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 and Third Quarter 2009

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

December 2009

Report Prepared By:

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MALCOLM PIRNIE

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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 Work Plan to summarize site activities, including Second Quarter 2009 operation and maintenance (O&M) activities and groundwater sampling results, and Third Quarter 2009 surface soil 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

Second quarter 2009 O&M and monitoring activities were conducted by the NYSDEC during pending approval for a budget addendum to the Work Assignment during the designated operating period. The NYSDEC performed the following activities:

- Collection and analysis of groundwater samples (analytical results are presented in Section 4).
- Removal of a chain-link fence surrounding the perimeter of the former foundry buildings.
- Disposal of investigation derived waste (IDW), including four 55 gallon drums of drill cuttings and one 55 gallon drum of decontamination water generated during the October 2008 subsurface investigation of the site.

Third Quarter 2009 O&M activities were conducted by Malcolm Pirnie in accordance with the approved Work Plan.

3.1. Landfill Security

The landfill perimeter fence, entry gate, and locks were inspected for proper operation and signs of deterioration. Figure 3-1 shows the location of the landfill. No problems were identified with the security of the landfill. A warning sign is present at the Foundry Street entrance gate that provides a warning indicating the area within the fence contains hazardous waste and unauthorized entry is forbidden.

3.2. Landfill Cap Maintenance

A visual inspection of the landfill cover was performed to assess the site for burrowing rodents, erosion, woody vegetation, and settlement. Burrowing rodent holes were identified near the northern perimeter of the landfill cell. The burrows will be monitored for activity to evaluate if removal of the rodent(s) is necessary. The landfill cover appeared to be mowed and no large or woody vegetation was present.

4. Groundwater Monitoring Program

4.1. Groundwater Sampling

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. According to the NYSDEC, the Second Quarter 2009 sampling event was also conducted to provide groundwater quality data to evaluate the site for reclassification from Class 2 to Class 3 on the NYSDEC Inactive Hazardous Waste Disposal Site Registry.

In April 2009, the NYSDEC collected groundwater samples from existing groundwater monitoring wells MW-2, MW-3, MW-4, and MW-5. They also collected samples from wells installed in October 2008 following a subsurface soil evaluation of the site. These wells include MW-1R (replacement well for MW-1), MW-3D, MW-5, MW-7, and MW-8. Figure 3-1 shows the locations of the monitoring wells. According to the NYSDEC, prior to collecting groundwater samples, three well volumes were purged from each well using a Whale® submersible pump. The results from the sampling event are summarized in Tables 4-1 (VOCs), 4-2 (SVOCs), and 4-3 (metals). Analytical reporting forms are provided in Appendix A.

4.1.1. Groundwater sampling Results – VOCs and SVOCs

As shown in Table 4-1 and Table 4-2, with the exception of estimated concentration (based on the "J" qualifier) of toluene in the sample from MW-7 (4 micrograms per liter (ug/L)), none of the samples contained concentrations of VOCs or SVOCs greater than the indicated reporting limits. Although the NYSDEC Class GA Standards are lower than a majority of the reporting limits presented on the laboratory reporting forms, the method detection limits for these analytes are generally within the range of the corresponding NYSDEC Class GA Standards. This means that the analytes would likely have been detected if they were present at concentrations less than the NYSDEC Class GA Standards, but would have been accompanied by a "J" (estimated value) qualifier.

4.1.2. Groundwater Sampling Results – Metals

As shown in Table 4-3, the concentrations of iron in the samples collected from monitoring wells MW-2 (532 ug/L), MW-3D (558 ug/L), MW-4 (667 ug/L), MW-7 (2,880 ug/L), and MW-8 (4,530 ug/L) exceeded the corresponding NYSDEC Class GA Standard of 300 ug/L. These exceedances may be anomalous since the previous (2007 and 2008) iron results from MW-2 and MW-4 were listed as non-detect (MW-2) or were an order of magnitude less than the concentrations from the 2009 sampling event.

Manganese was detected at a concentration greater than the applicable NYSDEC Class GA Standard of 300 ug/L in the samples from MW-7 (989 ug/L) and MW-8 (584 ug/L). As with the iron results above, the manganese concentrations in the 2009 samples were significantly higher than samples collected in 2007 and 2008. Therefore, as with the iron exceedances, the elevated manganese concentrations may also be anomalous.

Table 4-3 shows that sodium was detected in samples from groundwater monitoring wells MW-1R (25,600 ug/L), MW-2 (25,200 ug/L), MW-7 (57,500 ug/L), and MW-8 (26,700 ug/L) at concentrations greater than the NYSDEC Class GA Standard of 20,000 ug/L . These results, coupled with the elevated calcium concentrations present in all of the groundwater samples, suggest that road de-icing agents may be the source for the sodium.

As shown in Table 4-3, the sample collected from MW-7 contained lead at a concentration of 32 ug/L, which is greater than the respective site-specific cleanup goal and NYSDEC Class GA Standard of 25 ug/L.

Table 4-3 shows that no other metals were detected at concentrations greater than the applicable NYSDEC Class GA Standards.

5. Surface Soil Sampling

On July 29, 2009, at the request of NYSDEC, surface soil samples were collected from the site to evaluate if surface soil is an exposure route to site-related contaminants.

5.1. Surface Soil Sampling Location Selection

Six surface soil samples were collected from areas of the site 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. In addition, five surface soil samples were collected from off-site locations for a comparison of background concentrations of metals in the vicinity of the site in accordance with the NYSDEC Division of Environmental Remediation Draft DER-10 Technical Guidance for Site Investigation and Remediation (DER-10) and in consultation with NYSDEC and New York State Department of Health (NYSDOH) representatives. Figure 5-1 shows the on-site surface soil sampling locations. Figure 5-2 shows the background surface soil sampling locations.

5.2. Surface Soil Sampling Procedures

Surface soil samples were collected from the top two inches of soil using pre-cleaned, stainless-steel sampling spoons and bowls. Soil samples were homogenized in the stainless-steel bowls, then transferred to the appropriate sample container and submitted to Test America Laboratories in Shelton, Connecticut following chain-of-custody procedures for analysis of metals by USEPA Method ILM05.3. Analytical data are presented in Table 5-1. Analytical reporting forms are provided in Appendix A.

5.3. Surface Soil Sampling Results

As shown in Table 5-1, none of the surface soil samples contained concentrations of metals greater than the corresponding 6NYCRR Part 375 Commercial SCOs; however, surface soil sample SS-06 contained lead at a concentration of 327 milligrams per kilogram (mg/kg). This result is greater than the applicable site-specific clean up goal of 250 mg/kg. As shown on Figure 5-1, this sample was collected on the eastern side of the site near a former parking lot. According to the on-site geologist's field notes, the soil homogenized in the stainless steel bowl consisted of dark brown fine sand and silt and contained paint chips, an aluminum can "pull tab", and a nail (the nail and pull tab were removed from the soil sample prior to placement in the sampling container). Therefore, the elevated lead result is likely related to the potential presence of lead in the paint chips observed in the soil sample.

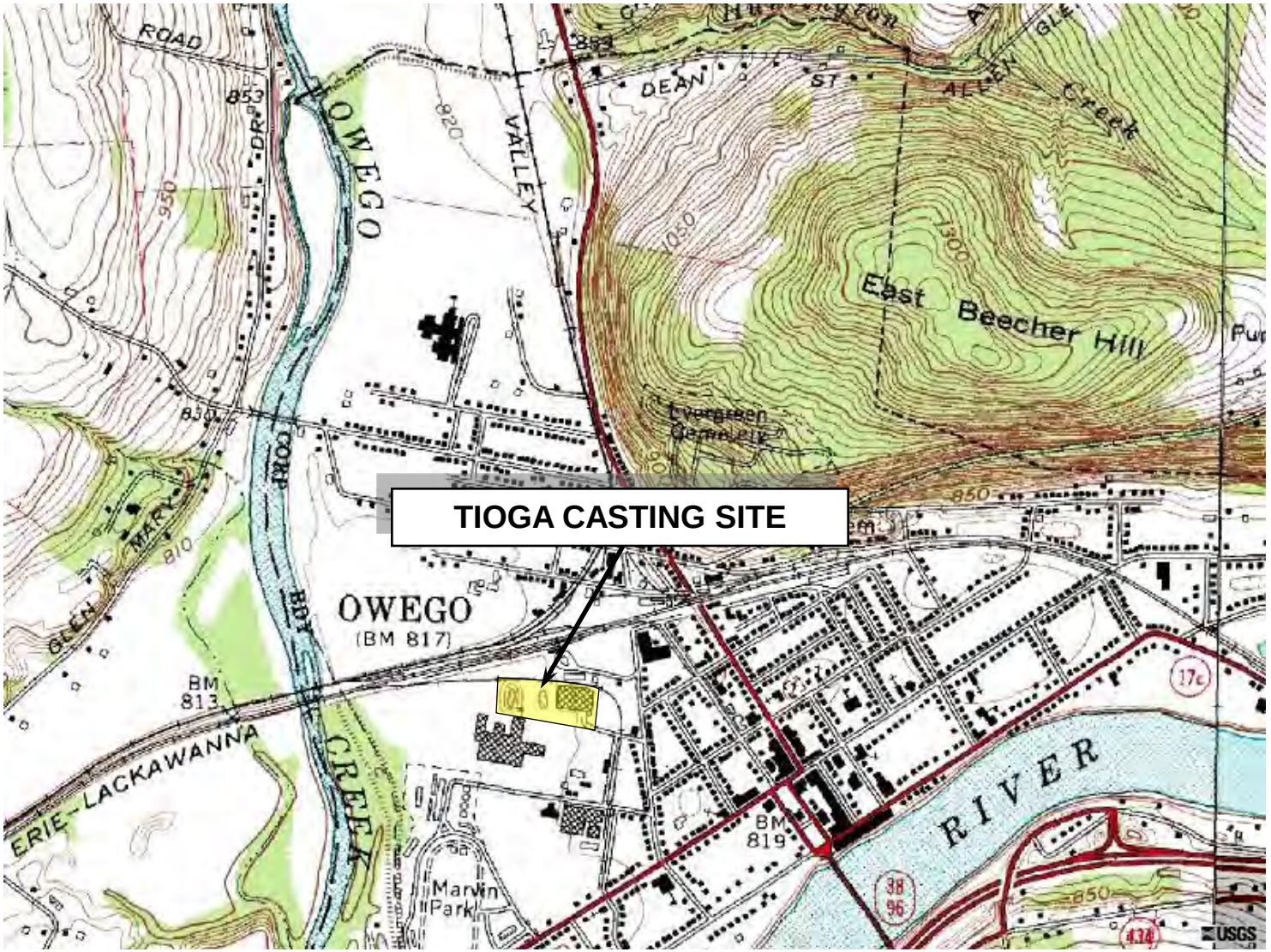
A duplicate surface soil sample (BG-SS-06) was collected as a quality assurance/quality control sample at location BG-SS-02. As shown in Table 5-1, the results from the two samples correlate well.

6. Summary

Second Quarter 2009 O&M and monitoring activities were conducted by the NYSDEC, including groundwater sampling and analysis, removal of a chain-link fence, and disposal of IDW. Malcolm Pirnie conducted O&M site activities during the third quarter 2009. No significant issues were reported with landfill security or the integrity of the landfill cover; however, burrowing rodent activity was observed and will be monitored.

The NYSDEC collected groundwater samples from the site in April, 2009. None of the samples contained concentrations of VOCs or SVOCs greater than the applicable NYSDEC Class GA Standards. Iron and manganese were reported in several samples at concentrations greater than the applicable NYSDEC Class GA Standard; however, based on previous sampling data, these results may be anomolous. Lead was detected in one sample at a concentration greater than the corresponding NYSDEC Class GA Standard. Sodium concentrations exceeded the NYSDEC Class GA Standard in four of the eight samples collected during the second quarter groundwater monitoring event. The sodium exceedances are likely related to the localized application of road de-icing agents.

Surface soil samples were collected from the site in July 2009 to evaluate the potential for exposure to metals. Only one surface soil sample contained lead at a concentration greater than the corresponding site-specific cleanup goal. None of the surface soil samples contained metals concentrations greater than the NYCRR Part 375 Commercial SCOs.



SCALE IN FEET

0 500 1000 2000

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 CASTING SITE LOCATION

FIGURE 2-1

F:\PROJECT\0266362\FILE\Reports\2007\3rd qtr 07\Figure 2-1

RAILROAD TRACKS

MW–6
(PROPOSED)

MW–4

LANDFILL
AREA

MW–3

MW–3D

MW–8

LEVELED
FOUNDRY SITE

MW–1
(ABANDONED)

MW–1R

MCMASTER ST.

