Cadmium	ND		5.0	0.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Calcium	51300		5000	100	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Iron	ND		100	19.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Magnesium	9270		5000	43.4	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Manganese	0.3	J	15.0	0.2	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Potassium	1890	J	5000	50.0	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Sodium	16900		5000	324	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M
Zinc	ND		60.0	1.5	ug/L	1.00	03/26/10 06:28	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-4 (RTC1249-06 - Water)						Sampled: 03/18/10 15:00		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:58	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:17	DAN	10C1839	CLP-M
Barium	42.6	J	200	0.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Cadmium	0.5	J	5.0	0.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Calcium	48000		5000	100	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Iron	22.2	J	100	19.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Magnesium	8820		5000	43.4	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Manganese	1.5	J	15.0	0.2	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Potassium	1130	J	5000	50.0	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Sodium	16100		5000	324	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M
Zinc	ND		60.0	1.5	ug/L	1.00	03/26/10 05:30	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-5 (RTC1249-08 - Water)						Sampled: 03/18/10 17:00		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 20:02	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:27	DAN	10C1839	CLP-M
Barium	47.4	J	200	0.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Cadmium	ND		5.0	0.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Calcium	45100		5000	100	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Iron	ND		100	19.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Magnesium	7330		5000	43.4	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Manganese	0.8	J	15.0	0.2	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Potassium	3530	J	5000	50.0	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Sodium	8320		5000	324	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M
Zinc	3.6	J	60.0	1.5	ug/L	1.00	03/26/10 05:40	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-7 (RTC1249-02 - Water)						Sampled: 03/18/10 14:35		Recvd: 03/23/10 09:00		
<u>Dissolved CLP Metals</u>										
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Barium	134	J	200	0.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Cadmium	0.4	J	5.0	0.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Calcium	86300		5000	100	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Copper	2.5	J	25.0	1.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Iron	ND		100	19.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Magnesium	13600		5000	43.4	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Manganese	120		15.0	0.2	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:09	MXM	10C1854	CLP-M
Nickel	2.2	J	40.0	1.3	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Potassium	5250		5000	50.0	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Sodium	59900	E	5000	324	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M
Zinc	9.3	J	60.0	1.5	ug/L	1.00	03/26/10 08:07	LMH	10C1838	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-7 (RTC1249-05 - Water)						Sampled: 03/18/10 14:35		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:56	MXM	10C1857	CLP-HG
Aluminum	140	J	200	39.8	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:12	DAN	10C1839	CLP-M
Barium	133	J	200	0.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Cadmium	0.4	J	5.0	0.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Calcium	85600		5000	100	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Copper	3.1	J	25.0	1.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Iron	192		100	19.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Magnesium	13600		5000	43.4	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Manganese	115		15.0	0.2	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Nickel	2.8	J	40.0	1.3	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Potassium	5190		5000	50.0	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Sodium	58900		5000	324	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M
Zinc	10.4	J	60.0	1.5	ug/L	1.00	03/26/10 05:25	LMH	10C1839	CLP-M

TestAmerica Connecticut
128 Long Hill Cross Road
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SDG Number: 220-11730

Received: 03/23/10

Reported: 03/31/10 09:37

Project: NYSDEC Standby - Tioga Castings

Project Number: 220-11730

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-8 (RTC1249-04 - Water)						Sampled: 03/18/10 12:05		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 19:54	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 10:07	DAN	10C1839	CLP-M
Barium	64.6	J	200	0.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Cadmium	0.3	J	5.0	0.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Calcium	52600		5000	100	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Iron	40.2	J	100	19.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Magnesium	8870		5000	43.4	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Manganese	2.7	J	15.0	0.2	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Nickel	ND		40.0	1.3	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Potassium	2440	J	5000	50.0	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Sodium	23300		5000	324	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M
Zinc	3.0	J	60.0	1.5	ug/L	1.00	03/26/10 05:20	LMH	10C1839	CLP-M

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Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Client ID: MW-X (RTC1249-11 - Water)						Sampled: 03/18/10		Recvd: 03/23/10 09:00		
<u>CLP Metals</u>										
Mercury	ND		0.2	0.1	ug/L	1.00	03/25/10 20:12	MXM	10C1857	CLP-HG
Aluminum	ND		200	39.8	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Antimony	ND		60.0	6.8	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Arsenic	ND		10.0	5.6	ug/L	1.00	03/26/10 11:10	DAN	10C1839	CLP-M
Barium	49.5	J	200	0.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Beryllium	ND		5.0	0.2	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Cadmium	ND		5.0	0.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Calcium	46200		5000	100	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Chromium	ND		10.0	0.9	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Cobalt	ND		50.0	0.6	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Copper	ND		25.0	1.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Iron	ND		100	19.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Lead	ND		10.0	3.0	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Magnesium	7490		5000	43.4	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Manganese	0.8	J	15.0	0.2	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Nickel	1.4	J	40.0	1.3	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Potassium	3620	J	5000	50.0	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Selenium	ND		35.0	8.7	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Silver	ND		10.0	1.2	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Sodium	8530		5000	324	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Thallium	ND		25.0	10.2	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Vanadium	ND		50.0	1.1	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M
Zinc	3.6	J	60.0	1.5	ug/L	1.00	03/26/10 06:23	LMH	10C1839	CLP-M

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Project Number: 220-11730

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracte	Units	Extract Volume	Units	Date Prepared	Lab Tech	Extraction Method
CLP Metals									
CLP-HG	10C1857	RTC1249-03	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-04	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-05	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-06	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-07	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-08	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-11	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-12	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-HG	10C1857	RTC1249-13	30.00	mL	50.00	mL	03/25/10 13:30	MXM	7470A
CLP-M	10C1839	RTC1249-03	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-04	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-05	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-06	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-07	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-08	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-11	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-12	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-13	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-03	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-04	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-05	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-06	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-07	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-08	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-11	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-12	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1839	RTC1249-13	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
Dissolved CLP Metals									
CLP-M	10C1838	RTC1249-01	50.00	mL	50.00	mL	03/25/10 12:00	AMH	CLP Metals Prep (Water)
CLP-M	10C1838	RTC1249-02	50.00	mL	50.00	mL	03/25/10 12:00	AMH	CLP Metals Prep (Water)
CLP-M	10C1838	RTC1249-01	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1838	RTC1249-02	50.00	mL	50.00	mL	03/25/10 12:00	DAN	CLP Metals Prep (Water)
CLP-M	10C1838	RTC1249-01	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1838	RTC1249-02	50.00	mL	50.00	mL	03/25/10 12:00	KCW	CLP Metals Prep (Water)
CLP-M	10C1854	RTC1249-01	30.00	mL	50.00	mL	03/25/10 15:30	MXM	CLP Metals Prep (Water)

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SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracte	Units	Extract Volume	Units	Date Prepared	Lab Tech	Extraction Method
CLP-M	10C1854	RTC1249-02	30.00	mL	50.00	mL	03/25/10 15:30	MXM	CLP Metals Prep (Water)

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LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers

CLP Metals

Blank Analyzed: 03/26/10 (Lab Number:10C1839-BLK1, Batch: 10C1839)

Aluminum			200	39.8	ug/L	ND					
Antimony			60.0	6.8	ug/L	ND					
Barium			200	0.3	ug/L	ND					
Beryllium			5.0	0.2	ug/L	ND					
Cadmium			5.0	0.3	ug/L	ND					
Calcium			5000	100	ug/L	ND					
Chromium			10.0	0.9	ug/L	ND					
Cobalt			50.0	0.6	ug/L	ND					
Copper			25.0	1.3	ug/L	ND					
Iron			100	19.3	ug/L	ND					
Lead			10.0	3.0	ug/L	ND					
Magnesium			5000	43.4	ug/L	ND					
Manganese			15.0	0.2	ug/L	ND					
Nickel			40.0	1.3	ug/L	ND					
Potassium			5000	50.0	ug/L	ND					
Selenium			35.0	8.7	ug/L	ND					
Silver			10.0	1.2	ug/L	ND					
Sodium			5000	324	ug/L	ND					
Thallium			25.0	10.2	ug/L	ND					
Vanadium			50.0	1.1	ug/L	ND					
Zinc			60.0	1.5	ug/L	ND					

Blank Analyzed: 03/26/10 (Lab Number:10C1839-BLK2, Batch: 10C1839)

Arsenic			10.0	5.6	ug/L	ND					

LCS Analyzed: 03/26/10 (Lab Number:10C1839-BS1, Batch: 10C1839)

Aluminum	10000	200	39.8	ug/L	10400	104	75-125
Antimony	200	60.0	6.8	ug/L	212	106	75-125
Barium	200	200	0.3	ug/L	207	104	75-125
Beryllium	200	5.0	0.2	ug/L	210	105	75-125
Cadmium	200	5.0	0.3	ug/L	201	101	75-125
Calcium	10000	5000	100	ug/L	10400	104	75-125
Chromium	200	10.0	0.9	ug/L	207	104	75-125
Cobalt	200	50.0	0.6	ug/L	206	103	75-125
Copper	200	25.0	1.3	ug/L	200	100	75-125
Iron	10000	100	19.3	ug/L	10100	101	75-125
Lead	200	10.0	3.0	ug/L	206	103	75-125
Magnesium	10000	5000	43.4	ug/L	10500	105	75-125

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LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers

CLP Metals

LCS Analyzed: 03/26/10 (Lab Number:10C1839-BS1, Batch: 10C1839)

Manganese		200	15.0	0.2	ug/L	204	102	75-125			
Nickel		200	40.0	1.3	ug/L	205	103	75-125			
Potassium		10000	5000	50.0	ug/L	10300	103	75-125			
Selenium		200	35.0	8.7	ug/L	216	108	75-125			
Silver		50.0	10.0	1.2	ug/L	52.7	105	75-125			
Sodium		10000	5000	324	ug/L	10600	106	75-125			
Thallium		200	25.0	10.2	ug/L	209	104	75-125			
Vanadium		200	50.0	1.1	ug/L	205	102	75-125			
Zinc		200	60.0	1.5	ug/L	206	103	75-125			

LCS Analyzed: 03/26/10 (Lab Number:10C1839-BS2, Batch: 10C1839)

Arsenic		200	10.0	5.6	ug/L	214	107	75-125			

Matrix Spike Analyzed: 03/26/10 (Lab Number:10C1839-MS1, Batch: 10C1839)

QC Source Sample: RTC1249-08

Aluminum	ND	2000	200	39.8	ug/L	2120	106	75-125			
Antimony	ND	100	60.0	6.8	ug/L	102	102	75-125			
Barium	47.4	2000	200	0.3	ug/L	2100	102	75-125			
Beryllium	ND	50.0	5.0	0.2	ug/L	52.5	105	75-125			
Cadmium	ND	50.0	5.0	0.3	ug/L	51.6	103	75-125			
Chromium	ND	200	10.0	0.9	ug/L	203	102	75-125			
Cobalt	ND	500	50.0	0.6	ug/L	543	109	75-125			
Copper	ND	250	25.0	1.3	ug/L	256	103	75-125			
Iron	ND	1000	100	19.3	ug/L	1070	107	75-125			
Lead	ND	20.0	10.0	3.0	ug/L	21.2	106	75-125			
Manganese	0.800	500	15.0	0.2	ug/L	522	104	75-125			
Nickel	ND	500	40.0	1.3	ug/L	519	104	75-125			
Selenium	ND	50.0	35.0	8.7	ug/L	55.5	111	75-125			
Silver	ND	50.0	10.0	1.2	ug/L	50.0	100	75-125			
Thallium	ND	50.0	25.0	10.2	ug/L	49.9	100	75-125			
Vanadium	ND	500	50.0	1.1	ug/L	516	103	75-125			
Zinc	3.64	500	60.0	1.5	ug/L	524	104	75-125			

Matrix Spike Analyzed: 03/26/10 (Lab Number:10C1839-MS2, Batch: 10C1839)

QC Source Sample: RTC1249-08

Arsenic	ND	40.0	10.0	5.6	ug/L	43.8	110	75-125			

Matrix Spike Dup Analyzed: 03/26/10 (Lab Number:10C1839-MSD1, Batch: 10C1839)

QC Source Sample: RTC1249-08

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LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
CLP Metals											
Matrix Spike Dup Analyzed: 03/26/10 (Lab Number:10C1839-MSD1, Batch: 10C1839)											
QC Source Sample: RTC1249-08											
Aluminum	ND	2000	200	39.8	ug/L	2100	105	75-125	0.8	20	
Antimony	ND	100	60.0	6.8	ug/L	96.3	96	75-125	6	20	
Barium	47.4	2000	200	0.3	ug/L	2090	102	75-125	0.2	20	
Beryllium	ND	50.0	5.0	0.2	ug/L	52.3	105	75-125	0.4	20	
Cadmium	ND	50.0	5.0	0.3	ug/L	50.8	102	75-125	1	20	
Chromium	ND	200	10.0	0.9	ug/L	202	101	75-125	0.8	20	
Cobalt	ND	500	50.0	0.6	ug/L	539	108	75-125	0.8	20	
Copper	ND	250	25.0	1.3	ug/L	254	102	75-125	0.9	20	
Iron	ND	1000	100	19.3	ug/L	1060	106	75-125	0.7	20	
Lead	ND	20.0	10.0	3.0	ug/L	21.2	106	75-125	0.05	20	
Manganese	0.800	500	15.0	0.2	ug/L	518	103	75-125	0.9	20	
Nickel	ND	500	40.0	1.3	ug/L	516	103	75-125	0.5	20	
Selenium	ND	50.0	35.0	8.7	ug/L	56.7	113	75-125	2	20	
Silver	ND	50.0	10.0	1.2	ug/L	49.1	98	75-125	2	20	
Thallium	ND	50.0	25.0	10.2	ug/L	53.3	107	75-125	6	20	
Vanadium	ND	500	50.0	1.1	ug/L	512	102	75-125	0.8	20	
Zinc	3.64	500	60.0	1.5	ug/L	519	103	75-125	0.9	20	

Matrix Spike Dup Analyzed: 03/26/10 (Lab Number:10C1839-MSD2, Batch: 10C1839)

QC Source Sample: RTC1249-08

Arsenic	ND	40.0	10.0	5.6	ug/L	42.6	107	75-125	3	20	

CLP Metals

Blank Analyzed: 03/25/10 (Lab Number:10C1857-BLK1, Batch: 10C1857)

Mercury			0.2	0.1	ug/L	ND					

LCS Analyzed: 03/25/10 (Lab Number:10C1857-BS1, Batch: 10C1857)

Mercury		6.67	0.2	0.1	ug/L	6.93	104	75-125			

Duplicate Analyzed: 03/25/10 (Lab Number:10C1857-DUP1, Batch: 10C1857)

QC Source Sample: RTC1249-08

Mercury	ND		0.2	0.1	ug/L	ND				20	

Matrix Spike Analyzed: 03/25/10 (Lab Number:10C1857-MS1, Batch: 10C1857)

QC Source Sample: RTC1249-08

Mercury	ND	1.67	0.2	0.1	ug/L	1.80	108	75-125			

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128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings

Project Number: 220-11730

Received: 03/23/10

Reported: 03/31/10 09:37

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers

Dissolved CLP Metals

Blank Analyzed: 03/26/10 (Lab Number:10C1838-BLK1, Batch: 10C1838)

Aluminum			200	39.8	ug/L	ND					
Antimony			60.0	6.8	ug/L	ND					
Barium			200	0.3	ug/L	ND					
Beryllium			5.0	0.2	ug/L	ND					
Cadmium			5.0	0.3	ug/L	ND					
Calcium			5000	100	ug/L	ND					
Chromium			10.0	0.9	ug/L	ND					
Cobalt			50.0	0.6	ug/L	ND					
Copper			25.0	1.3	ug/L	ND					
Iron			100	19.3	ug/L	ND					
Lead			10.0	3.0	ug/L	ND					
Magnesium			5000	43.4	ug/L	ND					
Manganese			15.0	0.2	ug/L	ND					
Nickel			40.0	1.3	ug/L	ND					
Potassium			5000	50.0	ug/L	ND					
Selenium			35.0	8.7	ug/L	ND					
Silver			10.0	1.2	ug/L	ND					
Sodium			5000	324	ug/L	ND					
Thallium			25.0	10.2	ug/L	ND					
Vanadium			50.0	1.1	ug/L	ND					
Zinc			60.0	1.5	ug/L	ND					

Blank Analyzed: 03/26/10 (Lab Number:10C1838-BLK2, Batch: 10C1838)

Arsenic			10.0	5.6	ug/L	ND					

LCS Analyzed: 03/26/10 (Lab Number:10C1838-BS1, Batch: 10C1838)

Aluminum	10000	200	39.8	ug/L	10300	103	75-125
Antimony	200	60.0	6.8	ug/L	211	105	75-125
Arsenic	200	10.0	5.6	ug/L	212	106	75-125
Barium	200	200	0.3	ug/L	206	103	75-125
Beryllium	200	5.0	0.2	ug/L	210	105	75-125
Cadmium	200	5.0	0.3	ug/L	201	101	75-125
Calcium	10000	5000	100	ug/L	10300	103	75-125
Chromium	200	10.0	0.9	ug/L	208	104	75-125
Cobalt	200	50.0	0.6	ug/L	206	103	75-125
Copper	200	25.0	1.3	ug/L	200	100	75-125
Iron	10000	100	19.3	ug/L	10200	102	75-125
Lead	200	10.0	3.0	ug/L	205	103	75-125

TestAmerica Buffalo - 10 Hazelwood Drive Amherst, NY 14228 tel 716-691-2600 fax 716-691-7991

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TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Project: NYSDEC Standby - Tioga Castings
Project Number: 220-11730

Received: 03/23/10

Reported: 03/31/10 09:37

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
Dissolved CLP Metals											
LCS Analyzed: 03/26/10 (Lab Number:10C1838-BS1, Batch: 10C1838)											
Magnesium		10000	5000	43.4	ug/L	10500	105	75-125			
Manganese		200	15.0	0.2	ug/L	205	103	75-125			
Nickel		200	40.0	1.3	ug/L	205	103	75-125			
Potassium		10000	5000	50.0	ug/L	10300	103	75-125			
Selenium		200	35.0	8.7	ug/L	215	107	75-125			
Silver		50.0	10.0	1.2	ug/L	52.8	106	75-125			
Sodium		10000	5000	324	ug/L	10500	105	75-125			
Thallium		200	25.0	10.2	ug/L	203	102	75-125			
Vanadium		200	50.0	1.1	ug/L	204	102	75-125			
Zinc		200	60.0	1.5	ug/L	207	103	75-125			

Matrix Spike Analyzed: 03/26/10 (Lab Number:10C1838-MS1, Batch: 10C1838)

QC Source Sample: RTC1249-01

Aluminum	77.6	2000	200	39.8	ug/L	2110	102	75-125			
Antimony	ND	100	60.0	6.8	ug/L	105	105	75-125			
Arsenic	ND	40.0	10.0	5.6	ug/L	42.4	106	75-125			
Barium	52.3	2000	200	0.3	ug/L	2070	101	75-125			
Beryllium	ND	50.0	5.0	0.2	ug/L	52.0	104	75-125			
Cadmium	0.340	50.0	5.0	0.3	ug/L	50.6	100	75-125			
Chromium	ND	200	10.0	0.9	ug/L	200	100	75-125			
Cobalt	ND	500	50.0	0.6	ug/L	533	107	75-125			
Copper	ND	250	25.0	1.3	ug/L	251	100	75-125			
Iron	ND	1000	100	19.3	ug/L	1050	105	75-125			
Lead	ND	20.0	10.0	3.0	ug/L	19.5	98	75-125			
Manganese	9.72	500	15.0	0.2	ug/L	523	103	75-125			
Nickel	ND	500	40.0	1.3	ug/L	513	103	75-125			
Selenium	ND	50.0	35.0	8.7	ug/L	53.2	106	75-125			
Silver	ND	50.0	10.0	1.2	ug/L	48.8	98	75-125			
Thallium	ND	50.0	25.0	10.2	ug/L	47.6	95	75-125			
Vanadium	ND	500	50.0	1.1	ug/L	504	101	75-125			
Zinc	ND	500	60.0	1.5	ug/L	516	103	75-125			

Matrix Spike Dup Analyzed: 03/26/10 (Lab Number:10C1838-MSD1, Batch: 10C1838)

QC Source Sample: RTC1249-01

Aluminum	77.6	2000	200	39.8	ug/L	2110	101	75-125	0.3	20
Antimony	ND	100	60.0	6.8	ug/L	103	103	75-125	2	20
Arsenic	ND	40.0	10.0	5.6	ug/L	43.0	108	75-125	2	20
Barium	52.3	2000	200	0.3	ug/L	2060	100	75-125	0.5	20

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484

SDG Number: 220-11730

Received: 03/23/10

Reported: 03/31/10 09:37

Project: NYSDEC Standby - Tioga Castings

Project Number: 220-11730

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
Dissolved CLP Metals											
Matrix Spike Dup Analyzed: 03/26/10 (Lab Number:10C1838-MSD1, Batch: 10C1838)											
QC Source Sample: RTC1249-01											
Beryllium	ND	50.0	5.0	0.2	ug/L	52.2	104	75-125	0.3	20	
Cadmium	0.340	50.0	5.0	0.3	ug/L	50.5	100	75-125	0.1	20	
Chromium	ND	200	10.0	0.9	ug/L	201	101	75-125	0.7	20	
Cobalt	ND	500	50.0	0.6	ug/L	537	107	75-125	0.7	20	
Copper	ND	250	25.0	1.3	ug/L	251	101	75-125	0.1	20	
Iron	ND	1000	100	19.3	ug/L	1050	105	75-125	0.04	20	
Lead	ND	20.0	10.0	3.0	ug/L	19.9	100	75-125	2	20	
Manganese	9.72	500	15.0	0.2	ug/L	526	103	75-125	0.6	20	
Nickel	ND	500	40.0	1.3	ug/L	514	103	75-125	0.3	20	
Selenium	ND	50.0	35.0	8.7	ug/L	51.6	103	75-125	3	20	
Silver	ND	50.0	10.0	1.2	ug/L	49.5	99	75-125	1	20	
Thallium	ND	50.0	25.0	10.2	ug/L	49.8	100	75-125	4	20	
Vanadium	ND	500	50.0	1.1	ug/L	503	101	75-125	0.07	20	
Zinc	ND	500	60.0	1.5	ug/L	515	103	75-125	0.2	20	

Dissolved CLP Metals

Blank Analyzed: 03/25/10 (Lab Number:10C1854-BLK1, Batch: 10C1854)

Mercury		0.2	0.1	ug/L	ND

LCS Analyzed: 03/25/10 (Lab Number:10C1854-BS1, Batch: 10C1854)

Mercury	6.67	0.2	0.1	ug/L	6.92	104	75-125

Duplicate Analyzed: 03/25/10 (Lab Number:10C1854-DUP1, Batch: 10C1854)

QC Source Sample: RTC1249-02

Mercury	ND	0.2	0.1	ug/L	ND		20

Matrix Spike Analyzed: 03/25/10 (Lab Number:10C1854-MS1, Batch: 10C1854)

QC Source Sample: RTC1249-02

Mercury	ND	1.67	0.2	0.1	ug/L	1.77	106	75-125

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Phone (203) 929-8140 Fax (203) 929-8142

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Lab P/N:		Order Tracking #361	
Company: TestAmerica Laboratories, Inc.		Dubauskas, Johanna		220-5190.1	
Client Contact: Shipping/Receiving		B-Mail: johanna.dubauskas@testamericainc.com		Page 1 of 2	
Address: 10 Hazenwood Drive, City: Amherst, State: NY, Zip: 14228-2296		PO #: 716-891-2900 (Tel) 716-891-7991 (Fax)		Job #: 220-11730-1	
Project Name: NYSDEC Standby - Tioga Castings Site		Project #: 22000761		Analysis Requested: 220-11730-1	
Site: SSC046		TAT Requested (days):		Preservation Codes:	
				A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsAc2 D - Nitric Acid P - NaOHMS E - NH4SCN Q - NH4SCN F - NaOH R - NH4SCN G - Ammonia S - H2SO4 H - Ascorbic Acid T - TSP Dodecylhydrazine I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4.5 L - EDTA Z - Other (specify)	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time	
MW-1R (220-11730-1)		3/18/10		12:00	
MW-7 (220-11730-2)		3/18/10		14:35	
MW-1R (220-11730-3)		3/18/10		12:00	
MW-3 (220-11730-4)		3/18/10		12:05	
MW-7 (220-11730-5)		3/18/10		14:35	
MW-4 (220-11730-6)		3/18/10		15:00	
MW-3D (220-11730-7)		3/18/10		16:30	
MW-5 (220-11730-8)		3/18/10		17:00	
MW-5 (220-11730-8MS)		3/18/10		17:00	
MW-5 (220-11730-8MSD)		3/18/10		17:00	
MW-X (220-11730-9)		3/18/10		17:00	
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Sample Disposal / A fee may be assessed if samples are retained longer than 1 month ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months		Special Instructions/Note:	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:		Total Number of Containers	
Empty Kit Relinquished by:		Date:		Time:	
Relinquished by: [Signature]		Date/Time: 3/22/10 11:28		Company: TAC	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seal Intact: A Yes B No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 20	

Chain of Custody Record

Client Information (Sub Contract Lab) Company: TestAmerica Laboratories, Inc. Address: 10 Hazardwood Drive, City: Amherst State: NY Zip: 14226-2268 Phone: 716-691-2800 (Tel) 716-691-7991 (Fax) Email: Project Name: NYSDEC Standby - Tioga Castings Site:		Sample: Lab No.: 220-11730-1 Dubauskas, Johanna Email: johanna.dubauskas@testamericainc.com Phone:		Carver Tracking Request Page 2 of 2	
Analysis Requested Date Date Requested: 4/1/2010 TAT Requested (days): PO #: WO #: Project #: 22000781 S904W		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - NaOH G - Ammonia H - Ascorbic Acid I - Ice J - Di Water K - EDTA L - BDA Other: M - Hexane N - None O - As NaO2 P - Na2O4S Q - Nitric Acid R - NaHSO3 S - H2SO4 T - TSP Double Distilled U - Acetone V - NaOH W - pH 4.5 X - BDA Y - other (specify)			
Sample Identification - Client ID (Lab ID) MW-3 (220-11730-10) MW-2 (220-11730-11)		Special Instructions/Note: SUBCONTRACT ILMOS,3 Dissolved TAL Metals SUBCONTRACT ILMOS,3 TAL Metals Field Filtered Sample (Yes or No)			
Sample Date 3/18/10 3/18/10		Sample Time 9:30 9:50		Matrix Water Water	
Sample Type (C=Comp, G=Grab) C G		Preservation Code: W W			
Total Number of Containers: 1 1		Special Instructions/Note: 1 1			
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological					
Delivery/Kit Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by:					
Relinquished by: K. Blumhagen Date/Time: 3/22/10 11:28 Company: TACOT		Relinquished by: [Signature] Date/Time: 3/22/10 09:00 Company: [Signature]			
Relinquished by: [Signature] Date/Time: Company:		Relinquished by: [Signature] Date/Time: Company:			
Custody Seals Intact: A Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 20°			

TestAmerica Buffalo

SDG: 220-11730

CLASS: CLP_METALS_SEQ

METHOD: CLP-M

ANALYSES DATA PACKAGE COVER PAGE
CLP-M

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica Connecticut

Project: NYSDEC Standby - Tioga Castings

Client Sample Id:

Lab Sample Id:

MW-1R

RTC1249-01

MW-7

RTC1249-02

MW-1R

RTC1249-03

MW-8

RTC1249-04

MW-7

RTC1249-05

MW-4

RTC1249-06

MW-3D

RTC1249-07

MW-5

RTC1249-08

MW-X

RTC1249-11

MW-3

RTC1249-12

MW-2

RTC1249-13

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-1R

Laboratory: TestAmerica Buffalo SDG: 220-11730
 Client: TestAmerica Connecticut Project: NYSDEC Standby - Tioga Castings
 Matrix: Water Laboratory ID: RTC1249-01 File ID: A032510-198
 Sampled: 03/18/10 12:00 Prepared: 03/25/10 12:00 Analyzed: 03/26/10 07:25
 Solids: 0.00 Preparation: CLP Metals Prep (Water) Initial/Final: 50 mL / 50 mL
 Batch: 10C1838 Sequence: T001066 Calibration: R10C088 Instrument: Trace 2

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7429-90-5	Aluminum (dissolved)	77.6	ug/L	1	J	CLP-M
7440-36-0	Antimony (dissolved)	60.0	ug/L	1	U	CLP-M
7440-38-2	Arsenic (dissolved)	10.0	ug/L	1	U	CLP-M
7440-39-3	Barium (dissolved)	52.3	ug/L	1	J	CLP-M
7440-41-7	Beryllium (dissolved)	0.2	ug/L	1	J	CLP-M
7440-43-9	Cadmium (dissolved)	0.3	ug/L	1	J	CLP-M
7440-70-2	Calcium (dissolved)	64200	ug/L	1		CLP-M
7440-47-3	Chromium (dissolved)	10.0	ug/L	1	U	CLP-M
7440-48-4	Cobalt (dissolved)	50.0	ug/L	1	U	CLP-M
7440-50-8	Copper (dissolved)	25.0	ug/L	1	U	CLP-M
7439-89-6	Iron (dissolved)	100	ug/L	1	U	CLP-M
7439-92-1	Lead (dissolved)	10.0	ug/L	1	U	CLP-M
7439-95-4	Magnesium (dissolved)	12200	ug/L	1		CLP-M
7439-96-5	Manganese (dissolved)	9.7	ug/L	1	J	CLP-M
7440-02-0	Nickel (dissolved)	40.0	ug/L	1	U	CLP-M
7440-09-7	Potassium (dissolved)	1670	ug/L	1	J	CLP-M
7782-49-2	Selenium (dissolved)	35.0	ug/L	1	U	CLP-M
7440-22-4	Silver (dissolved)	10.0	ug/L	1	U	CLP-M
7440-23-5	Sodium (dissolved)	25400	ug/L	1		CLP-M
7440-28-0	Thallium (dissolved)	25.0	ug/L	1	U	CLP-M
7440-62-2	Vanadium (dissolved)	50.0	ug/L	1	U	CLP-M
7440-66-6	Zinc (dissolved)	1.5	ug/L	1	J	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-1R

Laboratory: TestAmerica Buffalo SDG: 220-11730
Client: TestAmerica Connecticut Project: NYSDEC Standby - Tioga Castings
Matrix: Water Laboratory ID: RTC1249-01 File ID: J03250CD-39
Sampled: 03/18/10 12:00 Prepared: 03/25/10 15:30 Analyzed: 03/25/10 19:07
Solids: 0.00 Preparation: CLP Metals Prep (Water Initial/Final: 30 mL / 50 mL
Batch: 10C1854 Sequence: T001055 Calibration: R10C083 Instrument: Leeman 3

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7439-97-6	Mercury (dissolved)	0.2	ug/L	1	U	CLP-M

INORGANIC ANALYSIS DATA SHEET

CLP-M

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica ConnecticutProject: NYSDEC Standby - Tioga CastingsMatrix: WaterLaboratory ID: RTC1249-02File ID: A032510-206Sampled: 03/18/10 14:35Prepared: 03/25/10 12:00Analyzed: 03/26/10 08:07Solids: 0.00Preparation: CLP Metals Prep (WaterInitial/Final: 50 mL / 50 mLBatch: 10C1838Sequence: T001066Calibration: R10C088Instrument: Trace 2

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7429-90-5	Aluminum (dissolved)	200	ug/L	1	U	CLP-M
7440-36-0	Antimony (dissolved)	60.0	ug/L	1	U	CLP-M
7440-38-2	Arsenic (dissolved)	10.0	ug/L	1	U	CLP-M
7440-39-3	Barium (dissolved)	134	ug/L	1	J	CLP-M
7440-41-7	Beryllium (dissolved)	5.0	ug/L	1	U	CLP-M
7440-43-9	Cadmium (dissolved)	0.4	ug/L	1	J	CLP-M
7440-70-2	Calcium (dissolved)	86300	ug/L	1		CLP-M
7440-47-3	Chromium (dissolved)	10.0	ug/L	1	U	CLP-M
7440-48-4	Cobalt (dissolved)	50.0	ug/L	1	U	CLP-M
7440-50-8	Copper (dissolved)	2.5	ug/L	1	J	CLP-M
7439-89-6	Iron (dissolved)	100	ug/L	1	U	CLP-M
7439-92-1	Lead (dissolved)	10.0	ug/L	1	U	CLP-M
7439-95-4	Magnesium (dissolved)	13600	ug/L	1		CLP-M
7439-96-5	Manganese (dissolved)	120	ug/L	1		CLP-M
7440-02-0	Nickel (dissolved)	2.2	ug/L	1	J	CLP-M
7440-09-7	Potassium (dissolved)	5250	ug/L	1		CLP-M
7782-49-2	Selenium (dissolved)	35.0	ug/L	1	U	CLP-M
7440-22-4	Silver (dissolved)	10.0	ug/L	1	U	CLP-M
7440-23-5	Sodium (dissolved)	59900	ug/L	1		CLP-M
7440-28-0	Thallium (dissolved)	25.0	ug/L	1	U	CLP-M
7440-62-2	Vanadium (dissolved)	50.0	ug/L	1	U	CLP-M
7440-66-6	Zinc (dissolved)	9.3	ug/L	1	J	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-7

Laboratory: TestAmerica Buffalo SDG: 220-11730
Client: TestAmerica Connecticut Project: NYSDEC Standby - Tioga Castings
Matrix: Water Laboratory ID: RTC1249-02 File ID: J03250CD-40
Sampled: 03/18/10 14:35 Prepared: 03/25/10 15:30 Analyzed: 03/25/10 19:09
Solids: 0.00 Preparation: CLP Metals Prep (Water) Initial/Final: 30 mL / 50 mL
Batch: 10C1854 Sequence: T001055 Calibration: R10C083 Instrument: Leeman 3

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7439-97-6	Mercury (dissolved)	0.2	ug/L	1	U	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-1R

Laboratory: TestAmerica Buffalo SDG: 220-11730
 Client: TestAmerica Connecticut Project: NYSDEC Standby - Tioga Castings
 Matrix: Water Laboratory ID: RTC1249-03 File ID: A032510-175
 Sampled: 03/18/10 12:00 Prepared: 03/25/10 12:00 Analyzed: 03/26/10 05:15
 Solids: 0.00 Preparation: CLP Metals Prep (Water) Initial/Final: 50 mL / 50 mL
 Batch: 10C1839 Sequence: T001066 Calibration: R10C088 Instrument: Trace 2

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7429-90-5	Aluminum	41.0	ug/L	1	J	CLP-M
7440-36-0	Antimony	60.0	ug/L	1	U	CLP-M
7440-39-3	Barium	51.9	ug/L	1	J	CLP-M
7440-41-7	Beryllium	0.2	ug/L	1	J	CLP-M
7440-43-9	Cadmium	0.6	ug/L	1	J	CLP-M
7440-70-2	Calcium	63700	ug/L	1		CLP-M
7440-47-3	Chromium	10.0	ug/L	1	U	CLP-M
7440-48-4	Cobalt	50.0	ug/L	1	U	CLP-M
7440-50-8	Copper	25.0	ug/L	1	U	CLP-M
7439-89-6	Iron	48.9	ug/L	1	J	CLP-M
7439-92-1	Lead	10.0	ug/L	1	U	CLP-M
7439-95-4	Magnesium	12100	ug/L	1		CLP-M
7439-96-5	Manganese	16.5	ug/L	1		CLP-M
7440-02-0	Nickel	1.4	ug/L	1	J	CLP-M
7440-09-7	Potassium	1640	ug/L	1	J	CLP-M
7782-49-2	Selenium	35.0	ug/L	1	U	CLP-M
7440-22-4	Silver	10.0	ug/L	1	U	CLP-M
7440-23-5	Sodium	25100	ug/L	1		CLP-M
7440-28-0	Thallium	25.0	ug/L	1	U	CLP-M
7440-62-2	Vanadium	50.0	ug/L	1	U	CLP-M
7440-66-6	Zinc	4.1	ug/L	1	J	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-1R

Laboratory: TestAmerica Buffalo SDG: 220-11730
Client: TestAmerica Connecticut Project: NYSDEC Standby - Tioga Castings
Matrix: Water Laboratory ID: RTC1249-03 File ID: 1032610-014
Sampled: 03/18/10 12:00 Prepared: 03/25/10 12:00 Analyzed: 03/26/10 10:02
Solids: 0.00 Preparation: CLP Metals Prep (Water) Initial/Final: 50 mL / 50 mL
Batch: 10C1839 Sequence: T001067 Calibration: R10C089 Instrument: Trace 1

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7440-38-2	Arsenic	10.0	ug/L	1	U	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-8

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica Connecticut

Project: NYSDEC Standby - Tioga Castings

Matrix: Water

Laboratory ID: RTC1249-04

File ID: A032510-176

Sampled: 03/18/10 12:05

Prepared: 03/25/10 12:00

Analyzed: 03/26/10 05:20

Solids: 0.00

Preparation: CLP Metals Prep (Water

Initial/Final: 50 mL / 50 mL

Batch: 10C1839

Sequence: T001066

Calibration: R10C088

Instrument: Trace 2

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7429-90-5	Aluminum	200	ug/L	1	U	CLP-M
7440-36-0	Antimony	60.0	ug/L	1	U	CLP-M
7440-39-3	Barium	64.6	ug/L	1	J	CLP-M
7440-41-7	Beryllium	5.0	ug/L	1	U	CLP-M
7440-43-9	Cadmium	0.3	ug/L	1	J	CLP-M
7440-70-2	Calcium	52600	ug/L	1		CLP-M
7440-47-3	Chromium	10.0	ug/L	1	U	CLP-M
7440-48-4	Cobalt	50.0	ug/L	1	U	CLP-M
7440-50-8	Copper	25.0	ug/L	1	U	CLP-M
7439-89-6	Iron	40.2	ug/L	1	J	CLP-M
7439-92-1	Lead	10.0	ug/L	1	U	CLP-M
7439-95-4	Magnesium	8870	ug/L	1		CLP-M
7439-96-5	Manganese	2.7	ug/L	1	J	CLP-M
7440-02-0	Nickel	40.0	ug/L	1	U	CLP-M
7440-09-7	Potassium	2440	ug/L	1	J	CLP-M
7782-49-2	Selenium	35.0	ug/L	1	U	CLP-M
7440-22-4	Silver	10.0	ug/L	1	U	CLP-M
7440-23-5	Sodium	23300	ug/L	1		CLP-M
7440-28-0	Thallium	25.0	ug/L	1	U	CLP-M
7440-62-2	Vanadium	50.0	ug/L	1	U	CLP-M
7440-66-6	Zinc	3.0	ug/L	1	J	CLP-M

MW-8

Instrument: Trace 1

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7440-38-2	Arsenic	10.0	ug/L	1	U	CLP-M

INORGANIC ANALYSIS DATA SHEET

CLP-M

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica ConnecticutProject: NYSDEC Standby - Tioga CastingsMatrix: WaterLaboratory ID: RTC1249-05File ID: A032510-177Sampled: 03/18/10 14:35Prepared: 03/25/10 12:00Analyzed: 03/26/10 05:25Solids: 0.00Preparation: CLP Metals Prep (WaterInitial/Final: 50 mL / 50 mLBatch: 10C1839Sequence: T001066Calibration: R10C088Instrument: Trace 2

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7429-90-5	Aluminum	140	ug/L	1	J	CLP-M
7440-36-0	Antimony	60.0	ug/L	1	U	CLP-M
7440-39-3	Barium	133	ug/L	1	J	CLP-M
7440-41-7	Beryllium	5.0	ug/L	1	U	CLP-M
7440-43-9	Cadmium	0.4	ug/L	1	J	CLP-M
7440-70-2	Calcium	85600	ug/L	1		CLP-M
7440-47-3	Chromium	10.0	ug/L	1	U	CLP-M
7440-48-4	Cobalt	50.0	ug/L	1	U	CLP-M
7440-50-8	Copper	3.1	ug/L	1	J	CLP-M
7439-89-6	Iron	192	ug/L	1		CLP-M
7439-92-1	Lead	10.0	ug/L	1	U	CLP-M
7439-95-4	Magnesium	13600	ug/L	1		CLP-M
7439-96-5	Manganese	115	ug/L	1		CLP-M
7440-02-0	Nickel	2.8	ug/L	1	J	CLP-M
7440-09-7	Potassium	5190	ug/L	1		CLP-M
7782-49-2	Selenium	35.0	ug/L	1	U	CLP-M
7440-22-4	Silver	10.0	ug/L	1	U	CLP-M
7440-23-5	Sodium	58900	ug/L	1		CLP-M
7440-28-0	Thallium	25.0	ug/L	1	U	CLP-M
7440-62-2	Vanadium	50.0	ug/L	1	U	CLP-M
7440-66-6	Zinc	10.4	ug/L	1	J	CLP-M

CLP-M

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica Connecticut

Project: NYSDEC Standby - Tioga Castings

Matrix: Water

Laboratory ID: RTC1249-05

File ID: 1032610-016

Sampled: 03/18/10 14:35

Prepared: 03/25/10 12:00

Analyzed: 03/26/10 10:12

Solids: 0.00Preparation: CLP Metals Prep (WaterInitial/Final: 50 mL / 50 mL

Batch: 10C1839

Sequence: T001067Calibration: R10C089Instrument: Trace 1

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7440-38-2	Arsenic	10.0	ug/L	1	U	CLP-M

INORGANIC ANALYSIS DATA SHEET

CLP-M

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica ConnecticutProject: NYSDEC Standby - Tioga CastingsMatrix: WaterLaboratory ID: RTC1249-06File ID: A032510-178Sampled: 03/18/10 15:00Prepared: 03/25/10 12:00Analyzed: 03/26/10 05:30Solids: 0.00Preparation: CLP Metals Prep (WaterInitial/Final: 50 mL / 50 mLBatch: 10C1839Sequence: T001066Calibration: R10C088Instrument: Trace 2

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7429-90-5	Aluminum	200	ug/L	1	U	CLP-M
7440-36-0	Antimony	60.0	ug/L	1	U	CLP-M
7440-39-3	Barium	42.6	ug/L	1	J	CLP-M
7440-41-7	Beryllium	5.0	ug/L	1	U	CLP-M
7440-43-9	Cadmium	0.5	ug/L	1	J	CLP-M
7440-70-2	Calcium	48000	ug/L	1		CLP-M
7440-47-3	Chromium	10.0	ug/L	1	U	CLP-M
7440-48-4	Cobalt	50.0	ug/L	1	U	CLP-M
7440-50-8	Copper	25.0	ug/L	1	U	CLP-M
7439-89-6	Iron	22.2	ug/L	1	J	CLP-M
7439-92-1	Lead	10.0	ug/L	1	U	CLP-M
7439-95-4	Magnesium	8820	ug/L	1		CLP-M
7439-96-5	Manganese	1.5	ug/L	1	J	CLP-M
7440-02-0	Nickel	40.0	ug/L	1	U	CLP-M
7440-09-7	Potassium	1130	ug/L	1	J	CLP-M
7782-49-2	Selenium	35.0	ug/L	1	U	CLP-M
7440-22-4	Silver	10.0	ug/L	1	U	CLP-M
7440-23-5	Sodium	16100	ug/L	1		CLP-M
7440-28-0	Thallium	25.0	ug/L	1	U	CLP-M
7440-62-2	Vanadium	50.0	ug/L	1	U	CLP-M
7440-66-6	Zinc	60.0	ug/L	1	U	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-4

Laboratory: TestAmerica Buffalo SDG: 220-11730
Client: TestAmerica Connecticut Project: NYSDEC Standby - Tioga Castings
Matrix: Water Laboratory ID: RTC1249-06 File ID: 1032610-017
Sampled: 03/18/10 15:00 Prepared: 03/25/10 12:00 Analyzed: 03/26/10 10:17
Solids: 0.00 Preparation: CLP Metals Prep (Water) Initial/Final: 50 mL / 50 mL
Batch: 10C1839 Sequence: T001067 Calibration: R10C089 Instrument: Trace 1

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7440-38-2	Arsenic	10.0	ug/L	1	U	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-3D

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica Connecticut

Project: NYSDEC Standby - Tioga Castings

Matrix: Water

Laboratory ID: RTC1249-07

File ID: A032510-179

Sampled: 03/18/10 16:30

Prepared: 03/25/10 12:00

Analyzed: 03/26/10 05:35

Solids: 0.00

Preparation: CLP Metals Prep (Water

Initial/Final: 50 mL / 50 mL

Batch: 10C1839

Sequence: T001066

Calibration: R10C088

Instrument: Trace 2

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7429-90-5	Aluminum	200	ug/L	1	U	CLP-M
7440-36-0	Antimony	60.0	ug/L	1	U	CLP-M
7440-39-3	Barium	45.3	ug/L	1	J	CLP-M
7440-41-7	Beryllium	5.0	ug/L	1	U	CLP-M
7440-43-9	Cadmium	5.0	ug/L	1	U	CLP-M
7440-70-2	Calcium	50000	ug/L	1		CLP-M
7440-47-3	Chromium	10.0	ug/L	1	U	CLP-M
7440-48-4	Cobalt	50.0	ug/L	1	U	CLP-M
7440-50-8	Copper	25.0	ug/L	1	U	CLP-M
7439-89-6	Iron	100	ug/L	1	U	CLP-M
7439-92-1	Lead	10.0	ug/L	1	U	CLP-M
7439-95-4	Magnesium	9120	ug/L	1		CLP-M
7439-96-5	Manganese	0.9	ug/L	1	J	CLP-M
7440-02-0	Nickel	40.0	ug/L	1	U	CLP-M
7440-09-7	Potassium	1610	ug/L	1	J	CLP-M
7782-49-2	Selenium	35.0	ug/L	1	U	CLP-M
7440-22-4	Silver	10.0	ug/L	1	U	CLP-M
7440-23-5	Sodium	16900	ug/L	1		CLP-M
7440-28-0	Thallium	25.0	ug/L	1	U	CLP-M
7440-62-2	Vanadium	50.0	ug/L	1	U	CLP-M
7440-66-6	Zinc	60.0	ug/L	1	U	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-3D

Laboratory: TestAmerica Buffalo SDG: 220-11730
Client: TestAmerica Connecticut Project: NYSDEC Standby - Tioga Castings
Matrix: Water Laboratory ID: RTC1249-07 File ID: 1032610-018
Sampled: 03/18/10 16:30 Prepared: 03/25/10 12:00 Analyzed: 03/26/10 10:22
Solids: 0.00 Preparation: CLP Metals Prep (Water) Initial/Final: 50 mL / 50 mL
Batch: 10C1839 Sequence: T001067 Calibration: R10C089 Instrument: Trace 1

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7440-38-2	Arsenic	10.0	ug/L	1	U	CLP-M

INORGANIC ANALYSIS DATA SHEET

CLP-M

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica ConnecticutProject: NYSDEC Standby - Tioga CastingsMatrix: WaterLaboratory ID: RTC1249-08File ID: A032510-180Sampled: 03/18/10 17:00Prepared: 03/25/10 12:00Analyzed: 03/26/10 05:40Solids: 0.00Preparation: CLP Metals Prep (Water)Initial/Final: 50 mL / 50 mLBatch: 10C1839Sequence: T001066Calibration: R10C088Instrument: Trace 2

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7429-90-5	Aluminum	200	ug/L	1	U	CLP-M
7440-36-0	Antimony	60.0	ug/L	1	U	CLP-M
7440-39-3	Barium	47.4	ug/L	1	J	CLP-M
7440-41-7	Beryllium	5.0	ug/L	1	U	CLP-M
7440-43-9	Cadmium	5.0	ug/L	1	U	CLP-M
7440-70-2	Calcium	45100	ug/L	1		CLP-M
7440-47-3	Chromium	10.0	ug/L	1	U	CLP-M
7440-48-4	Cobalt	50.0	ug/L	1	U	CLP-M
7440-50-8	Copper	25.0	ug/L	1	U	CLP-M
7439-89-6	Iron	100	ug/L	1	U	CLP-M
7439-92-1	Lead	10.0	ug/L	1	U	CLP-M
7439-95-4	Magnesium	7330	ug/L	1		CLP-M
7439-96-5	Manganese	0.8	ug/L	1	J	CLP-M
7440-02-0	Nickel	40.0	ug/L	1	U	CLP-M
7440-09-7	Potassium	3530	ug/L	1	J	CLP-M
7782-49-2	Selenium	35.0	ug/L	1	U	CLP-M
7440-22-4	Silver	10.0	ug/L	1	U	CLP-M
7440-23-5	Sodium	8320	ug/L	1		CLP-M
7440-28-0	Thallium	25.0	ug/L	1	U	CLP-M
7440-62-2	Vanadium	50.0	ug/L	1	U	CLP-M
7440-66-6	Zinc	3.6	ug/L	1	J	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-5