N.

PARKING
AREA

MW–5

MW–2

MW–7

FOUNDRY ST.

ARMSTRONG PL.

FORMER OWEGO APALACHIN
MIDDLE SCHOOL

LEGEND

MW–3 MONITORING WELL LOCATION

RAILROAD TRACKS

ROADWAY/DRIVEWAY

BUILDING

FENCE

PROPERTY LINE

50 0 50 100

SCALE: 1" = 100'

MALCOLM PIRNIE

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

MONITORING WELL LOCATIONS

SCALE: 1" = 200'

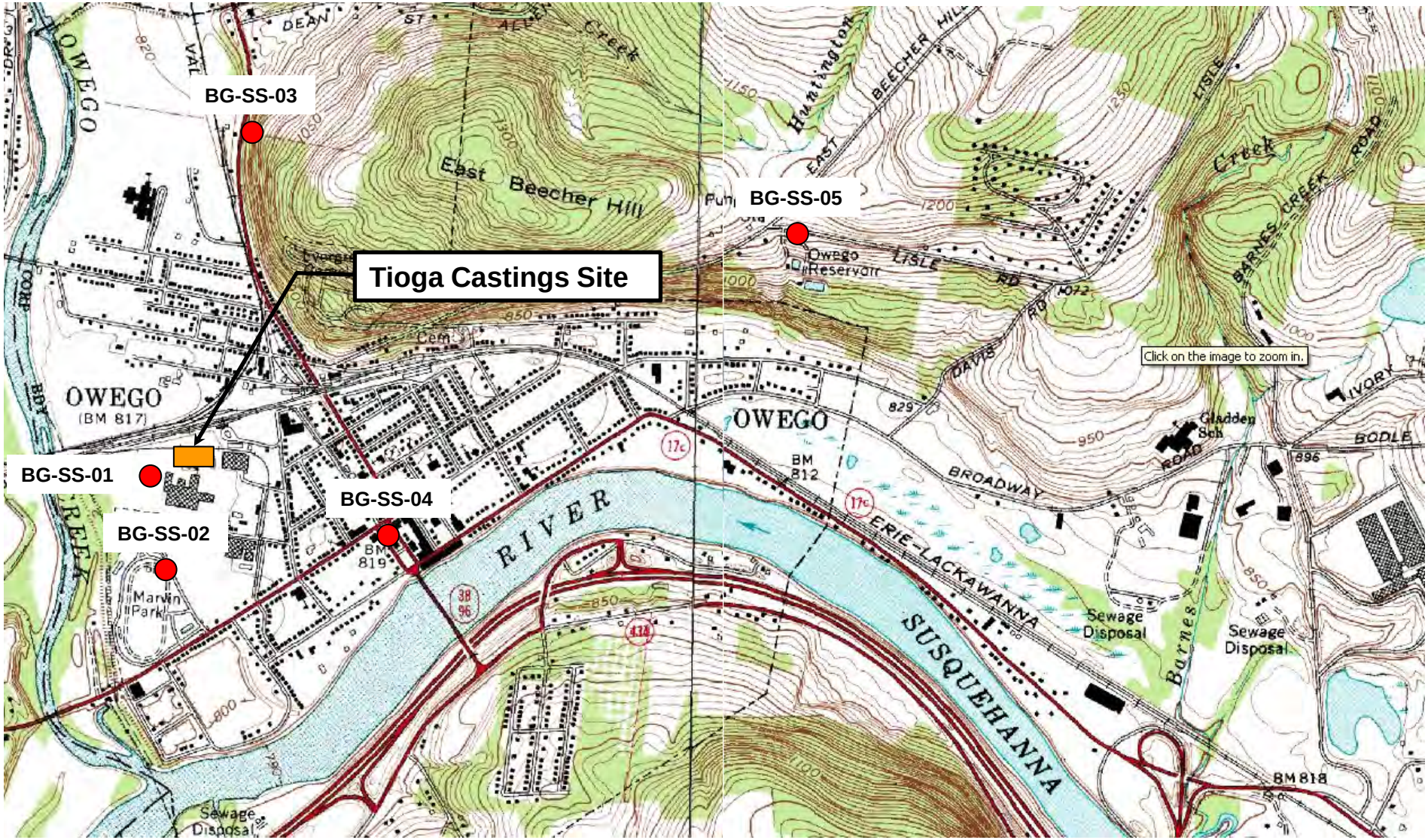
MALCOLM PIRNIE, INC.

DECEMBER 2009

FIGURE 3–1

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 3-1.DWG Scale:1:1 Date:12/22/2009 Time:09:58 Layout:Layout1

MALCOLM PIRNIE	**TIOGA CASTINGS SITE** **OWEGO, NEW YORK** **NYSDEC SITE NO. 7-54-012**	**SURFACE SOIL SAMPLING LOCATIONS**	JULY 2009 FIGURE 5-1



MALCOLM PIRNIE	**TIOGA CASTINGS SITE** **OWEGO, NEW YORK** **NYSDEC SITE NO. 7-54-012**	**BACKGROUND SURFACE SOIL SAMPLING LOCATIONS**	JULY 2009 FIGURE 5-2

Table 4-1
Groundwater Sample Results - VOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-1R 4/2/2009 ug/L	MW-2 7/17/2008 ug/L	MW-2 4/2/2009 ug/L	MW-3 4/2/2009 ug/L
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	5	NA	10 U	NA	NA
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	5*	10 U	NA	10 U	10 U
1,2,4-Trichlorobenzene	5	10 U	10 U	10 U	10 U
1,2-Dibromo-3-Chloropropane	0.04	NA	10 U	NA	NA
1,2-Dibromoethane		NA	10 U	NA	NA
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-Chlorotoluene	5*	10 U	NA	10 U	10 U
2-Hexanone	50*	10 U	10 U	10 U	10 U
4-Chlorotoluene	5*	10 U	NA	10 U	10 U
Acetone		15 U	10 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	50*	10 U	10 U	10 U	10 U
Bromomethane	5	10 U	10 U	10 U	10 U
Carbon Disulfide	60	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		NA	10 U	NA	NA
Dibromochloromethane	5	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	NA	10 U	NA	NA
m,p-Xylenes	5	10 U	NA	10 U	10 U
Methyl acetate		NA	10 U	NA	NA
Methyl Ethyl Ketone	50	10 U	10 U	10 U	10 U
Methyl isobutyl ketone		10 U	10 U	10 U	10 U
Methylcyclohexane		NA	10 U	NA	NA
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	5	10 U	NA	10 U	10 U

U - Analyte not detected at indicated quantitation limit.

J - Estimated.

NA - Not Analyzed

Table 4-1
Groundwater Sample Results - VOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-1R 4/2/2009 ug/L	MW-2 7/17/2008 ug/L	MW-2 4/2/2009 ug/L	MW-3 4/2/2009 ug/L
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
Trichlorofluromethane	5	10 U	10 U	10 U	10 U
Vinyl Acetate		10 U	NA	10 U	10 U
Vinyl Chloride	2	10 U	10 U	10 U	10 U
Xylenes, Total		NA	10 U	NA	NA

U - Analyte not detected at indicated quantitation limit.
J - Estimated.
NA - Not Analyzed

Table 4-1
Groundwater Sample Results - VOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-3D 4/2/2009 ug/L	MW-4 7/17/2008 ug/L	MW-4 4/2/2009 ug/L	MW-5 7/17/2008 ug/L
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	5	NA	10 U	NA	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	5*	10 U	NA	10 U	NA
1,2,4-Trichlorobenzene	5	10 U	10 U	10 U	10 U
1,2-Dibromo-3-Chloropropane	0.04	NA	10 U	NA	10 U
1,2-Dibromoethane		NA	10 U	NA	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-Chlorotoluene	5*	10 U	NA	10 U	NA
2-Hexanone	50*	10 U	10 U	10 U	10 U
4-Chlorotoluene	5*	10 U	NA	10 U	NA
Acetone		15 U	10 U	15 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	60	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		NA	10 U	NA	10 U
Dibromochloromethane	5	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	NA	10 U	NA	10 U
m,p-Xylenes	5	10 U	NA	10 U	NA
Methyl acetate		NA	10 U	NA	10 U
Methyl Ethyl Ketone	50	10 U	10 U	10 U	10 U
Methyl isobutyl ketone		10 U	10 U	10 U	10 U
Methylcyclohexane		NA	10 U	NA	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	5	10 U	NA	10 U	NA

U - Analyte not detected at indicated quantitation limit.

J - Estimated.

NA - Not Analyzed

Table 4-1
Groundwater Sample Results - VOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-3D 4/2/2009 ug/L	MW-4 7/17/2008 ug/L	MW-4 4/2/2009 ug/L	MW-5 7/17/2008 ug/L
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
Trichlorofluromethane	5	10 U	10 U	10 U	10 U
Vinyl Acetate		10 U	NA	10 U	NA
Vinyl Chloride	2	10 U	10 U	10 U	10 U
Xylenes, Total		NA	10 U	NA	10 U

U - Analyte not detected at indicated quantitation limit.
J - Estimated.
NA - Not Analyzed

Table 4-1
Groundwater Sample Results - VOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-5 4/2/2009 ug/L	MW-7 4/2/2009 ug/L	MW-8 4/2/2009 ug/L
1,1,1-Trichloroethane	5	10 U	10 U	10 U
1,1,2,2,-Tetrachloroethane	5	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	NA	NA	NA
1,1,2-Trichloroethane	1	10 U	10 U	10 U
1,1-Dichloroethane	5	10 U	10 U	10 U
1,1-Dichloroethene	5	10 U	10 U	10 U
1,2,3-Trichlorobenzene	5*	10 U	10 U	10 U
1,2,4-Trichlorobenzene	5	10 U	10 U	10 U
1,2-Dibromo-3-Chloropropane	0.04	NA	NA	NA
1,2-Dibromoethane		NA	NA	NA
1,2-Dichlorobenzene	3	10 U	10 U	10 U
1,2-Dichloroethane	0.6	10 U	10 U	10 U
1,2-Dichloropropane	1	10 U	10 U	10 U
1,3-Dichlorobenzene	3	10 U	10 U	10 U
1,4-Dichlorobenzene	3	10 U	10 U	10 U
2-Chlorotoluene	5*	10 U	10 U	10 U
2-Hexanone	50*	10 U	10 U	10 U
4-Chlorotoluene	5*	10 U	10 U	10 U
Acetone		15 U	15 U	15 U
Benzene	1	10 U	10 U	10 U
Bromodichloromethane	50	10 U	10 U	10 U
Bromoform	50*	10 U	10 U	10 U
Bromomethane	5	10 U	10 U	10 U
Carbon Disulfide	60	10 U	10 U	10 U
Carbon Tetrachloride	5	10 U	10 U	10 U
Chlorobenzene	5	10 U	10 U	10 U
Chloroethane	5	10 U	10 U	10 U
Chloroform	7	10 U	10 U	10 U
Chloromethane		10 U	10 U	10 U
cis 1,2-Dichloroethene	5	10 U	10 U	10 U
cis-1,3-Dichloropropene	0.4	10 U	10 U	10 U
Cyclohexane		NA	NA	NA
Dibromochloromethane	5	10 U	10 U	10 U
Dichlorodifluoromethane	5	10 U	10 U	10 U
Ethylbenzene	5	10 U	10 U	10 U
Isopropylbenzene	5	NA	NA	NA
m,p-Xylenes	5	10 U	10 U	10 U
Methyl acetate		NA	NA	NA
Methyl Ethyl Ketone	50	10 U	10 U	10 U
Methyl isobutyl ketone		10 U	10 U	10 U
Methylcyclohexane		NA	NA	NA
Methylene Chloride	5	10 U	10 U	10 U
Methyl-tert butyl ether	10	10 U	10 U	10 U
o-Xylene	5	10 U	10 U	10 U

U - Analyte not detected at indicated quantitation limit.

J - Estimated.

NA - Not Analyzed

Table 4-1
Groundwater Sample Results - VOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-5 4/2/2009 ug/L	MW-7 4/2/2009 ug/L	MW-8 4/2/2009 ug/L
Styrene	5	10 U	10 U	10 U
Tetrachloroethene	5	10 U	10 U	10 U
Toluene	5	10 U	4 J	10 U
trans 1,2-Dichloroethene	5	10 U	10 U	10 U
trans-1,3-Dichloropropene	0.4	10 U	10 U	10 U
Trichloroethene	5	10 U	10 U	10 U
Trichlorofluromethane	5	10 U	10 U	10 U
Vinyl Acetate		10 U	10 U	10 U
Vinyl Chloride	2	10 U	10 U	10 U
Xylenes, Total		NA	NA	NA

U - Analyte not detected at indicated quantitation limit.
J - Estimated.
NA - Not Analyzed

Table 4-2
Groundwater Sample Results - SVOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-1R 4/2/2009 ug/L	MW-2 4/2/2009 ug/L	MW-3 4/2/2009 ug/L	MW-3D 4/2/2009 ug/L	MW-4 4/2/2009 ug/L	MW-5 4/2/2009 ug/L	MW-7 4/2/2009 ug/L	MW-8 4/2/2009 ug/L
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	1	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	5	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	50	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
benzo(a)anthracene	0.002	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
benzo(a)pyrene	ND	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
benzo(b)fluoranthene	0.002	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
benzo(g,h,i)perylene	0.002	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

U - Analyte not detected at indicated quantitation limit.
ND - Non-detect.

Table 4-2
Groundwater Sample Results - SVOCs
Tioga Casting Site
NYSDEC Site Number 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-1R 4/2/2009 ug/L	MW-2 4/2/2009 ug/L	MW-3 4/2/2009 ug/L	MW-3D 4/2/2009 ug/L	MW-4 4/2/2009 ug/L	MW-5 4/2/2009 ug/L	MW-7 4/2/2009 ug/L	MW-8 4/2/2009 ug/L
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	50	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
butyl benzyl phthalate	50	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	0.002	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	50	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
dimethylphthalate	50	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
di-n-butyl phthalate	50	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
di-n-octyl phthalate	50	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
fluoranthene	50	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
fluorene	50	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	0.002	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	10	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	50	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
pentachlorophenol	1	23 U	24 U	22 U	24 U	24 U	23 U	23 U	22 U
phenanthrene	50	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
phenol	1	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U
pyrene	50	11 U	12 U	11 U	12 U	12 U	11 U	11 U	11 U

U - Analyte not detected at indicated quantitation limit.
ND - Non-detect.

Table 4-3
Groundwater Sample Results - Metals
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-1R 4/13/2009 ug/L		MW-2 8/2/2007 ug/L		MW-2 7/17/2008 ug/L		MW-2 4/13/2009 ug/L	
Aluminum		1050		60.2	B	23.6	U	632	
Antimony		6.7	U	5.6	U	5.5	U	6.7	U
Arsenic	25	3.0	U	4.2	U	3.7	U	3.0	U
Barium	1000	59.8	B	61.6	B	54.3	B	102	
Beryllium		0.5	U	0.40	B	0.3	U	0.5	U
Cadmium	5 [10]	0.3	U	0.36	U	0.3	U	0.3	U
Calcium		61200		54500	E	48800		50900	
Chromium	50 [50]	10.4	B	0.84	U	0.9	U	5.8	B
Cobalt		3.8	U	1.1	B	1.1	U	3.8	U
Copper	200	181		1.3	U	1.3	U	105	
Iron	300	**1410**		19.3	U	19	U	**532**	
Lead	25 [25]	1.4	U	2.9	U	2.9	U	1.4	U
Magnesium		11500		8650	E	7670		8320	
Manganese	300	106		2.8	B	8.2	B	211	
Mercury	0.7	NA		0.12	U	0.1	U	NA	
Molybdenum		5.5	B	NA		NA		5.0	U
Nickel		6.9	B	1.2	U	1.0	U	7.3	B
Potassium		2070	B	4710	BE	3900	B	4550	
Selenium	10	11.4	U	6.1	U	6.1	U	11.4	U
Silver	50	2.2	U	1.7	B	1.3	U	2.2	U
Sodium	20000	**25600**		**36100**	**E**	18700		**25200**	
Thallium	0.5*	3.0	U	7.0	U	5.9	U	3.0	U
Tin		5.0	U	NA		NA		5.0	U
Titanium		8.8	B	NA		NA		5.0	U
Vanadium		4.7	U	0.80	B	1.0	U	4.7	U
Zinc	2000*	13.5	U	3.6	U	3.6	U	13.5	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 4-3
Groundwater Sample Results - Metals
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-3 4/13/2009 ug/L		MW-3D 4/13/2009 ug/L		MW-4 8/2/2007 ug/L		MW-4 7/17/2008 ug/L	
Aluminum		195.0		668		40.0	U	32.6	B
Antimony		6.7	U	6.7	U	5.6	U	5.5	U
Arsenic	25	3.0	U	3.0	U	4.2	U	3.7	U
Barium	1000	38.3	B	39.2	B	40.0	B	38.3	B
Beryllium		0.5	U	0.5	U	0.27	U	0.3	U
Cadmium	5 [10]	0.3	U	0.3	U	0.36	U	0.7	B
Calcium		42900		42300		42700	E	42400	
Chromium	50 [50]	3.5	B	3.8	B	0.84	U	0.9	U
Cobalt		3.8	U	3.8	U	0.89	U	1.1	U
Copper	200	71.3		56.6		1.4	B	1.3	U
Iron	300	144	B	**558**		47.6	B	34	B
Lead	25 [25]	1.5	B	1.4	U	2.9	U	2.9	U
Magnesium		7450		7490		8190	E	7830	
Manganese	300	14.0	B	40.3	B	0.79	B	1.2	B
Mercury	0.7	NA		NA		0.12	U	0.1	U
Molybdenum		5.0	U	5.0	U	NA		NA	
Nickel		4.2	B	3.9	B	1.2	U	1.0	U
Potassium		1430	B	1550	B	1020	BE	1860	B
Selenium	10	11.4	U	11.4	U	6.1	U	6.1	U
Silver	50	2.2	U	2.2	U	1.0	U	1.3	U
Sodium	20000	17000		17300		12000	E	12800	
Thallium	0.5*	3.0	U	3.0	U	7.0	U	5.9	U
Tin		5.0	U	5.0	U	NA		NA	
Titanium		5.0	U	5.0	U	NA		NA	
Vanadium		4.7	U	4.7	U	0.78	U	1.0	U
Zinc	2000*	13.5	U	13.5	U	3.6	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 4-3
Groundwater Sample Results - Metals
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-4 4/13/2009 ug/L		MW-5 8/2/2007 ug/L		MW-5 7/17/2008 ug/L		MW-5 4/13/2009 ug/L	
Aluminum		754		79.0	B	28.9	B	102	B
Antimony		6.7	U	5.6	U	5.5	U	6.7	U
Arsenic	25	3.0	U	4.2	U	3.7	U	3.0	U
Barium	1000	60.9	B	56.4	B	55.7	B	47.1	B
Beryllium		0.5	U	0.51	B	0.3	U	0.5	U
Cadmium	5 [10]	0.3	U	0.36	U	0.3	U	0.3	U
Calcium		40500		44400	E	45200		44000	
Chromium	50 [50]	3.4	B	0.84	U	0.9	U	3.9	B
Cobalt		3.8	U	0.89	U	1.1	U	3.8	U
Copper	200	49.7		1.3	U	1.3	U	89.3	
Iron	300	**667**		19.3	U	19	U	246	
Lead	25 [25]	1.4	U	2.9	U	2.9	U	6.0	B
Magnesium		7080		7600	E	7570		7440	
Manganese	300	79.4		0.90	B	0.7	B	10.1	B
Mercury	0.7	NA		0.12	U	0.1	U	NA	
Molybdenum		5.0	U	NA		NA		5.0	U
Nickel		4.5	B	1.2	U	1.4	B	5.0	B
Potassium		1190	B	3330	BE	3340	B	2880	B
Selenium	10	11.4	U	6.1	U	6.1	U	11.4	U
Silver	50	2.2	U	1.6	B	1.3	U	2.2	U
Sodium	20000	15200		14200	E	15400		13300	
Thallium	0.5*	3.0	U	7.0	U	5.9	U	3.0	U
Tin		5.0	U	NA		NA		5.0	U
Titanium		5.0	U	NA		NA		5.0	U
Vanadium		4.7	U	0.80	B	1.0	U	4.7	U
Zinc	2000*	13.5	U	3.6	U	3.6	U	13.5	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 4-3
Groundwater Sample Results - Metals
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-7 4/13/2009 ug/L		MW-8 4/13/2009 ug/L	
Aluminum		1810		6190	
Antimony		6.7	U	6.7	U
Arsenic	25	3.0	U	3.0	U
Barium	1000	165		219	
Beryllium		0.5	U	0.5	U
Cadmium	5 [10]	0.3	U	0.3	U
Calcium		64300		52400	
Chromium	50 [50]	10.4	B	8.9	B
Cobalt		5.8	B	3.8	U
Copper	200	178		66.3	
Iron	300	**2880**		**4530**	
Lead	25 [25]	**30.2**	**B**	17.3	B
Magnesium		10000		8740	
Manganese	300	**989**		**524**	
Mercury	0.7	NA		NA	
Molybdenum		5.0	B	5.0	U
Nickel		10.6	B	9.5	B
Potassium		4510		3770	
Selenium	10	11.4	U	11.4	U
Silver	50	2.2	U	2.2	U
Sodium	20000	**57500**		**26700**	
Thallium	0.5*	3.0	U	3.0	U
Tin		5.0	U	5.0	U
Titanium		5.0	U	34.4	B
Vanadium		7.2	B	9.8	B
Zinc	2000*	40.4	B	40.2	B

* - 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 5-1
Surface Soil Sample Results - Metals
Tioga Casting Site
NYSDEC Site Number 7-54-012

Sample Date Units	Part 375 Commercial SCO mg/kg	SS-01 7/29/2009 mg/kg	SS-02 7/29/2009 mg/kg	SS-03 7/29/2009 mg/kg
Aluminum		4760	9880 E	5650 E
Antimony		0.6 U	0.6 U	0.6 U
Arsenic	16	2.8	5.2	3.7
Barium	400	62.5	48.7	40.9
Beryllium	590	0.022 J	0.137 J	0.068 J
Cadmium	9.3 [10]	1 B	0.05 U	0.04 U
Calcium		12800 BE	34500 BE	64500 BE
Chromium	400 [50]	25.7	12.1	8.45
Cobalt		2.46 J	7.04	4.93 J
Copper	270	33.2	14.3	22.2
Iron		23400 BE	18000 BE	13500 BE
Lead	1000 [250]	101 B	10.8 B	26.3 B
Magnesium		1460 B	18000 BE	9250 BE
Manganese	10000	973 BE	556 BE	424 BE
Mercury	2.8	0.0402 J	0.036 J	0.0199 J
Nickel	310	23.6	16.8	13.3
Potassium		523	813	777
Selenium	1500	0.6 U	0.7 U	0.6 U
Silver	1500	0.072 U	0.082 U	0.071 U
Sodium		133 J	46.7 J	62.5 J
Thallium		0.3 U	0.3 U	0.3 U
Vanadium		5.46	14.1	8.95
Zinc	10000	173 BE	49.3 B	121 BE

1 - Duplicate of BG-SS-02
U - Analyte not detected.
B - Analyte detected in associated blank.
J - Greater than MDL but less than RL.
MDL - Method detection limit.
RL - Reporting limit.
E - Exceeds calibration range; result quantiative.
[250] - Site-specific cleanup goal.

Table 5-1
Surface Soil Sample Results - Metals
Tioga Casting Site
NYSDEC Site Number 7-54-012

Sample Date Units	Part 375 Commercial SCO mg/kg	SS-04 7/29/2009 mg/kg	SS-05 7/29/2009 mg/kg	SS-06 7/29/2009 mg/kg
Aluminum		9780 E	6750 E	7640 E
Antimony		0.7 U	0.6 U	0.6 J
Arsenic	16	5.3	4.1	8.4
Barium	400	53	80.3	93.9
Beryllium	590	0.049 J	0.126 J	0.04 J
Cadmium	9.3 [10]	0.05 U	0.4 JB	1 B
Calcium		20200 BE	80200 BE	13900 BE
Chromium	400 [50]	19	15.1	35.3
Cobalt		7.82	5.59	5.22 J
Copper	270	24.4	37.7	62.1
Iron		22100 BE	14000 BE	23400 BE
Lead	1000 [250]	21.6 B	163 BE	**327 BE**
Magnesium		6310 BE	8800 BE	2900 B
Manganese	10000	571 BE	708 BE	865 BE
Mercury	2.8	0.0362 J	0.107	0.122
Nickel	310	25	16.5	30.5
Potassium		1040	1500	1210
Selenium	1500	0.7 U	0.6 U	0.7 U
Silver	1500	0.087 U	0.073 U	0.256 J
Sodium		38.7 U	94.8 J	146 J
Thallium		0.4 U	0.3 U	0.3 U
Vanadium		14.4	16.2	13.8
Zinc	10000	87.5 B	127 BE	395 BE

1 - Duplicate of BG-SS-02
U - Analyte not detected.
B - Analyte detected in associated blank.
J - Greater than MDL but less than RL.
MDL - Method detection limit.
RL - Reporting limit.
E - Exceeds calibration range; result quantiative.
[250] - Site-specific cleanup goal.