Laboratory: TestAmerica Buffalo SDG: 220-11730
Client: TestAmerica Connecticut Project: NYSDEC Standby - Tioga Castings
Matrix: Water Laboratory ID: RTC1249-08 File ID: 1032610-019
Sampled: 03/18/10 17:00 Prepared: 03/25/10 12:00 Analyzed: 03/26/10 10:27
Solids: 0.00 Preparation: CLP Metals Prep (Water) Initial/Final: 50 mL / 50 mL
Batch: 10C1839 Sequence: T001067 Calibration: R10C089 Instrument: Trace 1

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7440-38-2	Arsenic	10.0	ug/L	1	U	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-X

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica Connecticut

Project: NYSDEC Standby - Tioga Castings

Matrix: Water

Laboratory ID: RTC1249-11

File ID: A032510-188

Sampled: 03/18/10 00:00

Prepared: 03/25/10 12:00

Analyzed: 03/26/10 06:23

Solids: 0.00

Preparation: CLP Metals Prep (Water

Initial/Final: 50 mL / 50 mL

Batch: 10C1839

Sequence:

T001066

Calibration: R10C088

Instrument: Trace 2

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7429-90-5	Aluminum	200	ug/L	1	U	CLP-M
7440-36-0	Antimony	60.0	ug/L	1	U	CLP-M
7440-39-3	Barium	49.5	ug/L	1	J	CLP-M
7440-41-7	Beryllium	5.0	ug/L	1	U	CLP-M
7440-43-9	Cadmium	5.0	ug/L	1	U	CLP-M
7440-70-2	Calcium	46200	ug/L	1		CLP-M
7440-47-3	Chromium	10.0	ug/L	1	U	CLP-M
7440-48-4	Cobalt	50.0	ug/L	1	U	CLP-M
7440-50-8	Copper	25.0	ug/L	1	U	CLP-M
7439-89-6	Iron	100	ug/L	1	U	CLP-M
7439-92-1	Lead	10.0	ug/L	1	U	CLP-M
7439-95-4	Magnesium	7490	ug/L	1		CLP-M
7439-96-5	Manganese	0.8	ug/L	1	J	CLP-M
7440-02-0	Nickel	1.4	ug/L	1	J	CLP-M
7440-09-7	Potassium	3620	ug/L	1	J	CLP-M
7782-49-2	Selenium	35.0	ug/L	1	U	CLP-M
7440-22-4	Silver	10.0	ug/L	1	U	CLP-M
7440-23-5	Sodium	8530	ug/L	1		CLP-M
7440-28-0	Thallium	25.0	ug/L	1	U	CLP-M
7440-62-2	Vanadium	50.0	ug/L	1	U	CLP-M
7440-66-6	Zinc	3.6	ug/L	1	J	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-X

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica Connecticut

Project: NYSDEC Standby - Tioga Castings

Matrix: Water

Laboratory ID: RTC1249-11

File ID: 1032610-027

Sampled: 03/18/10 00:00

Prepared: 03/25/10 12:00

Analyzed: 03/26/10 11:10

Solids: 0.00

Preparation: CLP Metals Prep (Water

Initial/Final: 50 mL / 50 mL

Batch: 10C1839

Sequence:

T001067

Calibration: R10C089

Instrument: Trace 1

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7440-38-2	Arsenic	10.0	ug/L	1	U	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-3

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica Connecticut

Project: NYSDEC Standby - Tioga Castings

Matrix: Water

Laboratory ID: RTC1249-12

File ID: A032510-189

Sampled: 03/19/10 09:30

Prepared: 03/25/10 12:00

Analyzed: 03/26/10 06:28

Solids: 0.00

Preparation: CLP Metals Prep (Water

Initial/Final: 50 mL / 50 mL

Batch: 10C1839

Sequence: T001066

Calibration: R10C088

Instrument: Trace 2

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7429-90-5	Aluminum	200	ug/L	1	U	CLP-M
7440-36-0	Antimony	60.0	ug/L	1	U	CLP-M
7440-39-3	Barium	46.5	ug/L	1	J	CLP-M
7440-41-7	Beryllium	5.0	ug/L	1	U	CLP-M
7440-43-9	Cadmium	5.0	ug/L	1	U	CLP-M
7440-70-2	Calcium	51300	ug/L	1		CLP-M
7440-47-3	Chromium	10.0	ug/L	1	U	CLP-M
7440-48-4	Cobalt	50.0	ug/L	1	U	CLP-M
7440-50-8	Copper	25.0	ug/L	1	U	CLP-M
7439-89-6	Iron	100	ug/L	1	U	CLP-M
7439-92-1	Lead	10.0	ug/L	1	U	CLP-M
7439-95-4	Magnesium	9270	ug/L	1		CLP-M
7439-96-5	Manganese	0.3	ug/L	1	J	CLP-M
7440-02-0	Nickel	40.0	ug/L	1	U	CLP-M
7440-09-7	Potassium	1890	ug/L	1	J	CLP-M
7782-49-2	Selenium	35.0	ug/L	1	U	CLP-M
7440-22-4	Silver	10.0	ug/L	1	U	CLP-M
7440-23-5	Sodium	16900	ug/L	1		CLP-M
7440-28-0	Thallium	25.0	ug/L	1	U	CLP-M
7440-62-2	Vanadium	50.0	ug/L	1	U	CLP-M
7440-66-6	Zinc	60.0	ug/L	1	U	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-3

Laboratory: TestAmerica Buffalo SDG: 220-11730
Client: TestAmerica Connecticut Project: NYSDEC Standby - Tioga Castings
Matrix: Water Laboratory ID: RTC1249-12 File ID: 1032610-028
Sampled: 03/19/10 09:30 Prepared: 03/25/10 12:00 Analyzed: 03/26/10 11:15
Solids: 0.00 Preparation: CLP Metals Prep (Water) Initial/Final: 50 mL / 50 mL
Batch: 10C1839 Sequence: T001067 Calibration: R10C089 Instrument: Trace 1

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7440-38-2	Arsenic	10.0	ug/L	1	U	CLP-M

INORGANIC ANALYSIS DATA SHEET

CLP-M

Laboratory: TestAmerica Buffalo

SDG: 220-11730

Client: TestAmerica ConnecticutProject: NYSDEC Standby - Tioga CastingsMatrix: WaterLaboratory ID: RTC1249-13File ID: A032510-190Sampled: 03/19/10 09:50Prepared: 03/25/10 12:00Analyzed: 03/26/10 06:33Solids: 0.00Preparation: CLP Metals Prep (Water)Initial/Final: 50 mL / 50 mLBatch: 10C1839Sequence: T001066Calibration: R10C088Instrument: Trace 2

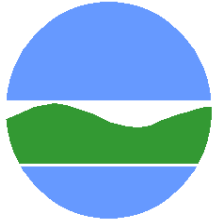
CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7429-90-5	Aluminum	57.8	ug/L	1	J	CLP-M
7440-36-0	Antimony	60.0	ug/L	1	U	CLP-M
7440-39-3	Barium	48.8	ug/L	1	J	CLP-M
7440-41-7	Beryllium	5.0	ug/L	1	U	CLP-M
7440-43-9	Cadmium	0.3	ug/L	1	J	CLP-M
7440-70-2	Calcium	51400	ug/L	1		CLP-M
7440-47-3	Chromium	10.0	ug/L	1	U	CLP-M
7440-48-4	Cobalt	50.0	ug/L	1	U	CLP-M
7440-50-8	Copper	25.0	ug/L	1	U	CLP-M
7439-89-6	Iron	28.6	ug/L	1	J	CLP-M
7439-92-1	Lead	10.0	ug/L	1	U	CLP-M
7439-95-4	Magnesium	8290	ug/L	1		CLP-M
7439-96-5	Manganese	54.2	ug/L	1		CLP-M
7440-02-0	Nickel	40.0	ug/L	1	U	CLP-M
7440-09-7	Potassium	4550	ug/L	1	J	CLP-M
7782-49-2	Selenium	35.0	ug/L	1	U	CLP-M
7440-22-4	Silver	10.0	ug/L	1	U	CLP-M
7440-23-5	Sodium	24000	ug/L	1		CLP-M
7440-28-0	Thallium	25.0	ug/L	1	U	CLP-M
7440-62-2	Vanadium	50.0	ug/L	1	U	CLP-M
7440-66-6	Zinc	2.3	ug/L	1	J	CLP-M

Form 1
INORGANIC ANALYSIS DATA SHEET
CLP-M

MW-2

Laboratory: TestAmerica Buffalo SDG: 220-11730
Client: TestAmerica Connecticut Project: NYSDEC Standby - Tioga Castings
Matrix: Water Laboratory ID: RTC1249-13 File ID: 1032610-029
Sampled: 03/19/10 09:50 Prepared: 03/25/10 12:00 Analyzed: 03/26/10 11:20
Solids: 0.00 Preparation: CLP Metals Prep (Water Initial/Final: 50 mL / 50 mL
Batch: 10C1839 Sequence: T001067 Calibration: R10C089 Instrument: Trace 1

CAS NO.	Analyte	Concentration	Units	Dilution Factor	Q	Method
7440-38-2	Arsenic	10.0	ug/L	1	U	CLP-M



New York State Department of Environmental Conservation

Department of Environmental Remediation • 625 Broadway • Albany, New York 12233

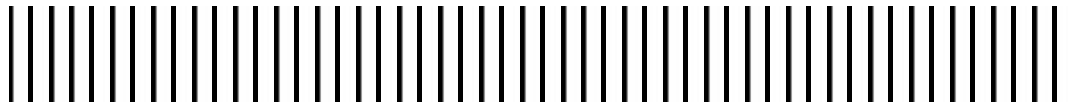
Site Number 7-54-012

Tioga Castings Site Quarterly Report

Second Quarter 2010

New York State Department of Environmental
Conservation Work Assignment D004443-8

October 2010



Report Prepared By:

Malcolm Pirnie, Inc.

855 Route 146
Suite 210
Clifton Park, New York 12065
518-250-7300

0266362

**MALCOLM
PIRNIÉ**

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Figures

2-1 Site Location

Appendices

A. Post-Closure Operation and Maintenance Checklist

1. Introduction

The New York State Department of Environmental Conservation (NYSDEC) has issued a Work Assignment (# D004443-8) to Malcolm Pirnie, Inc. (Malcolm Pirnie) for Operation, Maintenance, and Monitoring at the Tioga Castings Site (NYSDEC site number 7-54-012) in New York State. Malcolm Pirnie has prepared this Quarterly Report in accordance with the NYSDEC-approved Site Management Plan (SMP) to summarize second quarter 2010 operation and maintenance (O&M) activities.



2. Site Description

The Tioga Castings site is located on Foundry Street, Owego, Broome County, New York (Figure 2-1). The former foundry buildings have been razed, leaving the concrete slabs in-place. A capped, closed landfill is present at the western end of the site.

3. Operation and Maintenance

O&M activities were performed on May 25, 2010 in accordance with the NYSDEC-approved SMP. A Post Closure O&M Checklist (O&M Checklist) (Appendix A) was used to document the current status of the landfill, including landfill security and landfill cap maintenance.

3.1. Landfill Security

The landfill perimeter fence, entry gate, and locks, were inspected for proper operation and signs of deterioration. As indicated in the O&M Checklist, no problems were observed with the integrity of these components. In addition, the Foundry Street entry gate warning sign was in place and in acceptable condition.

3.2. Landfill Cap Maintenance

A visual inspection of the landfill cap was performed to assess the landfill for burrowing rodents, erosion, woody vegetation, and settlement. As shown in the O&M Checklist (Appendix A), burrowing rodent holes were observed on the north and south side of the landfill cap and small trees and brush were present in the drainage swales and on the slope of the landfill cap. No additional problems were observed with the condition of the landfill.

As indicated in the SMP, the landfill cap is currently mowed by the NYSDEC Operations Department. As shown in the accompanying site photographs, the landfill cap did not appear to be mowed during this (2010) growing season prior to the landfill inspection.

4. Recommendations

Burrowing rodents should be removed from the site to reduce the potential for the landfill cap to be compromised. In addition, the burrows should be backfilled to minimize infiltration of surface water to the landfill.

Brush and woody vegetation should be removed from the landfill cap and drainage ditches to reduce the potential for their root systems to compromise the integrity of the landfill cap.

TIOGA CASTINGS SITE LANDFILL

Post-Closure Operation and Maintenance Checklist

Inspected by: Jeremy Wyckoff - Malcolm Pirnie Inc.

Date: May 25, 2010

Time: 09:30

Conditions: Sunny, 65°F

LANDFILL COVER SYSTEM

Erosion	<u> </u>	YES	<u> X </u>	NO
Holes or Cracks in Cover	<u> </u>	YES	<u> X </u>	NO
Cap Settlement	<u> </u>	YES	<u> X </u>	NO
Ponded Water or Wet Areas	<u> </u>	YES	<u> X </u>	NO
Burrowing Rodents	<u> X </u>	YES	<u> </u>	NO
Sparse Vegetation/Bare Soil	<u> </u>	YES	<u> X </u>	NO
Brush or Other Woody Vegetation,	<u> X </u>	YES	<u> </u>	NO
Excessive Weeds in Grass	<u> </u>	YES	<u> X </u>	NO
Grass Mowed	<u> </u>	YES	<u> X </u>	NO

Comments: Evidence of burrowing animals was observed on the north and south sides of the landfill cap (Photograph 1). Small trees were observed growing on the sloped sides of the landfill (Photograph 2).

DRAINAGE DITCHES

Erosion	<u> </u>	YES	<u> X </u>	NO
Obstructions	<u> </u>	YES	<u> X </u>	NO
Sediment Accumulation	<u> </u>	YES	<u> X </u>	NO
Evidence of Surcharging	<u> </u>	YES	<u> X </u>	NO
Presence of Brush	<u> X </u>	YES	<u> </u>	NO

Comments: Brush/woody vegetation observed growing in drainage swales and along perimeter fencing (Photographs 3 & 4).

FENCING

Warning Signs	<u> X </u>	OK	<u> </u>	OTHER
Gates and Locks	<u> X </u>	OK	<u> </u>	OTHER
Posts	<u> X </u>	OK	<u> </u>	OTHER
Top Tension Wire	<u> X </u>	OK	<u> </u>	OTHER
Barbed Wire	<u> X </u>	OK	<u> </u>	OTHER

Comments: None. Gate and signage shown in Photograph 5. Landfill cap shown in Photograph 6.

MONITORING
WELLS

Capped and Locked	<u> X </u>	YES	<u> </u>	NO
Casing Damage	<u> </u>	YES	<u> X </u>	NO

Comments: None

INSPECTOR' SIGNATURE _____ **DATE** _____



Photograph 1:
Burrowing rodent hole on south edge of landfill cap.



Photograph 2:
Brush/woody vegetation on south slope of landfill, facing west.



Photograph 3:
Trees in drainage swale on east side of landfill, facing south.



Photograph 4:
Brush/woody vegetation on west side of landfill, facing south.



**Photograph 5:
Landfill access gate and warning sign .**

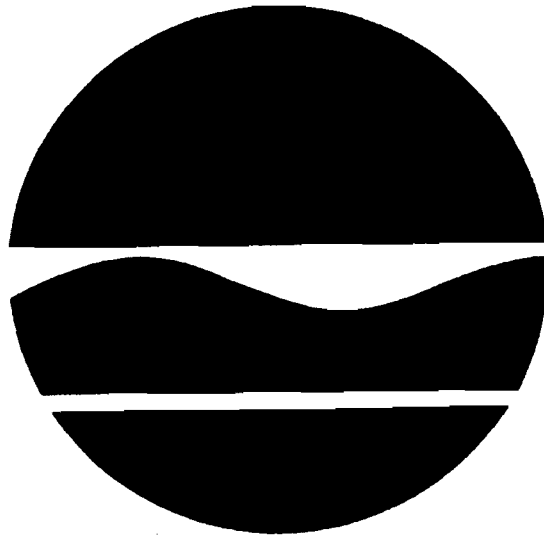


**Photograph 6:
Landfill cap, facing northeast.**

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

REMEDIATION SUMMARY REPORT

TIOGA CASTINGS SITE
VILLAGE OF OWEGO, TIOGA COUNTY
CONTRACT NO. D004100
SITE NO. 7-54-012



January 2001

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A AS-BUILTS

Initial Topographic Survey, sealed July 18, 2000

Intermediate Phase Plot, sealed August 17, 2000

Site Location Map, sealed December 8, 2000

Final Site Elevations, sealed December 8, 2000

Sample Locations superimposed on Final Site Elevations

- B AIR MONITORING
- C SAMPLE RESULTS
- D OFF-SITE DISPOSAL
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EXECUTIVE SUMMARY

The New York State Department of Environmental Conservation's (NYSDEC) Bureau of Construction Services provided construction management and NYSDEC's Region 7 Office provided construction inspection during the concrete slab removal and soil excavation project at the Tioga Castings site (NYSDEC Site No. 7-54-012), Owego, New York. This included full-time inspection and monitoring of remedial activities to ensure conformation with contract documents. Remediation work commenced on May 24, 2000, and substantial completion of the project was accomplished by September 1, 2000.

The remediation activities completed at the site under this project included the removal and off-site disposal of the former concrete building slab, excavation and off-site disposal of both non-hazardous and hazardous soils and the subsequent backfilling of the excavated areas. The contractor also encountered buried drums, an underground storage tank and asbestos containing materials.

Remediation was performed by Clean Ventures, Inc. (CV) of Elizabeth, New Jersey. CV was selected through competitive bidding on January 12, 2000, to perform the work. CV submitted the lowest of 15 bids at \$261,250.00. The engineer's estimate for the work was \$235,625.00. A copy of the bid tabulation is included in Table 2.

There was a change order for the removal of additional soil based on confirmatory sampling collected in the field. The change order also included costs to handle buried drums, sample and fill an underground storage tank and relocate asbestos containing materials. The change order also extended the contract time. The final contract amount was \$331,119.14. Table 3 depicts a breakdown of the final contract price by task.

Construction was completed in accordance with the contract documents entitled *Contract Documents, Tioga Casting Site (NYSDEC November 15, 1999)*.

1.0 SITE BACKGROUND

1.1 LOCATION

The Tioga Castings site is a Class 2 site listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State. The site is approximately seven acres in size and is located on Foundry Street, off of McMaster Street, in the Village of Owego, Tioga County. The site is located in a residential/commercial area, adjacent to the Owego-Apalachin Middle School.

1.2 HISTORY

The Tioga Castings facility began operations on-site between 1945 and 1947, and continued through 1988. The facility operated a cupola type foundry for the production of gray iron castings. Operations at the facility included smelting of pig iron, scrap iron (including engine blocks), coke, limestone and the use of phenol formaldehyde treated sand to cast the iron. The process produced solid wastes which included sand molds, fly ash, cast iron grindings, and fine baghouse ash/cupola dust. These wastes were reportedly disposed of at an off-site landfill until March 1979. The facility then operated an on-site landfill for the disposal of its foundry wastes. The facility ceased operations in 1988.

On July 11, 1989, the facility had a fire which destroyed most of the foundry structure and left the remaining building structurally unsafe. Since then the owner has demolished most of the on-site structures. The debris from the building demolition remains in piles around the site. Due to the conditions at the site, two Interim Remedial Measures (IRMs) were performed. A perimeter fence was erected in the fall of 1989 and drums containing hazardous wastes, along with cupola dust, were removed in early 1990.

A Remedial Investigation/Feasibility Study (RI/FS) was conducted under New York State's Superfund Program. The RI was finalized in November 1994 and the FS was finalized in December 1994. The Record of Decision (ROD) was signed on March 20, 1995 and called for the consolidation of on-site and off-site material to the on-site landfill and the placement of a low permeability cover over the landfill. A long term operation, maintenance and monitoring program is a part of the overall program. The elements of the ROD were completed during the 1997 construction season.

During the 1997 construction activity, soil samples were collected underneath the concrete slab remaining from the former foundry building. The results showed significant concentrations of lead and chromium above the clean goals established for the site. This report covers the second construction contract prepared to address this contamination which was found beneath the concrete slab.

2.0 SUMMARY OF REMEDIAL WORK

2.1 GENERAL OVERVIEW

A pre-construction conference was held at the NYSDEC's 50 Wolf Road offices on May 23, 2000. In attendance were Michael Cruden, NYSDEC's Project Manager, John May, NYSDEC Construction Inspector, John Murphy, Clean Venture's Project Manager and Vincente Alfonso of NYSDEC's Bureau of Affirmative Action. Notice to Proceed was granted on May 24, 2000.

Clean Venture mobilized to the site, providing an office trailer with electrical power, telephone and fax services and a project sign. Angel Flores was assigned as site superintendent by Clean Venture. The site superintendent was responsible for supervising Clean Venture's field personnel and subcontractors engaged in site operations, and assisting John Murphy in project management activities. Site surveying was performed by Williams & Edsall of Candor, New York. A complete list of subcontractors is included as Table 1.

2.2 HEALTH AND SAFETY

Clean Venture subcontracted with O'Rourke, Inc. to prepare a site specific health and safety plan and provide a health and safety officer during work at the site. O'Rourke, Inc. was responsible for conducting safety meetings, personal and perimeter air monitoring, and the collection of soil samples. Documentation air monitoring results are included in Appendix B.

The level of protection for workers for the majority of the work performed on-site was Modified Level D, which required the donning of safety glasses, rubber overboots, and gloves; in addition to the typical level D protection (field clothes, hard hats and steel toe boots).

Clean Venture constructed a decontamination pad. Certificates of decontamination were prepared for equipment decontamination and signed by the site health and safety officer.

Clean Venture subcontracted with local police to provide site security in accordance with the contract.

2.3 PRE-EXCAVATION SAMPLING

Pre-excavation samples were collected on June 9. Thirty three (33) samples were collected. In accordance with the contract, results were compared to the cleanup goals of cadmium - 10 ppm, chromium - 50 ppm and lead - 500 ppm below twelve inches and 250 ppm above twelve inches. Analytical results are included in Appendix C.

Three grids, B-98-41, 42 and 46, were sampled to confirm results obtained previously during the site investigation. The comparison at 12-18" was as follows:

	Pb	Cd	Cr		Pb	Cd	Cr
B-98-41	248	ND	12.7	A3-W4	66.9	ND	9.03
B-98-42	27	0.8	4.9	A3-W5	92	ND	13.1
B-98-46	20	ND	27.1	A1-N2	400	1.73	91.1

Area B-98-46 was excavated based on the failure of A1-N2 for chromium.

Grids B-98-9 and B-98-20 were sampled at 60" below the pad to confirm the depth of excavation. Both A2-D1 and A3-D4 met the cleanup goals and excavation ceased at 60".

Two samples were collected in grid B-98-10 to confirm results obtained during the site investigation. This grid was excavated based on the failure of A2-D3 for lead at 2210 ppm.

Based on the pre-excavation sampling, the excavation area was expanded as shown on the as-builts. Additionally, one floor and four sidewall confirmatory samples were collected following excavation. These additional samples were collected in excavation areas outside of the original sampling grid, otherwise the original borehole data was relied upon. The additional excavation north of area A4 was performed to be conservative, since the sample was collected close to within 12" of final grade. This is discussed further in section 2.4.4.

Sample results are included in Appendix C.

2.4 SOIL AND OTHER MATERIALS HANDLING

2.4.1 CONCRETE SLAB REMOVAL AND DISPOSAL

Clean Venture started demolition of the concrete pad on June 12. They decided not to build a decontamination pad specific to this task, but rather to decontaminate the concrete over the areas to be excavated. There was a concern with smaller concrete debris intermixed with soils, but the Department agreed this smaller debris could be disposed with contaminated soils at Clean Venture's own option. However, the landfill subsequently complained that the presence of concrete debris in excess of 4" diameter was preventing the use of the soils as a daily cover. Clean Venture then took steps to separate out materials above 4" in diameter prior to off-site disposal.

On June 15, Clean Venture notified the Department that they were encountering a different type of slab configuration than that originally specified and that some of the concrete was stained. On June 16, the Department responded that concrete which extended as deep or deeper than the excavation could be left in place, while concrete shallower than the excavation should be removed. The Department stated that the actual quantity of concrete would be paid for at the unit price. The response also noted that Clean Venture was responsible for decontamination of the concrete prior to off-site disposal, including stained or discolored portions of the debris. It was noted that the stained areas did not appear to be out of the ordinary for a former slab of an industrial foundry building. No special equipment or additional workforce was mobilized by Clean Venture.

With respect to the subsurface concrete, the contract (addendum 1) stated that the Department had no information regarding any footings or support structures, but it was likely that they existed beneath the slab typical of this type of industrial structure. Additionally, the six inch thickness of the upper slab may not be actual thickness in all areas. There was no cross sectional data or other depiction of the sub grade in areas to be excavated.

Clean Venture and the Department came to an agreement in the field to weigh the concrete removed, due to the inherent difficulty in measuring odd sized chunks of concrete for payment purposes and in surveying the actual removal. Once soil excavation was completed, the excavation area was resurveyed, removal quantities calculated and the agreed to quantity of concrete was subtracted to give the actual volume of soil removed. A conversion factor for converting tons of concrete to cubic yards was agreed upon.

See Appendix D, Off-Site Disposal.

2.4.2 UNDERGROUND STORAGE TANK

In the course of concrete removal, an underground storage tank was discovered along the border of grids 15 and 16, which contained an unknown liquid. The liquid was subsequently sampled and analyzed for volatiles, semi-volatiles and metals. Once the results confirmed that the water was clean, the tank was backfilled with flowable fill. Sample results are included in Appendix C.

2.4.3 BURIED DRUMS

Clean Venture discovered buried drums along the northern edge of grids 8 and 9. A former employee of the foundry indicated that the drums were placed there as a spill containment system for

molten metal from a cupola (iron smelter) operation. Visual observations from the area were consistent with this observation, including the presence of fire brick and sand. Clean Venture took a conservative approach by exposing the remaining drums in level B with an HNu meter and a explosimeter to check for the presence of volatile organic compounds or potentially explosive conditions. A total of nine empty drums were unearthed from this area. Although no contamination was evident in this area, CVI collected a soil sample at their own expense which confirmed the area was clean. Sample results are included in Appendix C.

2.4.4 SOIL EXCAVATION AND DISPOSAL

Clean Venture chose to excavate the nonhazardous areas first, stockpiling the soils and subsequently loading them into haul trucks for transport to the Steuben County Landfill. Progress was slow due to an insufficient number of haul vehicles needed to keep pace with excavation work. There was a significant amount of idle time, along with delays in constructing adequate staging areas.

Next, Clean Venture started to excavate and stockpile soils from grids identified as potentially hazardous. Certain grids were to be excavated and stockpiled together, with composite samples collected for TCLP analysis. On July 24, Clean Venture excavated areas 33 and 52, stockpiled them together and collected two samples for TCLP analysis. These soils were determined to be nonhazardous and were transported to the Steuben County Landfill.

Areas 9 and 10 were then excavated and consolidated into one stockpile. This stockpile was sampled and also determined to be nonhazardous. These soils were transported to the Steuben County Landfill.

Areas 26, 35 and 36 were excavated, stockpiled together and sampled. These soils were determined to be hazardous and were transported to Max Environmental Technologies' Landfill.

Finally, four wall and one floor samples were collected, analyzed for total cadmium, chromium and lead and compared to the cleanup limits in the contract. The floor sample and one sidewall sample failed for lead and, subsequently, the excavation was expanded and deepened. The excavation was expanded twenty (20) feet to the east of grid 18.2, which is not shown on the as-builts as the contractor failed to survey the area prior to backfilling. Afterward, one additional floor sample and one extra wall sample both passed. However, a sump was encountered in the expanded excavation, sampled and determined to be clean, and then subsequently backfilled with the surrounding excavation.

As-built records are included in Appendix A. Analytical results are included in Appendix C.

Photographs taken near the completion of excavation, prior to backfilling, are included in Appendix E.

2.4.5 ASBESTOS CONTAINING MATERIALS

The results of the pre-excavation sampling required an expansion of the original areas to be excavated. As a result of this, Clean Venture had to relocate some additional debris piles from grids 16 and 18 in order to clear the work area. In the course of this work, the presence of suspected asbestos containing materials (ACM) were noted and the items were subsequently sampled. The materials in question were confirmed to contain asbestos, but were considered non-friable. A qualified, licensed asbestos subcontractor was used to handle the relocation of ACM from these areas. O'Rourke, Inc. collected asbestos samples during this work in lieu of collecting dust and metals samples. ACM relocated from the excavation areas was covered and labeled appropriately. The subcontractor confirmed that a building demolition survey was not necessary for the balance of this remedial construction project. The NYS Department Of Labor was contacted and agreed with CVI's approach to asbestos under these circumstances.

The USEPA was contacted to evaluate the potential for conducting a federally funded removal action to address asbestos containing materials throughout the site. This request was made informally by transmitting a previously issued fact sheet, site map and directions. The USEPA made a site inspection and requested that the Department collect some asbestos samples from the buildings and debris piles. Based on the sampling, the Department formally requested the USEPA to conduct a removal action at the site to address asbestos containing materials.

2.5 CLEAN FILL MATERIAL

Clean fill was provided by F.S. Lopke Contracting, Inc. of Apalachin, N.Y. Lopke had a valid mining permit. Atlantic Testing Laboratories performed particle size analysis, plasticity index and laboratory compaction tests on a sample of the fill. Friend Laboratory, Inc. performed a TCL analysis of the fill.

The completed excavation area was compacted and then clean fill was placed in lifts and compacted. Atlantic Testing performed the in place compaction testing.

As-built records are included in Appendix A. Analytical results are included in Appendix C. Photographs taken following backfill, which depict site conditions near to completion of Clean Venture's work, are included in Appendix E.

2.6 CHANGE ORDERS

The pre-excavation sampling results required the Department to expand the extent of the soil removal and to prepare a change order one to address the time and associated cost to complete the extra work. Change order number one included additional costs related to soil excavation and disposal, backfilling, site services, health and safety and debris relocation (on a time and materials basis). The change order also addressed the time and associated costs to handle buried drums, an underground storage tank, asbestos containing materials, a sump and additional concrete demolition. The cost for the drums included a surcharge for level B personnel protection and a HNu meter. The water in the underground storage tank was sampled for volatiles, semi-volatiles and metals, prior to being filled with flowable fill. The asbestos containing materials were sampled to confirm they contained asbestos and a licensed asbestos abatement subcontractor was used to relocate these materials. The sump was sampled to confirm that the sludge was not contaminated. The contract time was extended twenty six (26) days. Change order one (final) increased the contract by \$69,869.14 to \$331,119.14.

3.0 CONCLUSIONS AND RECOMMENDATIONS

It is recommended that with the completion of this project and the implementation of long term monitoring, that the Tioga Castings site be reclassified on the NYS Registry of Inactive Hazardous Waste Sites. It is proposed the site description be redefined so that the east portion of the site be removed as part of the site since all known contamination has been removed from this area. It is also recommended that the remaining portion of the site consisting of the cap area be reclassified to a Class 4 status, indicating that remediation has been completed and long term maintenance is being conducted.

However, the following should be noted carefully with respect to any potential future use of the site:

1. The cleanup goal for lead was 250 ppm from the surface to 12" below grade and 500 ppm below 1 foot. Any future disturbance of the remaining concrete or soil surfaces might result in soils containing lead in excess of 250 ppm being on or

within 1 foot of the surface.

2. Asbestos containing materials were identified at the site and likely remain within the debris piles and dilapidated building structures. A future response action by USEPA may address this.
3. Significant physical hazards remain at the site.

4.0 CONSTRUCTION CERTIFICATION

Construction was completed in accordance with the contract documents entitled: "Tioga Castings Site, Site No. 7-54-012" and dated November 15, 1999.



P.E. Seal

Signed: _____

Michael J. Cruden
Michael J. Cruden, P.E.

Dated: _____

01/04/01

TABLES

Table 1

Subcontractors

<i>Company</i>	<i>Task</i>
O'Rourke, Incorporated	Health & Safety Services
Upstate Laboratories	Analytical Services
Williams & Edsall	Site Surveying
Ebony Environmental Construction	Transportation, Backfill
Rogers Fence Company	Temporary Fencing
John Pfrommer, LLC	Transportation
Tioga Gardens	Disposal (exempt C&D)
Max Environmental Technologies, Inc.	Disposal (Haz soils)
Friend Laboratory, Inc.	Analytical Services
Op-Tech	Asbestos Abatement
Steuben County Landfill	Disposal (Non-haz soils)

TABLE 2

BID TABULATION

TIOGA
SITE NO.
SOIL

CASTINGS
7-54-012
EXCAVATION

SITE
AND DISPOSAL

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT BID	ENGINEER'S ESTIMATE SUBTOTAL	Clean	Venture
						UNIT BID	SUBTOTAL
1	SITE PREP	L.S	1	\$50,000.00	\$50,000.00	\$15,000.00	\$15,000.00
2	SITE SERV	DAY	45	\$1,000.00	\$45,000.00	\$400.00	\$18,000.00
3	HEALTH & SAFETY	DAY	30	\$300.00	\$9,000.00	\$810.00	\$24,300.00
4	EXCAV CONCRETE	CY	350	\$30.00	\$10,500.00	\$84.00	\$29,400.00
5	EXCAV NON-HAZ SOILS	CY	950	\$52.50	\$49,875.00	\$85.00	\$80,750.00
6	EXCAV HAZ SOILS	CY	350	\$150.00	\$52,500.00	\$190.00	\$66,500.00
7	SAMPLING	EACH	45	\$50.00	\$2,250.00	\$75.00	\$3,375.00
8	BACKFILL	CY	1650	\$10.00	\$16,500.00	\$14.50	\$23,925.00
					TOTAL BID	\$235,625.00	\$261,250.00
					POLL LIAB	\$25,000.00	\$10,000.00
			LOW BID	\$261,250.00			
			VAR W/ENG	10.88%			
			SPREAD	\$108,750.00			
			AVG BID	\$302,243.83			

Integrated Tech	Services	Tyree	Organization	North American	Environmental	Ciminelli	Services	Abscope
UNIT BID	SUBTOTAL	UNIT BID	SUBTOTAL	UNIT BID	SUBTOTAL	UNIT BID	SUBTOTAL	UNIT BID
\$39,900.00	\$39,900.00	\$32,134.95	\$32,134.95	\$14,854.00	\$14,854.00	\$37,311.27	\$37,311.27	\$45,200.00
\$577.00	\$25,965.00	\$70.91	\$3,190.95	\$1,451.44	\$65,315.00	\$1,099.45	\$49,475.25	\$250.00
\$850.00	\$25,500.00	\$82.07	\$2,462.10	\$662.00	\$19,860.00	\$1,079.75	\$32,392.50	\$705.00
\$38.00	\$13,300.00	\$137.08	\$47,978.00	\$77.84	\$27,245.00	\$23.31	\$8,158.50	\$110.00
\$62.00	\$58,900.00	\$91.94	\$87,343.00	\$64.87	\$61,625.00	\$55.84	\$53,048.00	\$54.00
\$190.00	\$66,500.00	\$202.53	\$70,885.50	\$191.36	\$66,975.00	\$220.55	\$77,192.50	\$230.00
\$185.00	\$8,325.00	\$75.00	\$3,375.00	\$115.00	\$5,175.00	\$62.32	\$2,804.40	\$310.00
\$14.50	\$23,925.00	\$15.89	\$26,218.50	\$8.84	\$14,580.00	\$12.49	\$20,608.50	\$17.00
	\$262,315.00		\$273,588.00		\$275,629.00		\$280,990.92	
	\$30,000.00		\$1,500.00		Blank		\$0.00	

Environmental	Griffin	Industrial	Haseley	Constructors	USA	Remediation	Op-Tech	Environmental
SUBTOTAL	UNIT BID	SUBTOTAL	UNIT BID	SUBTOTAL	UNIT BID	SUBTOTAL	UNIT BID	SUBTOTAL
\$45,200.00	\$29,850.00	\$29,850.00	\$26,900.00	\$26,900.00	\$27,150.00	\$27,150.00	\$30,000.00	\$30,000.00
\$11,250.00	\$100.00	\$4,500.00	\$105.00	\$4,725.00	\$825.00	\$37,125.00	\$380.09	\$17,104.05
\$21,150.00	\$1,400.00	\$42,000.00	\$2,100.00	\$63,000.00	\$1,350.00	\$40,500.00	\$1,860.27	\$55,808.10
\$38,500.00	\$115.00	\$40,250.00	\$120.00	\$42,000.00	\$210.00	\$73,500.00	\$120.90	\$42,315.00
\$51,300.00	\$72.00	\$68,400.00	\$52.00	\$49,400.00	\$62.00	\$58,900.00	\$48.65	\$46,217.50
\$80,500.00	\$244.00	\$85,400.00	\$200.00	\$70,000.00	\$190.00	\$66,500.00	\$288.46	\$100,961.00
\$13,950.00	\$100.00	\$4,500.00	\$465.00	\$20,925.00	\$95.00	\$4,275.00	\$209.78	\$9,440.10
\$28,050.00	\$14.00	\$23,100.00	\$23.00	\$37,950.00	\$12.75	\$21,037.50	\$16.50	\$27,225.00
\$289,900.00		\$298,000.00		\$314,900.00		\$328,987.50		\$329,070.75
\$10,000.00		\$13,800.00		\$1,000.00		\$7,750.00		Blank

Environmental	Products & Serv	Boland	Excavating	Ontario	Specialty	Grace	Industries	Gary Dyer
UNIT BID	SUBTOTAL	UNIT BID	SUBTOTAL	UNIT BID	SUBTOTAL	UNIT BID	SUBTOTAL	UNIT BID
\$18,997.94	\$18,997.94	\$60,550.00	\$60,550.00	\$20,000.00	\$20,000.00	\$68,220.50	\$68,220.50	\$88,492.00
\$605.49	\$27,247.05	\$350.00	\$15,750.00	\$500.00	\$22,500.00	\$175.00	\$7,875.00	\$1,430.00
\$1,163.80	\$34,914.00	\$1,700.00	\$51,000.00	\$500.00	\$15,000.00	\$275.00	\$8,250.00	\$1,130.50
\$202.55	\$70,892.50	\$100.00	\$35,000.00	\$50.00	\$17,500.00	\$203.70	\$71,295.00	\$90.00
\$78.09	\$74,185.50	\$70.00	\$66,500.00	\$100.00	\$95,000.00	\$106.35	\$101,032.50	\$78.00
\$219.83	\$76,940.50	\$280.00	\$98,000.00	\$500.00	\$175,000.00	\$287.50	\$100,625.00	\$223.00
\$182.14	\$8,196.30	\$300.00	\$13,500.00	\$300.00	\$13,500.00	\$70.00	\$3,150.00	\$90.00
\$18.74	\$30,921.00	\$18.00	\$29,700.00	\$20.00	\$33,000.00	\$21.20	\$34,980.00	\$17.50
	\$342,294.79		\$370,000.00		\$391,500.00		\$395,428.00	
	\$3,200.00		\$8,000.00		\$49,000.00		\$15,000.00	

5027

Excavating

UNIT
COMPARISON

SUBTOTAL

LOW

AVERAGE

\$88,492.00	\$14,854.00	\$36,970.71
\$64,350.00	\$70.91	\$554.63
\$33,915.00	\$82.07	\$1,044.56
\$31,500.00	\$23.31	\$112.16
\$74,100.00	\$48.65	\$72.05
\$78,050.00	\$190.00	\$243.82
\$4,050.00	\$62.32	\$175.62
\$28,875.00	\$8.84	\$16.33

\$403,332.00

\$7,500.00

Table 3

Final

Costs

Description	Quantity		Unit Cost	Subtotal
Site Preparation	1	<i>lump sum</i>	\$15,000.00	\$15,000.00
Site Services	67	<i>days</i>	\$400.00	\$26,800.00
Health & Safety	50	<i>days</i>	\$810.00	\$40,500.00
Concrete	276.68	<i>cubic yards</i>	\$84.00	\$23,241.12
Nonhazardous Soils	1651.77	<i>cubic yards</i>	\$85.00	\$140,400.45
Hazardous Soils	274.56	<i>cubic yards</i>	\$190.00	\$52,166.40
Sampling	40	<i>samples</i>	\$75.00	\$3,000.00
Backfill	2203.01	<i>cubic yards</i>	\$14.50	\$31,943.65
Debris Relocation	1	<i>time & material</i>	\$2,259.07	\$2,259.07
Underground Storage Tank	1	<i>time & material</i>	\$1,056.82	\$1,056.82
Asbestos	1	<i>time & material</i>	\$1,530.19	\$1,530.19
Buried Drums	1	<i>time & material</i>	\$1,416.44	\$1,416.44
Sump Sample	1	<i>time & material</i>	\$1,605.00	\$1,605.00
Liquidated Damages	14	<i>per day</i>	(\$700.00)	(\$9,800.00)
			FINAL	COST
				<u>\$331,119.14</u>

APPENDIX A

AS-BUILTS

APPENDIX B

AIR MONITORING

Tioga Castings - Documentation Monitoring Results

Date	Location	Chemical Tested	Result	Units	OSHA PEL	Comments
6/15/2000	Jose	Lead	<0.8	ug/m3	50 ug/m3	Excavation
6/19/2000	South Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
6/19/2000	Blank	Dust	NA	Mg/m3	PNOR 15 MG/M3	
6/19/2000	West Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
6/19/2000	East Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
6/19/2000	North Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
6/20/2000	Kevin Perez	Lead	0.53	ug/m3	50 ug/m3	Concrete Decon
6/23/2000	Jose 623	Lead	<1	ug/m3	50 ug/m3	Excavation
6/26/2000	North Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
6/26/2000	East Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
6/26/2000	South Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
6/26/2000	Jose Feliciano 626	Lead	<0.7	ug/m3	50 ug/m3	Stockpile Area
6/26/2000	Blank	Dust	NA	Mg/m3	PNOR 15 MG/M3	
6/26/2000	West Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
6/28/2000	Blank	Lead	NA	ug/m3	50 ug/m3	
6/28/2000	Kevin Perez	Lead	<1	ug/m3	50 ug/m3	Concrete Decon
6/29/2000	Kevin 629	Lead	1.8	ug/m3	50 ug/m3	Concrete Decon

Date	Location	Chemical Tested	Result	Units	OSHA PEL	Comments
6/30/2000	Kevin 630	Lead	<1	ug/m3	50 ug/m3	Excavation
6/30/2000	Blank	Lead	NA	ug/m3	50 ug/m3	
7/6/2000	Jose Feliciano 76	Lead	<2	ug/m3	50 ug/m3	Concrete Handling
7/6/2000	East Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
7/6/2000	South Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
7/6/2000	West Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
7/6/2000	North Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
7/17/2000	East Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
7/17/2000	West Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
7/17/2000	Blank	Dust	NA	Mg/m3	PNOR 15 MG/M3	
7/17/2000	North Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
7/17/2000	South Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
7/21/2000	Dean Simmons	Asbestos	0.002	Fibers/cc	0.01 Fibers/cc	Hand Cleaning Ex area
7/21/2000	Area 1 B decon	Asbestos	<0.001	Fibers/cc	0.01 Fibers/cc	Hand Cleaning Ex area
7/26/2000	West Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M	
7/26/2000	Blank	Dust	NA	Mg/m3	PNOR 15 MG/M	
7/26/2000	South Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M	
7/26/2000	East Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M	
7/26/2000	North Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M	
8/4/2000	East Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	

Date	Location	Chemical Tested	Result	Units	OSHA PEL	Comments
8/4/2000	West Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
8/4/2000	South Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
8/4/2000	North Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
8/4/2000	Blank	Dust	NA	Mg/m3	PNOR 15 MG/M3	
8/7/2000	Truck	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	Jose Feliciano work area
8/7/2000	Blank	Lead	NA	ug/m3	50 ug/m3	
8/7/2000	Excavator	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	Angel Flores work area
8/7/2000	Excavator	Lead	<0.5	ug/m3	50 ug/m3	Angel Flores work area
8/7/2000	Truck	Lead	<0.6	ug/m3	50 ug/m3	Jose Feliciano work area
8/7/2000	Blank	Dust	NA	Mg/m3	PNOR 15 MG/M3	
8/18/2000	North Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
8/18/2000	South Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
8/18/2000	West Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
8/18/2000	Blank	Dust	NA	Mg/m3	PNOR 15 MG/M3	
8/18/2000	East Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M3	
8/24/2000	Work Area 1	Asbestos	<0.01	Fibers/cc	0.01 Fibers/cc	Relocating stockpile
8/24/2000	Work Area 2	Asbestos	<0.01	Fibers/cc	0.01 Fibers/cc	Relocating stockpile
8/24/2000	Work Area 3	Asbestos	<0.01	Fibers/cc	0.01 Fibers/cc	Relocating stockpile
8/24/2000	Work Area 4	Asbestos	<0.01	Fibers/cc	0.01 Fibers/cc	Relocating stockpile
8/30/2000	North Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M	

Date	Location	Chemical Tested	Result	Units	OSHA PEL	Comments
8/30/2000	South Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M	
8/30/2000	East Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M	
8/30/2000	West Perimeter	Dust	<0.2	Mg/m3	PNOR 15 MG/M	
8/30/2000	Blank	Dust	NA	Mg/m3	PNOR 15 MG/M	

APPENDIX C

SAMPLE RESULTS

Verification Samples

Appendix C

Soil Verification Samples

Sample No.	Cadmium (ppm)	Chromium (ppm)	Lead (ppm)
A1-N-1	11.6	48.9	2050
A1-E-1	10.1	26.8	1120
A1-S-1	4.3	20.7	171
A1-W-1	5.8	11.2	696
A2-N-1	4	14.3	622
A2-E-1	3.4	14.8	196
A2-S-1	2	8.4	15.2
A2-W-1	8	13.3	3760
A2-D-1	2.8	11.4	281
A2-D-2	2.9	11.7	202
A2-D-3	3.2	11.1	2200
A3-N-1	1.1	9.5	98.1
A3-N-2	6.1	53.7	500
A3-N-3	1.5	7.1	13
A3-E-1	2.3	10.4	1030
A3-E-2	8.7	88.2	734
A3-E-3	3.6	13.8	437
A3-E-4	3	11.4	207
A3-S-1	3.2	11.3	447
A3-S-2	2.9	12.9	466
A3-S-3	ND	14.3	14.7
A3-W-1	ND	16.6	468
A3-W-2	ND	8.1	105
A3-W-3	1.5	12.1	432
A3-W-4	ND	9	66.9
A3-W-5	ND	13.1	92.1
A3-W-6	1.3	32.8	144
A4-N-1	ND	5.2	379
A4-E-1	ND	7.6	8.8
A4-S-1	ND	15.4	274
A4-W-1	1.4	26.9	127
A3-D4	2.5	10.4	480
A1-N2	1.8	91.1	400
N1-SW	1.8	18.6	335
N2-SW	ND	24.4	192
E1-SW	2.6	21	486
E2-SW	6	28.9	1010
E3-BASE	9.1	20.4	514
E3-BASE-2	4.37	22.4	499
E4	ND	2.96	43

Waste Characterization

CHAIN OF CUSTODY RECORD

Jul 27 00 09:43a
KILIN LHRCVI - Rutherford Site
Fax: 607-5252445Jul 26 2001 16:50 P.M.
12011507-5139

P.2

FLI PRISM LABORATORY H N C		ONE RESEARCH CIRCLE WAVERLY NY 14892-1532 Telephone (607) 565 3500 Fax (607) 565 7160		CLIENT: <i>Clean Venture</i> ADDRESS: <i>201 S. First St</i> <i>Elizabeth, NY</i> PHONE: _____ FAX: _____		INVOICE TO: ADDRESS: _____	
Sample Site: <i>Tioga Castings,</i> <i>P.O. Owego, NY.</i>		Untreated Sodium thiosulfate HCl pH <2 Ascorbic acid & HCl pH <2 HNO ₃ pH <2 H ₂ O ₂ pH <2 NaOH pH >12 NaOH & Zinc acetate pH >9 Acetic Buffer pH <3 Sodium sulfite		PROJECT NO. / NAME <i>NYSDEC Site</i> <i># 7-54-012</i>		COPY TO: ADDRESS: _____	
DATE & TIME OF SAMPLE COLLECTION		SAMPLE DESCRIPTION		NUMBER OF CONTAINERS		ANALYSES / TESTS REQUESTED	
7/24/00		STOCK PILE 33+52		1		TCLP - Pb, Cd, Cr.	
"		STOCK PILE 33+52		1		TCLP - Pb, Cd, Cr.	
ANALYST		DATE		TIME		NOTES TO LABORATORY	
<i>Tracy Coleman</i>		7/24/00		<i>Toni Jones</i>		7/24/00 4:22 RUSH - Results by Wed. Aug. 2, 00	
<i>Chris Wade</i>		7/24/00				SUSPECTED CONTAMINATION LEVEL NONE SLIGHT MODERATE HIGH (please circle)	

1 of 22

TCLP



ONE RESEARCH CIRCLE WAVERLY, NY 14892-1882
 TELEPHONE (807) 565-8500 FAX (807) 565-4088

DATE 26-JUL-2000

LAB SAMPLE ID : L53643-1

Clean Venture
 John Murphy
 201 South First Street
 Elizabeth, NJ 07206



TIOGA CASTINGS 7-54-012
 STOCKPILE 33 & 52
 GRAB
 24-JUL-00 00:00 by CLIENT
 24-JUL-00 16:22
 N/A

Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Cadmium	U	mg/l	0.0500	26-JUL-00 01:38	EPA 6010 TCLP	00-102-09
Chromium	U	mg/l	0.100	26-JUL-00 01:38	EPA 6010 TCLP	00-102-09
Lead	U	mg/l	0.440	26-JUL-00 01:38	EPA 6010 TCLP	00-102-09

Page 1

OC R NY 10282 NJ 73180 PA 66180 EPA NY 00033

Approved by:

Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
 mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
 B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services.
 Your samples will be discarded after 14 days unless we are advised otherwise.