Table 5-1
Surface Soil Sample Results - Metals
Tioga Casting Site
NYSDEC Site Number 7-54-012

Sample Date Units	Part 375 Commercial SCO mg/kg	BG-SS-01 7/29/2009 mg/kg	BG-SS-02 7/29/2009 mg/kg	BG-SS-06[(1)] 7/29/2009 mg/kg
Aluminum		11300 E	10700 E	10000 E
Antimony		0.7 U	0.7 U	0.5 U
Arsenic	16	5	7.6	7.7
Barium	400	122	104	98.6 E
Beryllium	590	0.175 J	0.13 J	0.132 J
Cadmium	9.3 [10]	0.05 U	0.05 U	0.04 U
Calcium		1920 B	2010 B	1890 B
Chromium	400 [50]	14	13.7	13.4
Cobalt		8.41	7.72	7.41
Copper	270	14.6	14.8	13.7
Iron		19900 BE	18800 BE	17900 BE
Lead	1000 [250]	33.1 B	42.3 B	42.7 B
Magnesium		3060 B	2900 B	2750 B
Manganese	10000	577 BE	475 BE	467 BE
Mercury	2.8	0.0728 J	0.0565 J	0.0551 J
Nickel	310	19.3	18.7	17.7
Potassium		986	905	764
Selenium	1500	0.8 J	0.8 U	0.6 U
Silver	1500	0.092 U	0.093 U	0.069 U
Sodium		40.5 U	41.4 U	30.3 U
Thallium		0.4 U	0.4 U	0.3 U
Vanadium		13.3	12.9	12.1
Zinc	10000	69.6 B	78.7 B	78.2 B

1 - Duplicate of BG-SS-02
U - Analyte not detected.
B - Analyte detected in associated blank.
J - Greater than MDL but less than RL.
MDL - Method detection limit.
RL - Reporting limit.
E - Exceeds calibration range; result quantiative.
[250] - Site-specific cleanup goal.

Table 5-1
Surface Soil Sample Results - Metals
Tioga Casting Site
NYSDEC Site Number 7-54-012

Sample Date Units	Part 375 Commercial SCO mg/kg	BG-SS-03 7/29/2009 mg/kg	BG-SS-04 7/29/2009 mg/kg	BG-SS-05 7/29/2009 mg/kg
Aluminum		12000 E	9480 E	14700 E
Antimony		0.7 U	0.5 U	0.7 U
Arsenic	16	7.4	15	6.7
Barium	400	109	85.9	152 E
Beryllium	590	0.176 J	0.153 J	0.387 J
Cadmium	9.3 [10]	0.2 U	0.04 U	0.3 U
Calcium		1120 B	3370 B	3360 B
Chromium	400 [50]	13.5	12.1	15.5
Cobalt		7.03	6.8	10.5
Copper	270	14.1	25	13.1
Iron		20000 BE	16800 BE	22500 BE
Lead	1000 [250]	70.2 B	208 BE	27.6 B
Magnesium		2850 B	2580 B	3680 B
Manganese	10000	507 BE	492 BE	1030 BE
Mercury	2.8	0.109 J	0.757	0.0908 J
Nickel	310	17.4	15.6	22.4
Potassium		753	956	1560
Selenium	1500	0.7 U	0.6 U	0.8 U
Silver	1500	0.086 U	0.067 U	0.095 U
Sodium		37.9 U	78 J	42.1 U
Thallium		0.4 U	0.3 U	0.4 U
Vanadium		14.9	13.2	18.5
Zinc	10000	91.7 B	101 BE	70.9 B

1 - Duplicate of BG-SS-02
U - Analyte not detected.
B - Analyte detected in associated blank.
J - Greater than MDL but less than RL.
MDL - Method detection limit.
RL - Reporting limit.
E - Exceeds calibration range; result quantiative.
[250] - Site-specific cleanup goal.

New York State Department of Environmental Conservation
Tioga Castings Site Quarterly Report

Appendix A

Analytical Reporting Forms

MALCOLM PIRNIE

New York State Department of Environmental Conservation
Division of Environmental Remediation
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Alexander B. Grannis
Commissioner

Division of Environmental Remediation Laboratory
Analytical Report

The case narrative and analytical reports - Semi-Volatiles - for the Tioga Casting site are attached.

Case Narrative

Site Name: Tioga Casting Date received: 04/02/09

For sample delivery group(s): 092-01

For samples - 709-092-001, ...002, ...003, ...004 and ...005:

All QA/QC associated with these samples were within acceptable method criteria, except that one target mass in the check tune - Mass 275 - exceeded the upper limit for relative abundance. It was determined, however, that this did not effect either the qualitative or quantitative results for these samples.

For samples - 709-092-006, ...007 and ...008:

All QA/QC associated with these samples were within acceptable method criteria.

Note:

You will note that in most of the TIC reports for these samples, 13-Docosenamide,Z is reported at levels between 4.0 and 9.0ug/L. We believe this to be a lab contaminant either from our extraction procedure or a column bleed from our instrument, as it was detected in the method blank associated with these samples.

1B

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 1R

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-001

Sample wt/vol: 885 (g/ml) ML Lab File ID: 09F0308.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/6/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	phenol	11	U
95-57-8	2-chlorophenol	11	U
111-44-4	bis(2-chloroethyl)ether	11	U
541-73-1	1,3-dichlorobenzene	11	U
106-46-7	1,4-dichlorobenzene	11	U
95-50-1	1,2-dichlorobenzene	11	U
100-51-6	benzyl alcohol	11	U
108-60-1	bis(2-chloroisopropyl)ether	11	U
95-48-7	2-methylphenol	11	U
67-72-1	Hexachloroethane	11	U
621-64-7	N-nitros-di-n-propylamine	11	U
106-44-5	4-methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-nitrophenol	11	U
105-67-9	2,4-dimethylphenol	11	U
111-91-1	bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-trichlorophenol	11	U
95-95-4	2,4,5-trichlorophenol	11	U
91-58-7	2-chloronaphthalene	11	U
88-74-4	2-nitroaniline	23	U
208-96-8	acenaphthylene	11	U
131-11-3	dimethylphthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	acenaphthene	11	U
99-09-2	3-nitroaniline	23	U
132-64-9	Dibenzofuran	11	U
100-02-7	4-nitrophenol	23	U
121-14-2	2,4-Dinitrotoluene	11	U

1C

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 1R

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-001

Sample wt/vol: 885 (g/ml) ML Lab File ID: 09F0308.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/6/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	fluorene	11	U
7005-72-3	4-chlorophenyl phenyl ether	11	U
84-66-2	Diethyl phthalate	11	U
100-01-6	4-nitroaniline	23	U
534-52-1	2-methyl-4,6-dinitrophenol	23	U
86-30-6	N-nitrosodiphenylamine	11	U
101-55-3	4-bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	pentachlorophenol	23	U
85-01-8	phenanthrene	11	U
120-12-7	anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	di-n-butyl phthalate	11	U
206-44-0	fluoranthene	11	U
129-00-0	pyrene	11	U
85-68-7	butyl benzyl phthalate	11	U
56-55-3	benzo(a)anthracene	11	U
218-01-9	chrysene	11	U
91-94-1	3,3'-dichlorobenzidine	11	U
117-81-7	bis(2-ethylhexyl)phthalate	11	U
117-84-0	di-n-octyl phthalate	11	U
205-99-2	benzo(b)fluoranthene	11	U
207-08-9	benzo(k)fluoranthene	11	U
50-32-8	benzo(a)pyrene	11	U
193-39-5	indeno(1,2,3-cd)pyrene	11	U
53-70-3	dibenzo(a,h)anthracene	11	U
191-24-2	benzo(g,h,i)perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID Number: **MW 1R**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-001

Sample wt/vol: 885 (g/ml) ML Lab File ID: 09F0308.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted: (Y/N) N Date Extracted: 4/6/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000112-84-5	13-Docosenamide, (Z)-	34.05	6	JN

1B

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 7

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-002

Sample wt/vol: 890 (g/ml) ML Lab File ID: 09F0309.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/6/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	phenol	11	U
95-57-8	2-chlorophenol	11	U
111-44-4	bis(2-chloroethyl)ether	11	U
541-73-1	1,3-dichlorobenzene	11	U
106-46-7	1,4-dichlorobenzene	11	U
95-50-1	1,2-dichlorobenzene	11	U
100-51-6	benzyl alcohol	11	U
108-60-1	bis(2-chloroisopropyl)ether	11	U
95-48-7	2-methylphenol	11	U
67-72-1	Hexachloroethane	11	U
621-64-7	N-nitros-di-n-propylamine	11	U
106-44-5	4-methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-nitrophenol	11	U
105-67-9	2,4-dimethylphenol	11	U
111-91-1	bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-trichlorophenol	11	U
95-95-4	2,4,5-trichlorophenol	11	U
91-58-7	2-chloronaphthalene	11	U
88-74-4	2-nitroaniline	22	U
208-96-8	acenaphthylene	11	U
131-11-3	dimethylphthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	acenaphthene	11	U
99-09-2	3-nitroaniline	22	U
132-64-9	Dibenzofuran	11	U
100-02-7	4-nitrophenol	22	U
121-14-2	2,4-Dinitrotoluene	11	U

1C

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 7

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-002

Sample wt/vol: 890 (g/ml) ML Lab File ID: 09F0309.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/6/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	fluorene	11	U
7005-72-3	4-chlorophenyl phenyl ether	11	U
84-66-2	Diethyl phthalate	11	U
100-01-6	4-nitroaniline	22	U
534-52-1	2-methyl-4,6-dinitrophenol	22	U
86-30-6	N-nitrosodiphenylamine	11	U
101-55-3	4-bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	pentachlorophenol	22	U
85-01-8	phenanthrene	11	U
120-12-7	anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	di-n-butyl phthalate	11	U
206-44-0	fluoranthene	11	U
129-00-0	pyrene	11	U
85-68-7	butyl benzyl phthalate	11	U
56-55-3	benzo(a)anthracene	11	U
218-01-9	chrysene	11	U
91-94-1	3,3'-dichlorobenzidine	11	U
117-81-7	bis(2-ethylhexyl)phthalate	11	U
117-84-0	di-n-octyl phthalate	11	U
205-99-2	benzo(b)fluoranthene	11	U
207-08-9	benzo(k)fluoranthene	11	U
50-32-8	benzo(a)pyrene	11	U
193-39-5	indeno(1,2,3-cd)pyrene	11	U
53-70-3	dibenzo(a,h)anthracene	11	U
191-24-2	benzo(g,h,i)perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID Number: **MW 7**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-002

Sample wt/vol: 890 (g/ml) ML Lab File ID: 09F0309.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted: (Y/N) N Date Extracted: 4/6/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000112-84-5	13-Docosenamide, (Z)-	34.06	9	JN

1B

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 2

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-003

Sample wt/vol: 850 (g/ml) ML Lab File ID: 09F0310.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/6/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	phenol	12	U
95-57-8	2-chlorophenol	12	U
111-44-4	bis(2-chloroethyl)ether	12	U
541-73-1	1,3-dichlorobenzene	12	U
106-46-7	1,4-dichlorobenzene	12	U
95-50-1	1,2-dichlorobenzene	12	U
100-51-6	benzyl alcohol	12	U
108-60-1	bis(2-chloroisopropyl)ether	12	U
95-48-7	2-methylphenol	12	U
67-72-1	Hexachloroethane	12	U
621-64-7	N-nitros-di-n-propylamine	12	U
106-44-5	4-methylphenol	12	U
98-95-3	Nitrobenzene	12	U
78-59-1	Isophorone	12	U
88-75-5	2-nitrophenol	12	U
105-67-9	2,4-dimethylphenol	12	U
111-91-1	bis(2-chloroethoxy)methane	12	U
120-83-2	2,4-dichlorophenol	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U
91-20-3	Naphthalene	12	U
106-47-8	4-chloroaniline	12	U
87-68-3	Hexachlorobutadiene	12	U
59-50-7	4-chloro-3-methylphenol	12	U
91-57-6	2-Methylnaphthalene	12	U
77-47-4	Hexachlorocyclopentadiene	12	U
88-06-2	2,4,6-trichlorophenol	12	U
95-95-4	2,4,5-trichlorophenol	12	U
91-58-7	2-chloronaphthalene	12	U
88-74-4	2-nitroaniline	24	U
208-96-8	acenaphthylene	12	U
131-11-3	dimethylphthalate	12	U
606-20-2	2,6-Dinitrotoluene	12	U
83-32-9	acenaphthene	12	U
99-09-2	3-nitroaniline	24	U
132-64-9	Dibenzofuran	12	U
100-02-7	4-nitrophenol	24	U
121-14-2	2,4-Dinitrotoluene	12	U