"Our family, caring about your analytical needs... Since 1963."

2 OF 12



ONE RESEARCH CIRCLE WAVERLY, NY 14892-1582
TELEPHONE (807) 566-3500 FAX (607) 566-4088

DATE 26-JUL-2000

LAB SAMPLE ID L53643-2

Clean Venture
John Murphy
201 South First Street
Elizabeth, NJ 07206

TIOGA CASTINGS 7-54-012
STOCKPILE 33 & 52
GRAB
24-JUL-00 00:00 by CLIENT
24-JUL-00 16:22
N/A

Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Cadmium	U	mg/l	0.0500	26-JUL-00 01:41	EPA 6010 TCLP	00-102-09
Chromium	U	mg/l	0.100	26-JUL-00 01:41	EPA 6010 TCLP	00-102-09
Lead	U	mg/l	0.440	26-JUL-00 01:41	EPA 6010 TCLP	00-102-09

Page 1

OC K NY 10252 NJ 73188 PA 66180 EPA NY 00033

Approved by: [Signature]

Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analysis was detected in the method or trip blank J = result estimated below the quantitation limit

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services.
Your samples will be discarded after 14 days unless we are advised otherwise.

"Our family, caring about your analytical needs... Since 1983."

3 of 11

P. 35 JUL 26 2000 16:50

FAX: (607) 566-2445

FRIEND LAB

12011507-5139

CVI-Rutherford Site

JUL 27 00 09:43A



ONE RESEARCH CIRCLE WAVERLY, NY 14892-1438
 TELEPHONE (607) 565-8800 FAX (607) 565-4088

DATE 10-AUG-2000

LAB SAMPLE ID 254239-1

Clean Venture
 John Murphy
 201 South First Street
 Elizabeth, NJ 07206

SAMPLE SOURCE	TIOGA CASTINGS DECK 750012
ORIGIN	STOCKPILE B-98-9/10
DESCRIPTION	GRAB
SAMPLED ON	02-AUG-00 00:00 by CLIENT
DATE RECEIVED	02-AUG-00 16:53
P.O. NO.	N/A

Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notes/Ref
Cadmium	U	mg/L	0.0500	10-AUG-00 00:00	EPA 6010 TCLP	00-120-03
Chromium	U	mg/L	0.100	10-AUG-00 00:00	EPA 6010 TCLP	00-120-03
Lead	U	mg/L	0.640	10-AUG-00 00:00	EPA 6010 TCLP	00-120-03

Page 1

00 NY 10252 NJ 73108 PA 60100 EPA NY 00025

Approved by: John Murphy

Lab Director

KEY: ND or U = None Detected < = less than mg/L = micrograms per liter (equivalent to parts per billion)
 mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per billion)
 B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services.
 Your samples will be discarded after 14 days unless we are advised otherwise.

"Our family, caring about your analytical needs... Since 1863."



ONE RESEARCH CIRCLE WAVERLY, NY 14892-1402
 TELEPHONE (607) 565-8500 FAX (607) 565-4082

DATE 10-AUG-2000

LAB SAMPLE ID

LS4239-2

Clean Venture
 John Murphy
 201 South First Street
 Elizabeth, NJ 07206

SAMPLE SOURCE	TIOGA CASTINGS DEC#750012
ORIGIN	STOCKPILE B-98-9/10
DESCRIPTION	GRAB
SAMPLED ON	02-AUG-00 00:00 by CLIENT
DATE RECEIVED	02-AUG-00 16:53
P.Q. NO	N/A

Analyte Performed	Result	Units	Detection Limit	Date Analyzed	Method	Reference
Cadmium	U	mg/L	0.0500	10-AUG-00 00:00	EPA 6010 TCLP	DD-120-03
Chromium	U	mg/L	0.100	10-AUG-00 00:00	EPA 6010 TCLP	DD-120-03
Lead	U	mg/L	0.440	10-AUG-00 00:00	EPA 6010 TCLP	DD-120-03

Page 1

00 2 NY 18032 NJ 73188 PA 66180 EPA NY 60083

Approved by:

Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
 mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
 B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services. Your samples will be discarded after 14 days unless we are advised otherwise.

"Our family, caring about your analytical needs... Since 1983."



ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
 TELEPHONE (607) 565-8500 FAX (607) 565-6088

DATE 11-AUG-2000

LAB SAMPLE ID L54480-2

Clean Venture
 John Murphy
 301 South First Street
 Elizabeth, NJ 07206

1100A CRISINGS
 STOCKPILE B98 26/35
 COMPOSITE
 07-AUG-00 00:00 by CLIENT
 07-AUG-00 15:12
 N/A

Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Reference
Cadmium	U	mg/L	0.0500	11-AUG-00 00:00	EPA 6010 TCLP	00-120-03
Chromium	U	mg/L	0.100	11-AUG-00 00:00	EPA 6010 TCLP	00-120-03
Lead	5.26	mg/L	0.440	11-AUG-00 00:00	EPA 6010 TCLP	00-120-03

Results calculated on a dry weight basis.

Page 1

GC 1 NY 10282 NJ 73108 PA 08188 EPA NY 00089

Approved by:

Lab Director

KEY: ND or U = None Detected < = less than
 mg/L = milligrams per liter (equivalent to parts per million)
 B = analysis was detected in the method or trip blank

ug/L = micrograms per liter (equivalent to parts per billion)
 mg/kg = milligrams per kilogram (equivalent to parts per million)
 J = result estimated below the quantitation limit

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services. Your samples will be discarded after 14 days unless we are advised otherwise.

"Our family, caring about your analytical needs... Since 1983."

Aug 11 2000 16:35 P.03

Fax: 607-565-2445

FRIEND LAB

8 OF 12



ONE RESEARCH CIRCLE WAVERLY, NY 14098-1632
 TELEPHONE (807) 865-2500 FAX (807) 865-4063

DATE 11-AUG-2000

LAB SAMPLE ID L54480-1

Clean Venture
 John Murphy
 201 South First Street
 Elizabeth, NJ 07206

TIoga CASINGS
 STOCKPILE B98 26/35
 COMPOSITE
 07-AUG-00 00:00 by CLIENT
 07-AUG-00 15:12
 N/A

Analyte Performed	Result	Units	Detection Limit	Date Analyzed	Method	Method Reference
Cadmium	U	mg/L	0.0500	11-AUG-00 00:00	EPA 8010 TCLP	00-129-03
Chromium	U	mg/L	0.100	11-AUG-00 00:00	EPA 8010 TCLP	00-120-03
Lead	1.16	mg/L	0.440	11-AUG-00 00:00	EPA 8010 TCLP	00-120-03

Results calculated on a dry weight basis.

Page 1

00 2 NY 1222 NJ 73108 PA 02180 EPA NY00028

Approved by:

Lab Director

KEY: ND or U = None Detected < = less than
 mg/L = milligrams per liter (equivalent to parts per million)
 B = analyte was detected by the method of trip blank

ug/L = micrograms per liter (equivalent to parts per billion)
 mg/kg = milligrams per kilogram (equivalent to parts per million)
 J = result estimated below the quantitation limit

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services.
 Your samples will be discarded after 14 days unless we are advised otherwise.

"Our family, caring about your analytical needs... Since 1983."

7014 70:01 0007 11 5th

C:\P\COJING\XPJ

001 AUG10J

TOTAL P.09

9.15.11

ANALYTICAL REPORT

K Chem Lab, Inc.

1333 Main Street • Latrobe, PA 15650
 724-537-6621 • 724 537-3942 fax

Mr. Hank Springer
 Mill Service, Inc.
 RD 1, Box 135A
 Yukon, PA 15698

Project Information

NYDEC Tioga Casting

Report # 17944D

PO # Not recorded

Page 1 of 1

Date: July 6, 2000

Sample ID	Date	Time	Sample Description	Result	Parameter	D.L.	Methodology	Date Analyzed
17944D			NYDEC Tioga Casting D006, D007, D008 Comp.	75.3 % 35.1 % 7.84 s.u. 0.067 mg/kg <5.0 mg/kg <10.0 mg/kg 2.63 mg/kg 94.1 mg/kg 1.6 mg/kg 7.4 mg/kg 39.2 mg/kg 0.05 mg/kg 7.5 mg/kg 0.37 mg/kg 0.31 mg/kg <1 mg/kg 67.2 mg/kg 8.1 mg/kg <0.25 mg/kg 311 mg/kg	Total Solids Total Volatile Solids pH Total Cyanide Reactive Cyanide Reactive Sulfide Arsenic Barium Cadmium Chromium Lead Mercury Nickel Antimony Selenium Silver Copper Molybdenum Thallium Zinc	0.1 0.1 0.01 0.05 5.0 10.0 0.25 1 1 1 1 0.05 1 0.25 0.25 1 1 1 0.25 1	EPA 160.3 EPA 160.4 SW-846 9045C SW-846 9014 SW-846 9014 SW-846 9034 SW-846 7060A SW-846 6010B SW-846 6010B SW-846 6010B SW-846 7420 SW-846 7471A SW-846 6010B SW-846 7041 SW-846 7740 SW-846 7760A SW-846 6010B SW-846 6010B SW-846 7841 SW-846 6010B	
				TCLP ANALYSIS 8.60 s.u. 1.94 s.u. N/A 5.76 s.u.	pH in Distilled Water pH in Hydrochloric Acid Extraction Fluid Final Extraction pH	0.01 0.01 N/A 0.01	SW-846 1311 SW-846 1311 SW-846 1311 SW-846 1311	
				TCLP METALS <0.005 mg/L 1.47 mg/L 0.02 mg/L 0.05 mg/L 0.40 mg/L <0.0005 mg/L 0.08 mg/L <0.005 mg/L <0.005 mg/L 0.02 mg/L 0.17 mg/L <0.005 mg/L 3.19 mg/L	TCLP Arsenic TCLP Barium TCLP Cadmium TCLP Chromium TCLP Lead TCLP Mercury TCLP Nickel TCLP Antimony TCLP Selenium TCLP Silver TCLP Copper TCLP Thallium TCLP Zinc	0.005 0.01 0.01 0.01 0.01 0.0005 0.01 0.005 0.005 0.01 0.01 0.005 0.01	SW-846 7060A SW-846 6010B SW-846 6010B SW-846 6010B SW-846 7420 SW-846 7470A SW-846 6010B SW-846 7041 SW-846 7740 SW-846 7760A SW-846 6010B SW-846 7841 SW-846 6010B	

Work inspected by:

Charles T. Ford

Charles T. Ford, Laboratory Manager

10.6.21
 WASTE CHARACTERIZATION

ANALYTICAL REPORT

K Chem Lab, Inc.

1333 Main Street • Latrobe, PA 15650
724-537-6621 • 724-537-3942 fax

Mr. Hank Springer
Mill Service, Inc.
RD 1, Box 135A
Yukon, PA 15698

Project Information
NYDEC Tioga Casting

Report # 17944A

PO # Not recorded.

Page 1 of 2

Date: July 6, 2000

Sample ID	Date	Time	Sample Description	Result	Parameter	D.L.	Methodology	Date Analyzed
17944A	6/28/00		NYDEC Tioga Casting D006, D007, D008 Soil Grab	PCBs				
				<0.15 mg/kg	PCB-1016	0.15	SW-846-8270C	
				<0.15 mg/kg	PCB-1221	0.15	SW-846-8270C	
				<0.15 mg/kg	PCB-1232	0.15	SW-846-8270C	
				<0.15 mg/kg	PCB-1242	0.15	SW-846-8270C	
				<0.15 mg/kg	PCB-1248	0.15	SW-846-8270C	
				<0.15 mg/kg	PCB-1254	0.15	SW-846-8270C	
				<0.15 mg/kg	PCB-1260	0.15	SW-846-8270C	
				462 mg/kg	TPH-IR	1.0	EPA 418 I	
				<2 µg/kg	benzene	2	SW-846 8021B	
				<2 µg/kg	toluene	2	SW-846 8021B	
				<2 µg/kg	ethylbenzene	2	SW-846 8021B	
				<6 µg/kg	xylene, total	6	SW-846 8021B	
				<4 µg/kg	m,p-xylene	4	SW-846 8021B	
				<2 µg/kg	o-xylene	2	SW-846 8021B	
				>150°F	Ignitability	70	SW-846 1010	
				TCLP VOLATILE ORGANICS				
				<0.005 mg/L	TCLP Benzene	0.005	SW-846 8260B	
				<0.005 mg/L	TCLP Carbon Tetrachloride	0.005	SW-846 8260B	
				<0.005 mg/L	TCLP Chloroform	0.005	SW-846 8260B	
				<0.005 mg/L	TCLP 1,2-Dichloroethane	0.005	SW-846 8260B	
				<0.005 mg/L	TCLP 1,1-Dichloroethylene	0.005	SW-846 8260B	
				<0.005 mg/L	TCLP Methyl Ethyl Ketone	0.005	SW-846 8260B	
				<0.005 mg/L	TCLP Tetrachloroethylene	0.005	SW-846 8260B	
				<0.005 mg/L	TCLP Trichloroethylene	0.005	SW-846 8260B	
				<0.005 mg/L	TCLP Vinyl Chloride	0.005	SW-846 8260B	
				<0.005 mg/L	TCLP Chlorobenzene	0.005	SW-846 8260B	

22 of 22

Underground Storage Tank

DATE: 7/17/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 19200047
Client I.D.: CLEAN VENTURES, INC.
Sampled by: O'ROURKE INCORPORATED

APPROVAL: PEF
CC: RL
Lab I.D.: 10170

TIOGA CASTINGS SITE
NY6-DEC 7-54-03 TANK-AREA 36 1000M 07/07/00 G

ULL I.D.: 19100047

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Arsenic by furnace method	0.001mg/l	07/12/00		MB2576
Total Barium	<0.3mg/l	07/12/00		MB2578
Total Cadmium	0.008mg/l	07/12/00		MB2578
Total Chromium	<0.05mg/l	07/12/00		MB2578
Total Lead	<0.1mg/l	07/12/00		MB2578
Total Mercury	<0.0004mg/l	07/17/00		MB2591
Total Selenium by furnace method	<0.001mg/l	07/12/00		MB2577
Total Silver	<0.05mg/l	07/12/00		MB2578
EPA Method 8021				
Dichlorodifluoromethane	<0.5ug/l	07/11/00		VA5097
Chloromethane	<0.5ug/l	07/11/00		VA5097
Vinyl Chloride	<0.5ug/l	07/11/00		VA5097
Bromomethane	<0.5ug/l	07/11/00		VA5097
Chloroethane	<0.5ug/l	07/11/00		VA5097
Trichlorofluoromethane	<0.5ug/l	07/11/00		VA5097
1,1-Dichloroethene	<0.5ug/l	07/11/00		VA5097
Methylene Chloride	<0.5ug/l	07/11/00		VA5097
trans-1,2-Dichloroethene	<0.5ug/l	07/11/00		VA5097
1,1-Dichloroethane	<0.5ug/l	07/11/00		VA5097
2,2-Dichloropropane	<0.5ug/l	07/11/00		VA5097
cis-1,2-Dichloroethane	<0.5ug/l	07/11/00		VA5097
Chloroform	<0.5ug/l	07/11/00		VA5097
Bromochloromethane	<0.5ug/l	07/11/00		VA5097
1,1,1-Trichloroethane	<0.5ug/l	07/11/00		VA5097
1,1-Dichloropropene	<0.5ug/l	07/11/00		VA5097
Carbon tetrachloride	<0.5ug/l	07/11/00		VA5097
1,1-Dichloroethane	<0.5ug/l	07/11/00		VA5097
Trichloroethene	<0.5ug/l	07/11/00		VA5097
1,2-Dichloropropane	<0.5ug/l	07/11/00		VA5097
Bromodichloromethane	<0.5ug/l	07/11/00		VA5097
Dibromomethane	<0.5ug/l	07/11/00		VA5097
cis-1,3-Dichloropropene	<0.5ug/l	07/11/00		VA5097
trans-1,3-Dichloropropene	<0.5ug/l	07/11/00		VA5097
1,1,2-Trichloroethane	<0.5ug/l	07/11/00		VA5097
Tetrachloroethene	<0.5ug/l	07/11/00		VA5097
1,3-Dichloropropane	<0.5ug/l	07/11/00		VA5097
Dibromochloromethane	<0.5ug/l	07/11/00		VA5097
1,2-Dibromoethane	<0.5ug/l	07/11/00		VA5097

DATE: 7/17/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 19200047
Client I.D.: CLEAN VENTURES, INC.
sampled by: O'ROURKE INCORPORATED

APPROVAL: JEF

QC: DL
Lab I.D.: 10170

TIOGA CASTINGS SITE
NYS-DEC 7-54-02 TANK-AREA 36 1000M 07/07/00 0

ULI I.D.: 19200047

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
1,1,1,2-Tetrachloroethane	<0.5ug/l	07/11/00		VA5097
Bromoform	<0.5ug/l	07/11/00		VA5097
1,1,1,2-Tetrachloroethane	<0.5ug/l	07/11/00		VA5097
1,2,1-Trichloropropane	<0.5ug/l	07/11/00		VA5097
1,2-Dibromo-3-chloropropane	<0.5ug/l	07/11/00		VA5097
Benzene	<0.5ug/l	07/11/00		VA5097
Toluene	<0.5ug/l	07/11/00		VA5097
Chlorobenzene	<0.5ug/l	07/11/00		VA5097
Ethylbenzene	<0.5ug/l	07/11/00		VA5097
m-Xylene and p-Xylene	<0.5ug/l	07/11/00		VA5097
o-Xylene	<0.5ug/l	07/11/00		VA5097
Styrene	<0.5ug/l	07/11/00		VA5097
Isopropylbenzene	<0.5ug/l	07/11/00		VA5097
n-Propylbenzene	<0.5ug/l	07/11/00		VA5097
Bromobenzene	<0.5ug/l	07/11/00		VA5097
1,3,5-Trimethylbenzene	<0.5ug/l	07/11/00		VA5097
2-Chlorotoluene	<0.5ug/l	07/11/00		VA5097
4-Chlorotoluene	<0.5ug/l	07/11/00		VA5097
tert-Butylbenzene	<0.5ug/l	07/11/00		VA5097
1,3,4-Trimethylbenzene	<0.5ug/l	07/11/00		VA5097
sec-Butylbenzene	<0.5ug/l	07/11/00		VA5097
4-Isopropyltoluene	<0.5ug/l	07/11/00		VA5097
1,3-Dichlorobenzene	<0.5ug/l	07/11/00		VA5097
1,4-Dichlorobenzene	<0.5ug/l	07/11/00		VA5097
n-Butylbenzene	<0.5ug/l	07/11/00		VA5097
1,2-Dichlorobenzene	<0.5ug/l	07/11/00		VA5097
1,2,4-Trichlorobenzene	<0.5ug/l	07/11/00		VA5097
Hexachlorobutadiene	<0.5ug/l	07/11/00		VA5097
Naphthalene	<0.5ug/l	07/11/00		VA5097
1,2,3-Trichlorobenzene	<0.5ug/l	07/11/00		VA5097

TCL Semivolatiles by EPA Method 8270

Phenol	<5ug/l	07/13/00		SA2462
bis(1-Chloroethyl) ether	<5ug/l	07/13/00		SA2462
1-Chlorophenol	<5ug/l	07/13/00		SA2462
1,3-Dichlorobenzene	<5ug/l	07/13/00		SA2462
1,4-Dichlorobenzene	<5ug/l	07/13/00		SA2462
1,2-Dichlorobenzene	<5ug/l	07/13/00		SA2462
2-Methylphenol	<5ug/l	07/13/00		SA2462

DATE: 7/17/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 19200047
Client I.D.: CLEAN VENTURE, INC.
Sampled by: O'Rourke INCORPORATED

APPROVAL: PFF
QC: DL
Lab I.D.: 10170

TIOGA CASTINGS SITE
NYS-DEC 7-54-02 TANK-AREA 36 1000M 07/07/00 G

ULI I.D.: 19200047

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
2,2'-Oxybis(1-Chloropropane)	<5ug/l	07/13/00		SA2462
4-Methylphenol	<5ug/l	07/13/00		SA2462
N-Nitrosodi-n-propylamine	<5ug/l	07/13/00		SA2462
Hexachloroethane	<5ug/l	07/13/00		SA2462
Nitrobenzene	<5ug/l	07/13/00		SA2462
Isophorene	<5ug/l	07/13/00		SA2462
2-Nitrophenol	<5ug/l	07/13/00		SA2462
2,4-Dimethylphenol	<5ug/l	07/13/00		SA2462
bis(2-Chloroethoxy)methane	<5ug/l	07/13/00		SA2462
2,4-Dichlorophenol	<5ug/l	07/13/00		SA2462
1,2,4-Trichlorobenzene	<5ug/l	07/13/00		SA2462
Naphthalene	<5ug/l	07/13/00		SA2462
4-Chloroaniline	<5ug/l	07/13/00		SA2462
Hexachlorobutadiene	<5ug/l	07/13/00		SA2462
4-Chloro-3-methylphenol	<5ug/l	07/13/00		SA2462
1-Methylnaphthalene	<5ug/l	07/13/00		SA2462
Hexachlorocyclopentadiene	<5ug/l	07/13/00		SA2462
2,4,6-Trichlorophenol	<5ug/l	07/13/00		SA2462
1,4,5-Trichlorophenol	<5ug/l	07/13/00		SA2462
2-Chloronaphthalene	<5ug/l	07/13/00		SA2462
2-Nitroaniline	<50ug/l	07/13/00		SA2462
Dimethylphthalate	<5ug/l	07/13/00		SA2462
Acenaphthylene	<5ug/l	07/13/00		SA2462
2,6-Dinitrotoluene	<5ug/l	07/13/00		SA2462
1-Nitroaniline	<50ug/l	07/13/00		SA2462
Acenaphthene	<5ug/l	07/13/00		SA2462
2,4-Dinitrophenol	<50ug/l	07/13/00		SA2462
4-Nitrophenol	<50ug/l	07/13/00		SA2462
Dibenzofuran	<5ug/l	07/13/00		SA2462
2,4-Dinitrotoluene	<5ug/l	07/13/00		SA2462
Diethylphthalate	<5ug/l	07/13/00		SA2462
4-Chlorophenylphenylether	<5ug/l	07/13/00		SA2462
Fluorene	<5ug/l	07/13/00		SA2462
4-Nitroaniline	<5ug/l	07/13/00		SA2462
2-Methyl-4,6-dinitrophenol	<50ug/l	07/13/00		SA2462
N-Nitrosodiphenylamine	<5ug/l	07/13/00		SA2462
4-Bromophenylphenylether	<5ug/l	07/13/00		SA2462
Hexachlorobenzene	<5ug/l	07/13/00		SA2462

07/18/2000 13:22 607-587-4358
JUL-17-2000 MON 01:37 PM UPSTATE LABORATORIES

IMTED TIOGA CASTING
O'ROURKE INCORPORATED
FAX NO. 3154371208

PAGE 07
PAGE 95
P. 05

DATE: 7/17/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 19200047
Client I.D.: CLEAN VENTURES, INC.
Sampled by: O'ROURKE INCORPORATED

APPROVAL: PFF
QC: DL
Lab I.D.: 10170

TIOGA CASTING SITE
NYS-DWC 7-54-02 TANK-AREA 36 1000M 07/07/00 G

ULI I.D.: 19200047

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILES
Pentachlorophenol	<10ug/l	07/13/00		SA2462
Phenanthrene	<5ug/l	07/13/00		SA2462
Anthracene	<5ug/l	07/13/00		SA2462
Carbazole	<5ug/l	07/13/00		SA2462
di-n-butylphthalate	<5ug/l	07/13/00		SA2462
Fluoranthene	<5ug/l	07/13/00		SA2462
Pyrene	<5ug/l	07/13/00		SA2462
Butylbenzylphthalate	<5ug/l	07/13/00		SA2462
1,2'-Dichlorobenzidine	<5ug/l	07/13/00		SA2462
Benzo(a)anthracene	<5ug/l	07/13/00		SA2462
Chrysene	<5ug/l	07/13/00		SA2462
bis(2-Ethylhexyl)phthalate	<5ug/l	07/13/00		SA2462
di-n-octylphthalate	<5ug/l	07/13/00		SA2462
Benzo(b)fluoranthene	<5ug/l	07/13/00		SA2462
Benzo(k)fluoranthene	<5ug/l	07/13/00		SA2462
Benzo(a)pyrene	<5ug/l	07/13/00		SA2462
Indeno(1,2,3-cd)pyrene	<5ug/l	07/13/00		SA2462
Dibenzo(a,h)anthracene	<5ug/l	07/13/00		SA2462
Benzo(ghi)perylene	<5ug/l	07/13/00		SA2462

Upstate Laboratories, Inc.
6034 Corporate Drive • E. Syracuse, NY 13057-7017
(315) 437-0255 Fax 437-1209

Chain of Custody Record (TIOGA CASTINGS SITE)

Client: **Clean Venture** Client Project / Project Name: **NYS-DEC-7-54-02**

Client Contact: **Angel Flores (607) 687-1028** Site Location (city/state): **Owego, NY**

Sample Location: **Tank-Area 36** Date: **7-7-00** Time: **1000** Grab or ULI Internal Use Only: **Grab** Comp: **GW** Grib: **13200475**

Sample Number	Sample Description	Sample Bottle	Type	Size	Pres	No. of Containers										Special Turnaround Time (Lab Notification required)	Remarks
						1	2	3	4	5	6	7	8	9	10		
1) 8021 Full List																	
2) 82 8270 "																	
3) (8) Metals																	
4)																	
5)																	
6)																	
7)																	
8)																	
9)																	
10)																	

Note: The numbered columns above cross-reference with the numbered columns in the upper right-hand corner.

INTEC TIOGA CASTING
O'Rourke Incorporated
FAX NO. 3154371209

PAGE 08
PAGE 06
P. 08

Syracuse Rochester Buffalo Albany Binghamton Fair Lawn (NJ)

Buried Drum Area

DRUM AREA



ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-8500 FAX (607) 565-4088

DATE 26-JUL-2000

LAB SAMPLE ID LS3521-1

Clean Venture
John Murphy
201 South First Street
Elizabeth, NJ 07206

DEC-SITE 7-54-012
DRUM EXCAVATION
GRAB
20-JUL-00 00:00 by CLIENT
20-JUL-00 15:33
N/A

Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Total Solids	80.7	%		24-JUL-00 00:00	CLP 3.0	00-099-32
Cadmium	U	mg/kg	0.6130	25-JUL-00 11:09	EPA 6010	00-102-09
Chromium	32.2	mg/kg	1.23	25-JUL-00 11:09	EPA 6010	00-102-09
Lead	31	mg/kg	5.40	25-JUL-00 11:09	EPA 6010	00-102-09

Page 1

OC 2 NY 10282 NJ 73186 PA 88180 EPA NY 00033

Approved by:

Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services. Your samples will be discarded after 14 days unless we are advised otherwise.

"Our family, caring about your analytical needs... Since 1983."

1072

CUSTOMER CODE # _____

CHAIN OF CUSTODY RECORD

PAGE 1 of 1

ERI
ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site:

P.O. #

DATE & TIME OF
SAMPLE COLLECTION

SAMPLE DESCRIPTION

NUMBER OF
CONTAINERS

ANALYTES / TESTS REQUESTED

LAB USE ONLY

Untreated
Sodium thiosulfate
HCl pH <2
Ascorbic acid & HCl pH <2
HNO₃ pH <2
H₂SO₄ pH <2
NaOH pH >12
NaOH & Zinc acetate pH >9
Acetic Buffer pH <3
Sodium sulfite

CUSTOMER: *Clean Venture*
ADDRESS: *201 S. First St*
Elizabethtown, NY
PHONE: *734-5142*
FAX: *734-5142*
PROJECT NO / NAME: *DEC - Site*

INVOICE TO
ADDRESS:
COPY TO
ADDRESS:

Si-ne

7/20/00

Drum Excavation

Pb, Cd, Cr

153507

Description: Grab Composite Other
Matrix: DW WW MW Soil Air Other
Description: Grab Composite Other
Matrix: DW WW MW Soil Air Other
Description: Grab Composite Other
Matrix: DW WW MW Soil Air Other
Description: Grab Composite Other
Matrix: DW WW MW Soil Air Other

RELINQUISHED BY

DATE / TIME

ACCEPTED BY

DATE / TIME

NOTES TO LABORATORY

John Williams

7/20/00

Brynda Calhoun

7/20/00

3:33

None Slight Moderate High (please circle)

Sump

DATE: / /

Upstate Laboratories, Inc.
 Analysis Results
 Report Number: 24400041
 Client I.D.: CLEAN VENTURE, INC.

APPROVAL: - - - -
 QC: - ~~M~~ - Lab I.D.: 10170
 Sampled by:

ID: 24400041 Mat: Soil TIOGA CASTING CISTERN BASE 1310K 08/30/00 C

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCLP Herbicides by EPA Method 8150				
TCLP 2,4-D	<0.1mg/l	09/10/00		GA0318
TCLP 2,4,5-TP	<0.01mg/l	09/10/00		GA0318
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<0.1mg/kg dw	09/09/00		GA0315
Aroclor 1221	<0.1mg/kg dw	09/09/00		GA0315
Aroclor 1232	<0.1mg/kg dw	09/09/00		GA0315
Aroclor 1242	<0.1mg/kg dw	09/09/00		GA0315
Aroclor 1248	<0.1mg/kg dw	09/09/00		GA0315
Aroclor 1254	<0.1mg/kg dw	09/09/00		GA0315
Aroclor 1260	0.1mg/kg dw	09/09/00		GA0315
Total PCB	0.1mg/kg dw	09/09/00		GA0315
TCLP Pesticides by EPA Method 8080				
TCLP Chlordane	<0.01mg/l	09/11/00		GA0323
TCLP Endrin	<0.0005mg/l	09/11/00		GA0323
TCLP Heptachlor	<0.0005mg/l	09/11/00		GA0323
TCLP Lindane	<0.01mg/l	09/11/00		GA0323
TCLP Methoxychlor	<0.1mg/l	09/11/00		GA0323
TCLP Toxaphene	<0.01mg/l	09/11/00		GA0323
TCLP Heptachlor Epoxide	<0.0005mg/l	09/11/00		GA0323

dw = Dry weight

DATE: / /

State Laboratories, Inc.
 Analysis Results
 Report Number: 24400041
 Client I.D.: CLEAN VENTURE, INC.

APPROVAL: - - - -

QC: ☒ - Lab I.D.: 10170

Sampled by:

ID: 24400041 Mat: Soil TIOGA CASTING CISTERN BASE 1310H 08/30/00 C

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Corrosivity				
pH	7.25U	09/05/00		WD1636
Flash Point	>60degC	09/06/00		WD1643
Percent Solids	75%	08/31/00		WD1606
TOX	<230mg/l	09/06/00		WD1644
RCRA Reactivity				
Reactive Sulfide	<50mg/kg	09/01/00		WD1616
Reactive Cyanide	<1.0mg/l	09/14/00		WD1725
TCLP Arsenic	<0.5mg/l	09/05/00		MB2771
TCLP Barium	1.5mg/l	09/05/00		MB2771
TCLP Cadmium	0.070mg/l	09/05/00		MB2771
TCLP Chromium	<0.05mg/l	09/05/00		MB2771
TCLP Lead	0.1mg/l	09/05/00		MB2771
TCLP Mercury	<0.0004mg/l	09/12/00		MB2796
TCLP Selenium	<0.5mg/l	09/05/00		MB2771
TCLP Silver	0.05mg/l	09/05/00		MB2771
TCLP Volatile Organic Compounds by 8240				
TCLP Benzene	<0.03mg/l	09/13/00		VM3037
TCLP Carbon Tetrachloride	<0.03mg/l	09/13/00		VM3037
TCLP Chlorobenzene	<0.03mg/l	09/13/00		VM3037
TCLP Chloroform	<0.03mg/l	09/13/00		VM3037
TCLP 1,4-Dichlorobenzene	<0.03mg/l	09/13/00		VM3037
TCLP 1,2-Dichloroethane	<0.03mg/l	09/13/00		VM3037
TCLP 1,1-Dichloroethene	<0.03mg/l	09/13/00		VM3037
TCLP Methyl Ethyl Ketone	<0.1mg/l	09/13/00		VM3037
TCLP Tetrachloroethane	<0.03mg/l	09/13/00		VM3037
TCLP Trichloroethene	<0.03mg/l	09/13/00		VM3037
TCLP Vinyl Chloride	<0.02mg/l	09/13/00		VM3037
TCLP Semivolatile Compounds by 8270				
TCLP Cresol, Total	<0.10mg/l	09/06/00		SA2541
TCLP 2,4-Dinitrotoluene	<0.05mg/l	09/06/00		SA2541
TCLP Hexachlorobenzene	<0.05mg/l	09/06/00		SA2541
TCLP Hexachlorobutadiene	<0.05mg/l	09/06/00		SA2541
TCLP Hexachloroethane	<0.05mg/l	09/06/00		SA2541
TCLP Nitrobenzene	<0.05mg/l	09/06/00		SA2541
TCLP Pentachlorophenol	<0.10mg/l	09/06/00		SA2541
TCLP Pyridine	<0.05mg/l	09/06/00		SA2541
TCLP 2,4,5-Trichlorophenol	<0.05mg/l	09/06/00		SA2541
TCLP 2,4,6-Trichlorophenol	<0.05mg/l	09/06/00		SA2541

lw = Dry weight

Backfill Testing

AIT NUMBER

7- 436-00002/00001

FACILITY/PROGRAM NUMBER(S)

708-3-30-0030



PERMIT

Under the Environmental
Conservation Law

EFFECTIVE DATE

January 11, 2000

EXPIRATION DATE(S)

December 31, 2004

TYPE OF PERMIT ☐ New ☒ Renewal ☐ Modification ☐ Permit to Construct ☐ Permit to Operate

- ☐ Article 15, Title 5: Protection of Waters
- ☐ Article 15, Title 15: Water Supply
- ☐ Article 15, Title 15: Water Transport
- ☐ Article 15, Title 15: Long Island Wells
- ☐ Article 15, Title 27: Wild, Scenic and Recreational Rivers
- ☐ Other:
- ☐ 6NYCRR 608: Water Quality Certification
- ☐ Article 17, Titles 7, 8: SPDES
- ☐ Article 19: Air Pollution Control
- ☒ Article 23, Title 27: Mined Land Reclamation
- ☐ Article 24: Freshwater Wetlands
- ☐ Article 25: Tidal Wetlands
- ☐ Article 27, Title 7; 6NYCRR 360: Solid Waste Management
- ☐ Article 27, Title 9; 6NYCRR 373: Hazardous Waste Management
- ☐ Article 34: Coastal Erosion Management
- ☐ Article 36: Floodplain Management
- ☐ Articles 1, 3, 17, 19, 27, 37; 6NYCRR 380: Radiation Control

PERMIT ISSUED TO		TELEPHONE NUMBER	
F. S. Lopke Contracting, Inc.		607-687-1114	
ADDRESS OF PERMITTEE			
3430 State Route 434, Apalachin, NY 13732			
CONTACT PERSON FOR PERMITTED WORK		TELEPHONE NUMBER	
Dolene Riley, General Manager		607-687-1114	
NAME AND ADDRESS OF PROJECT/FACILITY			
Owego Plant			
LOCATION OF PROJECT/FACILITY			
Route 17C, 1.5 miles southwest of Owego			
COUNTY	TOWN	WATERCOURSE	NYTM COORDINATES
Tioga	Tioga		
DESCRIPTION OF AUTHORIZED ACTIVITY			
This permit authorizes mining activity on 132.7 acres of land during the permit term, within a 132.7 acre life-of-mine facility, on a 146 acre parcel of land, including specified processing equipment on lands owned by F. S. Lopke Contracting, Inc..			

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified (see page 2) and any Special Conditions included as part of this permit.

DEPUTY PERMIT ADMINISTRATOR:	ADDRESS
Michael K. Barylski	1285 Fisher Avenue, Cortland, NY 13045-1090
AUTHORIZED SIGNATURE	DATE
<i>Michael K. Barylski</i>	

RECEIVED

JAN 12 2000

DEPT. OF ENVIRONMENTAL CONSERVATION

REG. 7 - MINERAL RESOURCES



ATLANTIC TESTING LABORATORIES, Limited

August 1, 2000

Mr. John F. Murphy
Clean Venture, Inc.
201 South First Street
Elizabeth, New Jersey 07206

Re: Quality Control Testing
Tioga Castings - Owego, New York
Job No. 4460
ATL Report No. ET1318S-1-7-00

486 North Street
Endicott, NY 13760
(607) 757-9326 (T)
(607) 757-9252 (F)

P. O. Box 29
Canton, NY 13617
(315) 386-4578 (T)
(315) 386-1012 (F)

Dear Mr. Murphy:

On July 25, 2000, Mr. R. Craig obtained one sample (Sample #1, Tag #13181) of common fill material, at F. S. Lopke's Route 17C Owego, New York pit, and returned it to our Endicott, New York facility for laboratory testing. A Particle Size Analysis, Plasticity Index, and Laboratory Compaction Test were performed on this sample. The Laboratory Compaction Test Report is attached. The Particle Size Analysis and Plasticity Index test results follow:

PARTICLE SIZE ANALYSIS (WASH)
ASTM D 422 (WITH HYDROMETER)

SIEVE SIZE	PERCENT PASSING BY WEIGHT	
	SAMPLE #1, TAG #13181	PROJECT SPECIFICATION
2"	100	100
1-1/2"	97	45 - 80
1"	77	
3/4"	63	
1/2"	46	
3/8"	38	
1/4"	32	
#4	29	
#10	28	
#20	25	
#40	20	20 - 50
#80	14	
#100	13	
#200	10.7	15 - 30
.005 mm	4.9	
.001 mm	3.8	

PLASTICITY INDEX
ASTM D 4318

Plasticity Index = Non-plastic

Please feel free to contact our office should you have any questions or require any further information.

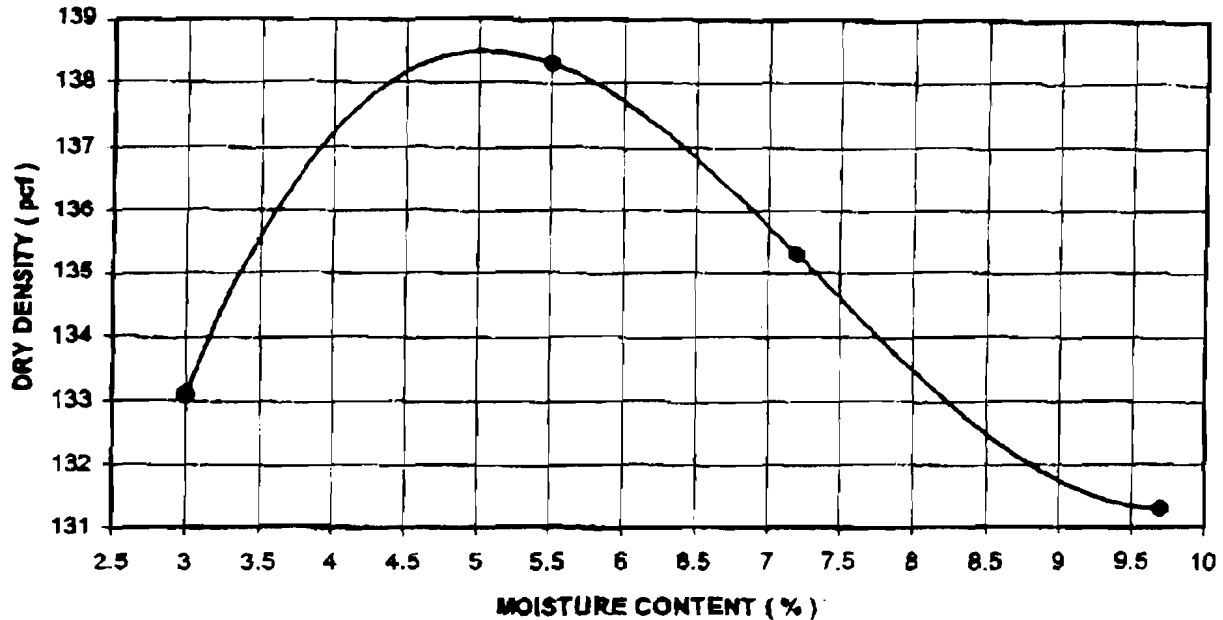
Respectfully submitted,
ATLANTIC TESTING LABORATORIES, Limited


Mark S. Wilbur, Manager
Endicott Testing Division
MSW/cb
Attachment



ATLANTIC TESTING LABORATORIES, Limited

MOISTURE - DENSITY RELATIONSHIP TEST



"Modified" Effort, ASTM D1557-78 Method D

ELEV./ DEPTH	CLASSIFICATION		NAT. MOIST.	SP. G.	LL	PI	% > NO. 4	% < NO. 200
	USCS	AASHTO						
	GP-GM		11.0		N/A	NP	71	11

TEST RESULTS		MATERIAL DESCRIPTION	
Optimum Moisture = 5.1 %		Common Fill	
Maximum Dry Density = 138.5 pcf			
Pc = N/A	Wc = N/A	SOIL CLASSIFICATION	
Pf = N/A	Wi = N/A	Brown cmf GRAVEL; little cmf SAND; little SILT/CLAY	
Splitting Sieve Size: 3/4 inch			
Project No.: ET1318S-1-7-2000		Remarks: • Collected by R. Craig, on July 25, 2000 • Sample # 1 Tag # 13181 • Manual Rammer, Moist Preparation • NP: Non-Plastic	
Project: Tioga Castings			
Client: CleanVennure, Inc.			
Sample Location: F. S. Lopke's Route 17C Owego, NY pit			
Date: July 31, 2000			



ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
 TELEPHONE (607) 565-2600 FAX (607) 565-4083

DATE 28-JUL-2000

LAB SAMPLE ID L53520-1

Clean Venture
 John Murphy
 201 South First Street
 Elizabeth, NJ 07206



DEC-SITE 7-54-012
 LOPKE FILL PILE
 GRAB
 20-JUL-00 00:00 by CLIENT
 20-JUL-00 15:33
 N/A

Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Cyanide, Total	U	mg/kg	0.452	26-JUL-00 00:00	EPA 335.3	00-013-44
Total Solids	92.1	%		24-JUL-00 00:00	CLP 3.0	00-099-32
Aluminum	7260	mg/kg	7.76	25-JUL-00 11:03	EPA 6010	00-102-09
Antimony	U	mg/kg	103	25-JUL-00 11:06	EPA 6010	00-102-09
Arsenic	2.8	mg/kg	1	23-JUL-00 22:51	EPA 7060	00-026-2
Barium	45.8	mg/kg	1.65	25-JUL-00 11:03	EPA 6010	00-102-09
Beryllium	0.341	mg/kg	0.207	25-JUL-00 11:03	EPA 6010	00-102-09
Cadmium	U	mg/kg	0.5170	25-JUL-00 11:03	EPA 6010	00-102-09
Calcium	29600	mg/kg	51.7	25-JUL-00 11:03	EPA 6010	00-102-09
Chromium	7.02	mg/kg	1.03	27-JUL-00 07:04	EPA 6010	00-102-10
Cobalt	5.95	mg/kg	1.03	25-JUL-00 11:03	EPA 6010	00-102-09
Copper	20.3	mg/kg	1.76	25-JUL-00 11:03	EPA 6010	00-102-09
Iron	14500	mg/kg	6.14	25-JUL-00 11:03	EPA 6010	00-102-09
Lead	10.3	mg/kg	4.55	25-JUL-00 11:03	EPA 6010	00-102-09
Magnesium	5750	mg/kg	51.7	25-JUL-00 11:03	EPA 6010	00-102-09
Manganese	526	mg/kg	0.517	25-JUL-00 11:03	EPA 6010	00-102-09
Mercury	0.017	mg/kg	0.0100	26-JUL-00 00:00	EPA 7470	98-011-02
Nickel	15.6	mg/kg	1.24	25-JUL-00 11:03	EPA 6010	00-102-09
Potassium	583	mg/kg	51.7	25-JUL-00 11:03	EPA 6010	00-102-09
Selenium	U	mg/kg	0.52	24-JUL-00 12:51	EPA 7741	98-201-32
Silver	U	mg/kg	1.03	25-JUL-00 11:03	EPA 6010	00-102-09
Sodium	100	mg/kg	20.7	25-JUL-00 11:03	EPA 6010	00-102-09

Page 1

QC NY 10282 NJ 73166 PA 88180 EPA NY 00033

Approved by:

Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
 mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
 B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services.
 Your samples will be discarded after 14 days unless we are advised otherwise.

"Our family, caring about your analytical needs... Since 1963."

P.02 Jul 28 2000 16:18

Fax: 607-565-2445

FRIEND LAB

4 OF 5

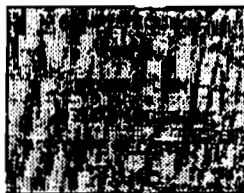


ONE RESEARCH CIRCLE WAVERLY, NY 14892-1832
TELEPHONE (607) 866-8500 FAX (607) 866-4083

DATE 28-JUL-2000

LAB SAMPLE ID :L53520-1

Clean Venture
John Murphy
201 South First Street
Elizabeth, NJ 07206



DEC-SITE 7-54-012
LOPKE FILL PILE
GRAB
20-JUL-00 00:00 by CLIENT
20-JUL-00 15:33
N/A

Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Thallium	U	mg/kg	6.72	25-JUL-00 11:03	EPA 6010	00-102-09
Vanadium	11.7	mg/kg	1.03	25-JUL-00 11:03	EPA 6010	00-102-09
Zinc	51	mg/kg	2.07	25-JUL-00 11:03	EPA 6010	00-102-09
EPA 8260						
Chloromethane	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Vinyl chloride	U	ug/kg	2	24-JUL-00 18:14	EPA 8260	00-092-1571
Chloroethene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Bromomethane	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
1,1-Dichloroethene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Acetone	U	ug/kg	24	24-JUL-00 18:14	EPA 8260	00-092-1571
Carbon disulfide	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Methylene chloride	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
trans-1,2-Dichloroethene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
1,1-Dichloroethane	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
cis-1,2-Dichloroethane	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
MIBK(2-Butanone)	U	ug/kg	24	24-JUL-00 18:14	EPA 8260	00-092-1571
Chloroform	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
1,1,1-Trichloroethene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Carbon tetrachloride	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Benzene	3	ug/kg	0.7	24-JUL-00 18:14	EPA 8260	00-092-1571
1,2-Dichloroethane	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Trichloroethene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
1,2-Dichloropropane	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Bromodichloromethane	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
cis-1,3-Dichloropropene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
MIBK(4-Methyl-2-pentanone)	U	ug/kg	10	24-JUL-00 18:14	EPA 8260	00-092-1571
Toluene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
trans-1,3-Dichloropropene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
1,1,2-Trichloroethane	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Tetrachloroethene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
2-Hexanone	U	ug/kg	10	24-JUL-00 18:14	EPA 8260	00-092-1571
Dibromochloromethane	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Chlorobenzene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Ethylbenzene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
p-Xylene/m-Xylene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
o-Xylene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Styrene	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
Bromoform	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571
1,1,2,2-Tetrachloroethane	U	ug/kg	5	24-JUL-00 18:14	EPA 8260	00-092-1571

Page 2

QC NY 10262 NJ 73108 PA 08180 EPA NY 00033

Approved by:

Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

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"Our family, caring about your analytical needs... Since 1963."

P.03 JUL 28 2000 16:20

Fax: 607-866-2445

FRIEND LAB
5 OF 5

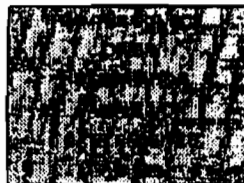


ONE RESEARCH CIRCLE WAVERLY, NY 14892-1632
TELEPHONE (807) 566-3500 FAX (807) 566-4083

DATE 28-JUL-2000

LAB SAMPLE ID :L53520-1

Clean Venture
John Murphy
201 South First Street
Elizabeth, NJ 07206



DEC-SITE 7-54-012
LOPKE FILL PILE
GRAB
20-JUL-00 00:00 by CLIENT
20-JUL-00 15:33
N/A

Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Surrogate Recovery:						
Dibromofluoromethane	118	%				00-092-1571
Toluene-d8	92	%				00-092-1571
4-Bromofluorobenzene	101	%				00-092-1571
Analysis Comment: Results Calculated on a dry weight basis.						
EPA 8081						
alpha-BHC	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
beta-BHC	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
Lindane (gamma-BHC)	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
delta-BHC	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
Heptachlor	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
Aldrin	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
Heptachlor epoxide	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
alpha-Chlordane	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
Endosulfan I	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
gamma-Chlordane	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
4,4'-DDE	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
Dieldrin	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
Endrin	U	mg/kg	0.003	25-JUL-00 00:00	EPA 8081	99-127-0687
Endosulfan II	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
4,4'-DDD	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
Endrin ketone	U	mg/kg	0.003	25-JUL-00 00:00	EPA 8081	99-127-0687
Endrin aldehyde	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
Endosulfan sulfate	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
4,4'-DDT	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
Methoxychlor	U	mg/kg	0.005	25-JUL-00 00:00	EPA 8081	99-127-0687
Toxaphene	U	mg/kg	0.05	25-JUL-00 00:00	EPA 8081	99-127-0687

Extraction Information:

Surrogate Recovery:				24-JUL-00 00:00		00-089-33
Decachlorobiphenyl	116	%				99-127-0687
Tetrachloro-m-Xylene	89	%				99-127-0687
Analysis Comment: RESULTS CALCULATED ON A DRY WEIGHT BASIS						

Page 3

QC NY 10252 NJ 73168 PA 88180 EPA NY 00039

Approved by:

Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
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P.04 Jul 28 2000 16:23

Fax: 607-565-2445

FRIEND LAB

6 OF 9

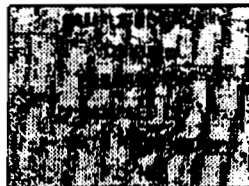


ONE RESEARCH CIRCLE WAVERLY, NY 14892-1632
TELEPHONE (607) 686-3600 FAX (607) 686-4063

DATE 28-JUL-2000

LAB SAMPLE ID L53520-1

Clean Venture
John Murphy
201 South First Street
Elizabeth, NJ 07206



DEC-SITE 7-54-012
LOPKE FILL PILE
GRAB
20-JUL-00 00:00 by CLIENT
20-JUL-00 15:33
N/A

Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
EPA 8082						
PCB 1016	U	ng/kg	0.01	25-JUL-00 00:00	EPA 8082	99-127-0687
PCB 1221	U	ng/kg	0.02	25-JUL-00 00:00	EPA 8082	99-127-0687
PCB 1232	U	ng/kg	0.01	25-JUL-00 00:00	EPA 8082	99-127-0687
PCB 1242	U	ng/kg	0.01	25-JUL-00 00:00	EPA 8082	99-127-0687
PCB 1248	U	ng/kg	0.01	25-JUL-00 00:00	EPA 8082	99-127-0687
PCB 1254	U	ng/kg	0.01	25-JUL-00 00:00	EPA 8082	99-127-0687
PCB 1260	U	ng/kg	0.01	25-JUL-00 00:00	EPA 8082	99-127-0687
Surrogate Recovery:						
Decachlorobiphenyl	116	%				99-127-0687
Analysis Comment: RESULTS CALCULATED ON A DRY WEIGHT BASIS						
EPA 8270						
Bis(2-chloroethyl)ether	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Phenol	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2-Chlorophenol	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
1,3-Dichlorobenzene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
1,4-Dichlorobenzene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
1,2-Dichlorobenzene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Bis(2-chloroisopropyl)ether	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2-Methylphenol	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Hexachloroethane	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
N-Nitrosodi-N-propylamine	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
3-Methylphenol/4-Methylphenol	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Nitrobenzene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Isophorone	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2-Nitrophenol	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2,4-Dimethylphenol	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Bis(2-chloroethoxy)methane	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2,4-Dichlorophenol	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
1,2,4-Trichlorobenzene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Naphthalene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
4-Chloroaniline	U	ug/kg	11000	26-JUL-00 15:28	EPA 8270	00-64-1673
Hexachlorobutadiene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
4-Chloro-3-methylphenol	U	ug/kg	11000	26-JUL-00 15:28	EPA 8270	00-64-1673
2-Methylnaphthalene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Hexachlorocyclopentadiene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2,4,6-Trichlorophenol	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2,4,5-Trichlorophenol	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2-Chloronaphthalene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2-Nitroaniline	U	ug/kg	22000	26-JUL-00 15:28	EPA 8270	00-64-1673

Page 4

QC C NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by:

Lab Director

KEY: ND or U = None Detected < = Less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services.
Your samples will be discarded after 14 days unless we are advised otherwise.

"Our family, caring about your analytical needs... Since 1963."

P.05 JUL 28 2000 16:25

FAX: 607-686-2745

FRIEND LAB

7 OF 5



ONE RESEARCH CIRCLE WAVERLY, NY 14892-1582
TELEPHONE (607) 565-3500 FAX (607) 565-4038

DATE 28-JUL-2000

LAB SAMPLE ID L53520-1

Clean Venture
John Murphy
201 South First Street
Elizabeth, NJ 07206



DEC-SITE 7-54-012
LOPKE FILL PILE
GRAB
20-JUL-00 00:00 by CLIENT
20-JUL-00 15:33
N/A

Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Dimethyl phthalate	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Acenaphthylene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2,6-Dinitrotoluene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
3-Nitroaniline	U	ug/kg	22000	26-JUL-00 15:28	EPA 8270	00-64-1673
Acenaphthene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2,4-Dinitrophenol	U	ug/kg	22000	26-JUL-00 15:28	EPA 8270	00-64-1673
Dibenzofuran	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
2,4-Dinitrotoluene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
4-Nitrophenol	U	ug/kg	22000	26-JUL-00 15:28	EPA 8270	00-64-1673
Diethyl phthalate	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Fluorene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
4-Chlorophenylphenylether	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
4-Nitroaniline	U	ug/kg	22000	26-JUL-00 15:28	EPA 8270	00-64-1673
2-Methyl-6,6-dinitrophenol	U	ug/kg	22000	26-JUL-00 15:28	EPA 8270	00-64-1673
N-Nitrosodiphenylamine	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
4-Bromophenylphenylether	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Hexachlorobenzene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Pentachlorophenol	U	ug/kg	22000	26-JUL-00 15:28	EPA 8270	00-64-1673
Phenanthrene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Anthracene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Carbazole	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Di-n-butyl phthalate	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Fluoranthene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Pyrene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Butylbenzyl phthalate	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Benzo(a)anthracene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
3,3-Dichlorobenzidine	U	ug/kg	11000	26-JUL-00 15:28	EPA 8270	00-64-1673
Chrysene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Bis-2-ethylhexyl phthalate	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Di-n-octyl phthalate	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Benzo(b)fluoranthene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Benzo(k)fluoranthene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Benzo(a)pyrene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Indeno(1,2,3-cd)pyrene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Dibenzo(a,h)anthracene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673
Benzo(g,h,i)perylene	U	ug/kg	5400	26-JUL-00 15:28	EPA 8270	00-64-1673

Extraction Information:

25-JUL-00 00:00

00-079-64

Page 5

QC NY 10252 NJ 73188 PA 88180 EPA NY 00093

Approved by:

Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank

ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services.
Your samples will be discarded after 14 days unless we are advised otherwise.

"Our family, caring about your analytical needs... Since 1963."

P.06

JUL 28 2000 16:27

Fax: 607-565-2445

FRIEND LAB

8 OF 9



ONE RESEARCH CIRCLE WAVERLY, NY 14898-1582
 TELEPHONE (607) 665-8500 FAX (607) 665-4083

DATE 29-JUL-2000

LAB SAMPLE ID L53520-1

Clean Venture
 John Murphy
 201 South First Street
 Elizabeth, NJ 07206

DEC-SITE 7-54-012
 LOPKE FILL PILE
 GRAB
 20-JUL-00 00:00 by CLIENT
 20-JUL-00 15:33
 N/A

Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Surrogate Recovery:						
Terphenyl-d14	74	%				00-64-1673
2-Fluorophenol	69	%				00-64-1673
Phenol-d5	64	%				00-64-1673
2,4,6-Trifluorophenol	62	%				00-64-1673
Nitrobenzene-d5	67	%				00-64-1673
2-Fluorobiphenyl	72	%				00-64-1673
Analysis Comment: Results calculated on a dry weight basis.						

Page 6

00 NY 10252 NJ 78188 PA 68180 EPA NY 00033

Approved by:

Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
 mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
 B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

The information in this report is accurate to the best of our knowledge and ability. In no event shall our liability exceed the cost of these services. Your samples will be discarded after 14 days unless we are advised otherwise.

"Our family, caring about your analytical needs... Since 1963."

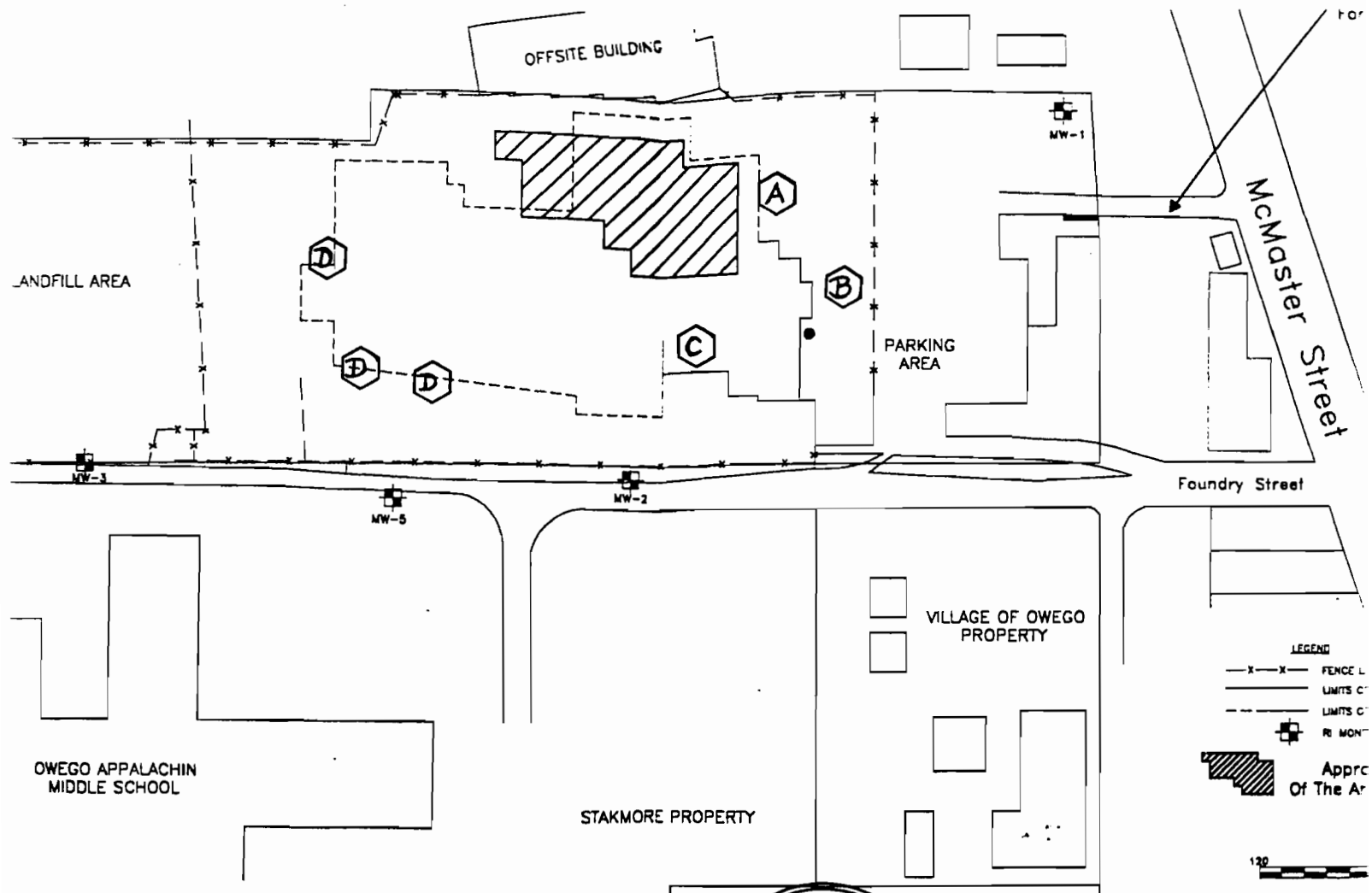
JUL 28 2000 16:30 P.07

Fax: 607-665-2445

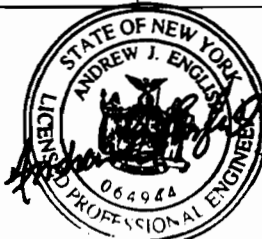
FRIEND LAB

9 OF 9

Asbestos



WARNING: IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7208.2 FOR ANY PERSON UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW SECTION 7208.2.



AREA TO BE REMEDIATED

DIVISION OF ENVIRONMENTAL REMEDIATION

DATE: 11/12/99

PREPARED BY: [Signature]

TIOGA CASTINGS SITE, ID # 7-5
VILLAGE OF OWEGO, TIOGA COUNTY

**SCIENTIFIC LABORATORIES, INC.**117 EAST 30TH STREET
NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-9392

PLM Bulk Asbestos ReportOrourke Incorporated
Timothy O'Rourke
100 West Street

New York, NY 13827

Date Received 07/16/2000 SciLab Job No. 200072790
Date Examined 07/16/2000 P.O. # NYS-DEC
ELAP Number 11480 Page 1 of 1
RE: NYS-DEC; Tioga Castings, Owego, NY

No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
	200072790-01	Yes	17 %

Location: TC/01

Description: Grey, Homogeneous, Debris
Asbestos Types: Chrysotile 17. %
Other Material: Cellulose Tracc, Non-fibrous 83. %**Testing Notes:**

Analyzed by: Paul Mucha

D/NSD = no asbestos detected; NA = not analyzed; NAPS = not analyzed positive stop; Bulk Asbestos Analysis per 40 CFR 763, Subpart F, Appendix A and ELAP Analysis Protocols 198.1/198.4 for NY samples; Note: PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing in NY State (see EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94). National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full with the approval of the laboratory. This report is ONLY for the items tested. ELAP #11480 V. Cert #AL016085

Reviewed By:

**SCIENTIFIC LABORATORIES, INC.**117 EAST 30TH STREET
NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-9392

PLM Bulk Asbestos ReportO'Rourke Incorporated
c/o Timothy O'Rourke
Lake Street

Syracuse, NY 13827

Date Received 08/24/2000 **SciLab Job No.** 200083976**Date Examined** 08/24/2000 **P.O. #** Clean Venture**Page 1 of 2****RE:** Clean Venture ; Tioga Castings Elizabeth, NJ

Ident No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
01	200083976-01	No	NAD
Location: Spray - On Insulation 			
Description: Green, Homogeneous, Spray - On Insulation			
Asbestos Types:			
Other Material: Cellulose 90. %, Non-fibrous 10. %			
02	200083976-02	Yes	50 %
Location: Paper Wrap 			
Description: Grey, Homogeneous, Paper Wrap			
Asbestos Types: Chrysotile 50. %			
Other Material: Cellulose 30. %, Non-fibrous 20. %			
03	200083976-03	No	NAD
Location: Spray - On Insulation 			
Description: OffWhite, Homogeneous, Spray - On Insulation			
Asbestos Types:			
Other Material: Cellulose 90. %, Non-fibrous 10. %			
04	200083976-04	No	NAD
Location: Insulation - Board 			
Description: Brown, Homogeneous, Insulation - Board			
Asbestos Types:			
Other Material: Cellulose 30. %, Non-fibrous 70. %			

**SCIENTIFIC LABORATORIES, INC.**117 EAST 30TH STREET
NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-9392

PLM Bulk Asbestos Report

urke Incorporated
Timothy O'Rourke
ake Street

Date Received 08/24/2000 SciLab Job No. 200083976

Date Examined 08/24/2000 P.O. # Clean Venture

Page 2 of 2

go, NY 13827

RE: Clean Venture ; Tioga Castings Elizabeth, NJ

Porting Notes:

alyzed by: Bonni Mora

NAD/NSD = no asbestos detected; NA = not analyzed; NAPS = not analyzed positive stop; Bulk Asbestos Analysis per
CFR 763, Subpart F, Appendix A and ELAP Analysis Protocols 198.1/198.4 for NY samples; Note: PLM is not
consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. TEM
currently the only method that can be used to determine if this material can be considered or treated as
on-asbestos-containing in NY State (see also EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94). National
stitute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except
full with the approval of the laboratory. This report relates ONLY to the items tested. ELAP #11480, Vt. Cert.

AL016055

Reviewed By: _____

O'Rourke, Inc.
23 Lake Street, PO Box 341
Owego, NY 13827
Phone: (607) 687-7434
Fax: (607) 687-7445

Client: *Clean Venture*
Attn to: *Elizabeth, NJ*
Address:
Phone:
Fax:

Invoice to:
Attn to:
Address:

5 F 2 5

Sample Site:

Tioga Castings

O. #

Untreated

Sodium thiosulfate

HCL pH <2

Ascorbic acid & HCL pH <2

HNO3 pH <2

H2SO4 pH <2

NaOH pH >12

NaOH & Zinc acetate pH >9

Acetic Buffer pH <3

Sodium Sulfite

Project No./Name:

Copy To:

Address:

Date & Time
of Sample
Collection

Sample #

Origin

Number of Containers

Analyses / Tests Requested

Sample Number
(Lab Use Only)

8/22/00

TC-01

Spray-on
Insul

Description: Grab Composite Other
Matrix: DW WW MW Soil Air Other

Friable Asbestos

TC-02

Paperwrap

Description: Grab Composite Other
Matrix: DW WW MW Soil Air Other

"

"

TC-03

Spray-on
Insul.

Description: Grab Composite Other
Matrix: DW WW MW Soil Air Other

"

"

TC-04

Insul.
Board

Description: Grab Composite Other
Matrix: DW WW MW Soil Air Other

"

"

Simplers Signature/Relinquished By

Jerry Coleman

Date / Time

8/22/00

Accepted By

Cy Flemming

Date / Time

8/24/00 1345

Notes to Laboratory

Need RUSH -
24 hr. TAT
Please

Relinquished By

Date / Time

Accepted By

Date / Time

Relinquished By

Date / Time

Accepted By

Date / Time

Suspected Contamination Level
None Slight Moderate High
(please circle)

APPENDIX D

OFF-SITE DISPOSAL

TIOGA CASTINGS OFF-SITE DISPOSAL

Hazardous Soil

Disposed of at Max Environmental Technologies
Pittsburg, Pennsylvania

Contract + Change Order 1

Total 274.56 Cubic Yards

Nonhazardous Soil

Disposed of at Steuben County Landfill
Bath, New York

Contract + Change Order 1

Total 1651.77 Cubic Yards

Concrete

Disposed of at Tioga Gardens
Owego, New York

Contract + Change Order 1

Total 276.68 Cubic Yards

APPENDIX E

SELECTED PHOTOGRAPHS

SUBSURFACE CONDITIONS
PRIOR TO BACKFILL









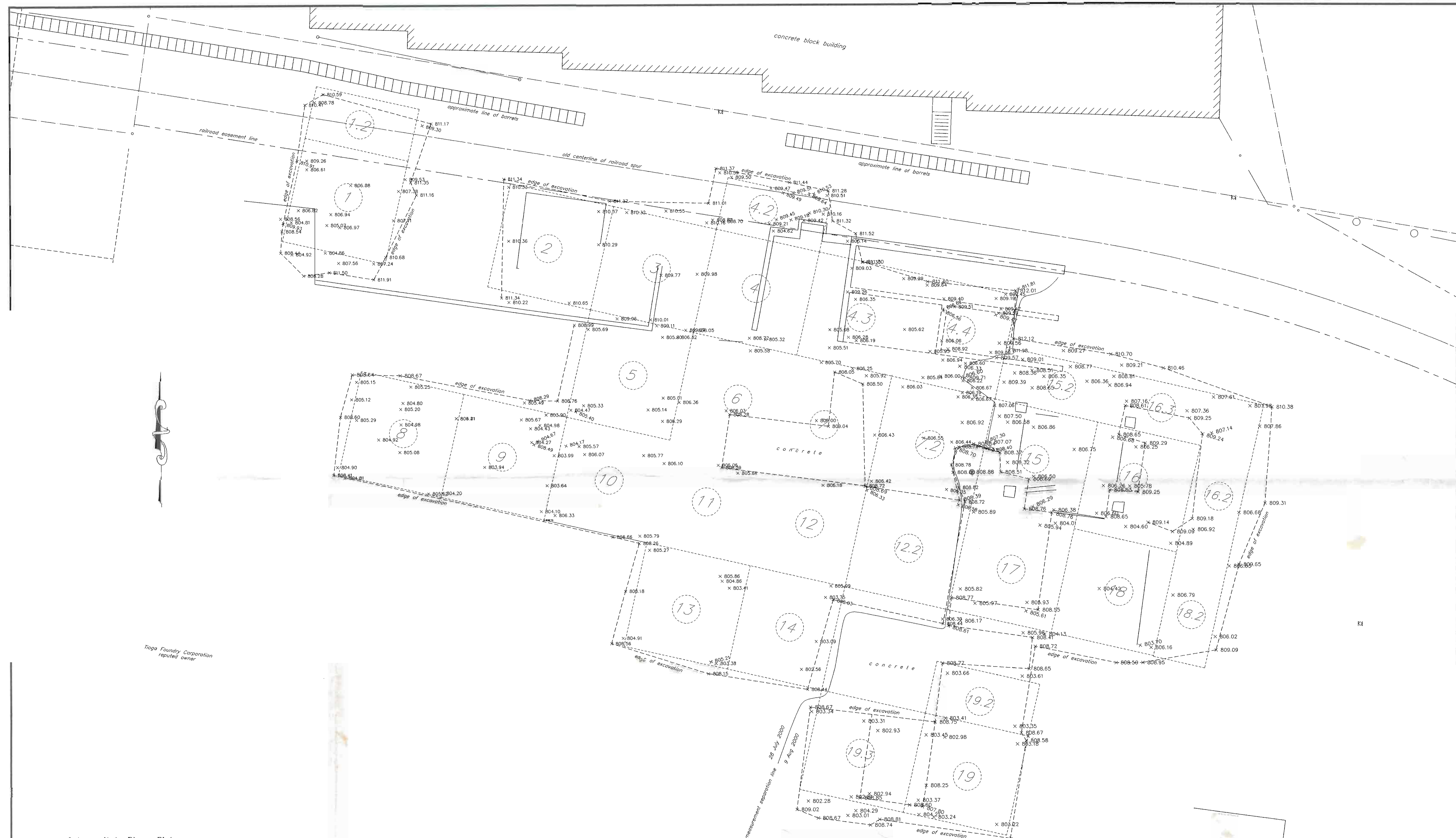


5 6F 5"

**SURFACE CONDITIONS
FOLLOWING BACKFILL**





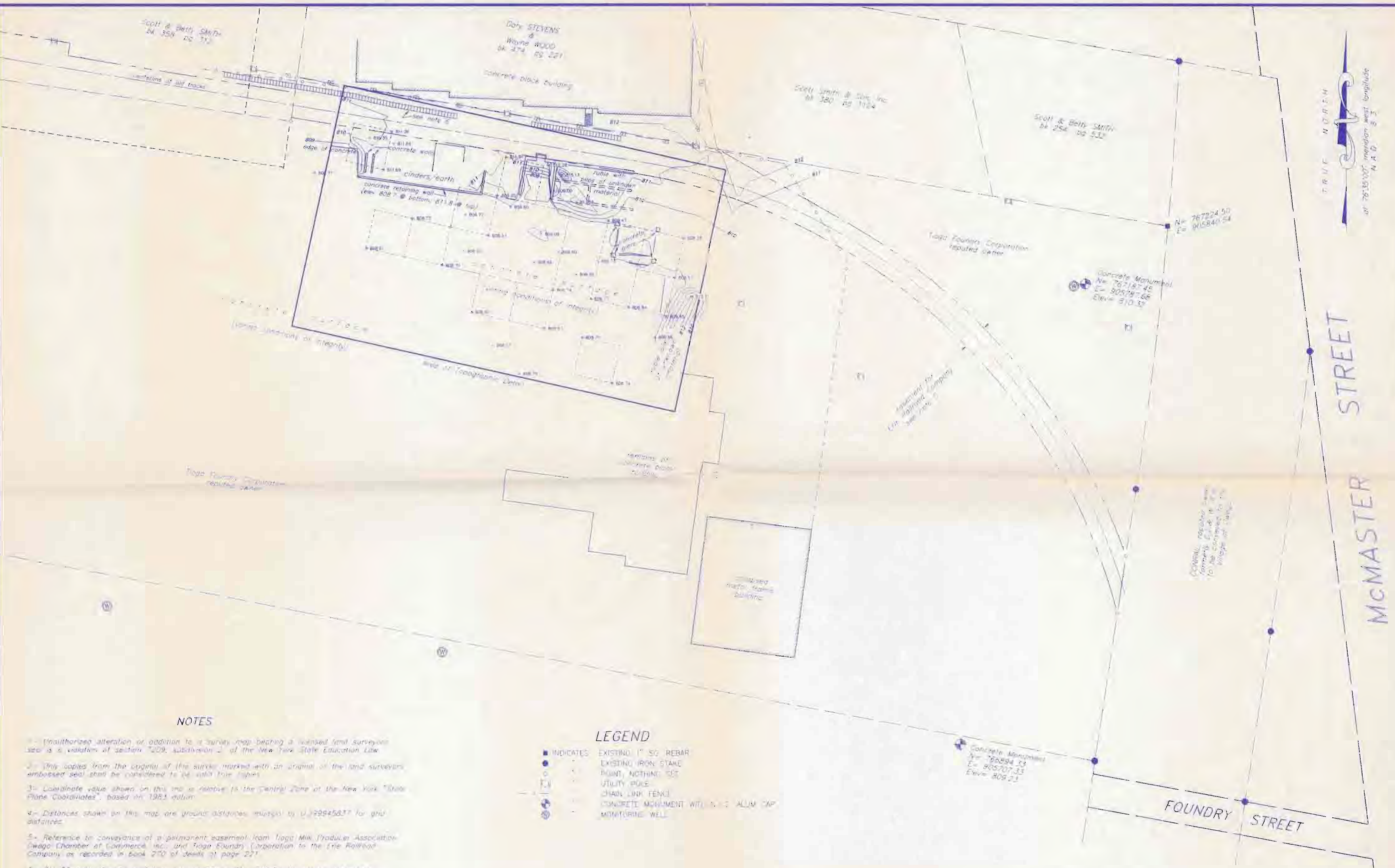


Tioga Foundry Corporation
reputed owner

Intermediate Phase Plot
Showing Site Excavation
TIOGA CASTING FACILITY
VILLAGE of OWEGO
TIOGA COUNTY NEW YORK

SCALE: 1" = 10'
PLOT DATE: 11 AUG 2000
JOB No.: 2000-096

SIGNED: *George R. Williams* DATE: 17 August 2000
GEORGE R. WILLIAMS WILLIAMS & EDSALL
Candor, NY 13943 Land Surveyors
Phone/Fax: (607)659-5803 Phone: (607)687-8953



TRUE NORTH
at 76°35'00" meridian west longitude
N.A.D. 83

NOTES

- 1- (Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of section 209, subdivision 2 of the New York State Education Law.
- 2- Only copies from the original of this survey marked with an original of the land surveyor's embossed seal shall be considered to be valid true copies.
- 3- Coordinate value shown on this map is relative to the "Fining Zone" of the New York "Base Plane Coordinates", based on 1983 datum.
- 4- Distances shown on this map are ground distances, reduced to 1983 datum.
- 5- Reference to conveyance of a permanent easement from Tioga Milk Producers Association (Tioga Chamber of Commerce, Inc. and Tioga Foundry Corporation) to the Erie Railroad Company as recorded in Book 270 of deeds at page 221.
- 6- Old 55 gallon barrels containing an unknown waste material are placed along here, stacked on their side 2' and sometimes 3' high. Also there are several barrels scattered about.
- 7- Spot elevations shown herein are a portion of those taken during this survey and were selected at random from present notes on this site.

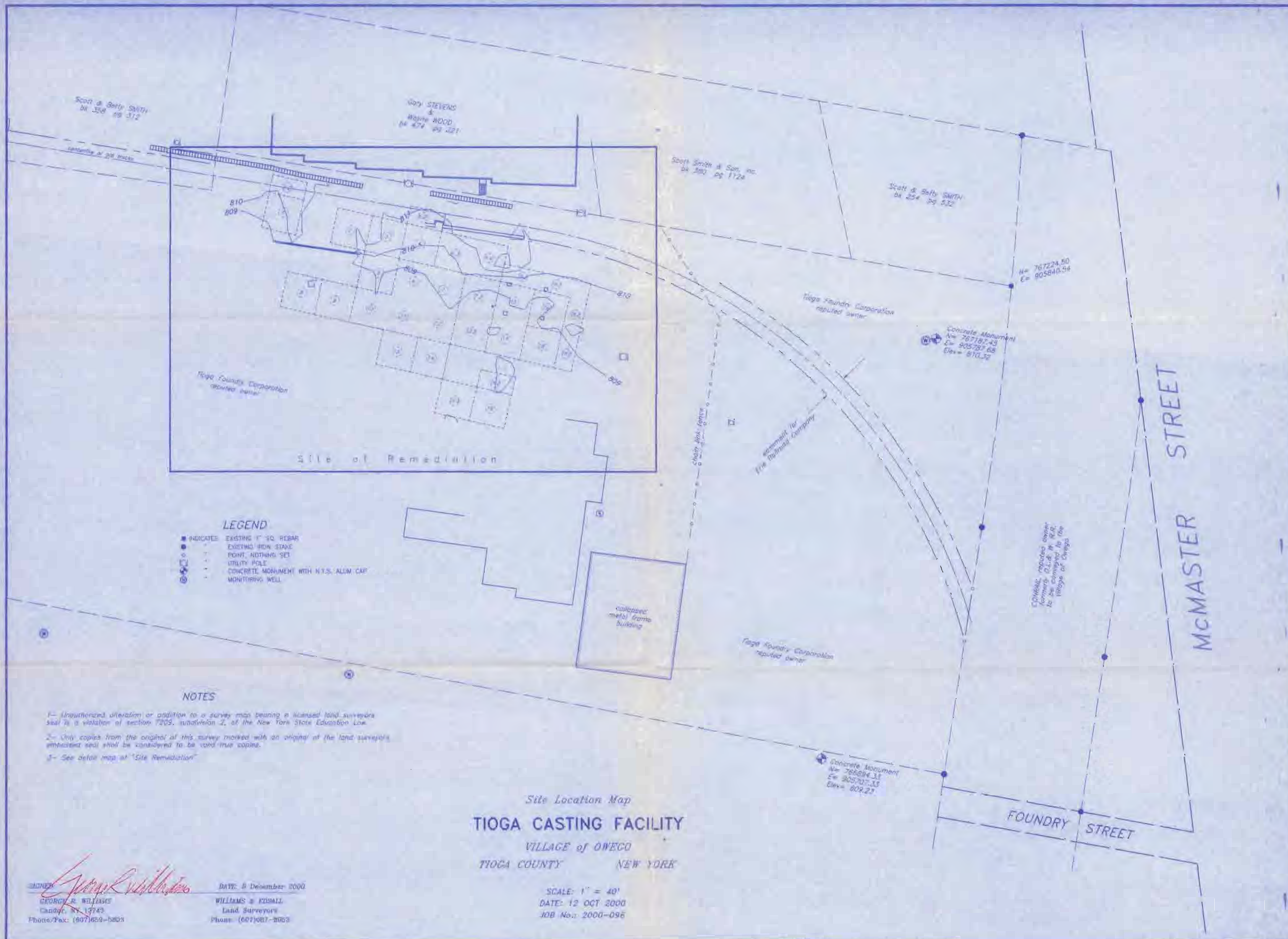
LEGEND

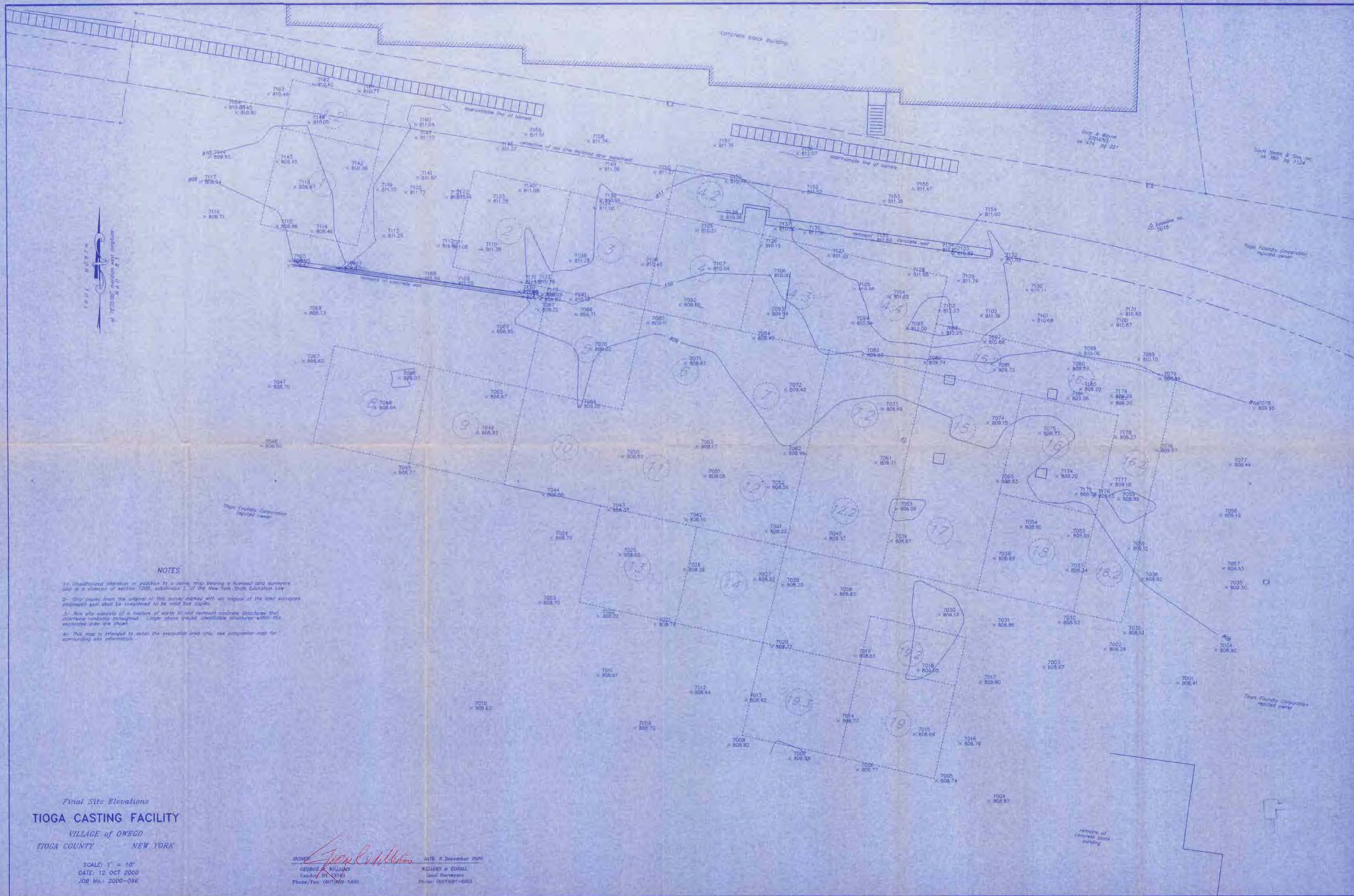
- INDICATES EXISTING 1" SQ REBAR
- EXISTING IRON STAND
- POINT, NOTHING SET
- UTILITY POLE
- CHAIN LINK FENCE
- CONCRETE MONUMENT WITH 1" ALUM CAP
- MONITORING WELL

Initial Topographic Survey of Portion of
TIOGA CASTING FACILITY
VILLAGE of OWEGO
TIOGA COUNTY NEW YORK

SIGNED *George R. Williams* DATE 18 July 2000
GEORGE R. WILLIAMS WILLIAMS & EDSALL
Candor, NY 13743 Land Surveyors
Phone/Fax (607)859-6803 Phone (607)687-8853

SCALE: 1" = 40'
DATE: 5 JUN 2000
JOB No.: 2000A096





NOTES

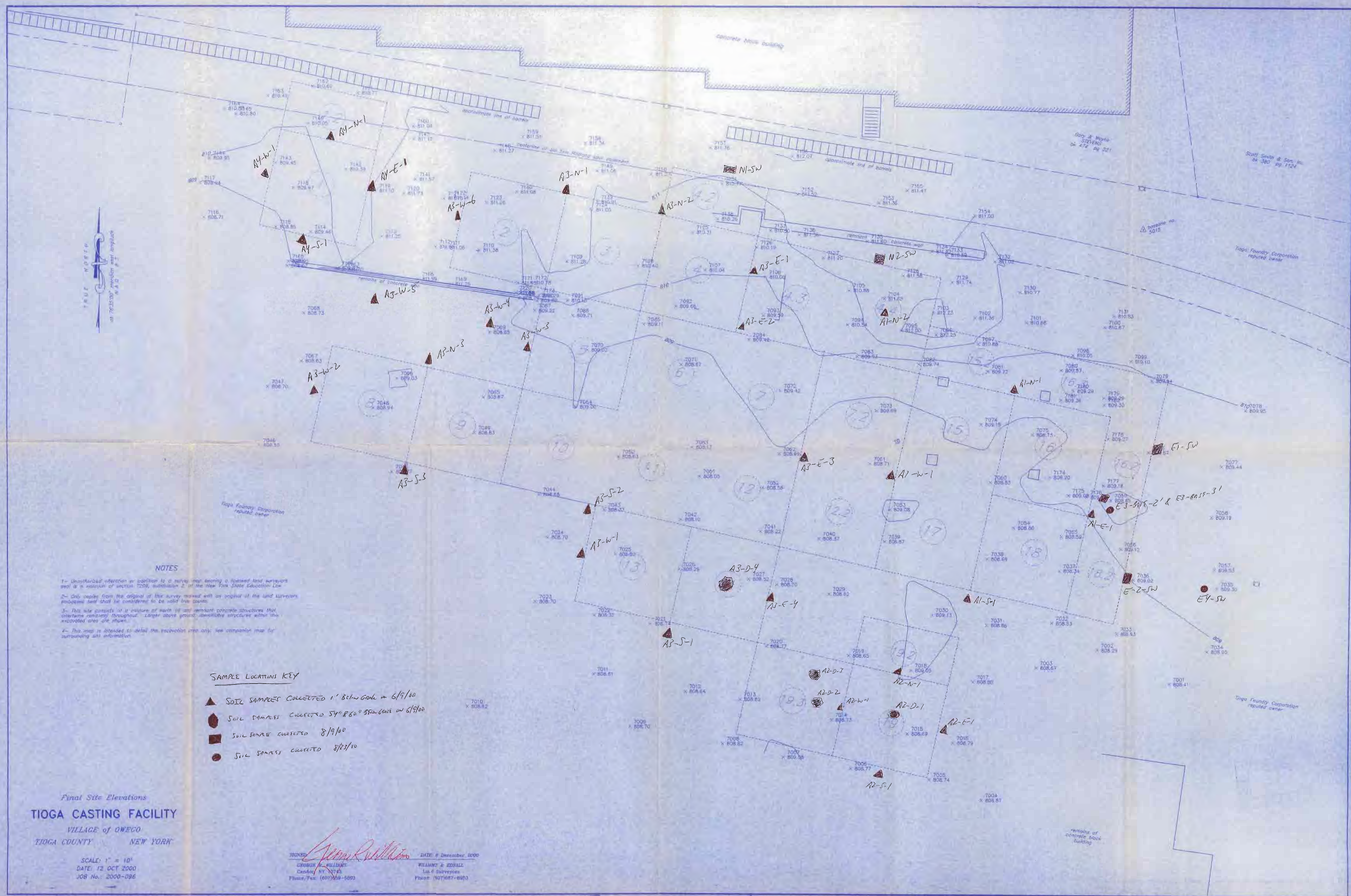
- 1- Unauthorized alteration or addition to a survey map bearing a licensed land surveyors seal is a violation of section 7205, subdivision 2, of the New York State Education Law.
- 2- Only copies from the original of this survey marked with an original of the land surveyors embossed seal shall be considered to be valid true copies.
- 3- This site consists of a mixture of earth fill and remnant concrete structures that are scattered randomly throughout. Larger above ground identifiable structures within this excavated area are shown.
- 4- This map is intended to detail the excavation area only; see companion map for surrounding site information.

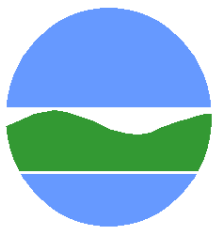
Final Site Elevations

TIOGA CASTING FACILITY
VILLAGE of OWEGO
TIOGA COUNTY NEW YORK

SCALE: 1" = 10'
DATE: 12 OCT 2000
JOB No.: 2000-096

SIGNATURE: *George W. Williams* DATE: 8 December 2000
GEORGE W. WILLIAMS WILLIAMS & EDWARD
Candor, NY 13243 Land Surveyors
Phone/Fax: (807) 681-5803 Phone: (807) 681-8953





New York State Department of Environmental Conservation

Division of Environmental Remediation • 625 Broadway 12th Floor • Albany, New York
12233-7013

Site Management Plan Tioga Castings Site

Site Number 7-54-012

New York State Department of Environmental
Conservation Work Assignment D004443-8

October 2010



Report Prepared By:

Malcolm Pirnie, Inc.

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0266362

**MALCOLM
PIRNIÉ**

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1. Introduction

This Site Management Plan SMP was developed in accordance with DER-10 to provide a framework for monitoring the effectiveness of the remedy at the Tioga Castings site.

This SMP includes the following site-specific documents:

- Operation and Maintenance (O&M) Plan – identifies the proper procedures and contingency plans required to operate and maintain the remedy.
- Long-term Monitoring (LTM) Plan – provides the procedures and monitoring requirements to evaluate the short-and long-term effectiveness of the remedy.
- Institutional Controls/Engineering Controls (IC/EC) Plan – describes the IC/ECs that are in place to provide the appropriate levels of protection for human health and the environment.
- Site-specific Health and Safety Plan (HASP) – identifies site-related hazards and provides requirements for the appropriate personal protective equipment (PPE) for on-site personnel.

2. Site Description and Background

The Tioga Casting Site is located on Foundry Street, Owego, Broome County, New York (Figure 1). The site is approximately seven acres with an approximately one acre landfill on the western portion of the property. Foundry operations were performed at the site from the 1940s through 1988. The facility operated a copula-type foundry and produced gray-iron castings. Solid wastes produced at the foundry (sand molds, fly ash, cast iron grindings, and copula dust) were reportedly disposed at an off-site landfill until 1979. The foundry then operated an on-site landfill for disposal of foundry wastes through its closing in 1988. In 1989 a fire destroyed most of the foundry structure. Based on the presence of materials that were found abandoned at the site, the facility was listed in the NYSDEC Inactive Hazardous Waste Disposal Registry (site number 7-54-012) as a Class 2 Site. The remains of the former foundry structure have since been razed, leaving the concrete slabs in-place.

A Record of Decision (ROD) was signed for the site in 1995. The remedy included the following items:

- Consolidation of on-site and off-site soil and waste piles that contained concentrations greater than the cleanup goals for the site in the on-site landfill.
- Maintain deed restrictions to prevent site development in areas of the site where contaminated material was present.
- Placement of a low permeability cover over the on-site landfill.
- Maintain a fence around the on-site landfill to limit site access.
- Cleaning and filling an on-site septic tank with cement.
- Operation and maintenance of the remedy.
- Groundwater monitoring.
- Site-specific cleanup goals for cadmium, chromium and lead as listed below:

	SOIL	GROUNDWATER
Cadmium	10 ppm	10 ppb
Chromium	50 ppm	50 ppb
Lead	250 ppm to 12" 500 ppm below 12"	25 ppb

The landfill closure was completed in 1997.

Asbestos-containing materials in piles of debris and in a building structure were identified at the site and removed in 2001.

In July 2008, additional groundwater monitoring and a subsurface soil investigation was initiated to evaluate if groundwater and/or subsurface soil contained concentration of VOCs, polychlorinated biphenyls (PCBs), or metals at concentrations greater than the respective NYSDEC Standards or site-specific cleanup criteria. Sub-slab soil vapor samples were also collected from beneath the former foundry building slab to evaluate potential soil vapor intrusion pathways. In addition, three new groundwater monitoring wells were installed to provide additional information on groundwater quality.

Based on the results of the July 2008 investigation, soil samples from two soil borings advanced into the landfill cell contained concentration of chromium greater than the site-specific cleanup criteria. Three soil borings contained concentrations of lead greater than the designated site-specific cleanup value and or 6NYCRR Part 375 Commercial SCO for lead. Arsenic, manganese, or copper exceeded the 6NYCRR Part 375 Commercial SCOs in at least one subsurface soil sample collected from the site. One sub-slab soil vapor sample contained concentrations of VOCs slightly greater than the NYSDOH Guidance value for mitigation. Although groundwater samples were not collected from the three new wells installed at the site during the investigation, none of the groundwater samples collected from the existing monitoring network contained concentrations of VOCs or metals greater than the respective NYSDEC Class GA Standards or site-specific cleanup goals (Malcolm Pirnie, 2008).

In April 2009, NYSDEC collected groundwater samples from all new and existing groundwater monitoring wells at the site for analysis of VOCs, SVOCs, and metals. Based on the results provided by NYSDEC (Appendix A), none of the samples contained concentrations of VOCs or SVOCs greater than corresponding NYSDEC Class GA Standards. Sodium was detected in samples from three wells at concentrations greater than the NYSDEC Class GA Standard. One sample contained lead at a concentration greater than the respective site-specific cleanup goal and NYSDEC Class GA Standard.

In July 2009, surface soil samples were collected from the site to evaluate the potential for surface soil to be an exposure route to site related contaminants. Six surface soil samples were collected from the site in areas known to have contained piles of debris, coal, or concentrations of metals in subsurface soil or groundwater greater than the respective 6NYCRR Part 375, NYSDEC Class GA, or site-specific cleanup goals. None of the surface soil samples contained concentrations of metals greater than the

corresponding 6NYCRR Part 375 Commercial SCOs; however, one surface soil sample contained lead at a concentration greater than the applicable site-specific clean up goal.

3. Operation and Maintenance Plan

The O&M Plan will be implemented to provide guidance for maintenance of the site.

3.1. Operation and Maintenance

Operation and Maintenance activities will be conducted on a semi-annual basis. A site-specific O&M inspection checklist (Appendix B) will be used to provide on-site personnel a guideline for proper O&M procedures, including landfill security and landfill cap maintenance. A list of site contacts is provided in Appendix C.

3.1.1. Landfill Security

The landfill perimeter fence, entry gate, and locks will be inspected for proper operation and signs of deterioration. A warning sign will be maintained at the Foundry Street entrance gate that provides a warning indicating the area within the fence contains hazardous waste and unauthorized entry is forbidden.

3.1.2. Landfill Cap Maintenance

The landfill cover will be mowed on an annual basis to reduce the potential for large, woody vegetation from compromising the integrity of the landfill cap system. The landfill cap is currently mowed by the NYSDEC Operations Department. A visual inspection of the landfill cover will be performed on a semi-annual basis (late spring and fall) to assess the site for burrowing rodents, erosion, woody vegetation, and settlement.