1C

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 2

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-003

Sample wt/vol: 850 (g/ml) ML Lab File ID: 09F0310.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/6/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	fluorene	12	U
7005-72-3	4-chlorophenyl phenyl ether	12	U
84-66-2	Diethyl phthalate	12	U
100-01-6	4-nitroaniline	24	U
534-52-1	2-methyl-4,6-dinitrophenol	24	U
86-30-6	N-nitrosodiphenylamine	12	U
101-55-3	4-bromophenyl phenyl ether	12	U
118-74-1	Hexachlorobenzene	12	U
87-86-5	pentachlorophenol	24	U
85-01-8	phenanthrene	12	U
120-12-7	anthracene	12	U
86-74-8	Carbazole	12	U
84-74-2	di-n-butyl phthalate	12	U
206-44-0	fluoranthene	12	U
129-00-0	pyrene	12	U
85-68-7	butyl benzyl phthalate	12	U
56-55-3	benzo(a)anthracene	12	U
218-01-9	chrysene	12	U
91-94-1	3,3'-dichlorobenzidine	12	U
117-81-7	bis(2-ethylhexyl)phthalate	12	U
117-84-0	di-n-octyl phthalate	12	U
205-99-2	benzo(b)fluoranthene	12	U
207-08-9	benzo(k)fluoranthene	12	U
50-32-8	benzo(a)pyrene	12	U
193-39-5	indeno(1,2,3-cd)pyrene	12	U
53-70-3	dibenzo(a,h)anthracene	12	U
191-24-2	benzo(g,h,i)perylene	12	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID Number: **MW 2**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-003

Sample wt/vol: 850 (g/ml) ML Lab File ID: 09F0310.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted: (Y/N) N Date Extracted: 4/6/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000112-84-5	13-Docosenamide, (Z)-	34.06	8	JN

1B

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 5

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-004

Sample wt/vol: 885 (g/ml) ML Lab File ID: 09F0311.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	phenol	11	U
95-57-8	2-chlorophenol	11	U
111-44-4	bis(2-chloroethyl)ether	11	U
541-73-1	1,3-dichlorobenzene	11	U
106-46-7	1,4-dichlorobenzene	11	U
95-50-1	1,2-dichlorobenzene	11	U
100-51-6	benzyl alcohol	11	U
108-60-1	bis(2-chloroisopropyl)ether	11	U
95-48-7	2-methylphenol	11	U
67-72-1	Hexachloroethane	11	U
621-64-7	N-nitros-di-n-propylamine	11	U
106-44-5	4-methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-nitrophenol	11	U
105-67-9	2,4-dimethylphenol	11	U
111-91-1	bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-trichlorophenol	11	U
95-95-4	2,4,5-trichlorophenol	11	U
91-58-7	2-chloronaphthalene	11	U
88-74-4	2-nitroaniline	23	U
208-96-8	acenaphthylene	11	U
131-11-3	dimethylphthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	acenaphthene	11	U
99-09-2	3-nitroaniline	23	U
132-64-9	Dibenzofuran	11	U
100-02-7	4-nitrophenol	23	U
121-14-2	2,4-Dinitrotoluene	11	U

1C

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 5

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-004

Sample wt/vol: 885 (g/ml) ML Lab File ID: 09F0311.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	fluorene	11	U
7005-72-3	4-chlorophenyl phenyl ether	11	U
84-66-2	Diethyl phthalate	11	U
100-01-6	4-nitroaniline	23	U
534-52-1	2-methyl-4,6-dinitrophenol	23	U
86-30-6	N-nitrosodiphenylamine	11	U
101-55-3	4-bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	pentachlorophenol	23	U
85-01-8	phenanthrene	11	U
120-12-7	anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	di-n-butyl phthalate	11	U
206-44-0	fluoranthene	11	U
129-00-0	pyrene	11	U
85-68-7	butyl benzyl phthalate	11	U
56-55-3	benzo(a)anthracene	11	U
218-01-9	chrysene	11	U
91-94-1	3,3'-dichlorobenzidine	11	U
117-81-7	bis(2-ethylhexyl)phthalate	11	U
117-84-0	di-n-octyl phthalate	11	U
205-99-2	benzo(b)fluoranthene	11	U
207-08-9	benzo(k)fluoranthene	11	U
50-32-8	benzo(a)pyrene	11	U
193-39-5	indeno(1,2,3-cd)pyrene	11	U
53-70-3	dibenzo(a,h)anthracene	11	U
191-24-2	benzo(g,h,i)perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID Number: **MW 5**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-004

Sample wt/vol: 885 (g/ml) ML Lab File ID: 09F0311.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted: (Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000112-84-5	13-Docosenamide, (Z)-	34.05	5	JN

1B

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 3

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-005

Sample wt/vol: 890 (g/ml) ML Lab File ID: 09F0312.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	phenol	11	U
95-57-8	2-chlorophenol	11	U
111-44-4	bis(2-chloroethyl)ether	11	U
541-73-1	1,3-dichlorobenzene	11	U
106-46-7	1,4-dichlorobenzene	11	U
95-50-1	1,2-dichlorobenzene	11	U
100-51-6	benzyl alcohol	11	U
108-60-1	bis(2-chloroisopropyl)ether	11	U
95-48-7	2-methylphenol	11	U
67-72-1	Hexachloroethane	11	U
621-64-7	N-nitros-di-n-propylamine	11	U
106-44-5	4-methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-nitrophenol	11	U
105-67-9	2,4-dimethylphenol	11	U
111-91-1	bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-trichlorophenol	11	U
95-95-4	2,4,5-trichlorophenol	11	U
91-58-7	2-chloronaphthalene	11	U
88-74-4	2-nitroaniline	22	U
208-96-8	acenaphthylene	11	U
131-11-3	dimethylphthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	acenaphthene	11	U
99-09-2	3-nitroaniline	22	U
132-64-9	Dibenzofuran	11	U
100-02-7	4-nitrophenol	22	U
121-14-2	2,4-Dinitrotoluene	11	U

1C

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 3

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-005

Sample wt/vol: 890 (g/ml) ML Lab File ID: 09F0312.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	fluorene	11	U
7005-72-3	4-chlorophenyl phenyl ether	11	U
84-66-2	Diethyl phthalate	11	U
100-01-6	4-nitroaniline	22	U
534-52-1	2-methyl-4,6-dinitrophenol	22	U
86-30-6	N-nitrosodiphenylamine	11	U
101-55-3	4-bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	pentachlorophenol	22	U
85-01-8	phenanthrene	11	U
120-12-7	anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	di-n-butyl phthalate	11	U
206-44-0	fluoranthene	11	U
129-00-0	pyrene	11	U
85-68-7	butyl benzyl phthalate	11	U
56-55-3	benzo(a)anthracene	11	U
218-01-9	chrysene	11	U
91-94-1	3,3'-dichlorobenzidine	11	U
117-81-7	bis(2-ethylhexyl)phthalate	11	U
117-84-0	di-n-octyl phthalate	11	U
205-99-2	benzo(b)fluoranthene	11	U
207-08-9	benzo(k)fluoranthene	11	U
50-32-8	benzo(a)pyrene	11	U
193-39-5	indeno(1,2,3-cd)pyrene	11	U
53-70-3	dibenzo(a,h)anthracene	11	U
191-24-2	benzo(g,h,i)perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID Number: **MW 3**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-005

Sample wt/vol: 890 (g/ml) ML Lab File ID: 09F0312.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted: (Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/8/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 3D

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-006

Sample wt/vol: 840 (g/ml) ML Lab File ID: 09F0317.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/9/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	phenol	12	U
95-57-8	2-chlorophenol	12	U
111-44-4	bis(2-chloroethyl)ether	12	U
541-73-1	1,3-dichlorobenzene	12	U
106-46-7	1,4-dichlorobenzene	12	U
95-50-1	1,2-dichlorobenzene	12	U
100-51-6	benzyl alcohol	12	U
108-60-1	bis(2-chloroisopropyl)ether	12	U
95-48-7	2-methylphenol	12	U
67-72-1	Hexachloroethane	12	U
621-64-7	N-nitros-di-n-propylamine	12	U
106-44-5	4-methylphenol	12	U
98-95-3	Nitrobenzene	12	U
78-59-1	Isophorone	12	U
88-75-5	2-nitrophenol	12	U
105-67-9	2,4-dimethylphenol	12	U
111-91-1	bis(2-chloroethoxy)methane	12	U
120-83-2	2,4-dichlorophenol	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U
91-20-3	Naphthalene	12	U
106-47-8	4-chloroaniline	12	U
87-68-3	Hexachlorobutadiene	12	U
59-50-7	4-chloro-3-methylphenol	12	U
91-57-6	2-Methylnaphthalene	12	U
77-47-4	Hexachlorocyclopentadiene	12	U
88-06-2	2,4,6-trichlorophenol	12	U
95-95-4	2,4,5-trichlorophenol	12	U
91-58-7	2-chloronaphthalene	12	U
88-74-4	2-nitroaniline	24	U
208-96-8	acenaphthylene	12	U
131-11-3	dimethylphthalate	12	U
606-20-2	2,6-Dinitrotoluene	12	U
83-32-9	acenaphthene	12	U
99-09-2	3-nitroaniline	24	U
132-64-9	Dibenzofuran	12	U
100-02-7	4-nitrophenol	24	U
121-14-2	2,4-Dinitrotoluene	12	U

1C

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 3D

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-006

Sample wt/vol: 840 (g/ml) ML Lab File ID: 09F0317.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/9/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	fluorene	12	U
7005-72-3	4-chlorophenyl phenyl ether	12	U
84-66-2	Diethyl phthalate	12	U
100-01-6	4-nitroaniline	24	U
534-52-1	2-methyl-4,6-dinitrophenol	24	U
86-30-6	N-nitrosodiphenylamine	12	U
101-55-3	4-bromophenyl phenyl ether	12	U
118-74-1	Hexachlorobenzene	12	U
87-86-5	pentachlorophenol	24	U
85-01-8	phenanthrene	12	U
120-12-7	anthracene	12	U
86-74-8	Carbazole	12	U
84-74-2	di-n-butyl phthalate	12	U
206-44-0	fluoranthene	12	U
129-00-0	pyrene	12	U
85-68-7	butyl benzyl phthalate	12	U
56-55-3	benzo(a)anthracene	12	U
218-01-9	chrysene	12	U
91-94-1	3,3'-dichlorobenzidine	12	U
117-81-7	bis(2-ethylhexyl)phthalate	12	U
117-84-0	di-n-octyl phthalate	12	U
205-99-2	benzo(b)fluoranthene	12	U
207-08-9	benzo(k)fluoranthene	12	U
50-32-8	benzo(a)pyrene	12	U
193-39-5	indeno(1,2,3-cd)pyrene	12	U
53-70-3	dibenzo(a,h)anthracene	12	U
191-24-2	benzo(g,h,i)perylene	12	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID Number: **MW 3D**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-006

Sample wt/vol: 840 (g/ml) ML Lab File ID: 09F0317.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted: (Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/9/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 4

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-007

Sample wt/vol: 820 (g/ml) ML Lab File ID: 09F0318.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/9/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	phenol	12	U
95-57-8	2-chlorophenol	12	U
111-44-4	bis(2-chloroethyl)ether	12	U
541-73-1	1,3-dichlorobenzene	12	U
106-46-7	1,4-dichlorobenzene	12	U
95-50-1	1,2-dichlorobenzene	12	U
100-51-6	benzyl alcohol	12	U
108-60-1	bis(2-chloroisopropyl)ether	12	U
95-48-7	2-methylphenol	12	U
67-72-1	Hexachloroethane	12	U
621-64-7	N-nitros-di-n-propylamine	12	U
106-44-5	4-methylphenol	12	U
98-95-3	Nitrobenzene	12	U
78-59-1	Isophorone	12	U
88-75-5	2-nitrophenol	12	U
105-67-9	2,4-dimethylphenol	12	U
111-91-1	bis(2-chloroethoxy)methane	12	U
120-83-2	2,4-dichlorophenol	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U
91-20-3	Naphthalene	12	U
106-47-8	4-chloroaniline	12	U
87-68-3	Hexachlorobutadiene	12	U
59-50-7	4-chloro-3-methylphenol	12	U
91-57-6	2-Methylnaphthalene	12	U
77-47-4	Hexachlorocyclopentadiene	12	U
88-06-2	2,4,6-trichlorophenol	12	U
95-95-4	2,4,5-trichlorophenol	12	U
91-58-7	2-chloronaphthalene	12	U
88-74-4	2-nitroaniline	24	U
208-96-8	acenaphthylene	12	U
131-11-3	dimethylphthalate	12	U
606-20-2	2,6-Dinitrotoluene	12	U
83-32-9	acenaphthene	12	U
99-09-2	3-nitroaniline	24	U
132-64-9	Dibenzofuran	12	U
100-02-7	4-nitrophenol	24	U
121-14-2	2,4-Dinitrotoluene	12	U