4. Long-term Monitoring Plan

4.1. Groundwater Monitoring

Groundwater samples will be collected from all existing groundwater monitoring wells. Figure 2 shows the locations of the wells to be included in LTM sampling events. Groundwater samples will be collected from wells MW-1R, MW-2, MW-3, MW-3D, MW-4, MW-5, proposed well MW-6, MW-7, and MW-8 on a five-quarter basis to provide information on seasonal groundwater quality over time.

4.1.1. Groundwater Sampling and Analysis

Groundwater samples will be collected from existing monitoring wells every 15 months in accordance with the USEPA Low Flow-Low Purge Sampling Protocol (1998). A peristaltic pump will be used to collect the groundwater samples. Prior to sampling, the water level will be measured using an electronic water level probe. Field parameters including pH, specific conductivity, temperature, turbidity, oxidation-reduction potential (ORP), and dissolved oxygen will be measured during well purging using a flow-through cell system. Purged groundwater will be visually assessed for the potential presence of LNAPL.

Groundwater samples will be sent to a NYSDOH ELAP and NYSDEC ASP-approved analytical laboratory under chain-of-custody procedures for analysis of Target Analyte List (TAL) metals by USEPA Method 6010B, including:

■ Aluminum	■ Copper	■ Selenium
■ Antimony	■ Iron	■ Silver
■ Arsenic	■ Lead	■ Sodium
■ Barium	■ Magnesium	■ Thallium
■ Beryllium	■ Manganese	■ Tin
■ Cadmium	■ Mercury	■ Titanium
■ Calcium	■ Molybdenum	■ Vanadium
■ Chromium	■ Nickel	■ Zinc
■ Cobalt	■ Potassium	

5. Institutional and Engineering Control Plan

5.1. Institutional Controls

Institutional controls are non-engineering measures and usually, but not always, are legal controls intended to affect human activities in such a way as to prevent or reduce exposure to contamination. The ROD specified that deed restrictions should be implemented; however, no deed restrictions are currently established for the site. In lieu of deed restrictions, the NYSDEC has imposed that the following ICs be maintained:

- Notification - The NYSDEC must be notified and approve intrusive activities to be performed at the site which will extend below the cover system and possibly disturb contaminated soil. In addition, Local officials, school districts, and adjacent property owners will be notified of any potential hazards associated with on-site activities. A Site Notification List is provided in Appendix D.
- Ground Intrusive Activities Restriction - Excavation and/or removal of soil from the site will be restricted. Excavated soil/material will require the appropriate characterization for the intended use or off-site disposal. No excavations will be conducted that could interfere with the performance of the remedy.
- Groundwater Monitoring – Monitor groundwater quality at each of the existing site monitoring wells to document contaminant concentrations and distribution. This program will allow the effectiveness of the natural attenuation to be monitored and will continue until data indicate that applicable groundwater standards have been achieved.
- Periodic Review Report - The site owner will periodically (at the direction of the NYSDEC) certify that the required institutional and engineering controls are in place and remain effective for the protection of public health and the environment.

As recommended by the ROD, deed restrictions for the site should also consider the following ICs:

- Site Use Restrictions - Prohibit the site from being used for purposes other than commercial use, including passive recreational use, and industrial use consistent with local zoning. Environmental easements should be binding on all future owners of the site.
- Groundwater Use Restriction - The use of groundwater underlying the site as a source of potable or process water should be prohibited without necessary water quality treatment as determined by the NYSDOH. This should be performed until

groundwater quality is deemed acceptable by the NYSDEC based on long-term monitoring.

5.2. Engineering Controls

Engineering controls are physical barriers intended to reduce the potential for human contact with site-related contamination.

The Tioga Casting Site landfill has a perimeter fence with locking gate to control access to the site. A warning sign is present on the perimeter fence access gate indicating the area within the fence contains hazardous waste and that unauthorized entry is forbidden. Engineering controls are inspected and maintained in accordance with the O&M Plan.

6. Health and Safety Plan

A site-specific HASP for the Tioga Castings Site is presented on the following page.

SITE SPECIFIC HEALTH AND SAFETY PLAN

SECTION 1: GENERAL INFORMATION AND DISCLAIMER		PROJECT NUMBER:	0266362
PROJECT NAME:	Tioga Casting Site	CLIENT NAME:	New York State DEC
PROJECT MANAGER:	Bruce Nelson	DEPUTY PROJECT MANAGER:	Jeremy Wyckoff
PREPARED BY:	Jeremy Wyckoff	DATE:	7/21/2009

NOTE: This site specific Health and Safety Plan - Short Form (HASP-SF) has been prepared for use by **Malcolm Pirnie, Inc.** employees for work at this site / facility. **The plan is written for the specific site / facility conditions, purposes, tasks, dates and personnel specified, and must be amended and reviewed by those personnel named in Section 4 if these conditions change.** Malcolm Pirnie, Inc. is not responsible for its use by others.

Subcontractors shall be solely responsible for the health and safety of their employees and shall comply with all applicable laws and regulations. In accordance with 1910.120(b)(1)(iv) and (v), Malcolm Pirnie, Inc. will inform subcontractors of the site / facility emergency response procedures, and any potential fire, explosion, health, safety or other hazards by making this Site Specific Health and Safety Plan and site information obtained by others available during regular business hours. All contractors and subcontractors are responsible for: (1) developing their own Health and Safety Plan, including a written Hazard Communication Program and any other written hazard specific or safety programs required by federal, state and local laws and regulations, that details subcontractor tasks, potential or actual hazards identified as a result of a risk analysis of those tasks, and the engineering controls, work practices and personal protective equipment to be utilized to minimize or eliminate employee exposure to the hazard; (2) providing their own personal protective equipment; (3) providing documentation that their employees have been health and safety trained in accordance with applicable federal, state and local laws and regulations; (4) providing evidence of medical surveillance and medical approvals for their employees; and (5) designating their own site safety officer responsible for ensuring that their employees comply with their own Health and Safety plan and taking any other additional measures required by their site activities.

Providing a copy of this Malcolm Pirnie plan to subcontractors, does not establish, nor is it intended to establish a "joint employer" relationship between the Contractor and Malcolm Pirnie. This allowance does not establish, nor is it intended to establish, a direct or indirect employer/employee relationship with subcontractor's employees.

THIS SITE SPECIFIC HASP MUST BE REVIEWED AND APPROVED BY CORPORATE HEALTH AND SAFETY FOR ONE OR MORE OF THE FOLLOWING CONDITIONS: IF AN UPGRADE TO "LEVEL C" OR ABOVE IS ANTICIPATED; A PERMIT REQUIRED CONFINED SPACE ENTRY OR ENTRY INTO AN EXCAVATION IS ANTICIPATED; SAMPLING OF UNKNOWN DRUMS AND/OR IN UNKNOWN CONDITIONS IS ANTICIPATED, OR IF THERE MAY BE RADIATION LEVELS GREATER THAN 0.5 mR (500µR)/HOUR.

SECTION 2: EMERGENCY INFORMATION			
(A) LOCAL RESOURCES	SERVICE NAME	TELEPHONE NUMBER	
EMERGENCY MEDICAL SERVICES	911	911	
HOSPITAL (Map attached)	Owego Family Care Center- United Hospital	(607) 687-8601	
FIRE DEPARTMENT	Owego Fire Department	(607) 687-1201 or 911	
POLICE / SECURITY	Owego Village Police Department	(607) 687-2233 or 911	
HAZMAT/ SPILL / OTHER RESPONSE	911	911	

(B) CORPORATE RESOURCES		
MALCOLM PIRNIE 24 / 7 EMERGENCY / INCIDENT TELEPHONE NUMBERS		(800) 478-6870 (24 HOURS)
CORPORATE HEALTH AND SAFETY **	CHUCK MYERS	(914) 641-2610 WHI
FIER PROJECTS	CHUCK MYERS	(914) 641-2610 WHI
MUNI/WEG/CMRT PROJECTS	LAURA LEE-CASEY,	(914) 641-2707 WHI
CORPORATE HEALTH PHYSICIST	LES SKOSKI	(201) 398-4377 NNJ
WORKERS COMP / OSHA LOG	LAURA LEE-CASEY, CHST, CET, EMT-P	(914) 641-2707 WHI
LEGAL DEPARTMENT **	JERRY CAVALUZZI	(914) 641-2950 WHI
** TO BE NOTIFIED IN CASE OF ACCIDENT		

SECTION 3: PROJECT INFORMATION (A) SITE / FACILITY INFORMATION:																		
SITE NAME: <u>Tioga Castings Site</u> ADDRESS: <u>Foundry Street</u> TOWNSHIP/ COUNTY: <u>Owego, New York</u> ☐ FEDERAL ☐ STATE	SITE CLIENT CONTACT: <u>Pason Long (NYSDEC)</u> PHONE NUMBER: <u>518-402-9745</u> SITE SAFETY CONTACT: <u>N/A</u> ☐ MUNICIPAL / REGIONAL ☒ PRIVATE																	
(B) SITE CLASSIFICATION: (check all that apply)																		
<table style="width: 100%; border: none;"> <tr> <td>☐ HAZARDOUS (RCRA)</td> <td>☐ UST / LUST</td> <td>☐ REFINERY</td> </tr> <tr> <td>☒ HAZARDOUS (CERCLA / STATE)</td> <td>☐ BROWNFIELD</td> <td>☐ WTP / WWTP</td> </tr> <tr> <td>☐ CONSTRUCTION</td> <td>☐ CHEMICAL PLANT</td> <td>☐ OTHER: _____</td> </tr> <tr> <td>☐ LANDFILL (NON-HAZARDOUS)</td> <td>☐ MANUFACTURING</td> <td>_____</td> </tr> <tr> <td>☐ ACTIVE</td> <td>☒ INACTIVE</td> <td>_____</td> </tr> </table>				☐ HAZARDOUS (RCRA)	☐ UST / LUST	☐ REFINERY	☒ HAZARDOUS (CERCLA / STATE)	☐ BROWNFIELD	☐ WTP / WWTP	☐ CONSTRUCTION	☐ CHEMICAL PLANT	☐ OTHER: _____	☐ LANDFILL (NON-HAZARDOUS)	☐ MANUFACTURING	_____	☐ ACTIVE	☒ INACTIVE	_____
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☐ LANDFILL (NON-HAZARDOUS)	☐ MANUFACTURING	_____																
☐ ACTIVE	☒ INACTIVE	_____																
(C) TYPE OF FIELD ACTIVITY																		
<table style="width: 100%; border: none;"> <tr> <td>☒ HAZARDOUS WASTE</td> <td>☐ SOLID WASTE</td> <td>☐ CONSTRUCTION</td> </tr> <tr> <td>☒ HYDROGEOLOGY</td> <td>☒ ENVIRONMENTAL</td> <td>☐ AIR / ODOR</td> </tr> <tr> <td>☐ WASTE WATER</td> <td>☐ WATER</td> <td>☐ OTHER: _____</td> </tr> </table>				☒ HAZARDOUS WASTE	☐ SOLID WASTE	☐ CONSTRUCTION	☒ HYDROGEOLOGY	☒ ENVIRONMENTAL	☐ AIR / ODOR	☐ WASTE WATER	☐ WATER	☐ OTHER: _____						
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(D) FIELD OBJECTIVES (Check all that apply)	SAMPLING:																	
☐ PRE-JOB VISIT ☐ CONTRACTOR OVERSIGHT ☐ CONSTRUCTION MGMT ☒ INSPECTION ☐ INVESTIGATION SURVEY	☐ AUDIT ☐ OTHER: _____ ☐ AIR ☐ SURFACE WATER ☐ GROUND WATER ☐ WASTE WATER ☐ WASTE STREAM																	
DATE(S) OF FIELD ACTIVITIES: <u>2009 through 2011</u>																		
(E) FIELD TASKS MALCOLM PIRNIE TASKS																		
M1. <u>Landfill and Site Inspection</u> M2. _____ M3. _____ M4. _____																		
TASKS PERFORMED BY OTHERS																		
01. _____ 02. _____ 03. _____ 04. _____																		

SECTION 4: PROJECT SAFETY ORGANIZATION, HEALTH AND SAFETY TRAINING, AND MEDICAL MONITORING

(A) PROJECT HEALTH AND SAFETY ROLES, RESPONSIBILITIES AND COORDINATION

PROJECT OFFICER	The Project Officer (PO) is ultimately responsible for project performance. The PO seeks and gets appropriate approvals for risk management decisions (e.g. from Regional/Practice Director(s), Legal Council, Corporate Health and Safety), and selects and effective and qualified project team. The PO supports the Project Manager or Deputy Project Manager with appropriate resources.
PROJECT MANAGER DEPUTY PROJECT MANAGER	The Project Manager (PM) has the responsibility for executing the project in accordance with the scope of work and good engineering practice. The PM will supervise the allocation of resources and staff to implement specific aspects of this HASP and may delegate authority to expedite and facilitate any application of the program. The PM implements and executes an effective program of site-specific personnel protection and accident prevention. The Project Manager reports to the Project Officer. Deputy Project Managers (DPM) are assigned all duties and responsibilities of the Site Safety Officer in his/her absence.
CORPORATE HEALTH & SAFETY	Corporate Health and Safety is responsible for Malcolm Pirnie's overall Health and Safety Program and provides project guidance on air monitoring methodology, data interpretation and assistance in determining appropriate project engineering controls, work practices, and personal protective equipment. Corporate Health and Safety also reviews and approve HASPs in accordance with Section 1.
SITE SAFETY OFFICER ALTERNATE SITE SAFETY OFFICER (S)	The Site Safety Officer (SSO) is responsible for interpreting and implementing the site health and safety provisions set out in this HASP, and will guide the efforts of field team personnel in their day-to-day compliance with this HASP. The SSO has the ability and authority to make necessary changes or additions to this HASP and provide technical assistance to field team personnel on problems relating to worksite safety. The SSO has the authority to correct safety-related deficiencies in materials or practice and to call a Project STOP in the most serious cases. Alternate Site Safety Officer (ASSO) is assigned all duties and responsibilities of the Site Safety Officer in his/her absence.
PUBLIC INFORMATION OFFICER:	The Public Information Officer (PIO) is responsible for all public, press and other news media request for information, and is the only person authorized to provide such information
SITE RECORDKEEPER:	The Site Recordkeeper is responsible for the documentation of all related health and safety data documentation, including but not limited to metrological data, instrument calibration, accident and injury reports, and air monitoring data.
FIELD TEAM LEADER:	The Field Team Leader (FTL) is responsible for leading "on-site" activities of field team personnel, and to ensure field team personnel perform only those tasks that have been identified in this HASP.
FIELD TEAM PERSONNEL	Field personnel have the following health and safety responsibilities: • Implement the procedures set forth in the HASP; • Take all reasonable precautions to prevent injury to themselves and their fellow employees; and • Perform only those tasks that they believe they can do safely, and immediately report any accidents and/or unsafe conditions in accordance with Section 1.

- (B) PROJECT TEAM - The following Malcolm Pirnie personnel are designated to carry out the stated project job functions on site. THE SITE SAFETY OFFICER, OR A DESIGNATED ALTERNATE WILL BE ON-SITE DURING **ALL** SITE ACTIVITIES. (NOTE: One person may carry out more than one job function.)

PROJECT MANAGER: Bruce Nelson

PROJECT OFFICER: Daniel Loewenstein

SITE SAFETY OFFICER: Jeremy Wyckoff

ALTERNATE SAFETY OFFICER(S): Stefan Bagnato

PUBLIC INFORMATION OFFICER: Bruce Nelson

SITE RECORDKEEPER: Jeremy Wyckoff

FIELD TEAM LEADER: Jeremy Wyckoff

FIELD TEAM PERSONNEL: Stefan Bagnato

Ely Moskal

Christine Thomas

The following subcontractors and governmental agencies have been informed by Malcolm Pirnie of emergency response procedures, and any potential fire, explosion, health, safety or other hazards of the site / facility by making this Site Specific Health and Safety Plan and site information obtained by others available during regular business hours. Subcontractors and governmental agencies shall be solely responsible for the health and safety of their employees and shall comply with all applicable laws and regulations as described in **Section 1** of this plan.

SUBCONTRACTOR(S): _____

FEDERAL AND STATE AGENCY REPS: Pason Long (NYSDEC)

OTHER AGENCY REPS: _____

(C) HEALTH AND SAFETY TRAINING, MEDICAL MONITORING, AND FIT TESTING PROGRAM

The following project staff is included in the Malcolm Pirnie Health and Safety Training and Medical Monitoring programs. The details of these programs can be found in the Health and Safety Policies and Written Programs. (NOTE: At least one CPR/First Aid Trained person must be on-site during HAZWOPER and confined space entry activities.)

NAME	HAZWOPER TRAINING				OTHER TRAINING					FIT TEST			
	INITIAL (DATE)	8HR (DATE)	MGR (DATE)	DOT (DATE)	CSE (DATE)	CPR / First Aid / (DATE)	BBP	MEDICAL (DATE)		MAKE /	SIZE /	TYPE	(DATE)
<u>Stefan Bagnato</u>	<u>10/03</u>	<u>10/09</u>	<u>03/06</u>	_____	_____	<u>03/08</u>	<u>03/08</u>	<u>11/08</u>	<u>07/09</u>	_____	_____	_____	_____
<u>Jeremy Wyckoff</u>	<u>06/04</u>	<u>4/10</u>	<u>03/06</u>	_____	<u>04/08</u>	<u>03/08</u>	<u>03/08</u>	<u>11/08</u>	<u>06/10</u>	<u>NOR</u>	<u>M-L</u>	<u>FF</u>	<u>11/08</u>
<u>Ely Moskal</u>	<u>08/05</u>	<u>10/09</u>	<u>03/06</u>	_____	_____	<u>03/08</u>	<u>03/08</u>	<u>11/08</u>	<u>11/09</u>	<u>MSA</u>	<u>MED</u>	<u>FF</u>	<u>11/08</u>
<u>Christine Thomas</u>	<u>11/06</u>	<u>12/09</u>	<u>12/07</u>	_____	<u>08/08</u>	_____	_____	<u>11/08</u>	<u>10/09</u>	<u>NOR</u>	<u>SML</u>	<u>FF</u>	<u>11/08</u>
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

SECTION 5: HAZARD ANALYSIS**(A) ACTUAL OR POTENTIAL PHYSICAL HAZARDS** – (Check all that apply to Malcolm Pirnie activities)

☒ ANIMALS / PLANTS	☐ ELECTRICAL	☐ IONIZING RADIATION	☒ STEEP / UNEVEN
☐ ASBESTOS / LEAD	☐ EXCAVATIONS (See Section 13)	☐ LIGHT RADIATION (i.e., Welding, High Intensity)	☒ TERRAIN
☐ CHEMICAL EXPOSURE (See Section 5B/5C)	☐ EXTREME COLD (See Section 10)	☐ LIMITED CONTACT	☐ TRAFFIC (STRUCK BY)
☐ CONFINED SPACE (See Section 12)	☐ FALL, >6' VERTICAL	☐ MOVING PARTS (LO / TO)	☐ OTHER: _____
☐ DEMOLITION	☐ FALLING OBJECTS	☐ NOISE (> 85 dB)	_____
☐ DRILLING	☒ HEAT STRESS	☐ NON-IONIZING RADIATION	_____
☐ DRUM HANDLING	☐ HEAVY EQUIPMT	☐ OVERHEAD OBJECTS	_____
	☐ HEAVY LIFTING	☐ POWERED PLATFORMS	_____
☐ DUST, HARMFUL	☐ HOT WORK	☐ POOR VISIBILITY	_____
☐ DUST, NUISANCE	☐ HUNTING SEASON	☐ ROLLING OBJECTS	
	☐ IMMERSION	☐ SCAFFOLDING	
		☐ SHARP OBJECTS	

(B) PRESENCE OF HAZARDOUS MATERIALS STORED OR USED ON SITE☐ YES☐ YES☒ NO

(CHECK ALL THAT APPLY)

By Client /
OwnerBy Malcolm Pirnie
(See Section 11)**TYPE**

☐ EXPLOSIVES	☐ FLAMMABLE / REACTIVE SOLIDS	☐ RADIOACTIVE	☐ HAZARDOUS WASTE (Stored)
☐ COMPRESSED GASES		☐ CORROSIVE	
☐ FLAMMABLE / COMBUSTIBLE LIQUIDS	☐ OXIDIZERS	☐ MISCELLANEOUS	
	☐ TOXIC / INFECTIOUS		

(C) CHEMICAL HAZARDS OF CONTAMINANTS INFORMATION**(1) IDENTIFIED CONTAMINANTS** - Known or suspected hazardous/toxic materials (attach historical information, physical description, map of contamination and tabulated data, if available)

SUBSTANCES INVOLVED	CHARACTERISTICS	MEDIA	ESTIMATED CONCENTRATIONS	LOWEST PEL, or TLV
Lead	TO	GW	50 ppb	0.05 ☐ PPM ☒ mg/m ³
Cadmium	TO	GW	15 ppb	0.01 ☐ PPM ☒ mg/m ³

Media types: GW (ground water), SW (surface water), WW (wastewater), AIR (air), SL (soil), SD (sediment), WL (waste, liquid), WS (waste, solid), WD (waste, sludge), WG (waste, gas), OT (other).

Characteristics: CA (corrosive, acid), CC (corrosive, caustic), IG (ignitable), RA (radioactive), VO (volatile), TO (toxic), RE (reactive), BIO (infectious), UN (unknown), OT (other, describe)

(2) DESCRIBE POTENTIAL FOR CONTACT WITH EACH MEDIA TYPE FOR EACH OF THE MPI TASKS LISTED IN SEC 3 (E):

MPI TASK	ROUTE OF EXPOSURE (INHAL/INGEST/CONTACT/ABSORB)	POTENTIAL FOR CONTACT (HIGH / MEDIUM / LOW)	METHOD OF CONTROL
1	Ingest/Contact	Low	WORK PRACTICES/PPE

The Site Safety Officer will brief the MPI field team on symptoms and signs of overexposure to chemical hazards

SECTION 6: SITE CONTROL MEASURES**(A) WORK ZONES - EXCAVATIONS, DRILLING OPERATIONS, AND HEAVY EQUIPMENT**

Jeremy Wyckoff has been designated to coordinate access control and security for Malcolm Pirnie operations on site. It is a Malcolm Pirnie policy that Malcolm Pirnie personnel will not enter trench or excavated areas without approval of Corporate Health and Safety. A safe perimeter has been established at the boundary of any excavation and/or a safe distance from excavators, drill rigs and other heavy equipment.

These boundaries are identified by: SITE ACCESS WILL BE RESTRICTED BY THE PERIMETER PROPERTY FENCE.

No unauthorized person should be within this area.

(B) WORK ZONES - CONTAMINATION

The prevailing wind conditions are WESTERLY. A wind direction indicator is used to determine daily wind direction. The Command Post is located upwind from the Exclusion Zone or at a sufficient distance to prevent exposure should a release occur.

Control boundaries have been established and Exclusion Zone(s) (the contaminated area) have been identified. (Attach site map)

These boundaries are identified by: CONTAMINATION IS IN THE SUB-SURFACE – EXCLUSION ZONE WILL BE IMMEDIATE WORK AREA.

No unauthorized person should be within this area.

SECTION 7: SAFETY PROCEDURES / EQUIPMENT REQUIRED

Identify all procedures and equipment needed to eliminate or minimize exposure to hazards identified in Section 5.

☐ AIR MONITORING EQUIPMENT (See Section 9)	☒ FIRST AID KIT / BBP KIT	☐ MSDSs - FACILITY / OTHERS
☐ BARRIER TAPE	☐ FLOTATION DEVICE (USCG)	☐ PPE - PHYSICAL HAZARDS (See Section 15)
☒ COMMUNICATIONS - ONSITE	☐ GFCI EXTENSION CORDS	☒ PPE - CHEMICAL HAZARDS (See Section 15)
☒ COMMUNICATIONS - OFFSITE (i.e., cell/digital phones if no other means)	☐ HARNESS(S) / LIFELINE(S)	☐ RESPIRATORY PROTECTION PROGRAM & EQUIPMENT (APR) (See Section 15)
☐ CONFINED SPACE PROGRAM & EQUIPMENT (See Section 12)	☒ INSECT / TICK REPELLANT	☐ RESPIRATORY PROTECTION PROGRAM & EQUIPMENT (SAR) (See Section 15)
☐ EYE WASH	☐ HUNTING SEASON	☐ TRAFFIC CONES
☐ EMERGENCY SHOWERS	☐ LADDER(S)	☐ VENTILATION EQUIPMENT
☐ EMERGENCY AIR HORN	☐ LIGHTING - HAND HELD	☐ OTHER:
☐ FALL PROTECTION PROGRAM & EQUIPMENT	☐ LIGHTING - FIXED / EMERGENCY	
☐ FIRE EXTINGUISHER(S) - ABC	☐ LOCKOUT/TAGOUT PROGRAM & EQUIPMENT	
	☐ MSDSs – ATTACHED (See Section 11)	

SECTION 8: COMMUNICATIONS AND SAFE WORK PRACTICES

(A) COMMUNICATIONS - ONSITE

Whenever possible, communications between site personnel should be face-to-face. When verbal communications is not possible, radio communications shall be established.

In case of radio communications failure, or when respiratory protection is in use, the following hand signals will be used:

OK; I AM ALL RIGHT; I UNDERSTAND	THUMBS UP
NO; NEGATIVE	THUMBS DOWN
NEED ASSISTANCE	BOTH HANDS ON TOP OF HEAD
DANGER - NEED TO LEAVE AREA, NO QUESTIONS	GRIP PARTNERS WRIST WITH BOTH HANDS
HAVING DIFFICULTY BREATHING	HANDS TO THROAT

(B) COMMUNICATIONS - OFF SITE

If applicable, telephone communication to the Command Post should be established as soon as practical.

Telephone numbers that can be used to reach the command post are:

518-250-7300

and

518-250-7360

(C) SAFE WORK PRACTICES

1. A "BUDDY SYSTEM" IN WHICH ANOTHER WORKER IS CLOSE ENOUGH TO RENDER IMMEDIATE AID WILL BE IN EFFECT. CLIENTS AND/OR CONTRACTORS MAY SERVE AS A "DESIGNATED BUDDY."
2. WHERE THE EYES OR BODY MAY BE EXPOSED TO CORROSIVE MATERIALS, SUITABLE FACILITIES FOR QUICK DRENCHING OR FLUSHING SHALL BE AVAILABLE FOR IMMEDIATE USE (SEE SECTION 7).
3. DO NOT KNEEL ON THE GROUND WHEN CHEMICAL PROTECTIVE CLOTHING IS BEING USED.
4. IF DRILLING EQUIPMENT IS INVOLVED, HAVE A CURRENT UTILITY SURVEY, AND KNOW WHERE THE 'KILL SWITCH' IS.
5. CONTACT WITH SAMPLES, EXCAVATED MATERIALS, OR OTHER CONTAMINATED MATERIALS MUST BE MINIMIZED.
6. ALL ELECTRICAL EQUIPMENT USED IN OUTSIDE LOCATIONS, WET AREAS OR NEAR WATER MUST BE PLUGGED INTO GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTED OUTLETS (SEE SECTION 7).
7. IN THE EVENT OF TREACHEROUS WEATHER-RELATED WORKING CONDITIONS (I.E., THUNDERSTORM, LIMITED VISIBILITY, EXTREME COLD OR HEAT) FIELD TASKS WILL BE SUSPENDED UNTIL CONDITIONS IMPROVE OR APPROPRIATE PROTECTION FROM THE ELEMENTS IS PROVIDED.
8. SMOKING, EATING, CHEWING GUM OR TOBACCO, OR DRINKING ARE FORBIDDEN EXCEPT IN CLEAN OR DESIGNATED AREAS.
9. USE OF CONTACT LENSES NEAR CHEMICALS OR DURING USE OF RESPIRATORY PROTECTION IS PROHIBITED AT ALL TIMES.
10. GOOD HOUSEKEEPING PRACTICES ARE TO BE MAINTAINED.
11. SITE / FACILITY SPECIFIC SAFE WORK PRACTICES:
NOT APPLICABLE

SECTION 9: ENVIRONMENTAL MONITORING

☒ THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES

- (A) The following environmental monitoring instruments shall be used on site at the specified intervals and recorded in the site logbook.
(NOTE: If monitoring period is "OTHER", monitoring schedule will be attached to this plan.)

EQUIPMENT		MONITORING PERIOD				ACTION LEVEL
☐ Combustible Gas Indicator		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	
☐ O ₂ Meter		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	
☐ Toxics: ☐ CO ☐ H ₂ S		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	
☐ Other: _____		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	
☐ PID (Lamp _____ eV)		☒ Continuous*	☐ Hourly	☐ x Day	☐ Other	
☐ FID						
☐ Colorimetric tubes:						
_____		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	
_____		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	
☐ Radiation: ☐ α ☐ β ☐ gamma		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	
☐ Respirable Dust Meter		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	
☐ Noise Meter		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	
☐ Other: _____		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	
_____		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	
_____		☐ Continuous	☐ Hourly	☐ x Day	☐ Other	

- (B) Monitoring equipment is to calibrated according to manufacturers' instructions. Record calibration data and air concentrations in the Health and Safety on-site log book.
- (C) Recommended Action Levels for Upgrade or Downgrade of Respiratory Protection, or Site Shutdown and Evacuation. These are average values. Consideration should be given to the potential for release of highly toxic compounds from the waste or from reaction by-products. Levels are for persistent (> 10 min) breathing zone measurements in non-confined spaces. **For unexpected conditions, stop all work and contact Corporate Health and Safety.**

Oxygen Levels

Less than 19.5%
19.5% to 23.5%
Greater than 23.5%

Level B necessary for work to start / continue. Consider toxicity potential.
Work may start / continue. Investigate changes. Continuous monitoring.
PROHIBITED WORK CONDITION

Flammability / Explosive Hazards

Less than 10% of LEL
10% to 25% of LEL
Greater than 25% of LEL

Work may start / continue. Consider toxicity potential.
Work may start / continue. Continuous monitoring.
PROHIBITED WORK CONDITION.

Uncharacterized Airborne Organic Vapors or Gases

Background*
Up to 5 meter units (m.u. or "ppm") above background

Work may start / continue. Continue to monitor conditions.
Level C necessary for work to start / continue. Continuous monitoring. Use Colorimetric tubes to characterize vapors.

Up to 50 m.u. above background
Greater than 50 m.u.

* Off-site clean air measurement

Level B necessary for work to start / continue. Continuous monitoring.
PROHIBITED WORK CONDITION.

Characterized Airborne Organic Vapors or Gases**

Up to 50% of TLV, or PEL or REL
Up to 25 times the TLV, or PEL or REL
Up to 500 times the TLV, or PEL or REL
Greater than 500 times the TLV, or PEL or REL

Work may start / continue. Continue to monitor conditions.
Level C necessary for work to start / continue. Continuous monitoring.
Level B necessary for work to start / continue. Continuous monitoring.
PROHIBITED WORK CONDITION.

** Use mixture calculations (% allowed = 3C_NEL_N) if more than one contaminant is present.

Radiation

Less than 0.5 mR/Hour (500 μR)
Up to 1 mR/Hour above background
Greater than 1 mR/Hour above background

Work may start / continue. Continue to monitor conditions.
Work may start / continue with Radiation Safety Officer present on site.
PROHIBITED WORK CONDITION.

*PID monitoring will be conducted continuously during intrusive activities (i.e., drilling and test pit excavation).

SECTION 10: PERSONAL MONITORING☐ THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES

(A) PERSONAL EXPOSURE SAMPLING (Consider if high levels of noise or high concentrations of lead, mercury or arsenic are present)

The following personal monitoring will be in effect on site: _____

A copy of personal monitoring results is to be sent to Corporate Health and Safety for inclusion in the Employee's Confidential Exposure Record File.

(B) HEAT / COLD STRESS MONITORING

The expected air temperature will be 20-80 °F. If it is determined that heat stress or cold stress monitoring is required (mandatory for heavy exertion in PPE at temperatures over 70°F, or at temperatures under 40°F or wind chill equivalent), the following procedures shall be followed (describe procedures in effect, for heat stress i.e., monitoring body temperature, body weight, pulse rate; for cold stress i.e., appropriate clothing, shelter breaks):

HEAT AND COLD STRESS MONITORING BY PERSONAL OBSERVATION WILL BE PERFORMED.

_____**SECTION 11: HAZARD COMMUNICATION PROGRAM**☒ THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES

If chemicals are introduced to the site by Malcolm Pirnie (e.g., decontamination liquids, preservatives, etc.), a copy of the Malcolm Pirnie Hazard Communication Program and Material Safety Data Sheets (MSDSs) of chemicals introduced by Malcolm Pirnie to the site is attached to this plan. The Site Safety Officer will review this information with all field personnel prior to the start of the project, and will inform other employers (e.g., Owner, Contractor and Subcontractors) the availability and location of this information. The Comprehensive List of Chemicals introduced by Malcolm Pirnie to this site is:

All chemicals being introduced to the site, hazardous/potentially hazardous samples prepared at the site, and/or any hazardous materials previously sent to the site, **that will be stored at the site or will be transported from the site by common carrier**, will be packaged, labeled and identified as hazardous materials in accordance with U.S. Department of Transportation (DOT) and/or International Air Transport Association (IATA) regulations by a trained HazMat employee.

(NOTE: At multi-employer sites, the Site Safety Officer will obtain information, if applicable, on hazardous chemicals other employers may produce or introduce to the job site to which Malcolm Pirnie employees may be exposed, including the location of their written hazard communication program(s), labeling program(s), and Material Safety Data Sheet(s).

SECTION 12: CONFINED SPACE ENTRY☒ THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES

If a permit-required confined space entry will be made on site, a copy of the Malcolm Pirnie Confined Space Entry Program, and a completed Malcolm Pirnie Confined Space Pre-Entry Inspection Check List will be attached to this plan. A Confined Space Entry Permit must be completed and posted outside the confined space prior to entry, and the entry will follow the Malcolm Pirnie Confined Space Entry written program. Permits are to be saved and logged with project documentation.

SECTION 13: EXCAVATION SAFETY☒ THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES

Excavations being created in order to accomplish Malcolm Pirnie tasks or in progress during Malcolm Pirnie inspection of other activities or tasks, shall be shored or slopped or otherwise protected to prevent accidental collapse prior to entry, in accordance with Subpart F of 29 CFR 1926. It is Malcolm Pirnie policy that Malcolm Pirnie personnel will not enter trench or excavated areas without approval of Corporate Health and Safety. If an entry into an excavation by Malcolm Pirnie personnel is necessary, a Excavation Plan identifying the Competent Person and the protective measure to be used (i.e., sloping, shoring, trench box) will be attached to this plan.

SECTION 14: DECONTAMINATION PROCEDURES☒ THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES

Personnel and equipment leaving the Exclusion Zone shall be thoroughly decontaminated. The Site Safety Officer is responsible for monitoring adherence with this decontamination plan.

A _____ decontamination protocol shall be used with the following decontamination stations:

- (1) _____
- (2) _____
- (3) _____
- (4) _____
- (5) _____
- (6) _____
- (7) _____
- (8) _____
- (Other) _____

The following decontamination equipment is required:

- ☐ Decon Pad (Plastic Sheet) ☐ Dry Brushes ☐ Buckets Other _____
- ☐ Trash Cans/Bags ☐ Wet Brushes ☐ Hose / Spray _____

_____ Will be used as the decontamination solution

SECTION 15: PERSONAL PROTECTIVE EQUIPMENT

TASK *	RESPIRATORS & CARTRIDGE ¹	USE ** (See Section 16)	CLOTHING ***	GLOVES	BOOTS	OTHER
<u>1</u>	<u>N/A</u>	<u>N/A</u>	<u>N/S</u>	<u>N/A</u>	<u>SL</u>	<u>N/A</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

* Same as Section 3E

**UP = Upgrade
CONT = Continuous

*** NOTE: PPE use will be in accordance with Malcolm Pirnie's Health and Safety Policy and Written Programs.

CODES:

RESPIRATORS ¹	CARTRIDGES ¹	CLOTHING	GLOVES ²	BOOTS	OTHER
HF = Half Face APR FF = Full Face APR ESCBA = Escape Bottle SAR = Airline SCBA = SCBA	P = Particulate OV = Organic Vapors AG = Acid Gas Mult = Multi-Gas/Vapor Other	N/S = No Special C = Coveralls T = Tyvek Sx = Saranex PT = PE Tyvek	Co = Cotton Le = Leather ³ L = Latex N = Nitrile B = Butyl Neo = Neoprene V = Viton PVC = Polyvinyl Chloride PVA = Polyvinyl Alcohol Other:	SL = Leather Safety H = Hip (Fireman) O = Latex overboots	HH = Hard Hat ³ G = Safety Glasses ³ GP = Glare Protection GI = Goggles - Impact GS = Goggles - Splash FS = Face Shield HP = Hearing Protection ³ RV = Reflective Vests ³

¹ - List all that apply, i.e., FF w/ OV/AG/P

² - Use same codes for clothing and boots of same material

³ Should be considered for all field jobs

Respiratory protection will be upgraded under the following conditions:

N/A

The following cartridge change out schedule is to be followed onsite (attach any calculations to plan):

N/A

SECTION 16: EMERGENCY ACTION PLAN

The following standard emergency response procedures will be used by onsite personnel. The Site Safety Officer shall be notified of any onsite emergencies and be responsible for ensuring that the appropriate procedure are followed.

(A) EVACUATION

All work activities are suspended and the site is to be EVACUATED IMMEDIATELY, when there is a threat to life or health as determined by individual good judgment, i.e. fire, hazardous chemical spill, dangerous gas leak, severe weather (i.e., tornado); or when notified by other site / facility staff and local fire or police officials.

If an evacuation is called for, the emergency alarm system for weather-related, medical, fire and other evacuation emergencies is:

PERSONAL NOTIFICATION OR HAND SIGNALS

Evacuation from the Exclusion Zone should whenever possible occur through the decontamination line. In those situations where egress in this manner cannot occur, the following emergency escape routes have been designated (document on map if possible):

FOUNDRY STREET

Once evacuated off site, all staff should gather at FOUNDRY STREET which is a minimum of 250 feet away from the incident

(B) FIRE OR EXPLOSION

Upon discovery of a fire or an explosion, the above-designated emergency signal shall be sounded and all personnel shall assemble at the decontamination line. The fire department is to be notified and all personnel moved to a safe distance (minimum 250') from the involved area.

If a person's clothing should catch fire, burning clothing may be extinguished by having the individual drop to the floor and roll. If necessary, physically restrain the person and roll them around on the floor to smother the flames. Use a fire blanket or extinguisher if one is readily available and you have been trained in its use. Call emergency medical services if not already done so.

If a person's clothing should become saturated with a chemical, douse the individual with water from the nearest safety shower if available. Consult the chemical Material Safety Data Sheets (MSDSs) for further information. Call emergency medical services if indicated by the MSDSs.

NEVER RE-ENTER THE SITE / FACILITY until the emergency has been declared over and permission to re-enter has been given by site / facility health and safety staff or local fire or police officials. If any staff is unaccounted for, notify an individual in charge.

(C) MEDICAL EMERGENCY

If you discover a medical emergency and are by yourself, CALL OUT FOR HELP. When someone arrives, tell them to call for help. If no one comes or you know you are alone, provide whatever care you can for 1 minute, then make the call yourself. (See Section 2)

Upon notification of an injury in the Exclusion Zone, the designated emergency signal shall be sounded. All site personnel shall assemble at the decontamination line. The SSO or alternate should evaluate the nature of the injury, and the affected person should be decontaminated to the extent possible prior to movement to the Support Zone. The onsite CPR/FA personnel shall initiate the appropriate first aid, and contact should be made for an ambulance (and other emergency services as needed) and with the designated medical facility (if required). No persons shall reenter the Exclusion Zone until the cause of the injury or symptoms is determined.

The hospital is 3 minutes from the site. Ambulance response time is minutes. N/A
of N/A was contacted on and briefed on the situation,
the potential hazards, and the substances involved. When IDLH conditions exist, arrangements should be made for onsite standby of emergency services.

A map for directions to the nearest hospital is attached to this plan. If not, the directions are: SEE ATTACHED MAP

(D) SAFETY EQUIPMENT FAILURE

If any other equipment (i.e., air monitoring) on site fails to operate properly, the FTL and/or SSO shall be notified to determine the effect of this failure on continuing operations on site. If the failure affects the safety of personnel or prevents completion of the Work Plan tasks, all personnel shall leave the work area until the situation is evaluated and appropriate actions taken.

(E) FOLLOW UP

In all situations, when an on site / facility emergency results in evacuation of the work area, or a "large spill" has occurred, staff shall not resume work until:

- The conditions resulting in the emergency have been corrected;
- The hazards reassessed by the SSO and Corporate Health and Safety;
- The HASP has been reviewed by the SSO and Corporate Health and Safety; and
- Site personnel have been briefed on any changes in the HASP by the SSO.

SECTION 17: SPILL CONTAINMENT / CONTROL☒ THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES

For most chemicals introduced to the worksite, or under control of Malcolm Pirnie employees, spills of chemicals would be considered incidental and would be controlled in the immediate area of the spill. Such spills shall be handled utilizing precautions appropriate for the chemical characteristics specified in the MSDS for the chemical including spill control methods and selection and use of minimum personal protective equipment.

For chemicals introduced to the worksite, or under control of Malcolm Pirnie employees, that would cause a "large spill" (greater than 55 gallons), a copy of the appropriate Emergency Response Guidebook (ERG) guide shall be attached to this plan, and a spill response contractor shall be identified in Section 2.

SECTION 18: EMPLOYEE ACKNOWLEDGEMENTS

PLAN REVIEWED BY:

DATE

Project Manager:

Bruce Nelson

Project Leader:

Jeremy Wyckoff

Local H&S Coordinator:

Aaron Bobar

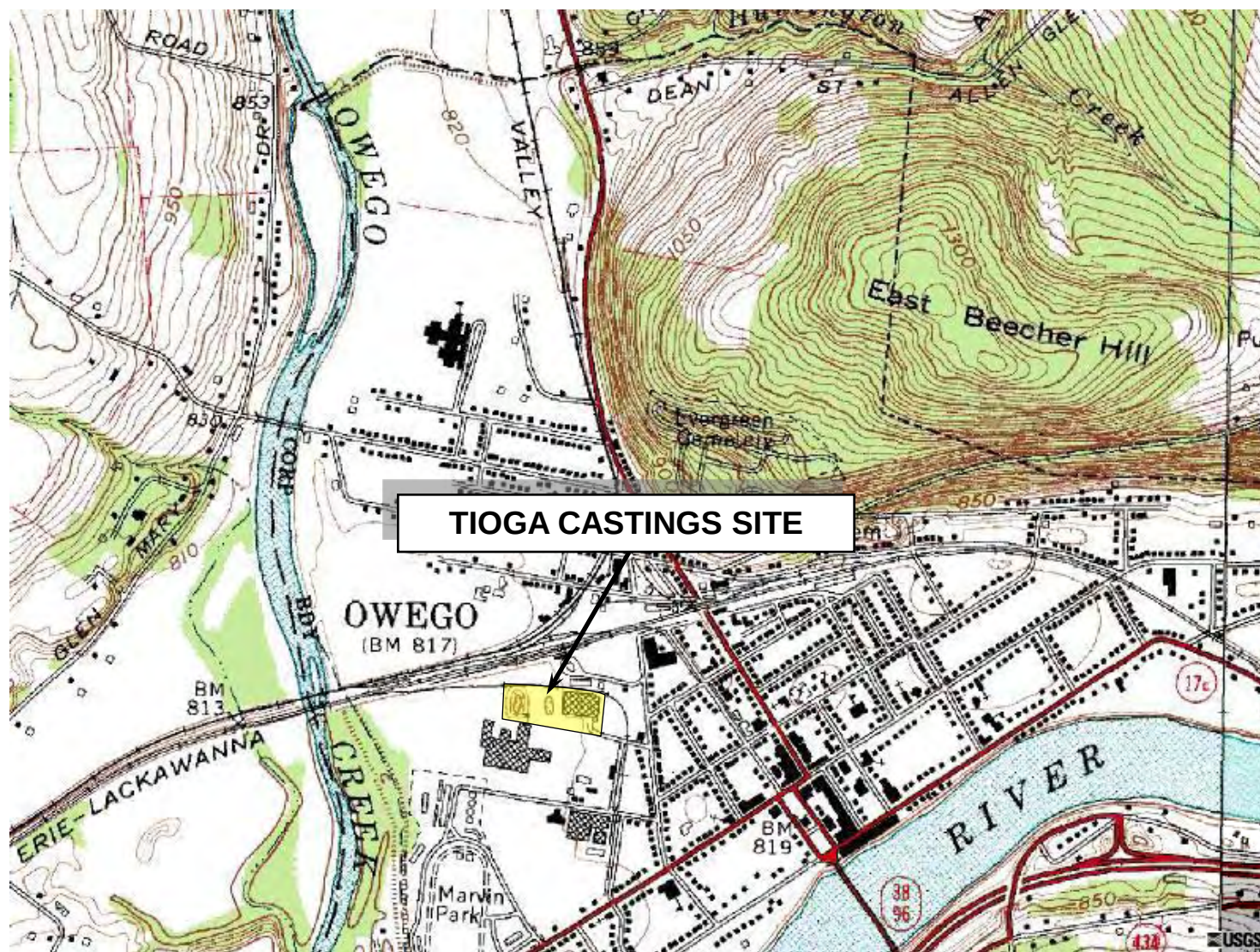
Corporate H & S

I acknowledge that I have read the information on this HASP, attached Material Safety Data Sheets (MSDSs), DOT Emergency Response Guides, and Health and Safety Programs.
I understand the site / facility hazards as described and agree to comply with the contents of the plan.