1C

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 4

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-007

Sample wt/vol: 820 (g/ml) ML Lab File ID: 09F0318.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/9/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	fluorene	12	U
7005-72-3	4-chlorophenyl phenyl ether	12	U
84-66-2	Diethyl phthalate	12	U
100-01-6	4-nitroaniline	24	U
534-52-1	2-methyl-4,6-dinitrophenol	24	U
86-30-6	N-nitrosodiphenylamine	12	U
101-55-3	4-bromophenyl phenyl ether	12	U
118-74-1	Hexachlorobenzene	12	U
87-86-5	pentachlorophenol	24	U
85-01-8	phenanthrene	12	U
120-12-7	anthracene	12	U
86-74-8	Carbazole	12	U
84-74-2	di-n-butyl phthalate	12	U
206-44-0	fluoranthene	12	U
129-00-0	pyrene	12	U
85-68-7	butyl benzyl phthalate	12	U
56-55-3	benzo(a)anthracene	12	U
218-01-9	chrysene	12	U
91-94-1	3,3'-dichlorobenzidine	12	U
117-81-7	bis(2-ethylhexyl)phthalate	12	U
117-84-0	di-n-octyl phthalate	12	U
205-99-2	benzo(b)fluoranthene	12	U
207-08-9	benzo(k)fluoranthene	12	U
50-32-8	benzo(a)pyrene	12	U
193-39-5	indeno(1,2,3-cd)pyrene	12	U
53-70-3	dibenzo(a,h)anthracene	12	U
191-24-2	benzo(g,h,i)perylene	12	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID Number: **MW 4**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-007

Sample wt/vol: 820 (g/ml) ML Lab File ID: 09F0318.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted: (Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/9/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000112-84-5	13-Docosenamide, (Z)-	34.05	5	JN

1B

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 8

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-008

Sample wt/vol: 900 (g/ml) ML Lab File ID: 09F0319.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/9/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	phenol	11	U
95-57-8	2-chlorophenol	11	U
111-44-4	bis(2-chloroethyl)ether	11	U
541-73-1	1,3-dichlorobenzene	11	U
106-46-7	1,4-dichlorobenzene	11	U
95-50-1	1,2-dichlorobenzene	11	U
100-51-6	benzyl alcohol	11	U
108-60-1	bis(2-chloroisopropyl)ether	11	U
95-48-7	2-methylphenol	11	U
67-72-1	Hexachloroethane	11	U
621-64-7	N-nitros-di-n-propylamine	11	U
106-44-5	4-methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-nitrophenol	11	U
105-67-9	2,4-dimethylphenol	11	U
111-91-1	bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-trichlorophenol	11	U
95-95-4	2,4,5-trichlorophenol	11	U
91-58-7	2-chloronaphthalene	11	U
88-74-4	2-nitroaniline	22	U
208-96-8	acenaphthylene	11	U
131-11-3	dimethylphthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	acenaphthene	11	U
99-09-2	3-nitroaniline	22	U
132-64-9	Dibenzofuran	11	U
100-02-7	4-nitrophenol	22	U
121-14-2	2,4-Dinitrotoluene	11	U

1C

Field ID Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW 8

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-008

Sample wt/vol: 900 (g/ml) ML Lab File ID: 09F0319.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted:(Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/9/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	fluorene	11	U
7005-72-3	4-chlorophenyl phenyl ether	11	U
84-66-2	Diethyl phthalate	11	U
100-01-6	4-nitroaniline	22	U
534-52-1	2-methyl-4,6-dinitrophenol	22	U
86-30-6	N-nitrosodiphenylamine	11	U
101-55-3	4-bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	pentachlorophenol	22	U
85-01-8	phenanthrene	11	U
120-12-7	anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	di-n-butyl phthalate	11	U
206-44-0	fluoranthene	11	U
129-00-0	pyrene	11	U
85-68-7	butyl benzyl phthalate	11	U
56-55-3	benzo(a)anthracene	11	U
218-01-9	chrysene	11	U
91-94-1	3,3'-dichlorobenzidine	11	U
117-81-7	bis(2-ethylhexyl)phthalate	11	U
117-84-0	di-n-octyl phthalate	11	U
205-99-2	benzo(b)fluoranthene	11	U
207-08-9	benzo(k)fluoranthene	11	U
50-32-8	benzo(a)pyrene	11	U
193-39-5	indeno(1,2,3-cd)pyrene	11	U
53-70-3	dibenzo(a,h)anthracene	11	U
191-24-2	benzo(g,h,i)perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID Number: **MW 8**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-008

Sample wt/vol: 900 (g/ml) ML Lab File ID: 09F0319.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: decanted: (Y/N) N Date Extracted: 4/7/2009

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 4/9/2009

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000112-84-5	13-Docosenamide, (Z)-	34.05	4	JN

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Alexander B. Grannis
Commissioner

Division of Environmental Remediation Laboratory
Analytical Report

The case narrative and analytical reports - Metals - for the Tioga Casting site are attached.

Case Narrative

Site Name: Tioga Casting Date received: 04/02/09

For sample delivery group(s): 092-01

The following problems were noted during water sample analysis:

Initial Calibration Verification - Copper (123%) recovery was greater than the upper limit. This appeared to have no impact on the reported results.

Continuing Calibration Verification - Ba, Be, Cu, Na, Ni, Pb, Se, V and Zn had recoveries that were slightly greater than the upper limit. It was determined not to have an impact on the reported results.

In the method blank associated with these samples, 'B' levels (amount below NELAC PTRL but above MDL) for Ca, Pb, Ni, Ag, and Zn were present. Copper, Iron, and Chromium were present at low, but detectable levels.

Any reported results for these elements, may be higher than the actual concentrations. Detected reports for Copper and Iron that do not exceed 344ug/L and 287ug/L (amount detected in blank), respectively, may be false positives.

DIVISION OF ENVIRONMENTAL REMEDIATION

LABORATORY ANALYTICAL REPORT

Site Name: Tioga Casting
Site Code: 754012
Date Received: 04-02-09

Field ID: MW 1R
SDG: 092-01
Lab Sample ID: 709-092-001
Matrix:GW

CAS NO.	ANALYTE	CONC UG/L	C	Q	M
7429-90-5	Aluminum	1050			PM
7440-36-0	Antimony	6.68	U		PM
7440-38-2	Arsenic	2.95	U		PM
7440-39-3	Barium	59.8	B		PM
7440-41-7	Beryllium	0.45	U		PM
7440-43-9	Cadmium	0.34	U		PM
7440-70-2	Calcium	61200			PM
7440-47-3	Chromium	10.4	B		PM
7440-48-4	Cobalt	3.76	U		PM
7440-50-8	Copper	181			PM
7439-89-6	Iron	1410			PM
7439-92-1	Lead	1.4	U		PM
7439-95-4	Magnesium	11500			PM
7439-96-5	Manganese	106			PM
7439-97-6	Mercury	Not Analyzed			n/a
7439-98-7	Molybdenum	5.48	B		PM
7440-02-0	Nickel	6.92	B		PM
7440-09-7	Potassium	2070	B		PM
7482-49-2	Selenium	11.41	U		PM
7440-22-4	Silver	2.19	U		PM
7440-23-5	Sodium	25600			PM
7440-28-0	Thallium	2.99	U		PM
7440-31-5	Tin	5	U		PM
7440-32-6	Titanium	8.75	B		PM
7440-62-2	Vanadium	4.72	U		PM
7440-66-6	Zinc	13.5	U		PM

DIVISION OF ENVIRONMENTAL REMEDIATION

LABORATORY ANALYTICAL REPORT

Site Name: Tioga Casting
Site Code: 754012
Date Received: 04-02-09

Field ID: MW 7
SDG: 092-01
Lab Sample ID: 709-092-002
Matrix:GW

CAS NO.	ANALYTE	CONC UG/L	C	Q	M
7429-90-5	Aluminum	1810			PM
7440-36-0	Antimony	6.68	U		PM
7440-38-2	Arsenic	2.95	U		PM
7440-39-3	Barium	165			PM
7440-41-7	Beryllium	0.45	U		PM
7440-43-9	Cadmium	0.34	U		PM
7440-70-2	Calcium	64300			PM
7440-47-3	Chromium	10.4	B		PM
7440-48-4	Cobalt	5.83	B		PM
7440-50-8	Copper	178			PM
7439-89-6	Iron	2880			PM
7439-92-1	Lead	30.2	B		PM
7439-95-4	Magnesium	10000			PM
7439-96-5	Manganese	989			PM
7439-97-6	Mercury	Not Analyzed			n/a
7439-98-7	Molybdenum	5	B		PM
7440-02-0	Nickel	10.6	B		PM
7440-09-7	Potassium	4510			PM
7482-49-2	Selenium	11.41	U		PM
7440-22-4	Silver	2.19	U		PM
7440-23-5	Sodium	57500			PM
7440-28-0	Thallium	2.99	U		PM
7440-31-5	Tin	5	U		PM
7440-32-6	Titanium	5	U		PM
7440-62-2	Vanadium	7.18	B		PM
7440-66-6	Zinc	40.4	B		PM

DIVISION OF ENVIRONMENTAL REMEDIATION

LABORATORY ANALYTICAL REPORT

Site Name: Tioga Casting
Site Code: 754012
Date Received: 04-02-09

Field ID: MW 2
SDG: 092-01
Lab Sample ID: 709-092-003
Matrix:GW

CAS NO.	ANALYTE	CONC UG/L	C	Q	M
7429-90-5	Aluminum	632			PM
7440-36-0	Antimony	6.68	U		PM
7440-38-2	Arsenic	2.95	U		PM
7440-39-3	Barium	102			PM
7440-41-7	Beryllium	0.45	U		PM
7440-43-9	Cadmium	0.34	U		PM
7440-70-2	Calcium	50900			PM
7440-47-3	Chromium	5.79	B		PM
7440-48-4	Cobalt	3.76	U		PM
7440-50-8	Copper	105			PM
7439-89-6	Iron	532			PM
7439-92-1	Lead	1.4	U		PM
7439-95-4	Magnesium	8320			PM
7439-96-5	Manganese	211			PM
7439-97-6	Mercury	Not Analyzed			n/a
7439-98-7	Molybdenum	5	U		PM
7440-02-0	Nickel	7.3	B		PM
7440-09-7	Potassium	4550			PM
7482-49-2	Selenium	11.41	U		PM
7440-22-4	Silver	2.19	U		PM
7440-23-5	Sodium	25200			PM
7440-28-0	Thallium	2.99	U		PM
7440-31-5	Tin	5	U		PM
7440-32-6	Titanium	5	U		PM
7440-62-2	Vanadium	4.72	U		PM
7440-66-6	Zinc	13.5	U		PM

DIVISION OF ENVIRONMENTAL REMEDIATION

LABORATORY ANALYTICAL REPORT

Site Name: Tioga Casting
Site Code: 754012
Date Received: 04-02-09

Field ID: MW 5
SDG: 092-01
Lab Sample ID: 709-092-004
Matrix:GW

CAS NO.	ANALYTE	CONC UG/L	C	Q	M
7429-90-5	Aluminum	102	B		PM
7440-36-0	Antimony	6.68	U		PM
7440-38-2	Arsenic	2.95	U		PM
7440-39-3	Barium	47.1	B		PM
7440-41-7	Beryllium	0.45	U		PM
7440-43-9	Cadmium	0.34	U		PM
7440-70-2	Calcium	44000			PM
7440-47-3	Chromium	3.88	B		PM
7440-48-4	Cobalt	3.76	U		PM
7440-50-8	Copper	89.3			PM
7439-89-6	Iron	246			PM
7439-92-1	Lead	6.03	B		PM
7439-95-4	Magnesium	7440			PM
7439-96-5	Manganese	10.1	B		PM
7439-97-6	Mercury	Not Analyzed			n/a
7439-98-7	Molybdenum	5	U		PM
7440-02-0	Nickel	4.97	B		PM
7440-09-7	Potassium	2880	B		PM
7482-49-2	Selenium	11.41	U		PM
7440-22-4	Silver	2.19	U		PM
7440-23-5	Sodium	13300			PM
7440-28-0	Thallium	2.99	U		PM
7440-31-5	Tin	5	U		PM
7440-32-6	Titanium	5	U		PM
7440-62-2	Vanadium	4.72	U		PM
7440-66-6	Zinc	13.5	U		PM

DIVISION OF ENVIRONMENTAL REMEDIATION

LABORATORY ANALYTICAL REPORT

Site Name: Tioga Casting
Site Code: 754012
Date Received: 04-02-09

Field ID: MW 3
SDG: 092-01
Lab Sample ID: 709-092-005
Matrix:GW

CAS NO.	ANALYTE	CONC UG/L	C	Q	M
7429-90-5	Aluminum	195			PM
7440-36-0	Antimony	6.68	U		PM
7440-38-2	Arsenic	2.95	U		PM
7440-39-3	Barium	38.3	B		PM
7440-41-7	Beryllium	0.45	U		PM
7440-43-9	Cadmium	0.34	U		PM
7440-70-2	Calcium	42900			PM
7440-47-3	Chromium	3.53	B		PM
7440-48-4	Cobalt	3.76	U		PM
7440-50-8	Copper	71.3			PM
7439-89-6	Iron	144	B		PM
7439-92-1	Lead	1.54	B		PM
7439-95-4	Magnesium	7450			PM
7439-96-5	Manganese	14	B		PM
7439-97-6	Mercury	Not Analyzed			n/a
7439-98-7	Molybdenum	5	U		PM
7440-02-0	Nickel	4.15	B		PM
7440-09-7	Potassium	1430	B		PM
7482-49-2	Selenium	11.41	U		PM
7440-22-4	Silver	2.19	U		PM
7440-23-5	Sodium	17000			PM
7440-28-0	Thallium	2.99	U		PM
7440-31-5	Tin	5	U		PM
7440-32-6	Titanium	5	U		PM
7440-62-2	Vanadium	4.72	U		PM
7440-66-6	Zinc	13.5	U		PM

DIVISION OF ENVIRONMENTAL REMEDIATION

LABORATORY ANALYTICAL REPORT

Site Name: Tioga Casting
Site Code: 754012
Date Received: 04-02-09

Field ID: MW 3D
SDG: 092-01
Lab Sample ID: 709-092-006
Matrix:GW

CAS NO.	ANALYTE	CONC UG/L	C	Q	M
7429-90-5	Aluminum	668			PM
7440-36-0	Antimony	6.68	U		PM
7440-38-2	Arsenic	2.95	U		PM
7440-39-3	Barium	39.2	B		PM
7440-41-7	Beryllium	0.45	U		PM
7440-43-9	Cadmium	0.34	U		PM
7440-70-2	Calcium	42300			PM
7440-47-3	Chromium	3.84	B		PM
7440-48-4	Cobalt	3.76	U		PM
7440-50-8	Copper	56.6			PM
7439-89-6	Iron	558			PM
7439-92-1	Lead	1.4	U		PM
7439-95-4	Magnesium	7490			PM
7439-96-5	Manganese	40.3	B		PM
7439-97-6	Mercury	Not Analyzed			n/a
7439-98-7	Molybdenum	5	U		PM
7440-02-0	Nickel	3.92	B		PM
7440-09-7	Potassium	1550	B		PM
7482-49-2	Selenium	11.41	U		PM
7440-22-4	Silver	2.19	U		PM
7440-23-5	Sodium	17300			PM
7440-28-0	Thallium	2.99	U		PM
7440-31-5	Tin	5	U		PM
7440-32-6	Titanium	5	U		PM
7440-62-2	Vanadium	4.72	U		PM
7440-66-6	Zinc	13.5	U		PM

DIVISION OF ENVIRONMENTAL REMEDIATION

LABORATORY ANALYTICAL REPORT

Site Name: Tioga Casting
Site Code: 754012
Date Received: 04-02-09

Field ID: MW 4
SDG: 092-01
Lab Sample ID: 709-092-007
Matrix:GW

CAS NO.	ANALYTE	CONC UG/L	C	Q	M
7429-90-5	Aluminum	754			PM
7440-36-0	Antimony	6.68	U		PM
7440-38-2	Arsenic	2.95	U		PM
7440-39-3	Barium	60.9	B		PM
7440-41-7	Beryllium	0.45	U		PM
7440-43-9	Cadmium	0.34	U		PM
7440-70-2	Calcium	40500			PM
7440-47-3	Chromium	3.43	B		PM
7440-48-4	Cobalt	3.76	U		PM
7440-50-8	Copper	49.7			PM
7439-89-6	Iron	667			PM
7439-92-1	Lead	1.4	U		PM
7439-95-4	Magnesium	7080			PM
7439-96-5	Manganese	79.4			PM
7439-97-6	Mercury	Not Analyzed			n/a
7439-98-7	Molybdenum	5	U		PM
7440-02-0	Nickel	4.46	B		PM
7440-09-7	Potassium	1190	B		PM
7482-49-2	Selenium	11.41	U		PM
7440-22-4	Silver	2.19	U		PM
7440-23-5	Sodium	15200			PM
7440-28-0	Thallium	2.99	U		PM
7440-31-5	Tin	5	U		PM
7440-32-6	Titanium	5	U		PM
7440-62-2	Vanadium	4.72	U		PM
7440-66-6	Zinc	13.5	U		PM

DIVISION OF ENVIRONMENTAL REMEDIATION

LABORATORY ANALYTICAL REPORT

Site Name: Tioga Casting
Site Code: 754012
Date Received: 04-02-09

Field ID: MW 8
SDG: 092-01
Lab Sample ID: 709-092-008
Matrix:GW

CAS NO.	ANALYTE	CONC UG/L	C	Q	M
7429-90-5	Aluminum	6190			PM
7440-36-0	Antimony	6.68	U		PM
7440-38-2	Arsenic	2.95	U		PM
7440-39-3	Barium	219			PM
7440-41-7	Beryllium	0.45	U		PM
7440-43-9	Cadmium	0.34	U		PM
7440-70-2	Calcium	52400			PM
7440-47-3	Chromium	8.92	B		PM
7440-48-4	Cobalt	3.76	U		PM
7440-50-8	Copper	66.3			PM
7439-89-6	Iron	4530			PM
7439-92-1	Lead	17.3	B		PM
7439-95-4	Magnesium	8740			PM
7439-96-5	Manganese	524			PM
7439-97-6	Mercury	Not Analyzed			n/a
7439-98-7	Molybdenum	5	U		PM
7440-02-0	Nickel	9.48	B		PM
7440-09-7	Potassium	3770			PM
7482-49-2	Selenium	11.41	U		PM
7440-22-4	Silver	2.19	U		PM
7440-23-5	Sodium	26700			PM
7440-28-0	Thallium	2.99	U		PM
7440-31-5	Tin	5	U		PM
7440-32-6	Titanium	34.4	B		PM
7440-62-2	Vanadium	9.75	B		PM
7440-66-6	Zinc	40.2	B		PM

- C (Concentration) qualifier - Enter "B" if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL). If the analyte was analyzed for but not detected, a "U" must be entered.

- M (Method) qualifier - Enter:

  - "P" for ICP
  - "A" for Flame AA
  - "F" for Furnace AA
  - "PM" for ICP when Microwave Digestion is used

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Division of Environmental Remediation
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Alexander B. Grannis
Commissioner

Division of Environmental Remediation Laboratory
Analytical Report

The case narrative and analytical reports - Volatiles - for the Tioga Casting site are attached.

Case Narrative

Site Name: Tioga Casting Date received: 04/02/09

For sample delivery group(s): 092-01

The calibration verification that these samples were run under had three target analytes - dichlorodifluoromethane, chloromethane, and bromomethane - exceeding the calibration verification criteria that is associated with this analytical method. However, the initial calibration that these samples were quantitated against was valid, and none of the analytes that exceeded the calibration verification criteria were found in the samples.

All other QA/QC associated with this sample delivery group were within acceptable method criteria.

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 1R

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-001

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0465.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
75-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	15	U
75-09-2	Methylene Chloride	10	U
540-59-0	trans 1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert butyl ether	10	U
75-34-4	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
540-59-0	cis 1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	m,p-Xylenes	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2,-Tetrachloroethane	10	U

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 1R

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-001

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0465.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Sample ID: **MW 1R**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-001

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0465.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 7

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-002

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0466.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
75-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	15	U
75-09-2	Methylene Chloride	10	U
540-59-0	trans 1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert butyl ether	10	U
75-34-4	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
540-59-0	cis 1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	4	J
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	m,p-Xylenes	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2,-Tetrachloroethane	10	U

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 7

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-002

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0466.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Sample ID: **MW 7**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-002

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0466.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 2

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-003

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0467.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
75-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	15	U
75-09-2	Methylene Chloride	10	U
540-59-0	trans 1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert butyl ether	10	U
75-34-4	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
540-59-0	cis 1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	m,p-Xylenes	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2,-Tetrachloroethane	10	U

Field Sample ID: **MW 2**

VOLATILE ORGANICS ANALYSIS DATA SHEET

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-003

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0467.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Sample ID: **MW 2**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-003

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0467.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 5

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-004

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0468.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
75-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	15	U
75-09-2	Methylene Chloride	10	U
540-59-0	trans 1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert butyl ether	10	U
75-34-4	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
540-59-0	cis 1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	m,p-Xylenes	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2,-Tetrachloroethane	10	U

Field Sample ID: **MW 5**

VOLATILE ORGANICS ANALYSIS DATA SHEET

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-004

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0468.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Sample ID: **MW 5**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-004

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0468.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 3

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-005

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0469.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
75-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	15	U
75-09-2	Methylene Chloride	10	U
540-59-0	trans 1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert butyl ether	10	U
75-34-4	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
540-59-0	cis 1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	m,p-Xylenes	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2,-Tetrachloroethane	10	U

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 3

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-005

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0469.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Sample ID: **MW 3**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-005

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0469.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 3D

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-006

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0471.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
75-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	15	U
75-09-2	Methylene Chloride	10	U
540-59-0	trans 1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert butyl ether	10	U
75-34-4	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
540-59-0	cis 1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	m,p-Xylenes	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2,-Tetrachloroethane	10	U

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 3D

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-006

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0471.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Sample ID: **MW 3D**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-006

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0471.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 4

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-007

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0472.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
75-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	15	U
75-09-2	Methylene Chloride	10	U
540-59-0	trans 1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert butyl ether	10	U
75-34-4	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
540-59-0	cis 1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	m,p-Xylenes	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2,-Tetrachloroethane	10	U

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 4

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-007

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0472.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Sample ID: **MW 4**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-007

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0472.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW 8

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-008

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0473.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
75-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	15	U
75-09-2	Methylene Chloride	10	U
540-59-0	trans 1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert butyl ether	10	U
75-34-4	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
540-59-0	cis 1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	m,p-Xylenes	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2,-Tetrachloroethane	10	U

Field Sample ID: **MW 8**

VOLATILE ORGANICS ANALYSIS DATA SHEET

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-008

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0473.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Sample ID: **MW 8**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-008

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0473.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW DUP

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-009

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0474.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
75-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	15	U
75-09-2	Methylene Chloride	10	U
540-59-0	trans 1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert butyl ether	10	U
75-34-4	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
540-59-0	cis 1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	m,p-Xylenes	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2,-Tetrachloroethane	10	U

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW DUP

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-009

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0474.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Sample ID: **MW DUP**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-009

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0474.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Trip Blank

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-010

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0475.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
75-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	15	U
75-09-2	Methylene Chloride	10	U
540-59-0	trans 1,2-Dichloroethene	10	U
1634-04-4	Methyl-tert butyl ether	10	U
75-34-4	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
540-59-0	cis 1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	m,p-Xylenes	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2,-Tetrachloroethane	10	U

1A

Field Sample ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Trip Blank

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-010

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0475.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Sample ID: **Trip Blank**

Site Name: Tioga Casting Contract:

Site Code: 754012 Case No.: SAS No.: SDG No.: 092-01

Matrix: (soil/water) WATER Lab Sample ID: 709-092-010

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 09C0475.D

Level: (low/med) LOW Date Received: 4/2/2009

% Moisture: not dec. Date Analyzed: 4/8/2009

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Analytical Report

Work Order: RSG1084

Project Description
Tioga Castings

For:

Jeremy Wyckoff
Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

DRAFT REPORT

DATA SUBJECT TO CHANGE

Amy.Haag@testamericainc.com

Thursday, August 13, 2009

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

TestAmerica Buffalo
Current Certifications

As of 1/27/2009

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
USDOE	Department of Energy	DOECAP-STB
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 accre ditation is required or available. Any exceptions to NELAP requirements are noted in this report.