EMPLOYEE (Print Name)

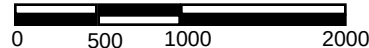
VISITOR (Print Name)

ATTACHED DOCUMENTS☐ MSDS(s)☐ Hazard Communication
Written Program☐ Confined Space Entry
Written Program☐ DOT ERG Guides☒ Site Map☐ Personal Protective Equipment
Written Program☐ Excavation Safety Plan☐ Respiratory Protection
Program☒ Hospital Directions☐ Emergency Action Plan☐ Evacuation Routes☐ Cartridge Change Out
Calculations☐ Other



TIOGA CASTINGS SITE

SCALE IN FEET

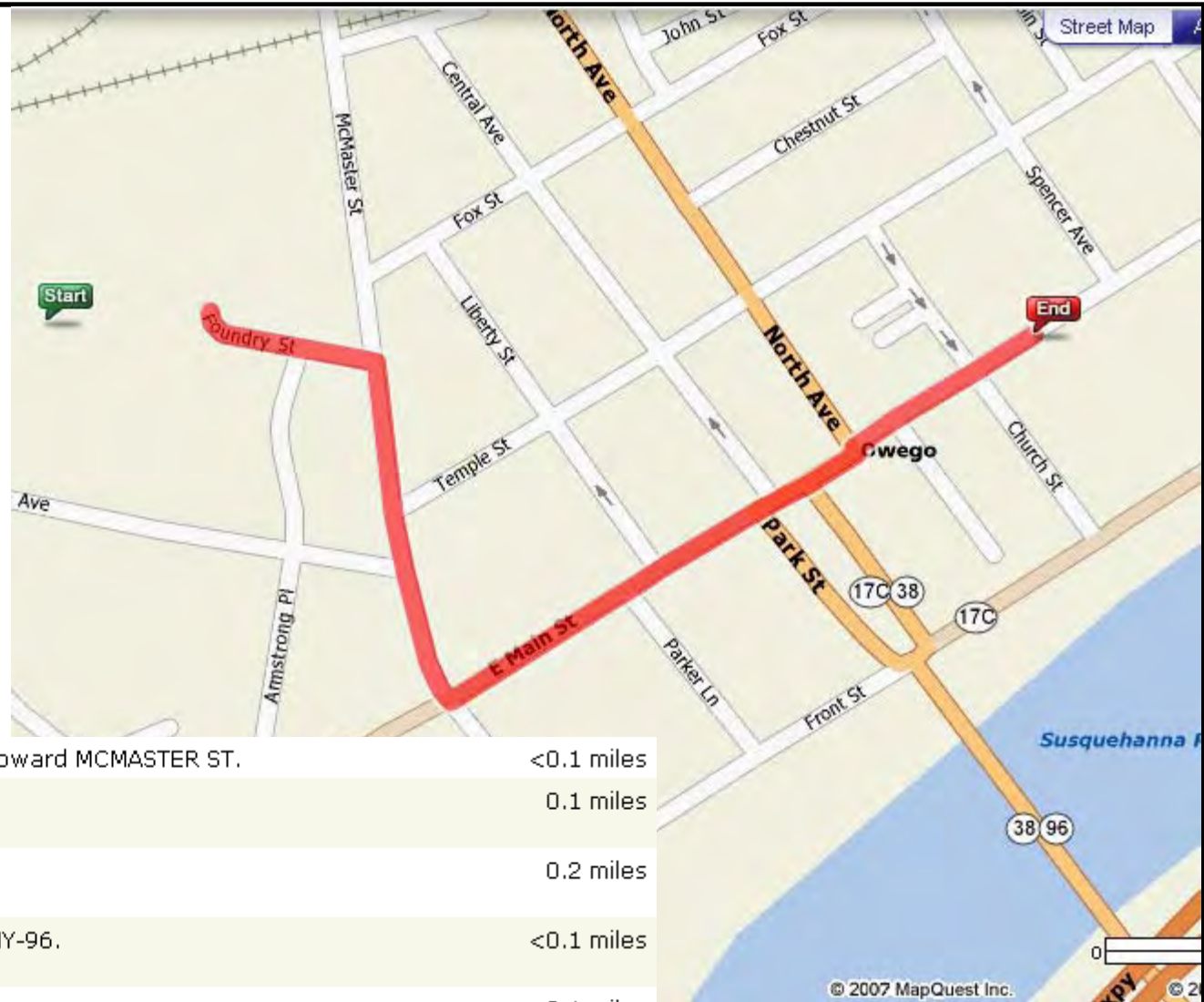


SOURCE: U.S.G.S 7.5 MIN. OWEGO QUAD, 1990

**MALCOLM
PIRNIE**

NYSDEC STANDBY CONTRACT NO. D004443
TIOGA CASTING FACILITIES
OWEGO, NEW YORK
TIOGA CASTINGS SITE LOCATION

FIGURE 1



1: Start out going EAST on FOUNDRY ST toward MCMASTER ST.	<0.1 miles
2: Turn RIGHT onto MCMASTER ST.	0.1 miles
3: Turn LEFT onto E MAIN ST / NY-17C.	0.2 miles
4: E MAIN ST / NY-17C becomes NY-38 / NY-96.	<0.1 miles
5: Turn RIGHT onto E MAIN ST.	0.1 miles
6: End at 231 Main St Owego, NY 13827-1628, US	

**MALCOLM
PIRNIE**

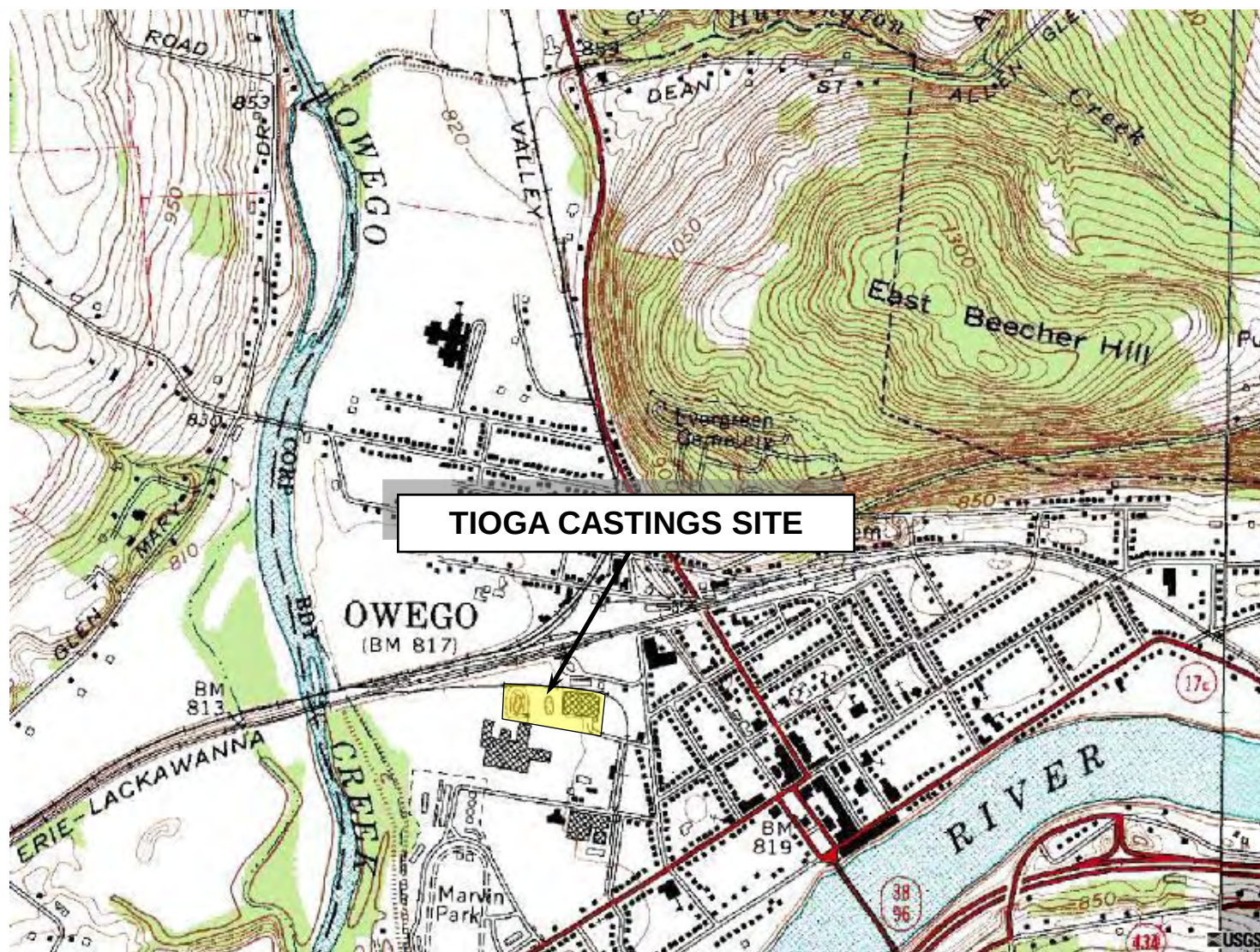
NYSDEC STANDBY CONTRACT NO. D004443
TIOGA CASTING FACILITIES
OWEGO, NEW YORK
HOSPITAL DIRECTIONS

FIGURE 2

7. References

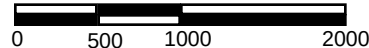
Malcolm Pirnie, Inc., 2008, Investigation Report - Tioga Castings Site, Oswego New York New.





TIOGA CASTINGS SITE

SCALE IN FEET

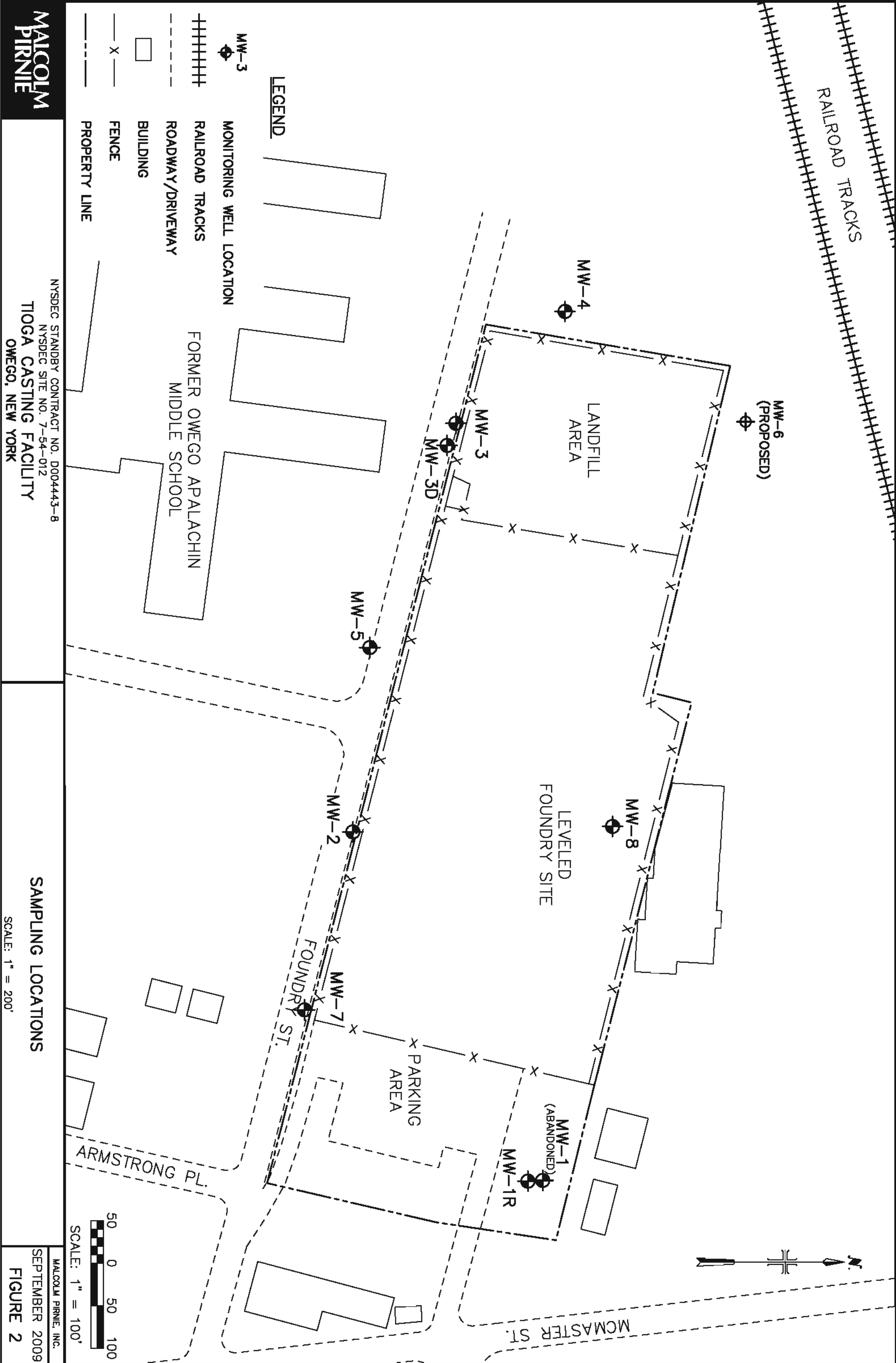


SOURCE: U.S.G.S 7.5 MIN. OWEGO QUAD, 1990

**MALCOLM
PIRNIE**

NYSDEC STANDBY CONTRACT NO. D004443
TIOGA CASTING FACILITIES
OWEGO, NEW YORK
TIOGA CASTINGS SITE LOCATION

FIGURE 1



Appendix A

NYSDEC Analytical Data Summary



Appendix A
Groundwater Sampling Summary - Metals
Tioga Casting Site
NYSDEC Site Number 7-54-012

Date Sample	NYSDEC Class GA	Site-Specific Cleanup Goal	Apr-09 MW-1R	Apr-09 MW-2	Apr-09 MW-3	Apr-09 MW-3D
Aluminum			1050	632	195	668
Antimony			6.68 U	6.68 U	6.68 U	6.68 U
Arsenic	25		2.95 U	2.95 U	2.95 U	2.95 U
Barium	1000		59.8 B	102	38.3 B	39.2 B
Beryllium			0.45 U	0.45 U	0.45 U	0.45 U
Cadmium	5	10	0.34 U	0.34 U	0.34 U	0.34 U
Calcium			61200	50900	42900	42300
Chromium	50	50	10.4 B	5.79 B	3.53 B	3.84 B
Cobalt			3.76 U	3.76 U	3.76 U	3.76 U
Copper			181	105	71.3	56.6
Iron			1410	532	144 B	558
Lead	25	25	1.4 U	1.4 U	1.54 B	1.4 U
Magnesium			11500	8320	7450	7490
Manganese			106	211	14 B	40.3 B
Mercury	0.7		NA	NA	NA	NA
Molybdenum			5.48 B	5 U	5 U	5 U
Nickel			6.92 B	7.3 B	4.15 B	3.92 B
Potassium			2070 B	4550	1430 B	1550 B
Selenium	10		11.41 U	11.41 U	11.41 U	11.41 U
Silver	50		2.19 U	2.19 U	2.19 U	2.19 U
Sodium	20000		25600	25200	17000	17300
Thallium			2.99 U	2.99 U	2.99 U	2.99 U
Tin			5 U	5 U	5 U	5 U
Titanium			8.75 B	5 U	5 U	5 U
Vanadium			4.72 U	4.72 U	4.72 U	4.72 U
Zinc			13.5 U	13.5 U	13.5 U	13.5 U

 Exceeds NYSDEC Class GA Standard.

 Exceeds NYSDEC Class GA Standard and site-specific cleanup goal.

NA - Not Analyzed.

U - Analyte not detected.

B - Result above MDL but less than RL.

Appendix A
Groundwater Sampling Summary - Metals
Tioga Casting Site
NYSDEC Site Number 7-54-012

Date Sample	NYSDEC Class GA	Site-Specific Cleanup Goal	Apr-09 MW-4	Apr-09 MW-5	Apr-09 MW-7	Apr-09 MW-8
Aluminum			754	102 B	1810	6190
Antimony			6.68 U	6.68 U	6.68 U	6.68 U
Arsenic	25		2.95 U	2.95 U	2.95 U	2.95 U
Barium	1000		60.9 B	47.1 B	165	219
Beryllium			0.45 U	0.45 U	0.45 U	0.45 U
Cadmium	5	10	0.34 U	0.34 U	0.34 U	0.34 U
Calcium			40500	44000	64300	52400
Chromium	50	50	3.43 B	3.88 B	10.4 B	8.92 B
Cobalt			3.76 U	3.76 U	5.83 B	3.76 U
Copper			49.7	89.3	178	66.3
Iron			667	246	2880	4530
Lead	25	25	1.4 U	6.03 B	30.2 B	17.3 B
Magnesium			7080	7440	10000	8740
Manganese			79.4	10.1 B	989	524
Mercury	0.7		NA	NA	NA	NA
Molybdenum			5 U	5 U	5 B	5 U
Nickel			4.46 B	4.97 B	10.6 B	9.48 B
Potassium			1190 B	2880 B	4510	3770
Selenium	10		11.41 U	11.41 U	11.41 U	11.41 U
Silver	50		2.19 U	2.19 U	2.19 U	2.19 U
Sodium	20000		15200	13300	57500	26700
Thallium			2.99 U	2.99 U	2.99 U	2.99 U
Tin			5 U	5 U	5 U	5 U
Titanium			5 U	5 U	5 U	34.4 B
Vanadium			4.72 U	4.72 U	7.18 B	9.75 B
Zinc			13.5 U	13.5 U	40.4 B	40.2 B

 Exceeds NYSDEC Class GA Standard.

 Exceeds NYSDEC Class GA Standard and site-specific cleanup goal.

NA - Not Analyzed.

U - Analyte not detected.

B - Result above MDL but less than RL.

Appendix A
Groundwater Sampling Summary - VOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Date Sample	NYSDEC Class GA	Apr-09 MW-1R	Apr-09 MW-2	Apr-09 MW-3	Apr-09 MW-3D
1,1,1-Trichloroethane	5	10 U	10 U	10 U	10 U
1,1,2,2,-Tetrachloroethane	5	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	1	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5	10 U	10 U	10 U	10 U
1,1-Dichloroethene	5	10 U	10 U	10 U	10 U
1,2,3-Trichlorobenzene		10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	5	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	3	10 U	10 U	10 U	10 U
1,2-Dichloroethane	0.6	10 U	10 U	10 U	10 U
1,2-Dichloropropane	1	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	3	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	3	10 U	10 U	10 U	10 U
2-Butanone	50	10 U	10 U	10 U	10 U
2-Chlorotoluene		10 U	10 U	10 U	10 U
2-Hexanone		10 U	10 U	10 U	10 U
4-Chlorotoluene		10 U	10 U	10 U	10 U
4-Methyl-2-pentanone		10 U	10 U	10 U	10 U
Acetone		15 U	15 U	15 U	15 U
Benzene	1	10 U	10 U	10 U	10 U
Bromodichloromethane	50	10 U	10 U	10 U	10 U
Bromoform		10 U	10 U	10 U	10 U
Bromomethane	5	10 U	10 U	10 U	10 U
Carbon Disulfide		10 U	10 U	10 U	10 U
Carbon Tetrachloride	5	10 U	10 U	10 U	10 U
Chlorobenzene	5	10 U	10 U	10 U	10 U
Chloroethane	5	10 U	10 U	10 U	10 U
Chloroform	7	10 U	10 U	10 U	10 U
Chloromethane		10 U	10 U	10 U	10 U
cis 1,2-Dichloroethene	5	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	0.4	10 U	10 U	10 U	10 U
Dibromochloromethane		10 U	10 U	10 U	10 U
Dichlorodifluoromethane	5	10 U	10 U	10 U	10 U
Ethylbenzene	5	10 U	10 U	10 U	10 U
m,p-Xylenes		10 U	10 U	10 U	10 U
Methylene Chloride	5	10 U	10 U	10 U	10 U
Methyl-tert butyl ether	10	10 U	10 U	10 U	10 U
o-Xylene		10 U	10 U	10 U	10 U
Styrene	5	10 U	10 U	10 U	10 U
Tetrachloroethene	5	10 U	10 U	10 U	10 U
Toluene	5	10 U	10 U	10 U	10 U
trans 1,2-Dichloroethene	5	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	0.4	10 U	10 U	10 U	10 U
Trichloroethene	5	10 U	10 U	10 U	10 U
Trichlorofluoromethane	5	10 U	10 U	10 U	10 U
Vinyl Acetate		10 U	10 U	10 U	10 U
Vinyl Chloride	2	10 U	10 U	10 U	10 U

J - Estimated.

U - Analyte not detected at the indicated quantitation limit.

Appendix A
Groundwater Sampling Summary - VOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Date Sample	NYSDEC Class GA	Apr-09 MW-4	Apr-09 MW-5	Apr-09 MW-7	Apr-09 MW-8
1,1,1-Trichloroethane	5	10 U	10 U	10 U	10 U
1,1,2,2,-Tetrachloroethane	5	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	1	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5	10 U	10 U	10 U	10 U
1,1-Dichloroethene	5	10 U	10 U	10 U	10 U
1,2,3-Trichlorobenzene		10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	5	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	3	10 U	10 U	10 U	10 U
1,2-Dichloroethane	0.6	10 U	10 U	10 U	10 U
1,2-Dichloropropane	1	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	3	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	3	10 U	10 U	10 U	10 U
2-Butanone	50	10 U	10 U	10 U	10 U
2-Chlorotoluene		10 U	10 U	10 U	10 U
2-Hexanone		10 U	10 U	10 U	10 U
4-Chlorotoluene		10 U	10 U	10 U	10 U
4-Methyl-2-pentanone		10 U	10 U	10 U	10 U
Acetone		15 U	15 U	15 U	15 U
Benzene	1	10 U	10 U	10 U	10 U
Bromodichloromethane	50	10 U	10 U	10 U	10 U
Bromoform		10 U	10 U	10 U	10 U
Bromomethane	5	10 U	10 U	10 U	10 U
Carbon Disulfide		10 U	10 U	10 U	10 U
Carbon Tetrachloride	5	10 U	10 U	10 U	10 U
Chlorobenzene	5	10 U	10 U	10 U	10 U
Chloroethane	5	10 U	10 U	10 U	10 U
Chloroform	7	10 U	10 U	10 U	10 U
Chloromethane		10 U	10 U	10 U	10 U
cis 1,2-Dichloroethene	5	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	0.4	10 U	10 U	10 U	10 U
Dibromochloromethane		10 U	10 U	10 U	10 U
Dichlorodifluoromethane	5	10 U	10 U	10 U	10 U
Ethylbenzene	5	10 U	10 U	10 U	10 U
m,p-Xylenes		10 U	10 U	10 U	10 U
Methylene Chloride	5	10 U	10 U	10 U	10 U
Methyl-tert butyl ether	10	10 U	10 U	10 U	10 U
o-Xylene		10 U	10 U	10 U	10 U
Styrene	5	10 U	10 U	10 U	10 U
Tetrachloroethene	5	10 U	10 U	10 U	10 U
Toluene	5	10 U	10 U	4 J	10 U
trans 1,2-Dichloroethene	5	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	0.4	10 U	10 U	10 U	10 U
Trichloroethene	5	10 U	10 U	10 U	10 U
Trichlorofluoromethane	5	10 U	10 U	10 U	10 U
Vinyl Acetate		10 U	10 U	10 U	10 U
Vinyl Chloride	2	10 U	10 U	10 U	10 U

J - Estimated.

U - Analyte not detected at the indicated quantitation li

Appendix A
Groundwater Sampling Summary - SVOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Date Sample	Apr-09 MW-1R	Apr-09 MW-2	Apr-09 MW-3	Apr-09 MW-3D	Apr-09 MW-4	Apr-09 MW-5	Apr-09 MW-7	Apr-09 MW-8
1,2,4-Trichlorobenzene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
1,2-dichlorobenzene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
1,3-dichlorobenzene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
1,4-dichlorobenzene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
2,4,5-trichlorophenol	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
2,4,6-trichlorophenol	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
2,4-dichlorophenol	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
2,4-dimethylphenol	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
2,4-Dinitrotoluene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
2,6-Dinitrotoluene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
2-chloronaphthalene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
2-chlorophenol	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
2-methyl-4,6-dinitrophenol	23 U	24 U	22 U	24 U	24 U	23 U	23 U	22 U
2-Methylnaphthalene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
2-methylphenol	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
2-nitroaniline	23 U	24 U	22 U	24 U	24 U	23 U	23 U	22 U
2-nitrophenol	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
3,3'-dichlorobenzidine	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
3-nitroaniline	23 U	24 U	22 U	24 U	24 U	23 U	23 U	22 U
4-bromophenyl phenyl ether	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
4-chloro-3-methylphenol	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
4-chloroaniline	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
4-chlorophenyl phenyl ether	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
4-methylphenol	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
4-nitroaniline	23 U	24 U	22 U	24 U	24 U	23 U	23 U	22 U
4-nitrophenol	23 U	24 U	22 U	24 U	24 U	23 U	23 U	22 U
acenaphthene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
acenaphthylene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
anthracene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
benzo(a)anthracene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
benzo(a)pyrene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
benzo(b)fluoranthene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
benzo(g,h,i)perylene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
benzo(k)fluoranthene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U

Appendix A
Groundwater Sampling Summary - SVOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Date Sample	Apr-09 MW-1R	Apr-09 MW-2	Apr-09 MW-3	Apr-09 MW-3D	Apr-09 MW-4	Apr-09 MW-5	Apr-09 MW-7	Apr-09 MW-8
benzyl alcohol	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
bis(2-chloroethoxy)methane	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
bis(2-chloroethyl)ether	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
bis(2-chloroisopropyl)ether	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
bis(2-ethylhexyl)phthalate	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
butyl benzyl phthalate	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
Carbazole	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
chrysene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
dibenzo(a,h)anthracene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
Dibenzofuran	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
Diethyl phthalate	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
dimethylphthalate	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
di-n-butyl phthalate	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
di-n-octyl phthalate	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
fluoranthene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
fluorene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
Hexachlorobenzene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
Hexachlorobutadiene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
Hexachlorocyclopentadiene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
Hexachloroethane	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
indeno(1,2,3-cd)pyrene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
Isophorone	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
Naphthalene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
Nitrobenzene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
N-nitros-di-n-propylamine	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
N-nitrosodiphenylamine	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
pentachlorophenol	23 U	24 U	22 U	24 U	24 U	23 U	23 U	22 U
phenanthrene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
phenol	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
pyrene	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U

Appendix B

Operation and Maintenance Checklist



TIOGA CASTINGS SITE LANDFILL
Post-Closure Operation and Maintenance Checklist

Inspected by: _____

Date: _____ Time: _____

Weather Conditions: _____

LANDFILL COVER SYSTEM

Erosion	_____	YES	_____	NO
Holes or Cracks in Cover	_____	YES	_____	NO
Cap Settlement	_____	YES	_____	NO
Ponded Water or Wet Areas	_____	YES	_____	NO
Burrowing Rodents	_____	YES	_____	NO
Sparse Vegetation/Bare Soil	_____	YES	_____	NO
Brush or Other Woody Vegetation,	_____	YES	_____	NO
Excessive Weeds in Grass	_____	YES	_____	NO
Grass Mowed	_____	YES	_____	NO

DRAINAGE DITCHES

Erosion	_____	YES	_____	NO
Obstructions	_____	YES	_____	NO
Sediment Accumulation	_____	YES	_____	NO
Evidence of Surcharging	_____	YES	_____	NO
Presence of Brush	_____	YES	_____	NO

Comments: _____

Continued

FENCING

Gates and Locks	_____	OK	_____	OTHER
Posts	_____	OK	_____	OTHER
Top Tension Wire	_____	OK	_____	OTHER
Barbed Wire	_____	OK	_____	OTHER

Comments: _____

MONITORING WELLS

Capped and Locked	_____	YES	_____	NO
Casing Damage	_____	YES	_____	NO

Comments: _____

INSPECTOR' SIGNATURE _____ **DATE** _____

REPORT REVIEWED BY _____ **DATE** _____

REPORT FORWARDED TO NYSDEC _____ **DATE** _____

Appendix C

Site Contact List



Appendix C

Site Contact List

Tioga Casting Site - NYSDEC Site Number 7-54-012

Property Owner (from Tioga County Real Property Web site)

Tioga Foundry Corp
2065 Carmichael
Owego, NY 13827

New York State Department of Environmental Conservation

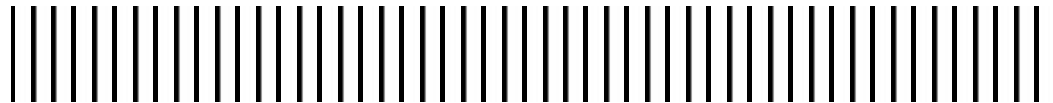
Payson Long
Environmental Engineer 1
Remedial Bureau E, Section D
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7013
(518) 402-9814

Malcolm Pirnie, Inc.

Jeremy Wyckoff
Project Hydrogeologist
855 Route 146, Suite 210
Clifton Park, New York 12605
(518) 250-7300

Appendix D

Notification List



Appendix D
Notification List
Tioga Casting Site
NYSDEC Site Number 7-54-012

Site Property Owner

John Sweet III
 2065 Carmichael
 Owego, NY 13827

NYSDEC

Payson Long - Environmental Engineer 1
 Division of Environmental Remediation
 Remedial Bureau E, Section D
 625 Broadway
 Albany, NY 12233-7013
 (518) 402-9814

Local Officials

Mayor
 Edward Arrington
 178 Main Street, Owego
 Owego, New York 13827

Tioga Count Legislature
 Dale N. Weston - Chair
 56 Main Street
 Owego, New York 13827

Village Clerk
 Rodney M. Marchewka
 178 Main Street, Owego
 Owego, New York 13827

Director of Utilities
 Michael Trivisonno
 2354 State Route 434
 Apalachin, New York 13732

Town Supervisor
 Donald Castellucci Jr.
 2354 State Route 434
 Apalachin, New York 13732

Chairman Planning Board
 Stewart Howard
 178 Main Street, Owego
 Owego, New York 13827

Schools

Owego-Apalachin Central School
 1 Sheldon Guile Blvd.
 Owego, New York 13827
 607-687-6230

Owego Elementary School
 1 Christa McAuliffe Dr.
 Owego, New York 13827
 607-687-6261

Owego-Apalachin Central School District
 Dr. William C. Russell - Superintendent
 36 Talcott Street
 Owego, NY 13827

Owego-Apalachin School District 1
 100 Elm Street
 Owego, New York 13827

Appendix D
Notification List
Tioga Casting Site
NYSDEC Site Number 7-54-012

Adjacent Property Owners ⁽¹⁾

128.07-2-1 Pinnacle Towers Inc. P.O. Box PMB353 4017 Washington Rd McMurray PA 15317	128.07-2-6 Thomas Clark 9-11 Lake St Owego NY 13827	128.07-2-3 Village of Owego and Owego Fire Department 178 Main St Owego NY 13827
128.07-2-15 Owego-Apalachin Central School 1 Sheldon Guile Blvd. Owego, New York 13827 607-687-6230	128.07-2-5.2 Roger Patterson 159A McMaster Street Owego NY 13827	128.07-2-5.1 Scott A Smith Family Llc 8 Delphine St Owego NY 13827
128.07-2-13 Stakmore Co Inc 30 Elm St Owego NY 13827	128.07-2-8 Village Of Owego 178 Main St Owego NY 13827	Village of Owego 20 Elm Street Owego, New York 13827

1 - Parcel and Property owner information from Tioga County Real Property web site.



Division of Hazardous Waste Remediation

Record of Decision

**Tioga Castings Site
Village of Owego, Tioga County
Site Number 7-54-012**

March 1995

TECHNOLOGY
SECTION
COPY

DECLARATION STATEMENT - RECORD OF DECISION

Tioga Castings Inactive Hazardous Waste Site

Village of Owego, Tioga County, New York

Site No. 9-07-010

Funding Source: 1986 Environmental Quality Bond Act

Statement of Purpose and Basis

This Record of Decision presents the selected remedial action for the Tioga Castings Inactive Hazardous Waste Disposal Site which was chosen in accordance with the New York State Environmental Conservation Law (ECL). The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40 CFR Part 300).

This decision is based upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Tioga Castings Inactive Hazardous Waste Site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A bibliography of the documents included as a part of the Administrative Record is included in Appendix B.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this Record of Decision, may present a current or potential threat to public health and the environment.

Description of Selected Remedy

Based upon the results of the Remedial Investigation/Feasibility Study (RI/FS) for the site and the criteria identified for the evaluation of alternatives, the NYSDEC has selected a remedy to consolidate contaminated material and place it on the existing on-site landfill followed by the placement of a low permeability cover over the landfill area.

The major elements of the selected remedy include:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Uncertainties identified during the RI/FS will be resolved.
2. Maintaining a fence around the landfill to limit site access as well as seeking deed restrictions to prevent site development activities in areas where contaminated material is present.

3. Consolidation of the on-site and off-site soils and waste piles that contain material above the cleanup goals for the site. These materials will be placed on the existing on-site landfill.
4. Placement of a low permeability cover over the on-site landfill.
5. Operation and maintenance of the remedy after the remedial construction is complete.
6. Monitoring of groundwater. This will be done to determine if the chosen alternative was successful in reducing the amount of infiltration, through contaminated material, to an amount which will not have an adverse impact upon groundwater quality.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedial action selected for this site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that employ treatment that reduces toxicity, mobility, or volume as principal element.

3/20/95

Date

Michael J. O'Toole Jr.

Michael J. O'Toole

Director, Division of Hazardous Waste Remediation
New York State Department of Environmental
Conservation

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1. Phase II RI Groundwater Results

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- A. Responsiveness Summary
- B. Administrative Record

Glossary of Acronyms

CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
ECL	Environmental Conservation Law
FWIA	Fish and Wildlife Impact Analysis
NA	Not Available
NCP	National Contingency Plan
ND	Not Detected
NYCRR	N.Y. Codes, Rules and Regulations
NYSDEC	N.Y. State Department of Environmental Conservation
NYSDOH	N.Y. State Department of Health
O&M	Operation and Maintenance
ppb	parts per billion
ppm	parts per million
PRAP	Proposed Remedial Action Plan
RI/FS	Remedial Investigation and Feasibility Study
ROD	Record of Decision
SCG	Standards, Criteria, and Guidance
SPDES	State Pollution Discharge Elimination System
TCLP	Toxic Characteristic Leaching Procedure
TWA	Time-Weighted Average

Notice

The mention of any trade names or commercial products in this document does not constitute any endorsement or recommendation for use by the New York State Department of Environmental Conservation.

RECORD OF DECISION

TIOGA CASTINGS SITE Owego(V), Tioga County, New York Site No. 7-54-012 January, 1995

SECTION 1: INTRODUCTION

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has selected a remedial program for the Tioga Castings inactive hazardous waste site. The main elements of the remedy include the consolidation of contaminated soils into the on-site landfill and the placement of an impermeable cap over the landfill.

This remedy will address the threat to human health and the environment created by the presence of elevated levels of metals (mainly lead and cadmium) in the soils at, as well as adjacent to, the site. This Record of Decision (ROD) identifies the selected remedy, summarizes the other alternatives considered, and discusses the rationale for this selection.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Tioga Castings (Site No. 7-54-012) site is approximately 7 acres in size and is located on Foundry Street, off of McMaster Street, in the Village of Owego, Tioga County (see Figure 1 on next page).

The former foundry building occupied the front (eastern) portion of the facility while the former landfill can be found at the western edge of the former facility. The former landfill is approximately one acre in size. The site is located in a residential/ commercial area, adjacent to the Owego-Apalachin Middle School (see Figure 2 for the site plan). The Owego Creek is located approximately one-half mile to the west and the Susquehanna River is located approximately one-half mile to the south. During the installation of groundwater monitoring wells during site investigations, geological sampling was conducted at 5 foot intervals down to a depth of approximately 17 feet. Materials encountered below the site include silt, sand, and gravel.

Groundwater below the site is generally encountered at approximately 10 to 15 feet below the ground surface. The first round of groundwater levels were 2 to 5 feet below ground surface. However, these levels were taken in April 1993 when groundwater was elevated as a result of snow melt and heavy rain. Groundwater flow direction is generally to the south-southeast.

The Weitsman Property site is a class 2a site located approximately 1500 feet south of the Tioga Castings site (On New York's registry of inactive hazardous waste disposal sites, "2a" is a temporary classification assigned to sites that have insufficient data for inclusion in any of the other classifications).

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

The Tioga Castings facility began operations on site between 1945 and 1947, and continued through 1988. The facility operated a cupola type foundry for the production of gray iron castings. Operations at the facility included smelting of pig iron, scrap iron (including engine blocks), coke, limestone and the use of phenol-formaldehyde treated sand to cast the iron. The process produced solid wastes which included sand molds, bentonite, fly ash, cast iron grindings, and fine baghouse ash/cupola dust. These wastes were reportedly disposed of at an off-site landfill until March 1979. The facility then operated an on site landfill for the disposal of its foundry wastes. The facility ceased operations in 1988. The following materials were left on site; sand casts, various drums, a number of one-ton plastic lined bags of cupola dust as well as the material contained in the on-site landfill. On July 11, 1989, the facility had a fire which destroyed most of the foundry structure and left the remaining building structurally unsafe.

EP Toxicity analyses of the cupola dust have shown it to be a hazardous waste as a result of the presence of lead and cadmium. An EP Toxicity analysis is a procedure which determines the ability of the soil to "leach" contaminants; that is, it determines how readily the contamination in the soil will contaminate water that passes through it. This is important in determining potential impacts to groundwater and in determining the waste's regulatory status as a hazardous waste. Total lead (or cadmium) analyses, on the other hand, simply determines how much lead (or cadmium) is present in the soil.

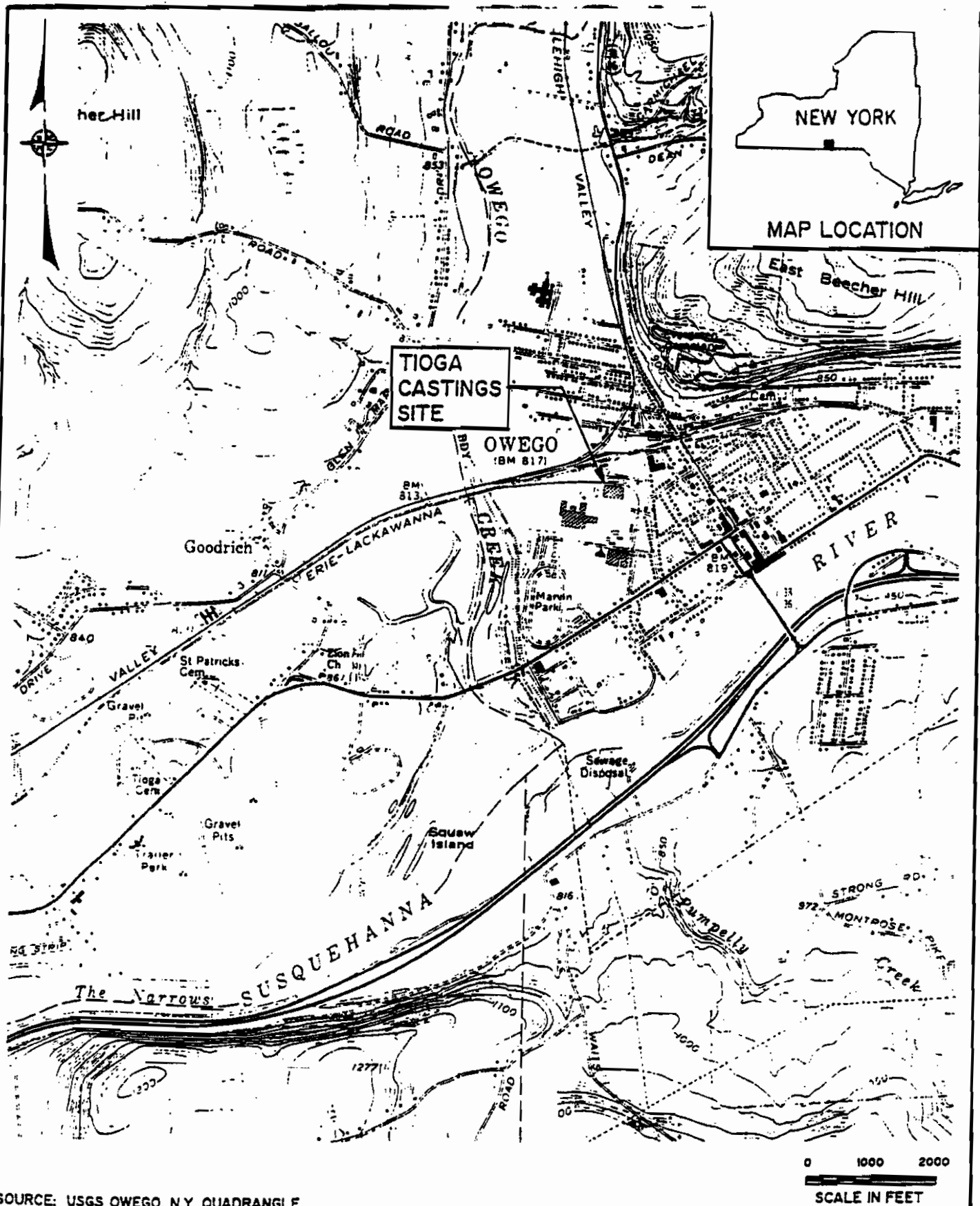
Due to the conditions at the site, two Interim Remedial Measures (IRMs) were carried out to address potential physical/chemical hazards (see Section 4.2 for the definition of an IRM). In the fall of 1989, a perimeter fence was erected to limit access to the property. By early 1990, the drums, which had been left on site, were removed from the site and disposed of properly.

In addition, analytical results from a landfill surface soil sample showed a total lead concentration of 15,000 ppm (as discussed in Section 6, the cleanup goal for lead has been identified as 250 ppm). A temporary cover was placed over the landfill in August 1991 in order to minimize the potential for the erosion (wind, surface water) of this material.

3.2: Previous Investigations/Actions:

(see Figure 3 for a map of previous soil sample locations/results)

- August 1989 - Thirteen surface soil samples were collected, from the grassy area north of the Owego-Apalachin middle school, and analyzed for total lead and cadmium as well as for EP Toxicity. Cadmium was detected at two locations at 3.7 ppm; lead was present at concentrations ranging from 43 - 960 ppm; the results of the EP Toxicity analyses did not indicate the presence of hazardous waste.
- Sept. 1989 - Thirty one additional surface soil samples were collected from the grassy area north of the school, six from the former landfill area, and five from northeast of the former facility. All of the samples were analyzed for lead. Total lead concentrations in the schoolyard were between 51 -350 ppm; west of the former landfill, levels were between 40 -50 ppm; northeast of the former foundry lead was present from 120 -270 ppm; and one surface soil sample from the former landfill indicated a lead concentration of 15,000 ppm.



TIOGA CASTINGS SITE
OWEGO, NEW YORK

SITE LOCATION MAP

FIGURE 1

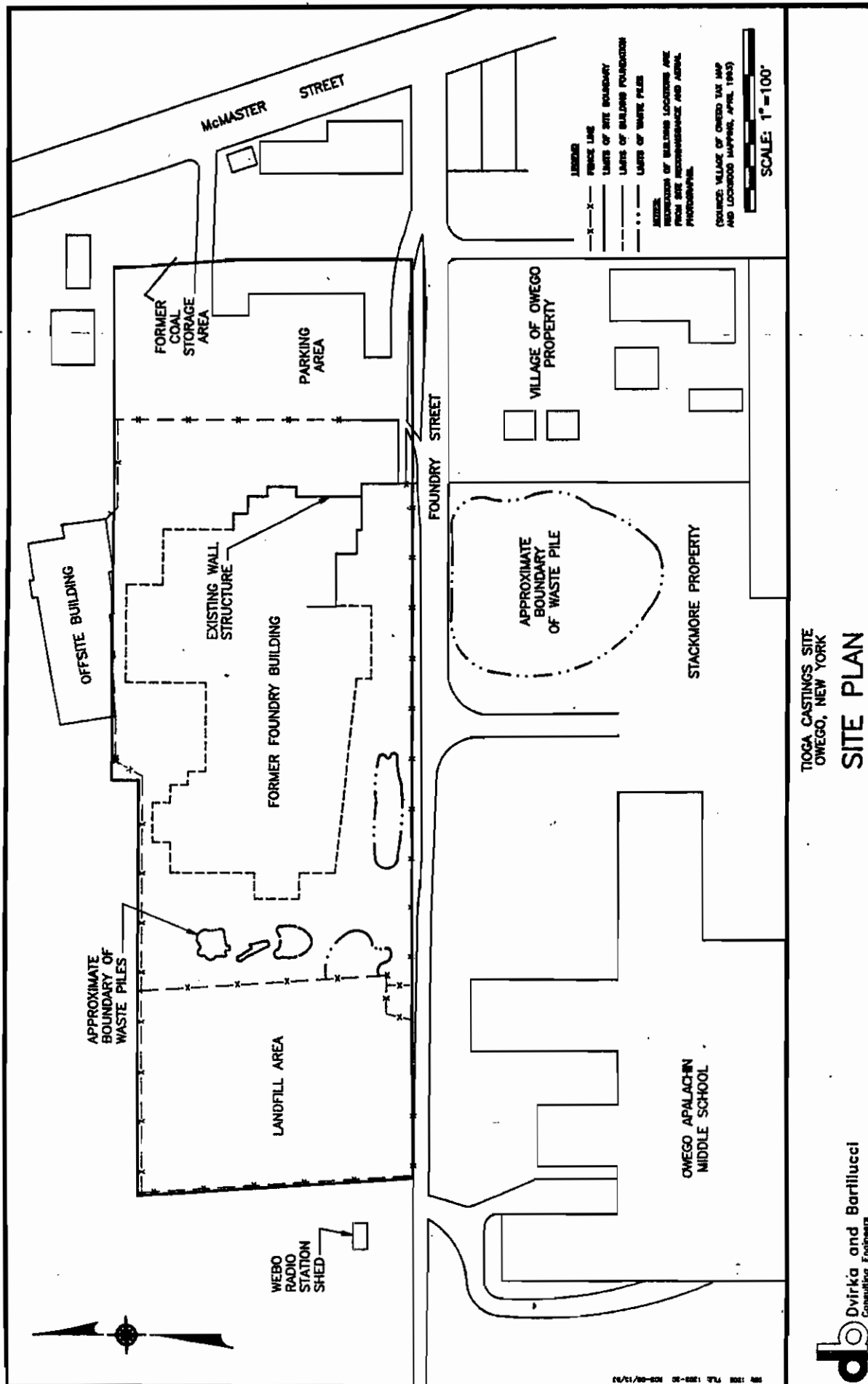


FIGURE 2

- Fall 1989 - A perimeter fence is placed around the former foundry to limit access.
- Feb. 1990 - An IRM, to remove waste material abandoned at the site, was completed. The IRM was initiated by the responsible party, however it became necessary for the State to complete the work.
- July 1991 - Prior to the demolition of the building, grid sampling was conducted to characterize the dust that blanketed the floor of the former foundry building. Thirty-one samples were collected and analyzed for lead. Twenty-eight of the samples had concentrations at or below 210 ppm; three of the samples had elevated concentrations of lead (1,400, 9,300, and 28,000 ppm). Dust from these areas was containerized and disposed of prior to the demolition of the building.
- August 1991 - An IRM was conducted to place a temporary cap over the landfill area (see Section 4.2). Since this work involved heavy truck traffic along Foundry Street (a dirt road), ten surface soil samples were collected from the roadway. The highest lead concentration detected was 400 ppm (eight of the samples indicated concentrations below 140 ppm).

3.3: Enforcement Status

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The Potential Responsible Party (PRP) for this site is the Tioga Castings Facility. On August 14, 1989, an order on consent between the PRP and the Department was signed (Index No. A702068909) which obligated the PRP to construct a perimeter fence around the site to restrict access and to remove hazardous waste abandoned on the property.

The PRP failed to carry out the RI/FS at the site when requested by the NYSDEC (the PRP was not financially able to perform the necessary work). After the remedy is selected, the PRP will again be contacted to assume responsibility for the remedial program. If an agreement cannot be reached with the PRP, the NYSDEC will evaluate the site for further action under the State Superfund. The PRP is subject to legal actions by the State for recovery of all response costs the State has incurred.

SECTION 4: SUMMARY OF SITE CHARACTERISTICS

In response to a determination that the presence of hazardous waste at the Site presents a significant threat to human health and the environment, the NYSDEC has recently completed a Remedial Investigation/Feasibility Study (RI/FS).

4.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site.

The RI was completed in two phases. The first phase field work was completed between April 5, 1993 and May 4, 1993. The second phase field work was carried out in December, 1993. A report entitled Phase I/Phase II Remedial Investigation has been prepared describing the field activities and findings of the RI in detail. The RI activities consisted of the following:

- On-site sampling of surface soils, subsurface soils, and sediments from floor drains.
- Off-site surface and subsurface soil sampling as well as the collection of background soil samples.
- Soil borings in the on-site landfill in order to characterize the fill material.
- The installation of groundwater monitoring wells to determine the impact this site is having on the groundwater.

To determine which media (soil, groundwater, etc.) are contaminated at levels of concern, the analytical data obtained from the RI were compared to environmental Standards, Criteria, and Guidance (SCGs, defined in Section 8.2 below). Groundwater, drinking water, and surface water SCGs identified for this site were based on NYSDEC Ambient Water Quality Standards and Guidance Values. For the evaluation and interpretation of soil and sediment analytical results, NYSDEC soil cleanup guidelines for the protection of groundwater, background conditions, and risk-based remediation criteria were used to develop remediation goals.

Based upon the results of the remedial investigation in comparison to the SCGs and potential public health and environmental exposure rates, certain areas and media of the site require remediation. These are summarized below. Complete information can be found in the RI Report.

Chemical concentrations are reported in parts per billion (ppb) or parts per million (ppm). For comparison purposes, SCGs are given for each medium.

Soil

Elevated levels of certain metals have been found in soils on site as well as adjacent to the site. The metals found at elevated concentrations include cadmium, lead, and chromium. Generally, lead and cadmium are the most predominant contaminants which will drive the remediation at this site. Figure 4 identifies areas where cleanup goals have been exceeded.

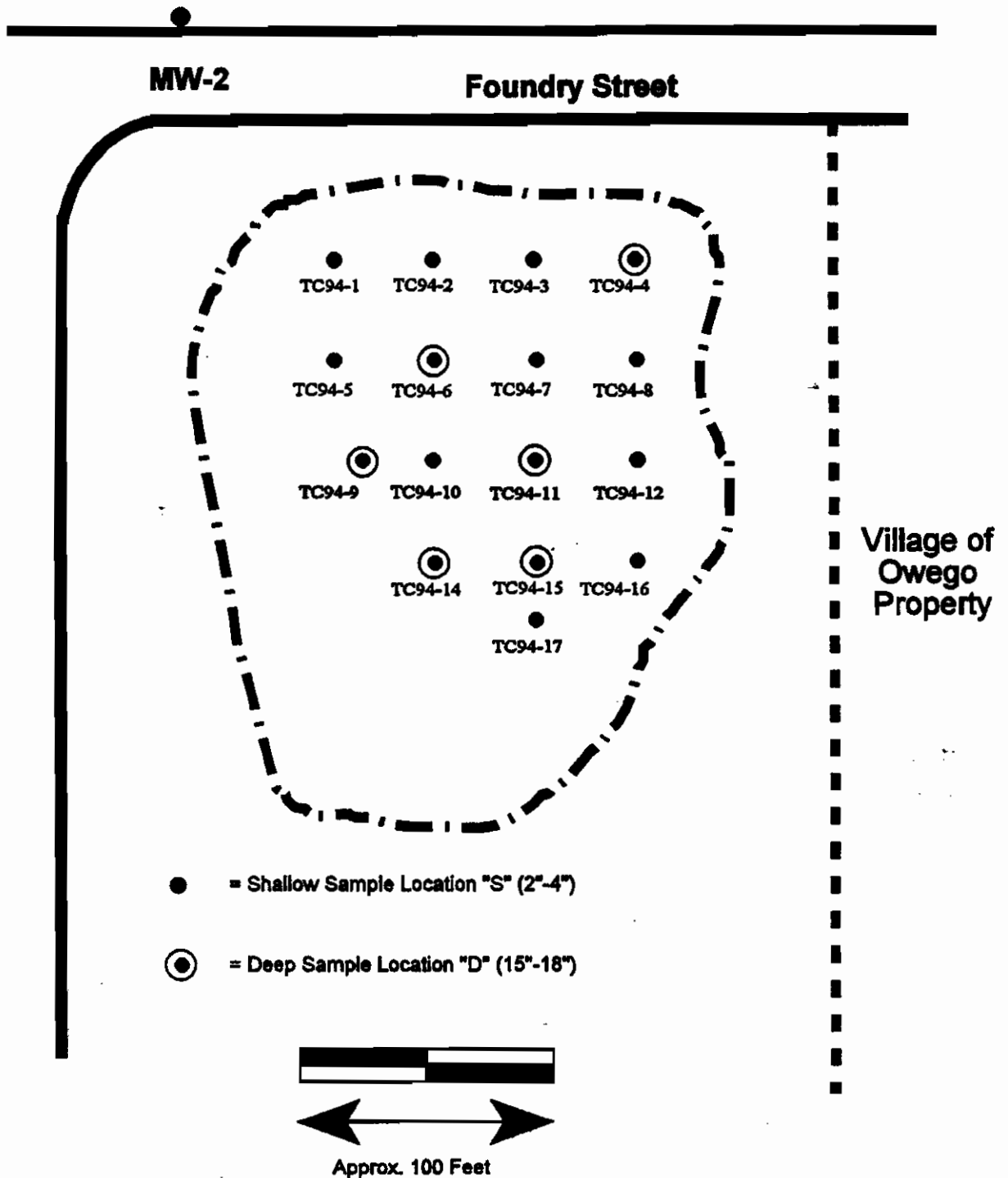
The analysis of on-site surface soil samples indicated lead concentrations from approximately 10 - 917 ppm with one exception (22,200 ppm). Subsurface soil sample results indicated lead concentrations from 15 - 2600 ppm; lead concentrations in off-site surface soil samples ranged from approximately 25 - 800 ppm. This site's cleanup level for lead has been set at 250 ppm (for surface soils).

The on-site surface soil results indicated cadmium concentrations from 0.4 - 3.7 ppm with one exception (48.6 ppm). Subsurface soil concentrations ranged from 0.35 - 3 ppm with one exception (5.6 ppm). Cadmium levels in off-site surface soils (except 8/94 samples, as summarized in the next paragraph) ranged from 0.2 - 3.4 ppm with one exception (9.5 ppm).

In August 1994, twenty two soil samples were taken from the waste piles located on the Stakmore property and were analyzed for total metals. The total cadmium concentrations ranged from 2 - 8 ppm, the total lead concentrations ranged from 90-240 ppm. Figure 5 identifies the locations of the samples taken from the Stakmore property.

During the RI, three subsurface soil samples collected from inside the landfill were analyzed for TCLP metals (the TCLP analysis is similar to, and has replaced, the EP Toxicity analysis previously discussed). Although the RI samples did not exceed TCLP regulatory levels, historical analyses for total lead indicate there is still material on site which would likely be classified as hazardous waste (i.e. samples from the surface of the

Figure 5
Stakmore Property
Sample Locations
August 10, 1994



landfill and from the south-central perimeter of the site indicated lead concentrations of 15,000 ppm and 22,200, respectively).

Sediment

There are floor drains and a septic tank present on site. Sediment samples were collected from these areas. Lead concentrations ranged from 7.6 - 410 ppm; cadmium was present at concentrations of 4.1 - 6.8 ppm.

Groundwater

As a part of the RI, five monitoring wells were installed around the perimeter of the site. Two rounds of groundwater samples were collected (April '93 and December '93). The results of these groundwater sampling events are summarized on Figure 6 and Table 1.

The analysis of groundwater samples indicated concentrations of site related contaminants above groundwater standards. In the first round of groundwater samples, one sample exceeded the 25 ug/l [ppb] standard for lead (26.7 ug/l). The results of the second round indicated that three of the five groundwater samples exceeded the standard for lead with concentrations of 26.8, 39.6, and 41.8 ug/l. Two of the samples exceeded the 10 ug/l standard for cadmium with concentrations of 12.8 and 14 ug/l.

Surface Water

There is no surface water near the site; the topography is very flat and surface drainage from the site is in the form of sheet flow/ infiltration.

4.2 Interim Remedial Measures:

Interim Remedial Measures (IRMs) are conducted at sites when a source of contamination or an exposure pathway can be effectively addressed before completion of the RI/FS.

Three IRMs were performed prior to the initiation of the RI/FS. A description of these IRMs can be found in the Site History (Section 3).

SECTION 5: SUMMARY OF SITE RISKS

5.1 Summary of Human Exposure Pathways:

An exposure pathway is the process by which an individual is exposed to a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media (e.g., soil, groundwater) and transport mechanisms; 3) the point of exposure; 4) the route of exposure (e.g., ingestion, inhalation); and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Completed pathways known to or that may exist at the site include:

- Dust could become airborne and migrate from the site. This would provide the potential for inhalation or ingestion of these materials.

- Although the perimeter fence limits access to the site there is potential for unauthorized access to the site. In addition, there are elevated levels of contaminants located outside the fenced area. As a result there is potential for skin contact and ingestion of contaminated soils.

The available information indicates that the residential population in the area of the site is using municipal water. Therefore, the ingestion of contaminated groundwater is currently not considered to be a complete pathway by which exposure could occur. During the remedial design, additional information will be gathered regarding water usage in the area of the site to confirm this indication.

5.2 Summary of Environmental Exposure Pathways:

The presence of contaminants in an ecosystem can result in a variety of effects on wildlife population, ranging from a reduction in population size to changes in the community structure. The area on and adjacent to this site is, for the most part, disturbed land which does not support an abundance of ecological organisms. In addition, there is a lack of surface water near the site minimizing the potential for uptake of contaminants by this route.

In the case of the Tioga Castings site, the pathways for potential contaminant exposure to wildlife would be limited to:

- Terrestrial animals burrowing through contaminated soils and waste piles.
- Animals feeding on the sparse vegetation which have accumulated contaminants.
- Animals drinking from any water which may pond, as a result of precipitation events, in areas associated with contaminated surface soils.

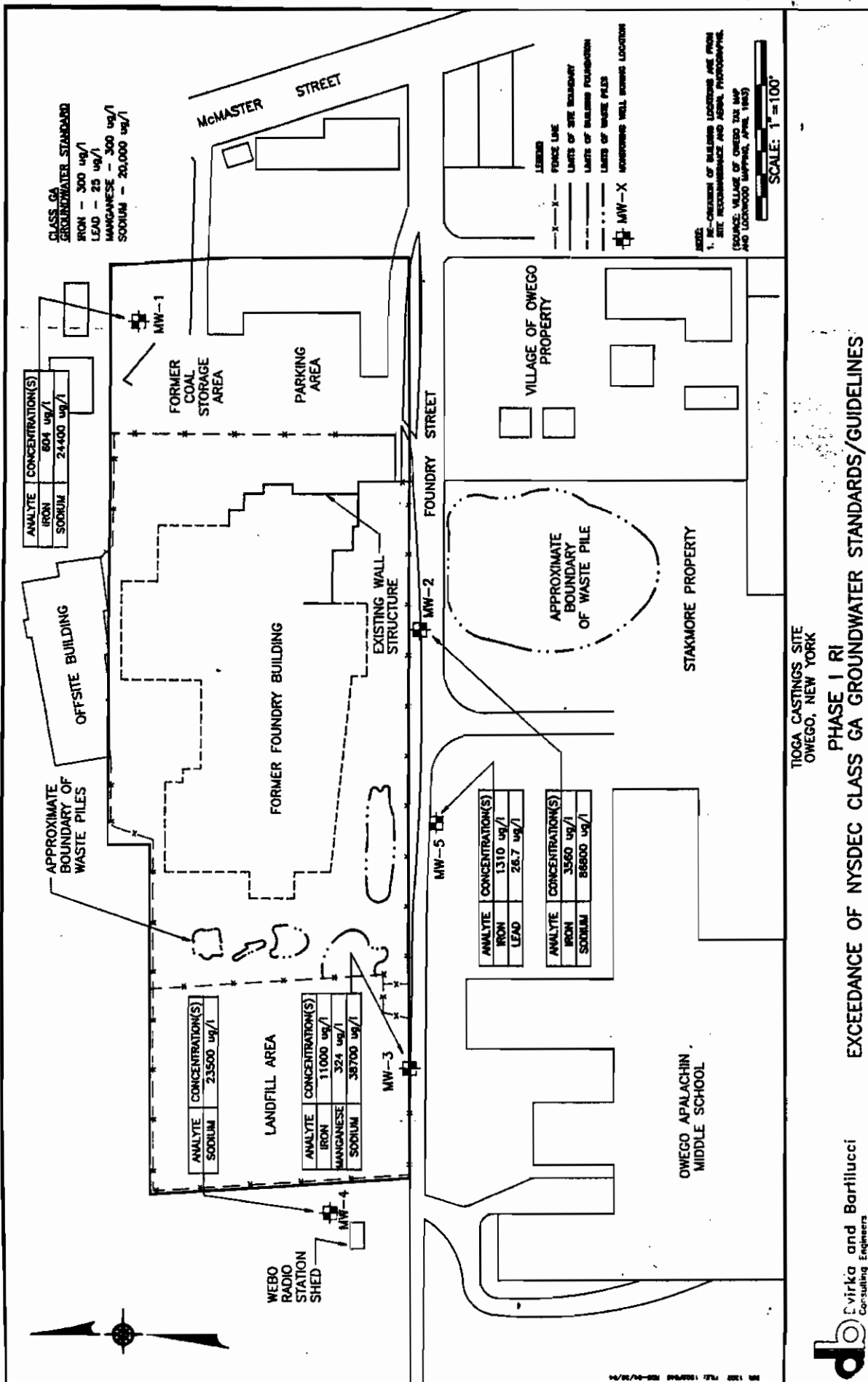
SECTION 6: REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR 375-1.10. These goals are established under the overall goal of protecting human health and the environment and meeting all Standards, Criteria, and Guidance (SCGs).

At a minimum, the remedy selected should eliminate or mitigate all significant threats to public health and the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The goals selected for this site are:

- Prevent direct contact exposure (dermal absorption, inhalation and incidental ingestion) with waste piles/soils that have concentrations above the cleanup goals.
- Prevent or reduce the transport of contamination off site via surface runoff from areas where the surface material is contaminated.
- Prevent or greatly reduce the amount of precipitation infiltrating through contaminated soils and adversely impacting the groundwater.



10
TIOGA CASTINGS SITE
REMEDIAL INVESTIGATION REPORT
PHASE II GROUNDWATER ANALYTICAL RESULTS

SAMPLE ID	TC93-MW1	TC93-MW2	TC93-MW3	TC93-MW4	TC93-MW5	NYSDEC CLASS GA
DATE OF COLLECTION	12/9/93	12/9/93	12/9/93	12/9/93	12/9/93	GROUNDWATER
DILUTION FACTOR	1	1	1	1	1	STANDARDS/GUIDELINES
PARAMETER	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Cadmium	12.8	14	7	6	5	10
Lead	26.8	20.8	41.8	13.2	39.6	25

: Value exceeds standard/guideline

The December 1994 Remedial Investigation/ Feasibility Study (RI/FS) presented a cleanup goal of 4 ppm for cadmium in soils based on a qualitative risk assessment. Based on a more detailed evaluation (e.g.. Marathon Battery Site) a cadmium cleanup level of 10 ppm was established. This level was found to be protective based on a very conservative scenario (e.g. for use as a vegetable garden).

The Department's cleanup goal for lead is generally established at a concentration of 400 ppm. However, due to the proximity of this site to the school and the small increase in volumes and costs, the cleanup goal for lead has been set at 250 ppm for surface soils.

The following are contaminant specific cleanup goals:

	SOIL	GROUNDWATER
cadmium	10 ppm	10 ppb
chromium	50 ppm	50 ppb
lead	250 ppm to 12" 500 ppm below 12"	25 ppb

SECTION 7: DESCRIPTION OF REMEDIAL ALTERNATIVES

Potential remedial alternatives for the Tioga Castings site were identified, screened and evaluated in the Feasibility Study. This evaluation is presented in the December 1994 Tioga Castings Feasibility Study Report. A summary of the detailed analysis follows.

The potential remedies are intended to address the contaminated soils and groundwater at the site.

Alternative 1: No Further Action

Present Worth:		\$ 120,000
Capital Cost:		\$ 0
Annual O&M:		\$ 7,700
Time to Construct:		NA

The no further action alternative recognizes the work that has been completed under the previously completed IRMs. It requires continued monitoring only, to evaluate the effectiveness of the remediation completed under the IRMs.

This is an unacceptable alternative as the site would remain in its present condition and the threat presented by contaminated soils/ groundwater would remain.

Alternative 2: Institutional Actions, Consolidation of Contaminated Soil in Existing On-site Landfill, Placement of Permeable Cover over Landfill, Operation and Maintenance (O&M)

Present Worth:		\$ 891,000
Capital Cost:		\$ 502,000
Annual O&M:		\$ 25,700
Time to Construct:		2 - 3 months

Institutional actions would include the maintenance of the security fencing as well as pursuing the placement of deed restrictions on the property. Under this alternative contaminated soils from on-site and off-site areas would be excavated and consolidated into the existing on-site landfill located along the western edge of the property. This material would be placed/graded in preparation for the placement of a permeable cover. The purpose of the cover would be to prevent direct contact as well as the erosion and off site transport of contaminated material.

Alternative 3: Institutional Actions, Consolidation of Contaminated Soils in Existing On-site Landfill, Placement of a Low Permeability Cover, O&M

Present Worth:	\$ 1,090,000
Capital Cost:	\$ 701,000
Annual O&M:	\$ 25,700
Time to Construct:	2 - 3 months

This alternative would be the same as Alternative 2 with the exception of the type of cover placed over the existing landfill. The low permeability cover would consist of a geomembrane placed on a preparatory/subgrade layer and covered by a protective barrier drainage layer and topsoil.

Alternative 4: Excavation of Contaminated Soil and Off-site Disposal

Present Worth:	\$ 3,746,000
Capital Cost:	\$ 3,457,000
Annual O&M:	\$ 18,700
Time to Construct:	approximately 6 months

This alternative would involve the excavation and off-site disposal of all contaminated materials (including the volume contained within the on site landfill). This material represents a volume of approximately 28,000 cubic yards.

Alternative 5: Institutional Actions, On-site Stabilization of Contaminated Material, Placement of this Material in the On-site Landfill, Permeable Cover on Landfill

Present Worth:	\$ 2,641,000
Capital Cost:	\$ 2,252,000
Annual O&M:	\$ 25,700
Time to Construct:	3 - 12 months

Included in this alternative are the institutional actions discussed in Alternative 2. Stabilization can be performed in-situ or ex-situ. For this site, ex-situ stabilization would be recommended due to the advantage of ensuring proper blending. Treatability studies would be conducted to determine the reagent most effective for the contaminated material present at the Tioga Castings site.

Ex-situ stabilization would involve the excavation and stockpiling of material. The approximate throughput utilizing a pugmill would be 4 - 100 cubic yards/hour (depending on the size of the equipment used). If continuous processing equipment is used, as much as 225 cubic yards/hour could be processed. After the stabilization process is complete, the material would be backfilled at the on-site landfill. A significant increase in volume (approximately 30%) would be expected.

Alternative 6: Institutional Actions, Groundwater Extraction and Treatment

Present Worth:	\$ 1,808,000
Capital Cost:	\$ 862,000
Annual O&M:	\$ 107,000
Time to Construct:	3 - 6 months
Duration of Operation:	10 years (estimate)

Included in this alternative are the institutional actions described in Alternative 2. This alternative would be designed to address groundwater contamination through extraction and treatment. This alternative could be implemented on its own or in combination with one of the other alternatives.

Pre-design pump tests would be required to design the groundwater recovery system. The extraction system would be designed to capture the inorganic plume migrating from the site. The extraction system would consist of five wells located along the southern and eastern perimeter of the site. Four extraction wells would be spaced 300 feet apart along the southern perimeter and one well would be placed at the approximate midpoint of the eastern property boundary. This spacing is based on an estimated 400 foot cone of influence that would be created by each pumping well at a withdrawal rate of 50 gallons/minute with 4 feet of drawdown. This withdrawal rate corresponds to a total of 360,000 gallons/day. An estimate of the length of time to remediate the plume cannot be determined without additional downgradient data. However, for the purpose of developing a cost estimate, an operating period of 10 years has been assumed.

The treatment system would consist of an on-site conventional removal process for metals. It is likely that reverse osmosis would be the most practical removal process for this site, however pre-design treatability studies would be performed prior to the selection of the treatment process. Since there are no sewers or surface water bodies adjacent to the site, discharge from the on site treatment of groundwater would be to a groundwater infiltration system.

SECTION 8: SUMMARY OF COMPARATIVE ANALYSIS OF THE ALTERNATIVES

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each criterion, a brief description is provided followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is contained in the Feasibility Study.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of the health and environmental impacts to assess whether each alternative is protective.

Alternative 4 would be the most protective of human health and the environment since all significantly contaminated soil would be removed off site with the assumption that there are no potential receptors of contaminated groundwater. Of the remaining alternatives, Alternative 5 would be most protective of human health and the environment since contaminated materials would be stabilized to prevent leaching of contaminants and covered to prevent direct contact. Alternatives 2 and 3 would eliminate surface soil exposure routes. Alternative 3 would provide an impermeable cover over the landfill area and would be more protective of groundwater. Alternative 2 would provide a permeable cover in the area of the landfill. Groundwater treatment would be performed only under Alternative 6. Alternative 1 would not provide any protection of human health or the environment for groundwater or contaminated soils at the site.

Alternatives 4 and 5 would be considered permanent remedies. Post-remediation measures would be taken for the other alternatives to monitor their effectiveness and maintain their integrity.

Alternative 1 would not achieve the remedial action objectives (RAOs) for soil or groundwater. Alternative 2 would achieve the RAOs for soil, but RAOs for groundwater would not be met for an extended period of time. Alternatives 3, 4, and 5 would achieve RAOs for soil. RAOs for groundwater would be achieved in a relatively short period of time (i.e. less than ten years) through source isolation/removal and natural attenuation. Alternative 6 would actively remediate the groundwater, but would not address the RAOs for soil.

Alternatives 2, 3, 4, and 5 would have potential short term risks, however those risks could be easily managed using proper control measures (i.e. dust suppression and erosion controls).

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet applicable environmental laws, regulations, standards, and guidance. The major SCGs for this site include:

- 6 NYCRR Part 360 Solid Waste Management Facilities
- TAGM HWR-92-4046 Determination of Soil Cleanup Objectives
- TAGM HWR-89-4031 Fugitive Dust Suppression and Particulate Monitoring
- 6 NYCRR Part 375 Inactive Hazardous Waste Disposal Site Remedial Program
- TOGS 2.1.2 Underground Injection/ Recirculation at Groundwater Remediation Sites
- 6/93 USEPA Guidance on Solidification/ Stabilization and its Application to Waste Materials
- Air Guide 1

Alternatives 4 and 5 would achieve soil SCGs at the site. All other alternatives that address soils, except no action, involve consolidation of site soils and placement of a cover. Although Alternatives 2 and 3 would take longer to attain SCGs for groundwater protection, they are protective of health and the environment. Alternative 3 has a greater potential for reducing leaching of contaminants to groundwater. As a result, Alternative 3 would attain SCGs for groundwater much sooner than Alternative 2. Alternative 6 would achieve SCGs for groundwater in the shortest period of time. As discussed above, Alternative 6 could be implemented on its own or in combination with one of the other alternatives.

3. Short-term Impacts and Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared with the other alternatives.

During construction activities associated with Alternatives 2, 3, 4 and 5, access to the site would be restricted to minimize the potential for exposure to contaminants. Site remediation workers would be protected through use of appropriate respiratory and dermal contact protection as required by the Occupational Safety and Health Administration (OSHA) and the site specific health and safety plan to be developed prior to remediation. The surrounding community would be protected through measures to prevent fugitive emissions, such as dust suppression and temporary cover, and runoff of contaminated excavated material, such as erosion controls. As long as these control measures are used properly, they are effective in minimizing any potential short-term impacts.

Alternative 6 would cause very limited disturbance of site soils and therefore would generate the least short-term impacts. Exclusive of Alternative 6, which is related to remediation of groundwater, Alternatives 2 and 3 would cause the least disturbance of site soils, and therefore, the least short-term impacts. Alternatives 4

and 5 would cause a great deal of disturbance of soils. Since Alternative 1 would require no activity, there would be no short-term impacts due to construction.

With the exception of attaining groundwater RAOs, all alternatives can be implemented in a short time (less than two years). Alternative 6 would directly treat groundwater and has the highest potential for achieving groundwater standards in the shortest time. From fastest to slowest, the other Alternatives would be ranked as follows: 4, 5/3, 2, and 1.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of alternatives after implementation of the response actions. If wastes or treated residuals remain on site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

By removing contaminants, Alternative 4 is judged to be the most effective in the long-term for the soil/waste contamination at the Tioga Castings Site, requiring limited long-term monitoring/maintenance. On-site containment with a permeable or low permeability cover (Alternatives 2 and 3, respectively), is not considered permanent. Contaminated soil would remain at the site without treatment, requiring groundwater monitoring and maintenance. Alternative 5 would treat the soil and would be considered permanent. Alternatives 3 and 5 are likely to be more effective than other alternatives with regard to leaching contaminants to groundwater. The no further action alternative (Alternative 1) would not be effective in the long-term. Alternative 6, with no contaminated soil/waste remediation, is considered permanent for only groundwater contamination.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternative 4 would decrease the mobility, toxicity and volume of the contaminated soil with respect to the site. Alternative 5 would also decrease the mobility of contaminated site soils, however, it is likely to increase the volume. Alternative 3 would also decrease the mobility of the contaminants from the soil to groundwater. Alternatives 1 and 2 would not reduce the toxicity, mobility or volume of the contaminated soil or groundwater. Alternative 6 would reduce the toxicity, mobility and volume of contaminated groundwater at the site.

6. Implementability. The technical and administrative feasibility of implementing each alternative is evaluated. Technically, this includes the difficulties associated with the construction, the reliability of the technology, and the ability to monitor the effectiveness of the remedy. Administratively, the availability of the necessary personnel and equipment is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

All of the alternatives could be implemented and the required materials/services are readily available. There would be no difficulties associated with coordinating with other divisions/agencies.

Alternative 2 represents the most readily implementable alternative, other than no action, due to the relatively simple constructability of a permeable cover. Alternative 3 would likely be the next easiest alternative to be implemented since a low permeability cap would be placed over the consolidated contaminated material which would likely require additional regrading and site preparation activities. Based on volumes of material to be excavated, Alternatives 4 and 5, respectively, would be more difficult to implement, with Alternative 5 being the most difficult because of the need to stabilize the material and backfill it in the on-site landfill. Alternative 6 is a readily implementable alternative with minimal disturbance of contaminated materials.

7. **Cost.** Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are:

Alt.	Capital Cost	Annual O&M	Total
1	\$ 0	\$ 7,700	\$ 120,000
2	\$ 502,000	\$ 25,700	\$ 891,000
3	\$ 701,000	\$ 25,700	\$ 1,090,000
4	\$ 3,457,000	\$ 18,700	\$ 3,746,000
5	\$ 2,252,000	\$ 25,700	\$ 2,641,000
6	\$ 862,000	\$ 107,000	\$ 1,808,000

8. **Community Acceptance** - Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan have been evaluated. A "Responsiveness Summary" has been prepared that describes public comments received and how the Department addresses the concerns raised. The Responsiveness Summary is included as Exhibit A.

SECTION 9: SELECTED REMEDY

Based upon the results of the RI/FS, and the evaluation presented in Section 7, the NYSDEC has selected Alternative 3 (institutional actions, consolidation of contaminated soils, placement of a low permeability cover, O&M, and monitoring) as the remedy for this site.

Alternative 1 is not acceptable because it does not address the remedial goals. Alternative 2 would address direct contact and erosion of contaminated material, however it would do nothing to reduce infiltration through contaminated soils. Alternative 4 would address the goals of the program, however there would be substantially greater costs than other alternatives. Alternatives 3 and 5 would not actively remediate groundwater, however by isolating the source of contamination, and by natural attenuation, attainment of groundwater standards would be expected in a relatively short period of time (i.e. less than 10 years). Alternatives 3 and 5 would both be effective, however the cost of Alternative 5 is much greater than Alternative 3.

Alternative 6 (on its own) would actively address groundwater, but would do little to address direct contact and erosion of contaminated material. Alternative 6 has not been proposed with Alternative 3 because 1) the level of contamination in the groundwater is low; 2) available information indicates that residents around the site use municipal water and not groundwater; and 3) groundwater standards are expected to be attained in a relatively short period of time (< 10 years). Also, the characteristics of the aquifer would require the collection of large quantities of groundwater to effectively contain and collect contaminated water. Based on these factors, active groundwater remediation is not proposed.

The estimated present worth cost to carry out the remedy is \$ 1,090,000. The cost to construct the remedy is estimated to be \$ 701,000 and the estimated average annual operation and maintenance cost for 30 years is \$ 25,700.

The elements of the selected remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Uncertainties identified during the RI/FS will be resolved.
2. Maintaining the fence around the landfill to limit site access as well as pursuing deed restrictions to prevent site development activities in areas where contaminated material is present.
3. Consolidation of the on-site and off-site soils/ waste piles that contain material above the cleanup goals for the site. These materials will be placed on the existing on-site landfill.
4. Placement of a low permeability cover over the on-site landfill; the cap will consist of a geomembrane placed on a preparatory/ subgrade layer and covered by a protective barrier drainage layer and topsoil.
5. Operation and maintenance of the remedy after the remedial construction is complete.
6. Monitoring of groundwater. This will be done to determine if the chosen alternative was successful in reducing the amount of infiltration through contaminated material to an amount which will not have an adverse impact upon groundwater quality.

SECTION 10.0: HIGHLIGHTS OF COMMUNITY PARTICIPATION

Citizen Participation (CP) Activities were implemented to provide concerned citizens and organizations with opportunities to learn about and comment upon the investigations and studies pertaining to the Tioga Castings Site. All major reports were placed in a document repository in the vicinity of the site and made available for public review. A public contact list was developed and used to distribute fact sheets and meeting announcements.

On February 2, 1995 a public meeting was held at the Owego-Apalachin Middle School, Owego, New York to describe the Proposed Remedial Action Plan. Prior to the meeting a public meeting announcement/ fact sheet was mailed to those persons on the contact list. The public comment period extended from January 23, - February 22, 1995. Comments received regarding the Proposed Remedial Action Plan have been addressed and are documented in the Responsiveness Summary (Exhibit A).

EXHIBIT A
RESPONSIVENESS SUMMARY
Tioga Castings Site
Village of Owego, Tioga County
Site ID No. 7-54-012

This document summarizes the comments and questions received by the New York State Department of Environmental Conservation (NYSDEC) regarding the Proposed Remedial Action Plan (PRAP) for the subject site. A public comment period was held between January 23, 1995 and February 22, 1995 to receive comments on the proposal. A public meeting was held on February 2, 1995 at the Owego-Apalachin Middle School to present the results of the investigations performed at the site and to describe the PRAP. The information below summarizes the comments and questions received and the Department's responses to those comments.

DESCRIPTION OF THE SELECTED REMEDY

Based upon the results of the Remedial Investigation/Feasibility Study (RI/FS) for the site and the criteria identified for the evaluation of alternatives, the NYSDEC has selected a remedy to consolidate contaminated material to the existing on site landfill and place a low permeability cover over the landfill area.

The major elements of the selected remedy include:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Uncertainties identified during the RI/FS will be resolved.
2. Maintaining the fence around the landfill to limit site access as well as pursuing deed restrictions to prevent site development activities in areas where contaminated material is present.
3. Consolidation of the on-site and off-site soils/ waste piles that contain material above the cleanup goals for the site. These materials will be placed on the existing on-site landfill.
4. Placement of a low permeability cover over the on-site landfill; the cap will consist of a geomembrane placed on a preparatory/ subgrade layer and covered by a protective barrier drainage layer and topsoil.
5. Operation and maintenance of the remedy after the remedial construction is complete.
6. Monitoring of groundwater. This will be done to determine if the chosen alternative was successful in reducing the amount of infiltration through contaminated material to an amount which will not have an adverse impact upon groundwater quality.

I. QUESTIONS/COMMENTS RAISED DURING THE PUBLIC MEETING

1. Issue: What will the cost to property owners be to remove the off-site material and place it on site?

Response: The material present off site above cleanup goals will be brought back on site and consolidated in the landfill area. This material contains elevated levels of metals as a result of historical operation of the Tioga Castings Facility. The consolidation of this material will

be done as a part of the remedial program for this site. Unless Tioga Castings steps forward to implement the remedial program, the work will be performed (and financed) under the State Superfund program. There will be no cost to the off-site property owners. All that will be required of off-site property owners is access to remove the contaminated soil.

2. Issue: Owego-Apalachin Middle School is used year round. Several hundred children are there during the summer. Even if the removal/consolidation of the material is scheduled during the summer, there will be a lot of kids around.

Response: The construction schedule will take into account our goal of minimizing disruptions /distractions to the children. Steps will be taken during remedial activities to safeguard both on-site workers as well as the local community (limiting access to work areas, use of dust suppression, etc.).

3. Issue: In reference to the previous issue, who will be on site to regulate the amount of airborne contamination? Will it be a part of the contract for removing the material? Will an independent third party be responsible for monitoring airborne contamination caused by the contractor during excavation/removal activities?

Response: The Department has guidance documents which clearly state what levels of airborne particulates would require some type of action (i.e., dust suppression, temporarily delaying excavation activities). These levels will be incorporated into the project specifications. In order to insure that the contractor is performing work according to the project specifications, there will be construction oversight provided by the Department. The oversight will be provided by one of the Department's on-site inspectors, or, depending on the availability of staff, by a consultant hired by the Department to oversee the construction.

4. Issue: What is meant by groundwater? I understand that groundwater is very extensive. How can you clean up all of that water?

Response: Groundwater is found below the ground in areas where it fully saturates the soils/overburden present. The soils below this site contain sands and gravel. Relatively speaking, this allows much more free space (pore space) for groundwater to occupy. In other words, the groundwater aquifer immediately below the site would readily produce large amounts of water if a withdrawal well were installed. If it were necessary, withdrawal wells could be installed to remove groundwater and limit its migration away from the site. During the decision making process, the following factors were considered: the exceedances of groundwater standards were marginal; there are no known users of the groundwater in the immediate vicinity of the site; it is anticipated that the remediation of the source of the groundwater contamination will restore groundwater quality to below standards in a relatively short period of time (less than 10 years). Although active remediation of the groundwater is possible, the conditions summarized above do not warrant such action at this site.

5. Issue: How far away from the site has the contamination in the groundwater migrated?

Response: Five monitoring wells were installed around the perimeter of the site during the Remedial Investigation. Samples taken from downgradient locations indicated marginal exceedances of groundwater standards. In such a permeable/productive aquifer, it is anticipated that concentrations in the groundwater drop to levels below groundwater standards within a short

distance downgradient of the site. Since no one is using groundwater immediately downgradient of the site, additional downgradient monitoring wells were not installed.

6. Issue: Other from the landfill area, will the other site fencing be taken down? Will the majority of the site then be available for development?

Response: All material above cleanup goals will be consolidated into the existing on-site landfill and a low permeability cover will be placed over the landfill. Certain slopes must be maintained (for drainage) and no subsurface work could be performed at the landfill. However, after remediation, there will be no restrictions placed on the remainder of the property. The final fencing (required as a part of the remedial program) will be just around the landfill.

7. Issue: Off-site samples show slightly elevated lead levels. Would it be better to simply leave the off-site soil where it is rather than removing it and stirring it up and spreading contamination through the air? Is this causing more risk than leaving it alone?

Response: Potential short term impacts are taken into consideration as a part of the evaluation of alternatives in the Feasibility Study (FS). Although there is a potential for dust to become airborne during the excavation of soils, dust suppression techniques will be used, if necessary, to mitigate any impacts. These dust suppression techniques are easily implemented and very reliable (i.e., water mist to control dust).

8. Issue: What happens if the plan does not work? Most people in the neighborhood would prefer that all the material be removed and disposed of off site.

Response: Long term groundwater monitoring will be carried out to evaluate the effectiveness of the remedial action relative to the restoration of groundwater quality. Although the need for it is not anticipated, active groundwater removal and treatment could be implemented in the future to aid in the restoration of groundwater quality. We are confident that the final cover system will be effective in preventing contact with contaminated materials in the landfill.

Although excavation and off-site disposal was evaluated during the FS, the costs associated with this alternative are much greater (almost 4 times greater) than the costs associated with the chosen alternative. Since the proposal is protective of human health and the environment and much more cost effective, it has been selected.

9. Issue: This is a relatively small site. It seems like the proposed solution is just a band-aid. Why not do the job right and remove it all? If everything were removed the entire site could be developed.

Response: As discussed above, the selected remedy is protective of human health and the environment (the major evaluation criterion which must be met in order for an alternative to be selected). Although future land use is a legitimate concern, the Department must take into account the need to remediate several hundred sites across the state to protect other communities. Given the limited resources available to investigate and remediate sites, spending the additional monies to excavate and dispose of the contaminants off site would not be cost effective.

10. Issue: Over the past two years, approximately \$300,000 has been spent studying the site. Now the proposal is to spend another \$1 million to clean up this site. Will you come back in a few more years to do more clean up?

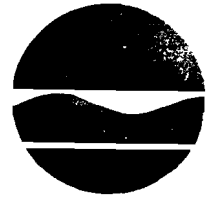
- Response:** The remedial process at a site involves many steps, including: identifying that contamination exists; determining the nature and extent of the contamination (RI); evaluating alternatives that could be used to clean-up the site (FS); implementation of the chosen alternative. Currently, the RI/FS has been completed and an alternative has been chosen (in the Record of Decision or ROD). The estimated cost of \$1 million is for the implementation of the chosen alternative and the completion of the remedial program at this site. Other than monitoring and maintenance, no further activities are planned.
- 11. Issue:** The main concern seems to be metals. What about the materials associated with the sand molds and binders? Will this material be consolidated as well? The non-hazardous wastes which are on site could be a hindrance to the sale of the property.
- Response:** The only "hazardous waste" (as defined in 6NYCRR Part 371) present as a result of past operations at this site are those wastes contaminated with high concentrations of metals. State Superfund monies can only be spent for the remediation of "hazardous waste." As a result, the areas where only non-hazardous waste remains cannot be included as a part of the remedial program.
- 12. Issue:** How much time will elapse between the beginning of the excavation of the off-site material and the on-site consolidation and capping of the landfill?
- Response:** It is estimated that it will take approximately 2-3 months to complete the excavation, consolidation and capping of the landfill.
- 13. Issue:** Has the approach been used elsewhere?
- Response:** Yes, on-site containment (capping) of existing landfills has been used at many other sites across New York State.
- 14. Issue:** Will this approach become more common as money "dries up"?
- Response:** Although cost is one of the criteria considered when selecting remedies, it is secondary to protection of human health and the environment. For sites such as this site (where there already is a landfill on-site), on-site containment is often selected.

EXHIBIT B
ADMINISTRATIVE RECORD
Tioga Castings Site
Tioga County
7-54-012

1. Record of Decision; dated March 1995.
2. Proposed Remedial Action Plan; dated January 1995.
3. RI/FS Referral from the Division of Environmental Enforcement, dated August 31, 1992.
4. Remedial Investigation/Feasibility Study (RI/FS) Work Plan, dated March 1993.
5. Citizen Participation Plan, dated March 1993.
6. Fact Sheet, announcing March 31, 1993 Public Meeting.
7. Phase I/Phase II RI Report, dated November 1994.
8. Appendices to Phase I/ Phase II RI Report, dated May 1994.
9. FS Report, dated December 1994.
10. Fact Sheet, announcing February 2, 1995 Public Meeting.
11. Responsiveness Summary, prepared in March 1995 and attached to Record of Decision as Exhibit A.

claybook

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 7010



Thomas C. Jorling
Commissioner

AUG 1 1989

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mrs. John Sweet Sr. & Mr. John Sweet Jr.
307 Main Street
Owego, NY 13827

Dear Mrs. & Mr. Sweet:

As mandated by Section 27-1305 of the Environmental Conservation Law (ECL), copy enclosed, the New York State Department of Environmental Conservation (NYSDEC) must maintain a registry of all inactive disposal sites suspected or known to contain hazardous wastes. The ECL also mandates that this Department notify, by certified mail, the owner of all or any part of each site or area included in the Registry of Inactive Hazardous Waste Disposal Sites.

Our records indicate that you are the owner or part owner of the site listed below. Therefore, this letter constitutes notification of the inclusion of such site in the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

DEC Site No.: 754012
Site Name: Tioga Casting Facilities
Site Address: Foundry Street, Owego, New York

Enclosed is a copy of the New York State Department of Environmental Conservation, Division of Hazardous Waste Remediation, Inactive Hazardous Waste Disposal Site Report form as it appears in the Registry and Annual Report, and an explanation of the site classifications. The Law allows the owner and/or operator of a site listed in the Registry to petition the Commissioner of the New York State Department of Environmental Conservation for deletion of such site, modification of site classification, or modification of any information regarding such site, by submitting a written statement setting forth the grounds of the petition. Such petition may be addressed to:

Mr. Thomas C. Jorling
Commissioner
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-1010

Pursuant to Section 27-1317 of the ECL and Section 1389-d of the Public Health Law, enclosed is a copy of 6 NYCRR Part 375 Inactive Hazardous Waste Disposal Sites, which became effective on April 16, 1987. Section 375.9 of the previously referenced regulation mandates that no person may substantially change the manner in which an inactive hazardous waste disposal site listed in the Registry is used without notifying this Department and the New York State Department of Health.

For additional information, please contact me, at (518) 457-0747.

Sincerely,

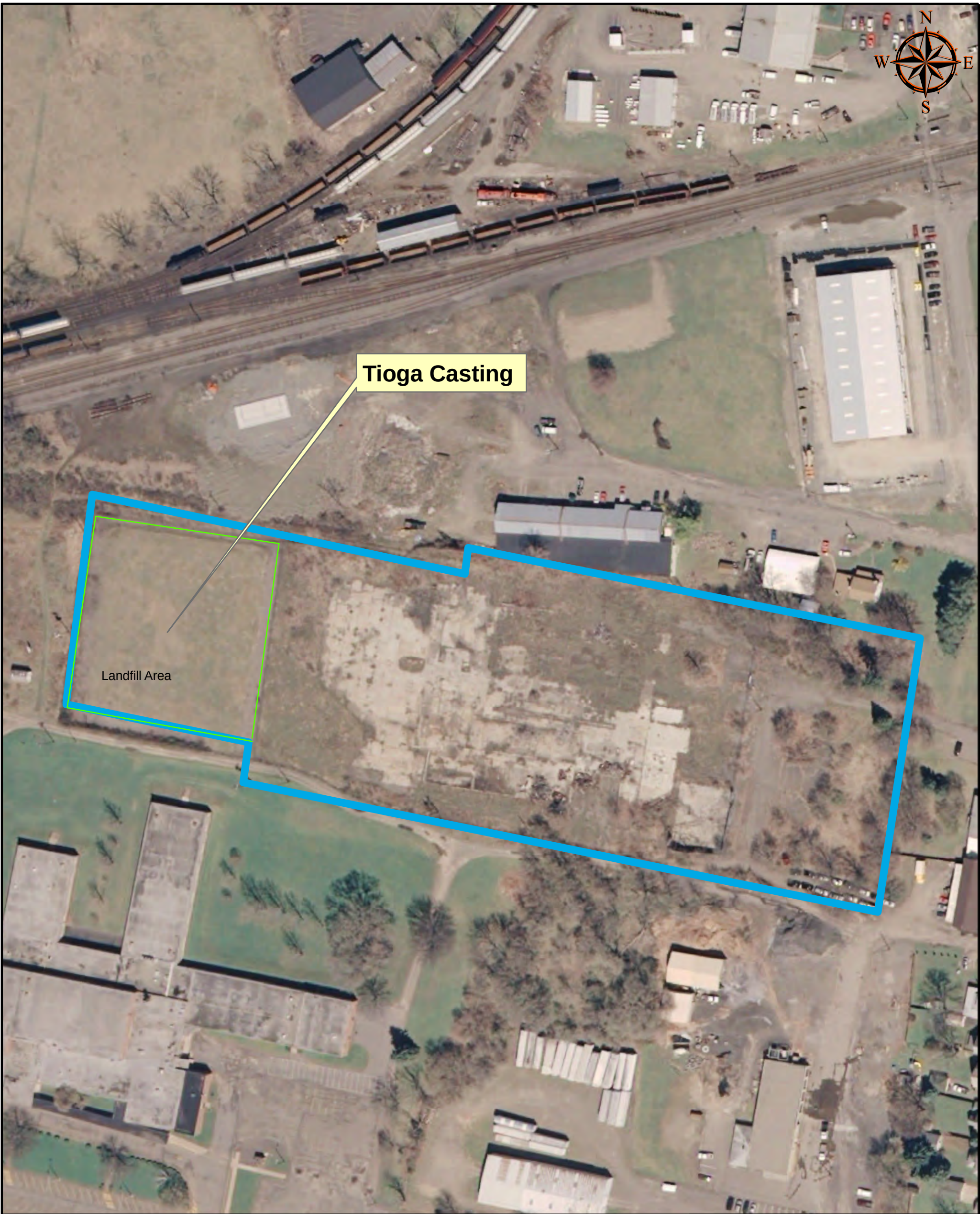
A handwritten signature in cursive script, appearing to read "Wayne R Baerger for".

Robert L. Marino
Chief
Site Control Section
Bureau of Hazardous Site Control
Division of Hazardous Waste Remediation

Enclosures

bcc: E. Barcomb
R. Marino
R. Tramontano, DOH
D. Markell, DEE
L. Concra, DRA
T. Male, R/7
A. Coburn, R/7
T. Koch
C. Johnson

CJ/me



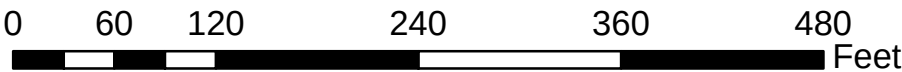
Site Reclassification and Boundry Redefinition

March 27, 2009



Tioga Casting 754012
Foundry Street
Owego, NY

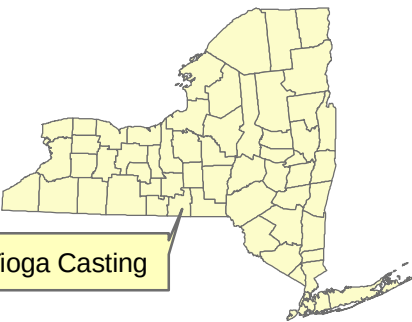
Project Manager: Payson Long
Map Arranged by: Payson Long



C:\Documents and Settings\pdlong\My Documents\GIS Projects\Tioga Casting SiteReclass.mxd

Legend

-  Current Tioga Casting Site Boundary
-  Proposed Tioga Casting Site Boundry





APPROXIMATE SAMPLING LOCATIONS

LEGEND:

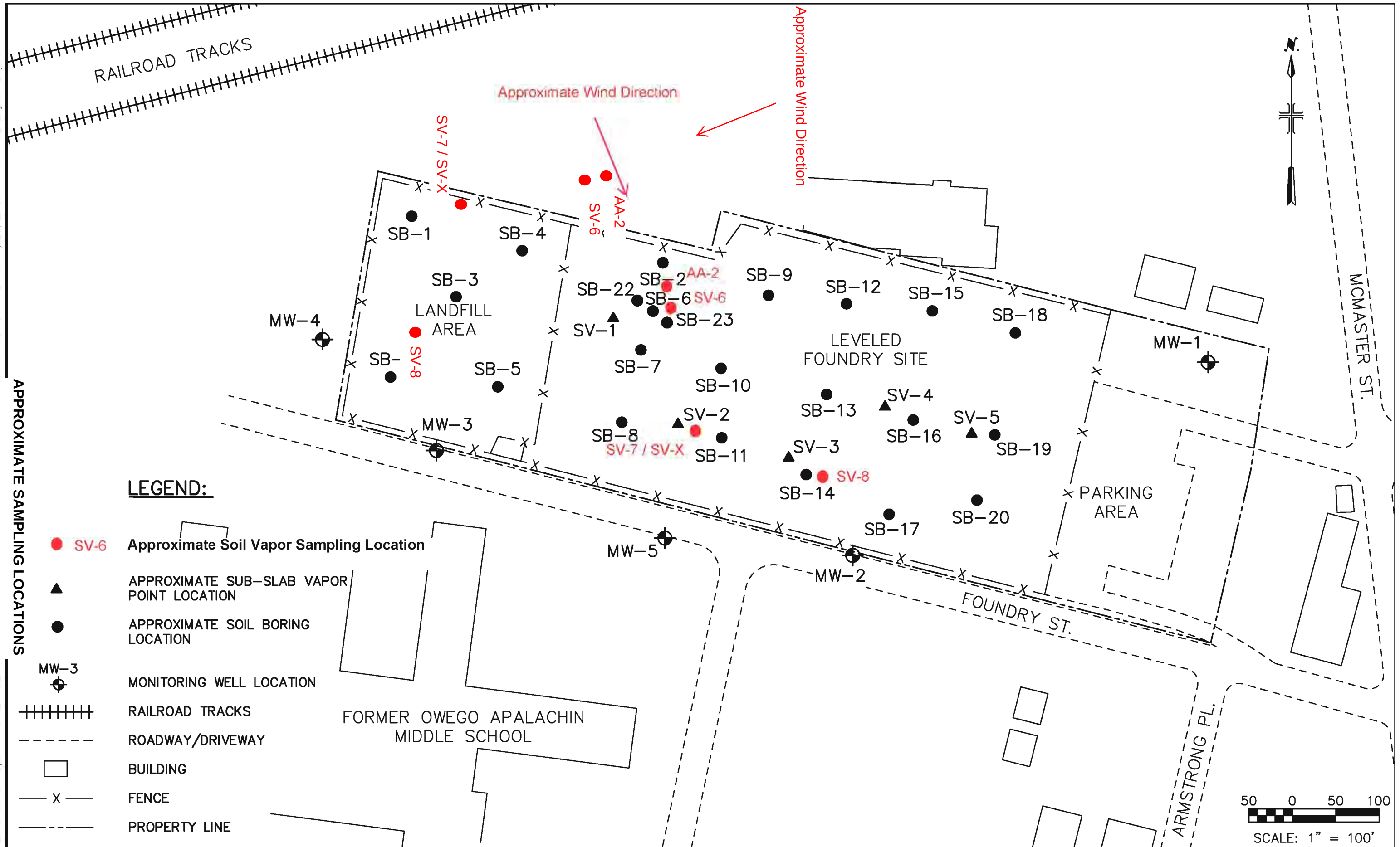
- SV-6 Approximate Soil Vapor Sampling Location
- ▲ APPROXIMATE SUB-SLAB VAPOR POINT LOCATION
- APPROXIMATE SOIL BORING LOCATION
- MW-3 MONITORING WELL LOCATION
- RAILROAD TRACKS
- ROADWAY/DRIVEWAY
- BUILDING
- X FENCE
- PROPERTY LINE

NYSDEC STANDBY CONTRACT NO. D004443-8
NYSDEC SITE NO. 7-54-012
TIOGA CASTING FACILITY
OWEGO, NEW YORK

APPROXIMATE SAMPLING LOCATIONS

SCALE: 1" = 200'

MALCOLM PIRNIE, INC.
SEPTEMBER 2007
FIGURE 1



Summary of Air Sampling Results

Tioga Castings Site

Owego, New York

NYSDEC Site No: 7-54-012

Sample ID Date Matrix	Units	NYSDOH DECISION MATRIX	SV-6 12/9/10 Air	SV-7 12/9/10 Air	SV-8 12/9/10 Air	SV-X 12/9/10 Air	AA-2 12/9/10 Air
Acetone	µg/m ³		0.95 U	0.95 U	12 U	0.95 U	6.7 U
Benzene	µg/m ³		1.6	1 U	0.33	0.96 NJ	0.34
Benzyl chloride	µg/m ³		0.52 U	0.52 U	0.52 U	0.52 U	0.18 U
Bromodichloromethane	µg/m ³		0.67 U	0.67 U	0.67 U	0.67 U	0.24 U
Bromoform	µg/m ³		1 U	1 U	1 U	1 U	0.36 U
Bromomethane	µg/m ³		0.39 U	0.39 U	0.39 U	0.39 U	0.14 U
1,3-Butadiene	µg/m ³		0.22 U	0.22 U	0.22 U	0.22 U	0.078 U
2-Butanone (MEK)	µg/m ³		4.5 U	1.8 U	1.4 U	0.79 U	1.6 U
Carbon Disulfide	µg/m ³		1.1	1.8	0.31 U	1.7	0.11 U
Carbon Tetrachloride	µg/m ³	Matrix 1	0.63 U	0.63 U	0.63 U	0.63 U	0.46
Chlorobenzene	µg/m ³		0.46 U	0.46 U	0.46 U	0.46 U	0.16 U
Chloroethane	µg/m ³		0.26 U	0.26 U	0.26 U	0.26 U	0.093 U
Chloroform	µg/m ³		0.49 U	0.49 U	0.49 U	0.49 U	0.17 U
Chloromethane	µg/m ³		0.21 U	0.21 U	0.21 U	0.21 U	1.1
Cyclohexane	µg/m ³		1.2	1.1	0.78	1	0.12 U
Dibromochloromethane	µg/m ³		0.85 U	0.85 U	0.85 U	0.85 U	0.3 U
1,2-Dibromoethane	µg/m ³		0.77 U	0.77 U	0.77 U	0.77 U	0.27 U
1,2-Dichlorobenzene	µg/m ³		0.6 U	0.6 U	0.6 U	0.6 U	0.21 U
1,3-Dichlorobenzene	µg/m ³		0.6 U	0.6 U	0.6 U	0.6 U	0.21 U
1,4-Dichlorobenzene	µg/m ³		0.6 U	0.6 U	0.6 U	0.6 U	0.21 U
Dichlorodifluoromethane	µg/m ³		1.6	1.1 NJ	2.6	1.4	1.1
1,1-Dichloroethane	µg/m ³		0.4 U	0.4 U	0.4 U	0.4 U	0.14 U
1,2-Dichloroethane	µg/m ³		0.4 U	0.4 U	0.4 U	0.4 U	0.14 U
1,1-Dichloroethylene	µg/m ³	Matrix 2	0.4 U	0.4 U	0.4 U	0.4 U	0.14 U
cis-1,2-Dichloroethylene	µg/m ³	Matrix 2	0.4 U	0.4 U	0.4 U	0.4 U	0.14 U
trans-1,2-Dichloroethylene	µg/m ³		0.4 U	0.4 U	0.4 U	0.4 U	0.14 U
1,2-Dichloropropane	µg/m ³		0.46 U	0.46 U	0.46 U	0.46 U	0.16 U
cis-1,3-Dichloropropene	µg/m ³		0.45 U	0.45 U	0.45 U	0.45 U	0.16 U
trans-1,3-Dichloropropene	µg/m ³		0.45 U	0.45 U	0.45 U	0.45 U	0.16 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	µg/m ³		0.7 U	0.7 U	0.7 U	0.7 U	0.25 U
Ethanol	µg/m ³		3.1 UJ	1.9 UJ	2.5 UJ	1.9 UJ	1.6 UJ
Ethyl Acetate	µg/m ³		0.36 U	0.36 U	0.36 U	0.36 U	0.13 U
Ethylbenzene	µg/m ³		2.2 NJ	0.43 U	0.43 U	0.43 U	0.15 U
4-Ethyltoluene	µg/m ³		0.49 U	0.49 U	0.49 U	0.49 U	0.17 U
Heptane	µg/m ³		230	28	4.2	26	0.14 U

Summary of Air Sampling Results

Tioga Castings Site

Owego, New York

NYSDEC Site No: 7-54-012

Sample ID Date Matrix	Units	NYSDOH DECISION MATRIX	SV-6 12/9/10 Air	SV-7 12/9/10 Air	SV-8 12/9/10 Air	SV-X 12/9/10 Air	AA-2 12/9/10 Air
Hexachlorobutadiene	µg/m ³		1.1 U	1.1 U	1.1 U	1.1 U	0.37 U
Hexane	µg/m ³		360	63	5	60	0.12 U
2-Hexanone (MBK)	µg/m ³		0.41 U	0.41 U	0.41 U	0.41 U	0.43
Isopropanol	µg/m ³		0.25 UJ	0.25 UJ	0.9 UJ	0.25 UJ	0.29 J
Methyl tert-Butyl Ether (MTBE)	µg/m ³		0.36 U	0.36 U	0.36 U	0.36 U	0.13 U
Methylene Chloride	µg/m ³		1.4 U	1.4 U	2.6	1.4 U	0.52
4-Methyl-2-pentanone (MIBK)	µg/m ³		0.41 U	0.41 U	0.41 U	0.41 U	0.14 U
Propene	µg/m ³		0.69 U	0.69 U	0.69 U	0.69 U	0.24 U
Styrene	µg/m ³		0.43 U	0.43 U	0.43 U	0.43 U	0.15 U
1,1,2,2-Tetrachloroethane	µg/m ³		0.69 U	0.69 U	0.69 U	0.69 U	0.24 U
Tetrachloroethylene	µg/m ³	Matrix 2	0.68 U	0.68 U	0.68 U	0.68 U	0.24 U
Tetrahydrofuran	µg/m ³		0.29 U	0.29 U	0.29 U	0.29 U	0.1 U
Toluene	µg/m ³		2.9	1.5	0.75	1.4	0.19
1,2,4-Trichlorobenzene	µg/m ³		0.74 U	0.74 U	0.74 U	0.74 U	0.26 U
1,1,1-Trichloroethane	µg/m ³	Matrix 2	3.6	1.7	1.8	1.7	0.19 U
1,1,2-Trichloroethane	µg/m ³		0.55 U	0.55 U	0.55 U	0.55 U	0.19 U
Trichloroethylene	µg/m ³	Matrix 1	0.54 U	0.54 U	0.54 U	0.54 U	0.19 U
Trichlorofluoromethane	µg/m ³		0.56 U	0.56 U	0.99	0.56 U	1
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/m ³		0.84	0.77 U	0.77 U	0.77 U	0.46
1,2,4-Trimethylbenzene	µg/m ³		0.49 U	0.49 U	0.49 U	0.49 U	0.17 U
1,3,5-Trimethylbenzene	µg/m ³		0.49 U	0.49 U	0.49 U	0.49 U	0.17 U
Vinyl Acetate	µg/m ³		0.35 U	0.35 U	0.35 U	0.35 U	0.12 U
Vinyl Chloride	µg/m ³	Matrix 1	0.26 U	0.26 U	0.26 U	0.26 U	0.09 U
m&p-Xylene	µg/m ³		1.7 U	0.87 U	0.87 U	0.87 U	0.3 U
o-Xylene	µg/m ³		1.1 U	0.43 U	0.43 U	0.43 U	0.15 U

Notes:

U - Analyte not detected at indicated concentration

J - Estimated concentration

UJ - Analyte not detected - Reporting limit estimated

NJ - Tentatively identified compound - Estimated concentration

Table 5
Summary of Soil Vapor Intrusion Sampling Results - VOCs
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Sample ID Sample Type Sample Date Units	NYSDOH Soil Vapor Intrusion Guidance	AA-1 Ambient Air 7/17/2008 ug/m ³	SV-1 Soil Vapor 7/18/2008 ug/m ³	SV-2 Soil Vapor 7/18/2008 ug/m ³	SV-3 Soil Vapor 7/18/2008 ug/m ³	SV-4 Soil Vapor 7/18/2008 ug/m ³	SV-5 Soil Vapor 7/18/2008 ug/m ³
TO-15 Volatiles							
Acetone		22	20	240	29	20	160
Benzene		2.9	6.5	19	8.8	8.1	12
Benzyl Chloride		0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromodichloromethane		0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Bromoform		0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
Bromomethane		0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,3-Butadiene		0.08 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
2-Butanone (MEK)		4.1	6.3	31	14	4.2	17
Carbon Disulfide		0.12 U	14	71	19	2.7	28
Carbon Tetrachloride	5	0.56	0.31 U	0.31 U	0.82	0.31 U	0.31 U
Chlorobenzene		0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Chlorodibromomethane		0.31 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Chloroethane		0.1 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chloroform		0.17 U	0.24 U	0.24 U	0.24 U	0.24 U	0.79
Chloromethane		1	0.19	0.5	0.11	0.1 U	0.1 U
Cyclohexane		0.99	2.6	8	0.17 U	8.6	0.17 U
1,2-Dibromoethane		0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene		0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,3-Dichlorobenzene		0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene		0.21 U	0.42	0.3 U	1	1.2	1.2
Dichlorodifluoromethane		3	7.1	5	4.1	3.8	21
1,1-Dichloroethane		0.14 U	0.2 U	20	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane		0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethylene	100	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethylene	100	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
t-1,2-Dichloroethylene		0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane		0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
cis-1,3-Dichloropropene		0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
trans-1,3-Dichloropropene		0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichlorotetrafluoroethane (114)		0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Ethanol		80	14	30	30	14	14
Ethyl Acetate		0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Ethylbenzene		3.7	5.4	16	8.6	2.9	6
4-Ethyl Toluene		2.4	3.1	5.2	3.3	0.88	1.6
n-Heptane		2.1	48	140	300	13	47
Hexachlorobutadiene		0.75 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Hexane		8.3	90	290	380	14	60
2-Hexanone		0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Isopropanol		1.8	1.8	5.3	1.8	0.75	2.7
Methyl tert-Butyl Ether (MTBE)		0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Methylene Chloride	60	3.6	2.6	2.4	2.1	2.3	4.9
4-Methyl-2-Pentanone (MIBK)		0.44	0.2 U	0.2 U	0.2 U	0.2 U	1.1
Propene		0.13 U	0.18 U	0.18 U	0.18 U	16	0.18 U
Styrene		0.15 U	0.41	0.79	0.54	0.28	0.45
1,1,2,2-Tetrachloroethane		0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Tetrachloroethylene	100	0.24 U	2.7	5.7	0.84	1.3	4.6
Tetrahydrofuran		0.23	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Toluene		13	23	350	41	80	130
1,2,4-Trichlorobenzene		0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,1,1-Trichloroethane		0.19 U	1.1	1100	54	13	5
1,1,2-Trichloroethane		0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Trichloroethylene	5	0.19 U	0.88	0.4	0.27 U	0.27 U	0.27 U
Trichlorofluoromethane		2.2	2.3	1.9	15	11	21
1,1,2-Trichloro-1,2,2-Trifluoroethane		0.71	1.2	0.87	2	1.7	1.4
1,2,4-Trimethylbenzene		9	12	17	10	5.1	6.1
1,3,5-Trimethylbenzene		2.6	3.2	5.4	3.6	1.9	2.5
Vinyl Acetate		0.5 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Vinyl Chloride	5	0.1 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
m/p-Xylene		13	17	48	18	13	22
o-Xylene		5.5	8.5	21	8.6	7.9	9.7

Notes

U - Analyte not detected at indicated quantitation limit

■ "Mitigate" based on NYSDOH Guidance for Evaluating Soil Vapor Intrusion (Soil Vapor / Indoor Air Matrix 2)

ug/m³ - micrograms per cubic meter

Data Validation Services

120 Cobble Creek Road P.O. Box 208
North Creek, NY 12853

Phone 518-251-4429
Facsimile 518-251-4428

January 13, 2010

Jeremy Wyckoff
Malcolm Pirnie, Inc.
855 Rt 146 Suite 204
Clifton Park, NY 12065

RE: Data Usability Summary Report (DUSR) of Tioga Castings site Data Package
Con-Test SDG No. 10L0386

Dear Mr. Wyckoff:

Review has been completed for the data package generated by Con-test that pertains to analysis of 6-L summa canister air samples collected at the Tioga Castings site. Four air samples and a field duplicate collected 12/09/10 were analyzed for a full list of volatile analytes by USEPA GC/MS method TO-15.

The data package submitted by the laboratory contain full deliverables for validation, but this usability report is generated from review of the QC summary form information, with full review of sample raw data and limited review of associated QC raw data. Full validation has not been performed. However, the reported QC summary forms and sample raw data have been reviewed for application of validation qualifiers, with guidance from the 2006 USEPA Region II validation SOP HW-31, and in consideration for the specific requirements of the analytical methodology. The following items were reviewed:

- * Data Completeness
- * Case Narrative
- * Custody Documentation
- * Holding Times
- * Surrogate and Internal Standard Recoveries
- * Method and Canister Blanks
- * Laboratory Control Samples (LCSs)
- * Instrumental Tunes
- * Initial and Continuing Calibration Standards
- * Method Compliance
- * Sample Result Verification

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR level review.

In summary, sample processing was conducted in compliance with the analytical method. However, many of the sample results are edited to reflect non-detection, often at elevated reporting limits, or qualified otherwise. No data are rejected. The soil vapor samples were processed with lesser volume, resulting in reporting limits that are elevated by a factor of almost three.

Copies of the client sample identifications and the laboratory case narrative are attached to this text, and should be reviewed in conjunction with this report. The laboratory case narrative was not signed, and did not contain the required “verbatim” statement.

Sample report forms are attached, with recommended qualifiers applied in red ink. Results are validated in ppbv, as processed by the laboratory. Conversion factors to ug/m3 were checked on random detected values, and no errors were found.

Volatile Analyses by EPA TO-15

Results for the following analytes have been qualified as tentative in identification and estimated in value due to poor mass spectral quality:

- ethylbenzene in SV-6
- dichlorodifluoromethane in SV-7
- benzene in SV-X

Results for the following analytes have been edited to reflect non-detection due to very poor mass spectral quality:

- m,p-xylene in SV-6
- o-xylene in SV-6
- benzene in SV-7

Clean canister batch certification summaries were forwarded upon request. They show contamination above the reporting limit for acetone, 2-butanone, and ethanol. Conflicting summaries were provided for the batch associated with four of the five field samples; the highest concentrations were used to determine the potential for external contamination in the associated field samples. The following detected values are within the range for consideration as external contamination, and have been edited to reflect non-detection, usually at a significantly elevated reporting limit:

- 2-butanone and ethanol in SV-6
- acetone, ethanol, and 2-butanone in SV-8 and AA-2
- 2-butanone in SV-X and SV-7

Initial and continuing calibration standard (ICV and CCV) responses are within protocol and validation guidelines, with the following exceptions, results for which are qualified in the project samples:

- acetone detections (71%RSD, with curve intercept above zero), with a likely high bias
- ethanol (33%D), with a likely low bias

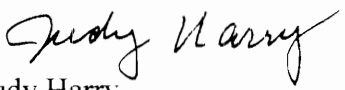
Ethanol and isopropanol produced low recoveries in the LCS (55% and 59%, respectively). The results for these two compounds are therefore qualified as estimated, with a possible low bias.

The blind field duplicate of SV-7 and the laboratory duplicate of SV-8 show acceptable correlations.

Holding times were met. Internal standard responses are within the required limits, and surrogate recoveries fall within the acceptance range. Although listed in the laboratory data package table of contents, there was no surrogate summary form present in the data package. The raw data were reviewed for compliance.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,


Judy Harry

VALIDATION DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.

J The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.

UJ The analyte was not detected. The associated reported quantitation limit is an estimate and may be inaccurate or imprecise.

NJ The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.

R The data are unusable. The analyte may or may not be present.

EMPC The results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.

**CLIENT and LABORATORY SAMPLE IDs
and CASE NARRATIVE**

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Malcolm Pirnie - Clifton Park-NY

REPORT DATE: 12/21/2010

855 Route 146, Suite 210

Clifton Park, NY 12065

PURCHASE ORDER NUMBER:

ATTN: Jeremy Wyckoff

PROJECT NUMBER: 0266362-NY DEC Standby/Tioga Castings

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 10L0386

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Tioga Castings, Owego, NY

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SV-6	10L0386-01	Sub Slab		EPA TO-15	
SV-7	10L0386-02	Sub Slab		EPA TO-15	
SV-8	10L0386-03	Sub Slab		EPA TO-15	
SV-X	10L0386-04	Sub Slab		EPA TO-15	
AA-2	10L0386-05	Ambient Air		EPA TO-15	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15**Qualifications:**

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Significant uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**1,2,4-Trichlorobenzene, Toluene**

10L0386-01[SV-6], 10L0386-02[SV-7], 10L0386-03[SV-8], 10L0386-04[SV-N], 10L0386-05[AA-2], B024025-BLK1, B024025-BS1, B024025-DUP1, B024028-BLK1, B024028-BS1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Michael A. Erickson
Laboratory Director

QUALIFIED SAMPLE RESULTS FORMS

ANALYTICAL RESULTS

Project Location: Tioga Castings, Owego, NY
 Date Received: 12/10/2010
Field Sample #: SV-6
Sample ID: 10L0386-01
 Sample Matrix: Sub Slab
 Sampled 12/9/2010 12:32

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1081
 Canister Size: 6 liter
 Flow Controller ID: 4079
 Sample Type: 30 min

Work Order: 10L0386
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -5
 Receipt Vacuum(in Hg): -5
 Flow Controller Type: Fixed-On/Off
 Flow Controller Calibration
 RPD Pre and Post-Sampling

EPA TO-15

Analyte	ppbv			ug/m3		Dilution	Date/Time		Analyst
	Results	RL	Flag	Results	RL		Analyzed		
Acetone	ND	0.40		ND	0.95	2	12/18/10 19:11	XC	
Benzene	0.51	0.10		1.6	0.32	2	12/18/10 19:11	XC	
Benzyl chloride	ND	0.10		ND	0.52	2	12/18/10 19:11	XC	
Bromodichloromethane	ND	0.10		ND	0.67	2	12/18/10 19:11	XC	
Bromoform	ND	0.10		ND	1.0	2	12/18/10 19:11	XC	
Bromomethane	ND	0.10		ND	0.39	2	12/18/10 19:11	XC	
1,3-Butadiene	ND	0.10		ND	0.22	2	12/18/10 19:11	XC	
2-Butanone (MEK)	~~1.5~~	~~0.10~~ 1.5 u		~~4.5~~	~~0.22~~ 4.5 u	2	12/18/10 19:11	XC	
Carbon Disulfide	0.35	0.10		1.1	0.31	2	12/18/10 19:11	XC	
Carbon Tetrachloride	ND	0.10		ND	0.63	2	12/18/10 19:11	XC	
Chlorobenzene	ND	0.10		ND	0.46	2	12/18/10 19:11	XC	
Chloroethane	ND	0.10		ND	0.26	2	12/18/10 19:11	XC	
Chloroform	ND	0.10		ND	0.49	2	12/18/10 19:11	XC	
Chloromethane	ND	0.10		ND	0.21	2	12/18/10 19:11	XC	
Cyclohexane	0.34	0.10		1.2	0.34	2	12/18/10 19:11	XC	
Dibromochloromethane	ND	0.10		ND	0.85	2	12/18/10 19:11	XC	
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	12/18/10 19:11	XC	
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	12/18/10 19:11	XC	
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	12/18/10 19:11	XC	
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	12/18/10 19:11	XC	
Dichlorodifluoromethane (Freon 12)	0.32	0.10		1.6	0.49	2	12/18/10 19:11	XC	
1,1-Dichloroethane	ND	0.10		ND	0.40	2	12/18/10 19:11	XC	
1,2-Dichloroethane	ND	0.10		ND	0.40	2	12/18/10 19:11	XC	
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	12/18/10 19:11	XC	
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	12/18/10 19:11	XC	
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	12/18/10 19:11	XC	
1,2-Dichloropropane	ND	0.10		ND	0.46	2	12/18/10 19:11	XC	
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/18/10 19:11	XC	
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/18/10 19:11	XC	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70	2	12/18/10 19:11	XC	
Ethanol	~~4.6~~	~~0.10~~ 4.6 u		~~3.1~~	~~0.36~~ 3.1 u	2	12/18/10 19:11	XC	
Ethyl Acetate	ND	0.10		ND	0.36	2	12/18/10 19:11	XC	
Ethylbenzene	0.52	0.10	NJ	2.2	0.43	2	12/18/10 19:11	XC	
4-Ethyltoluene	ND	0.10		ND	0.49	2	12/18/10 19:11	XC	
Heptane	56	0.10		230	0.41	2	12/18/10 19:11	XC	
Hexachlorobutadiene	ND	0.10		ND	1.1	2	12/18/10 19:11	XC	
Hexane	100	0.25		360	0.88	5	12/20/10 13:45	XC	
2-Hexanone (MBK)	ND	0.10		ND	0.41	2	12/18/10 19:11	XC	

ANALYTICAL RESULTS

Project Location: Tioga Castings, Owego, NY
 Date Received: 12/10/2010
Field Sample #: SV-6
Sample ID: 10L0386-01
 Sample Matrix: Sub Slab
 Sampled: 12/9/2010 12:32

Sample Description Location:
 Sub Description Location:
 Canister ID: 1081
 Canister Size: 6 liter
 Flow Controller ID: 4079
 Sample Type: 30 min

Work Order: 10L0386
 Initial Vacuum (in Hg): -29
 Final Vacuum (in Hg): -5
 Receipt Vacuum (in Hg): -5
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration:
 RPD Pre and Post-Sampling

EPA TO-15

Analyte	ppbv			ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag	Results	RL			
Isopropanol	ND	0.10	u	ND	0.25	2	12/18/10 19:11	XC
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	12/18/10 19:11	XC
Methylene Chloride	ND	0.40		ND	1.4	2	12/18/10 19:11	XC
4-Methyl-2-pentanone (MIBK)	ND	0.10		ND	0.41	2	12/18/10 19:11	XC
Propene	ND	0.40		ND	0.69	2	12/18/10 19:11	XC
Styrene	ND	0.10		ND	0.43	2	12/18/10 19:11	XC
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	12/18/10 19:11	XC
Tetrachloroethylene	ND	0.10		ND	0.68	2	12/18/10 19:11	XC
Tetrahydrofuran	ND	0.10		ND	0.29	2	12/18/10 19:11	XC
Toluene	0.76	0.10		2.9	0.38	2	12/18/10 19:11	XC
1,2,4-Trichlorobenzene	ND	0.10	V-05	ND	0.74	2	12/18/10 19:11	XC
1,1,1-Trichloroethane	0.66	0.10		3.6	0.55	2	12/18/10 19:11	XC
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	12/18/10 19:11	XC
Trichloroethylene	ND	0.10		ND	0.54	2	12/18/10 19:11	XC
Trichlorofluoromethane (Freon 11)	ND	0.10		ND	0.56	2	12/18/10 19:11	XC
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.11	0.10		0.84	0.77	2	12/18/10 19:11	XC
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	12/18/10 19:11	XC
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	12/18/10 19:11	XC
Vinyl Acetate	ND	0.10		ND	0.35	2	12/18/10 19:11	XC
Vinyl Chloride	ND	0.10		ND	0.26	2	12/18/10 19:11	XC
m&p-Xylene	~~0.59~~ 0.20	0.20	0.39 u	~~1.7~~ 1.7	1.7	2	12/18/10 19:11	XC
o-Xylene	~~0.25~~ 0.25	0.25	0.25 u	~~1.1~~ 1.1	1.1	2	12/18/10 19:11	XC

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	103	70-130	12/20/10 13:45
4-Bromofluorobenzene (1)	104	70-130	12/18/10 19:11

ANALYTICAL RESULTS

Project Location: Tioga Castings, Owego, NY
 Date Received: 12/10/2010
 Field Sample #: SV-7
 Sample ID: 10L0386-02
 Sample Matrix: Sub Slab
 Sampled: 12/9/2010 12:36

Sample Description Location:
 Sub Description Location:
 Canister ID: 1170
 Canister Size: 6 liter
 Flow Controller ID: 4094
 Sample Type: 30 min

Work Order: 10L0386
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -5
 Receipt Vacuum(in Hg): -6
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling

EPA TO-15

Analyte	ppbv			ug/m3		Dilution	Date/Time		Analyst
	Results	RL	Flag	Results	RL		Analyzed		
Acetone	ND	0.40		ND	0.95	2	12/18/10 19:50	XC	
Benzene	~~0.31~~ 0.31	0.10	U	~~1.0~~ 1.0	0.22	2	12/18/10 19:50	XC	
Benzyl chloride	ND	0.10		ND	0.52	2	12/18/10 19:50	XC	
Bromodichloromethane	ND	0.10		ND	0.67	2	12/18/10 19:50	XC	
Bromoform	ND	0.10		ND	1.0	2	12/18/10 19:50	XC	
Bromomethane	ND	0.10		ND	0.39	2	12/18/10 19:50	XC	
1,3-Butadiene	ND	0.10		ND	0.22	2	12/18/10 19:50	XC	
2-Butanone (MEK)	~~0.61~~ 0.61	0.10	U	~~1.8~~ 1.8	0.22	2	12/18/10 19:50	XC	
Carbon Disulfide	0.57	0.10		1.8	0.31	2	12/18/10 19:50	XC	
Carbon Tetrachloride	ND	0.10		ND	0.63	2	12/18/10 19:50	XC	
Chlorobenzene	ND	0.10		ND	0.46	2	12/18/10 19:50	XC	
Chloroethane	ND	0.10		ND	0.26	2	12/18/10 19:50	XC	
Chloroform	ND	0.10		ND	0.49	2	12/18/10 19:50	XC	
Chloromethane	ND	0.10		ND	0.21	2	12/18/10 19:50	XC	
Cyclohexane	0.32	0.10		1.1	0.34	2	12/18/10 19:50	XC	
Dibromochloromethane	ND	0.10		ND	0.85	2	12/18/10 19:50	XC	
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	12/18/10 19:50	XC	
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	12/18/10 19:50	XC	
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	12/18/10 19:50	XC	
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	12/18/10 19:50	XC	
Dichlorodifluoromethane (Freon 12)	0.22	0.10	NS	1.1	0.49	2	12/18/10 19:50	XC	
1,1-Dichloroethane	ND	0.10		ND	0.40	2	12/18/10 19:50	XC	
1,2-Dichloroethane	ND	0.10		ND	0.40	2	12/18/10 19:50	XC	
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	12/18/10 19:50	XC	
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	12/18/10 19:50	XC	
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	12/18/10 19:50	XC	
1,2-Dichloropropane	ND	0.10		ND	0.46	2	12/18/10 19:50	XC	
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/18/10 19:50	XC	
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/18/10 19:50	XC	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70	2	12/18/10 19:50	XC	
Ethanol	ND	1.0	NS	ND	1.9	2	12/18/10 19:50	XC	
Ethyl Acetate	ND	0.10		ND	0.36	2	12/18/10 19:50	XC	
Ethylbenzene	ND	0.10		ND	0.43	2	12/18/10 19:50	XC	
4-Ethyltoluene	ND	0.10		ND	0.49	2	12/18/10 19:50	XC	
Heptane	6.7	0.10		28	0.41	2	12/18/10 19:50	XC	
Hexachlorobutadiene	ND	0.10		ND	1.1	2	12/18/10 19:50	XC	
Hexane	18	0.10		63	0.35	2	12/18/10 19:50	XC	
2-Hexanone (MBK)	ND	0.10		ND	0.41	2	12/18/10 19:50	XC	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Tioga Castings, Owego, NY
Date Received: 12/10/2010
Field Sample #: SV-7
Sample ID: 10L0386-02
Sample Matrix: Sub Slab
Sampled: 12/9/2010 12:36

Sample Description/Location:
Sub Description/Location:
Canister ID: 1170
Canister Size: 6 liter
Flow Controller ID: 4094
Sample Type: 30 min

Work Order: 10L0386
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling

EPA TO-15

Analyte	ppbv			ug/m3		Dilution	Date/Time		Analyst
	Results	RL	Flag	Results	RL		Analyzed		
Isopropanol	ND	0.10	V-05	ND	0.25	2	12/18/10 19:50	XC	
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	12/18/10 19:50	XC	
Methylene Chloride	ND	0.40		ND	1.4	2	12/18/10 19:50	XC	
4-Methyl-2-pentanone (MIBK)	ND	0.10		ND	0.41	2	12/18/10 19:50	XC	
Propene	ND	0.40		ND	0.69	2	12/18/10 19:50	XC	
Styrene	ND	0.10	V-05	ND	0.43	2	12/18/10 19:50	XC	
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	12/18/10 19:50	XC	
Tetrachloroethylene	ND	0.10		ND	0.68	2	12/18/10 19:50	XC	
Tetrahydrofuran	ND	0.10		ND	0.29	2	12/18/10 19:50	XC	
Toluene	0.40	0.10		1.5	0.38	2	12/18/10 19:50	XC	
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	12/18/10 19:50	XC	
1,1,1-Trichloroethane	0.32	0.10		1.7	0.55	2	12/18/10 19:50	XC	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	12/18/10 19:50	XC	
Trichloroethylene	ND	0.10		ND	0.54	2	12/18/10 19:50	XC	
Trichlorofluoromethane (Freon 11)	ND	0.10		ND	0.56	2	12/18/10 19:50	XC	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	12/18/10 19:50	XC	
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	12/18/10 19:50	XC	
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	12/18/10 19:50	XC	
Vinyl Acetate	ND	0.10		ND	0.35	2	12/18/10 19:50	XC	
Vinyl Chloride	ND	0.10		ND	0.26	2	12/18/10 19:50	XC	
m&p-Xylene	ND	0.20		ND	0.87	2	12/18/10 19:50	XC	
o-Xylene	ND	0.10		ND	0.43	2	12/18/10 19:50	XC	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	102	70-130	12/18/10 19:50

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ANALYTICAL RESULTS

Project Location: Tioga Castings, Owego, NY

Date Received: 12/10/2010

Field Sample #: SV-8

Sample ID: 10L0386-03

Sample Matrix: Sub Slab

Sampled: 12/9/2010 12:34

Sample Description Location:

Sub Description Location:

Canister ID: 1174

Canister Size: 6 liter

Flow Controller ID: 4075

Sample Type: 30 min

Work Order: 10L0386

Initial Vacuum(in Hg): -28

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling

EPA TO-15

Analyte	ppbv			ug/m3			Date/Time		
	Results	RL	Flag	Results	RL		Dilution	Analyzed	Analyst
Acetone	~~5.0~~	~~0.10~~	5.0 U	~~1.2~~	~~0.25~~	1.2 U	2	12/18/10 20:29	XC
Benzene	0.10	0.10		0.33	0.32		2	12/18/10 20:29	XC
Benzyl chloride	ND	0.10		ND	0.52		2	12/18/10 20:29	XC
Bromodichloromethane	ND	0.10		ND	0.67		2	12/18/10 20:29	XC
Bromoform	ND	0.10		ND	1.0		2	12/18/10 20:29	XC
Bromomethane	ND	0.10		ND	0.39		2	12/18/10 20:29	XC
1,3-Butadiene	ND	0.10		ND	0.22		2	12/18/10 20:29	XC
2-Butanone (MEK)	~~0.17~~	~~0.10~~	0.17 U	~~1.4~~	~~0.25~~	1.4 U	2	12/18/10 20:29	XC
Carbon Disulfide	ND	0.10		ND	0.31		2	12/18/10 20:29	XC
Carbon Tetrachloride	ND	0.10		ND	0.63		2	12/18/10 20:29	XC
Chlorobenzene	ND	0.10		ND	0.46		2	12/18/10 20:29	XC
Chloroethane	ND	0.10		ND	0.26		2	12/18/10 20:29	XC
Chloroform	ND	0.10		ND	0.49		2	12/18/10 20:29	XC
Chloromethane	ND	0.10		ND	0.21		2	12/18/10 20:29	XC
Cyclohexane	0.23	0.10		0.78	0.34		2	12/18/10 20:29	XC
Dibromochloromethane	ND	0.10		ND	0.85		2	12/18/10 20:29	XC
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77		2	12/18/10 20:29	XC
1,2-Dichlorobenzene	ND	0.10		ND	0.60		2	12/18/10 20:29	XC
1,3-Dichlorobenzene	ND	0.10		ND	0.60		2	12/18/10 20:29	XC
1,4-Dichlorobenzene	ND	0.10		ND	0.60		2	12/18/10 20:29	XC
Dichlorodifluoromethane (Freon 12)	0.53	0.10		2.6	0.49		2	12/18/10 20:29	XC
1,1-Dichloroethane	ND	0.10		ND	0.40		2	12/18/10 20:29	XC
1,2-Dichloroethane	ND	0.10		ND	0.40		2	12/18/10 20:29	XC
1,1-Dichloroethylene	ND	0.10		ND	0.40		2	12/18/10 20:29	XC
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40		2	12/18/10 20:29	XC
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40		2	12/18/10 20:29	XC
1,2-Dichloropropane	ND	0.10		ND	0.46		2	12/18/10 20:29	XC
cis-1,3-Dichloropropene	ND	0.10		ND	0.45		2	12/18/10 20:29	XC
trans-1,3-Dichloropropene	ND	0.10		ND	0.45		2	12/18/10 20:29	XC
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70		2	12/18/10 20:29	XC
Ethanol	~~19.3~~	~~0.10~~	19.3 U	~~2.5~~	~~0.25~~	2.5 U	2	12/18/10 20:29	XC
Ethyl Acetate	ND	0.10		ND	0.36		2	12/18/10 20:29	XC
Ethylbenzene	ND	0.10		ND	0.43		2	12/18/10 20:29	XC
4-Ethyltoluene	ND	0.10		ND	0.49		2	12/18/10 20:29	XC
Heptane	1.0	0.10		4.2	0.41		2	12/18/10 20:29	XC
Hexachlorobutadiene	ND	0.10		ND	1.1		2	12/18/10 20:29	XC
Hexane	1.4	0.10		5.0	0.35		2	12/18/10 20:29	XC
2-Hexanone (MBK)	ND	0.10		ND	0.41		2	12/18/10 20:29	XC

ANALYTICAL RESULTS

Project Location: Tioga Castings, Owego, NY
Date Received: 12/10/2010
Field Sample #: SV-8
Sample ID: 10L0386-03
Sample Matrix: Sub Slab
Sampled: 12/9/2010 12:34

Sample Description/Location:
Sub Description/Location:
Canister ID: 1174
Canister Size: 6 liter
Flow Controller ID: 4075
Sample Type: 30 min

Work Order: 10L0386
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -4
Receipt Vacuum(in Hg): -4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Isopropanol	0.37	0.10	U3	0.90	0.25	2	12/18/10 20:29	XC	
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	12/18/10 20:29	XC	
Methylene Chloride	0.76	0.40		2.6	1.4	2	12/18/10 20:29	XC	
4-Methyl-2-pentanone (MIBK)	ND	0.10		ND	0.41	2	12/18/10 20:29	XC	
Propene	ND	0.40		ND	0.69	2	12/18/10 20:29	XC	
Styrene	ND	0.10		ND	0.43	2	12/18/10 20:29	XC	
1,1,2,2-Tetrachloroethane	ND	0.10	V-05	ND	0.69	2	12/18/10 20:29	XC	
Tetrachloroethylene	ND	0.10		ND	0.68	2	12/18/10 20:29	XC	
Tetrahydrofuran	ND	0.10		ND	0.29	2	12/18/10 20:29	XC	
Toluene	0.20	0.10		0.75	0.38	2	12/18/10 20:29	XC	
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	12/18/10 20:29	XC	
1,1,1-Trichloroethane	0.33	0.10		1.8	0.55	2	12/18/10 20:29	XC	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	12/18/10 20:29	XC	
Trichloroethylene	ND	0.10		ND	0.54	2	12/18/10 20:29	XC	
Trichlorofluoromethane (Freon 11)	0.18	0.10		0.99	0.56	2	12/18/10 20:29	XC	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	12/18/10 20:29	XC	
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	12/18/10 20:29	XC	
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	12/18/10 20:29	XC	
Vinyl Acetate	ND	0.10		ND	0.35	2	12/18/10 20:29	XC	
Vinyl Chloride	ND	0.10		ND	0.26	2	12/18/10 20:29	XC	
m&p-Xylene	ND	0.20		ND	0.87	2	12/18/10 20:29	XC	
o-Xylene	ND	0.10		ND	0.43	2	12/18/10 20:29	XC	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	102	70-130	12/18/10 20:29

ANALYTICAL RESULTS

Project Location: Tioga Castings, Owego, NY
 Date Received: 12/10/2010
Field Sample #: SV-X
Sample ID: 10L0386-04
 Sample Matrix: Sub Slab
 Sampled: 12/9/2010 00:00

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1670
 Canister Size: 6 liter
 Flow Controller ID: 4016
 Sample Type: 30 min

Work Order: 10L0386

Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -4
 Receipt Vacuum(in Hg): -2
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	ND	0.40	NJ	ND	0.95	2	12/18/10 21:48	XC	
Benzene	0.30	0.10		0.96	0.32	2	12/18/10 21:48	XC	
Benzyl chloride	ND	0.10		ND	0.52	2	12/18/10 21:48	XC	
Bromodichloromethane	ND	0.10		ND	0.67	2	12/18/10 21:48	XC	
Bromoform	ND	0.10		ND	1.0	2	12/18/10 21:48	XC	
Bromomethane	ND	0.10		ND	0.39	2	12/18/10 21:48	XC	
1,3-Butadiene	ND	0.10		ND	0.22	2	12/18/10 21:48	XC	
2-Butanone (MEK)	~~0.27~~	~~0.10~~	0.27 U	~~0.79~~	~~0.29~~	2	12/18/10 21:48	XC	
Carbon Disulfide	0.56	0.10		1.7	0.31	2	12/18/10 21:48	XC	
Carbon Tetrachloride	ND	0.10		ND	0.63	2	12/18/10 21:48	XC	
Chlorobenzene	ND	0.10		ND	0.46	2	12/18/10 21:48	XC	
Chloroethane	ND	0.10		ND	0.26	2	12/18/10 21:48	XC	
Chloroform	ND	0.10		ND	0.49	2	12/18/10 21:48	XC	
Chloromethane	ND	0.10		ND	0.21	2	12/18/10 21:48	XC	
Cyclohexane	0.30	0.10		1.0	0.34	2	12/18/10 21:48	XC	
Dibromochloromethane	ND	0.10		ND	0.85	2	12/18/10 21:48	XC	
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	12/18/10 21:48	XC	
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	12/18/10 21:48	XC	
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	12/18/10 21:48	XC	
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	12/18/10 21:48	XC	
Dichlorodifluoromethane (Freon 12)	0.29	0.10		1.4	0.49	2	12/18/10 21:48	XC	
1,1-Dichloroethane	ND	0.10		ND	0.40	2	12/18/10 21:48	XC	
1,2-Dichloroethane	ND	0.10		ND	0.40	2	12/18/10 21:48	XC	
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	12/18/10 21:48	XC	
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	12/18/10 21:48	XC	
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	12/18/10 21:48	XC	
1,2-Dichloropropane	ND	0.10		ND	0.46	2	12/18/10 21:48	XC	
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/18/10 21:48	XC	
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/18/10 21:48	XC	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70	2	12/18/10 21:48	XC	
Ethanol	ND	1.0	UJ	ND	1.9	2	12/18/10 21:48	XC	
Ethyl Acetate	ND	0.10		ND	0.36	2	12/18/10 21:48	XC	
Ethylbenzene	ND	0.10		ND	0.43	2	12/18/10 21:48	XC	
4-Ethyltoluene	ND	0.10		ND	0.49	2	12/18/10 21:48	XC	
Heptane	6.3	0.10		26	0.41	2	12/18/10 21:48	XC	
Hexachlorobutadiene	ND	0.10		ND	1.1	2	12/18/10 21:48	XC	
Hexane	17	0.10		60	0.35	2	12/18/10 21:48	XC	
2-Hexanone (MBK)	ND	0.10		ND	0.41	2	12/18/10 21:48	XC	

ANALYTICAL RESULTS

Project Location: Tioga Castings, Owego, NY

Date Received: 12/10/2010

Field Sample #: SV-X

Sample ID: 10L0386-04

Sample Matrix: Sub Slab

Sampled: 12/9/2010 00:00

Sample Description Location:

Sub Description/Location:

Canister ID: 1670

Canister Size: 6 liter

Flow Controller ID: 4016

Sample Type: 30 min

Work Order: 10L0386

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -2

Receipt Vacuum(in Hg): -2

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Isopropanol	ND	0.10	43	ND	0.25	2	12/18/10 21:48	XC	
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	12/18/10 21:48	XC	
Methylene Chloride	ND	0.40		ND	1.4	2	12/18/10 21:48	XC	
4-Methyl-2-pentanone (MIBK)	ND	0.10		ND	0.41	2	12/18/10 21:48	XC	
Propene	ND	0.40		ND	0.69	2	12/18/10 21:48	XC	
Styrene	ND	0.10		ND	0.43	2	12/18/10 21:48	XC	
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	12/18/10 21:48	XC	
Tetrachloroethylene	ND	0.10		ND	0.68	2	12/18/10 21:48	XC	
Tetrahydrofuran	ND	0.10		ND	0.29	2	12/18/10 21:48	XC	
Toluene	0.38	0.10	V-05	1.4	0.38	2	12/18/10 21:48	XC	
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	12/18/10 21:48	XC	
1,1,1-Trichloroethane	0.31	0.10		1.7	0.55	2	12/18/10 21:48	XC	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	12/18/10 21:48	XC	
Trichloroethylene	ND	0.10		ND	0.54	2	12/18/10 21:48	XC	
Trichlorofluoromethane (Freon 11)	ND	0.10		ND	0.56	2	12/18/10 21:48	XC	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	12/18/10 21:48	XC	
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	12/18/10 21:48	XC	
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	12/18/10 21:48	XC	
Vinyl Acetate	ND	0.10		ND	0.35	2	12/18/10 21:48	XC	
Vinyl Chloride	ND	0.10		ND	0.26	2	12/18/10 21:48	XC	
m&p-Xylene	ND	0.20		ND	0.87	2	12/18/10 21:48	XC	
o-Xylene	ND	0.10		ND	0.43	2	12/18/10 21:48	XC	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	101	70-130	12/18/10 21:48

ANALYTICAL RESULTS

Project Location: Tioga Castings, Owego, NY
Date Received: 12/10/2010
Field Sample #: AA-2
Sample ID: 10L0386-05
Sample Matrix: Ambient Air
Sampled: 12/9/2010 12:31

Sample Description Location:
Sub Description/Location:
Canister ID: 1497
Canister Size: 6 liter
Flow Controller ID: 4078
Sample Type: 30 min

Work Order: 10L0386
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -
Receipt Vacuum(in Hg): -2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3		Dilution	Date/Time		Analyst
	Results	RL	Flag	Results	RL		Analyzed		
Acetone	~~2.8~~ 2.8	0.41	U	~~0.7~~ 6.7	0.23	0.702	12/18/10 17:10	XC	
Benzene	0.11	0.035		0.34	0.11	0.702	12/18/10 17:10	XC	
Benzyl chloride	ND	0.035		ND	0.18	0.702	12/18/10 17:10	XC	
Bromodichloromethane	ND	0.035		ND	0.24	0.702	12/18/10 17:10	XC	
Bromoform	ND	0.035		ND	0.36	0.702	12/18/10 17:10	XC	
Bromomethane	ND	0.035		ND	0.14	0.702	12/18/10 17:10	XC	
1,3-Butadiene	ND	0.035		ND	0.078	0.702	12/18/10 17:10	XC	
2-Butanone (MEK)	~~0.56~~ 0.56	~~0.035~~	U	~~1.6~~ 1.6	~~0.40~~	0.702	12/18/10 17:10	XC	
Carbon Disulfide	ND	0.035		ND	0.11	0.702	12/18/10 17:10	XC	
Carbon Tetrachloride	0.073	0.035		0.46	0.22	0.702	12/18/10 17:10	XC	
Chlorobenzene	ND	0.035		ND	0.16	0.702	12/18/10 17:10	XC	
Chloroethane	ND	0.035		ND	0.093	0.702	12/18/10 17:10	XC	
Chloroform	ND	0.035		ND	0.17	0.702	12/18/10 17:10	XC	
Chloromethane	0.51	0.035		1.1	0.072	0.702	12/18/10 17:10	XC	
Cyclohexane	ND	0.035		ND	0.12	0.702	12/18/10 17:10	XC	
Dibromochloromethane	ND	0.035		ND	0.30	0.702	12/18/10 17:10	XC	
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	12/18/10 17:10	XC	
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/18/10 17:10	XC	
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/18/10 17:10	XC	
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/18/10 17:10	XC	
Dichlorodifluoromethane (Freon 12)	0.22	0.035		1.1	0.17	0.702	12/18/10 17:10	XC	
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	12/18/10 17:10	XC	
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	12/18/10 17:10	XC	
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/18/10 17:10	XC	
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/18/10 17:10	XC	
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/18/10 17:10	XC	
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	12/18/10 17:10	XC	
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/18/10 17:10	XC	
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/18/10 17:10	XC	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	12/18/10 17:10	XC	
Ethanol	~~0.86~~ 0.86	~~0.35~~	U	~~1.6~~ 1.6	~~0.60~~	0.702	12/18/10 17:10	XC	
Ethyl Acetate	ND	0.035		ND	0.13	0.702	12/18/10 17:10	XC	
Ethylbenzene	ND	0.035		ND	0.15	0.702	12/18/10 17:10	XC	
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	12/18/10 17:10	XC	
Heptane	ND	0.035		ND	0.14	0.702	12/18/10 17:10	XC	
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	12/18/10 17:10	XC	
Hexane	ND	0.035		ND	0.12	0.702	12/18/10 17:10	XC	
2-Hexanone (MBK)	0.10	0.035		0.43	0.14	0.702	12/18/10 17:10	XC	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Tioga Castings, Owego, NY
Date Received: 12/10/2010
Field Sample #: AA-2
Sample ID: 101.0386-05
Sample Matrix: Ambient Air
Sampled: 12/9/2010 12:31

Sample Description Location:
Sub Description Location:
Canister ID: 1497
Canister Size: 6 liter
Flow Controller ID: 4078
Sample Type: 30 min

Work Order: 101.0386
Initial Vacuum (in Hg): -29
Final Vacuum (in Hg): -2
Receipt Vacuum (in Hg): -2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration:
Pre and Post-Sampling

EPA TO-15

Analyte	ppbv			ug/m3		Date/Time		
	Results	RL	Flag	Results	RL	Dilution	Analyzed	Analyst
Isopropanol	0.12	0.035	J	0.29	0.086	0.702	12/18/10 17:10	XC
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	12/18/10 17:10	XC
Methylene Chloride	0.15	0.14		0.52	0.49	0.702	12/18/10 17:10	XC
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	12/18/10 17:10	XC
Propene	ND	0.14		ND	0.24	0.702	12/18/10 17:10	XC
Styrene	ND	0.035		ND	0.15	0.702	12/18/10 17:10	XC
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	12/18/10 17:10	XC
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	12/18/10 17:10	XC
Tetrahydrofuran	ND	0.035		ND	0.10	0.702	12/18/10 17:10	XC
Toluene	0.050	0.035		0.19	0.13	0.702	12/18/10 17:10	XC
1,2,4-Trichlorobenzene	ND	0.035	V-05	ND	0.26	0.702	12/18/10 17:10	XC
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	12/18/10 17:10	XC
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	12/18/10 17:10	XC
Trichloroethylene	ND	0.035		ND	0.19	0.702	12/18/10 17:10	XC
Trichlorofluoromethane (Freon 11)	0.19	0.035		1.0	0.20	0.702	12/18/10 17:10	XC
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.060	0.035		0.46	0.27	0.702	12/18/10 17:10	XC
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.702	12/18/10 17:10	XC
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	12/18/10 17:10	XC
Vinyl Acetate	ND	0.035		ND	0.12	0.702	12/18/10 17:10	XC
Vinyl Chloride	ND	0.035		ND	0.090	0.702	12/18/10 17:10	XC
m&p-Xylene	ND	0.070		ND	0.30	0.702	12/18/10 17:10	XC
o-Xylene	ND	0.035		ND	0.15	0.702	12/18/10 17:10	XC

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	103	70-130	12/18/10 17:10