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

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.

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

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

DATA QUALIFIERS AND DEFINITIONS

B	Analyte was detected in the associated Method Blank.
D02	Dilution required due to sample matrix effects
D08	Dilution required due to high concentration of target analyte(s)
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.
M1	The MS and/or MSD were outside the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
R3	The RPD exceeded the acceptance limit due to sample matrix effects.
R4	Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
NR	Any inclusion of NR indicates that the project specific requirements do not require reporting estimated values below the laboratory reporting limit.

ADDITIONAL COMMENTS

Results are reported on a wet weight basis unless otherwise noted.

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-01 (DRAFT: SS-01 - Solid)						**Sampled: 07/29/09 10:20**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**4760**		20.6	1.3	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Arsenic	**2.8**		1.0	0.2	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Barium	**62.5**		20.6	0.027	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Beryllium	**0.022**	J	0.515	0.010	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Calcium	**12800**	B, E	515	10.3	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Chromium	**25.7**		1.03	0.093	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Cobalt	**2.46**	J	5.15	0.052	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Copper	**33.2**		2.6	0.1	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Iron	**23400**	E, B	10.3	3.1	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Lead	**101**	B	1.0	0.1	mg/kg dry	1.00	08/07/09 15:42	AMH	9G31048	CLP-M
Magnesium	**1460**	B	20.6	1.0	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Manganese	**973**	B, E	1.5	0.03	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Mercury	**0.0402**	J	0.101	0.0082	mg/kg dry	1.00	07/31/09 17:09	MXM	9G31042	CLP-M
Nickel	**23.6**		4.12	0.082	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Potassium	**523**		515	5.0	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Sodium	**133**	J	515	31.9	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Vanadium	**5.46**		5.15	0.098	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Zinc	**173**	E, B	6.2	0.2	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**93**		0.010	NR	%	1.00	07/31/09 10:06	KMB/C	9G30063	Dry Weight
Sample ID: RSG1084-02 (DRAFT: SS-02 - Solid)						**Sampled: 07/29/09 10:30**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**9880**	E	23.3	1.5	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Arsenic	**5.2**		1.2	0.3	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Barium	**48.7**		23.3	0.030	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Beryllium	**0.137**	J	0.582	0.012	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Calcium	**34500**	B, E	582	11.6	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Chromium	**12.1**		1.16	0.105	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Cobalt	**7.04**		5.82	0.058	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Copper	**14.3**		2.9	0.1	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Iron	**18000**	B, E	11.6	3.5	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Lead	**10.8**	B	1.2	0.1	mg/kg dry	1.00	08/07/09 15:47	AMH	9G31048	CLP-M
Magnesium	**18000**	B, E	23.3	1.1	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Manganese	**556**	B, E	1.7	0.04	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Mercury	**0.0360**	J	0.106	0.0086	mg/kg dry	1.00	07/31/09 17:15	MXM	9G31042	CLP-M
Nickel	**16.8**		4.66	0.093	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Potassium	**813**		582	5.7	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Sodium	**46.7**	J	582	36.1	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Vanadium	**14.1**		5.82	0.111	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Zinc	**49.3**	B	7.0	0.2	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**94**		0.010	NR	%	1.00	07/31/09 10:08	KMB/C	9G30063	Dry Weight

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Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-03 (DRAFT: SS-03 - Solid)					**Sampled: 07/29/09 10:40**		**Recvd: 07/30/09 11:30**			
DRAFT: CLP Metals										
Aluminum	**5650**	E	20.4	1.3	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Arsenic	**3.7**		1.0	0.2	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Barium	**40.9**		20.4	0.026	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Beryllium	**0.068**	J	0.509	0.010	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Calcium	**64500**	D08, B	5090	102	mg/kg dry	10.0	08/07/09 17:47	AMH	9G31048	CLP-M
Chromium	**8.45**		1.02	0.092	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Cobalt	**4.93**	J	5.09	0.051	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Copper	**22.2**		2.5	0.1	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Iron	**13500**	B, E	10.2	3.1	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Lead	**26.3**	B	1.0	0.1	mg/kg dry	1.00	08/07/09 15:52	AMH	9G31048	CLP-M
Magnesium	**9250**	B, E	20.4	0.9	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Manganese	**424**	B, E	1.5	0.03	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Mercury	**0.0199**	J	0.102	0.0083	mg/kg dry	1.00	07/31/09 17:17	MXM	9G31042	CLP-M
Nickel	**13.3**		4.07	0.081	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Potassium	**777**		509	5.0	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Sodium	**62.5**	J	509	31.6	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Vanadium	**8.95**		5.09	0.097	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Zinc	**121**	E, B	6.1	0.2	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**94**		0.010	NR	%	1.00	07/31/09 10:10	KMB/C	9G30063	Dry Weight
Sample ID: RSG1084-04 (DRAFT: SS-04 - Solid)					**Sampled: 07/29/09 10:55**		**Recvd: 07/30/09 11:30**			
DRAFT: CLP Metals										
Aluminum	**9780**	E	25.0	1.6	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Arsenic	**5.3**		1.2	0.3	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Barium	**53.0**		25.0	0.032	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Beryllium	**0.049**	J	0.624	0.012	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Calcium	**20200**	B, E	624	12.5	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Chromium	**19.0**		1.25	0.112	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Cobalt	**7.82**		6.24	0.062	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Copper	**24.4**		3.1	0.1	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Iron	**22100**	B, E	12.5	3.7	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Lead	**21.6**	B	1.2	0.1	mg/kg dry	1.00	08/07/09 16:18	AMH	9G31048	CLP-M
Magnesium	**6310**	B, E	25.0	1.2	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Manganese	**571**	B, E	1.9	0.04	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Mercury	**0.0362**	J	0.113	0.0092	mg/kg dry	1.00	07/31/09 17:18	MXM	9G31042	CLP-M
Nickel	**25.0**		4.99	0.100	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Potassium	**1040**		624	6.1	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Vanadium	**14.4**		6.24	0.119	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Zinc	**87.5**	B	7.5	0.2	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**87**		0.010	NR	%	1.00	07/31/09 10:12	KMB/C	9G30063	Dry Weight

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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-05 (DRAFT: SS-05 - Solid)					**Sampled: 07/29/09 11:13**		**Recvd: 07/30/09 11:30**			
DRAFT: CLP Metals										
Aluminum	**6750**	E	21.0	1.3	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Arsenic	**4.1**		1.0	0.2	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Barium	**80.3**		21.0	0.027	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Beryllium	**0.126**	J	0.525	0.010	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Calcium	**80200**	D08, B	2620	52.5	mg/kg dry	5.00	08/07/09 18:12	AMH	9G31048	CLP-M
Chromium	**15.1**		1.05	0.094	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Cobalt	**5.59**		5.25	0.052	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Copper	**37.7**		2.6	0.1	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Iron	**14000**	B, E	10.5	3.1	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Lead	**163**	B	1.0	0.1	mg/kg dry	1.00	08/07/09 16:34	AMH	9G31048	CLP-M
Magnesium	**8800**	B, E	21.0	1.0	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Manganese	**708**	B, E	1.6	0.03	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Mercury	**0.107**		0.106	0.0086	mg/kg dry	1.00	07/31/09 17:20	MXM	9G31042	CLP-M
Nickel	**16.5**		4.20	0.084	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Potassium	**1500**		525	5.1	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Sodium	**94.8**	J	525	32.5	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Vanadium	**16.2**		5.25	0.100	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Zinc	**127**	E, B	6.3	0.2	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**89**		0.010	NR	%	1.00	07/31/09 10:14	KMB/C	9G30063	Dry Weight
Sample ID: RSG1084-06 (DRAFT: SS-06 - Solid)					**Sampled: 07/29/09 11:30**		**Recvd: 07/30/09 11:30**			
DRAFT: CLP Metals										
Aluminum	**7640**	E	22.9	1.4	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Antimony	**0.6**	J	6.9	0.6	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Arsenic	**8.4**		1.1	0.3	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Barium	**93.9**		22.9	0.030	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Beryllium	**0.040**	J	0.571	0.011	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Calcium	**13900**	B, E	571	11.4	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Chromium	**35.3**		1.14	0.103	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Cobalt	**5.22**	J	5.71	0.057	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Copper	**62.1**		2.9	0.1	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Iron	**23400**	B, E	11.4	3.4	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Lead	**327**	B	1.1	0.1	mg/kg dry	1.00	08/07/09 16:39	AMH	9G31048	CLP-M
Magnesium	**2900**	B	22.9	1.1	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Manganese	**865**	B, E	1.7	0.04	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Mercury	**0.122**		0.105	0.0085	mg/kg dry	1.00	07/31/09 17:22	MXM	9G31042	CLP-M
Nickel	**30.5**		4.57	0.091	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Potassium	**1210**		571	5.6	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Silver	**0.256**	J	1.14	0.080	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Sodium	**146**	J	571	35.4	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Vanadium	**13.8**		5.71	0.109	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Zinc	**395**	E, B	6.9	0.2	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										

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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-06 (DRAFT: SS-06 - Solid) - cont.						**Sampled: 07/29/09 11:30**		**Recvd: 07/30/09 11:30**		
DRAFT: General Chemistry Parameters - cont.										
Percent Solids	**89**		0.010	NR	%	1.00	07/31/09 10:16	KMB/C	9G30063	Dry Weight
Sample ID: RSG1084-07 (DRAFT: BG-SS-01 - Solid)						**Sampled: 07/29/09 11:40**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**11300**	E	26.1	1.6	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Arsenic	**5.0**		1.3	0.3	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Barium	**122**		26.1	0.034	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Beryllium	**0.175**	J	0.654	0.013	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Calcium	**1920**	B	654	13.1	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Chromium	**14.0**		1.31	0.118	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Cobalt	**8.41**		6.54	0.065	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Copper	**14.6**		3.3	0.2	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Iron	**19900**	B, E	13.1	3.9	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Lead	**33.1**	B	1.3	0.2	mg/kg dry	1.00	08/07/09 16:44	AMH	9G31048	CLP-M
Magnesium	**3060**	B	26.1	1.2	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Manganese	**577**	B, E	2.0	0.04	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Mercury	**0.0728**	J	0.137	0.0111	mg/kg dry	1.00	07/31/09 17:23	MXM	9G31042	CLP-M
Nickel	**19.3**		5.23	0.105	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Potassium	**986**		654	6.4	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Selenium	**0.8**	J	4.6	0.8	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Vanadium	**13.3**		6.54	0.124	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Zinc	**69.6**	B	7.8	0.2	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**73**		0.010	NR	%	1.00	07/31/09 10:18	KMB/C	9G30063	Dry Weight
Sample ID: RSG1084-08 (DRAFT: BG-SS-02 - Solid)						**Sampled: 07/29/09 12:05**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**10700**	E	26.7	1.7	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Arsenic	**7.6**		1.3	0.3	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Barium	**104**		26.7	0.035	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Beryllium	**0.130**	J	0.668	0.013	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Calcium	**2010**	B	668	13.4	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Chromium	**13.7**		1.34	0.120	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Cobalt	**7.72**		6.68	0.067	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Copper	**14.8**		3.3	0.2	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Iron	**18800**	B, E	13.4	4.0	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Lead	**42.3**	B	1.3	0.2	mg/kg dry	1.00	08/07/09 16:49	AMH	9G31048	CLP-M
Magnesium	**2900**	B	26.7	1.2	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Manganese	**475**	B, E	2.0	0.04	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Mercury	**0.0565**	J	0.109	0.0088	mg/kg dry	1.00	07/31/09 17:28	MXM	9G31042	CLP-M
Nickel	**18.7**		5.34	0.107	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Potassium	**905**		668	6.5	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Vanadium	**12.9**		6.68	0.127	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Zinc	**78.7**	B	8.0	0.2	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M

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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-08 (DRAFT: BG-SS-02 - Solid) - cont.						**Sampled: 07/29/09 12:05**		**Recvd: 07/30/09 11:30**		
DRAFT: General Chemistry Parameters										
Percent Solids	**81**		0.010	NR	%	1.00	07/31/09 10:20	KMB/C	9G30063	Dry Weight
Sample ID: RSG1084-09 (DRAFT: BG-SS-03 - Solid)						**Sampled: 07/29/09 13:05**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**12000**	E	24.4	1.5	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Arsenic	**7.4**		1.2	0.3	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Barium	**109**		24.4	0.032	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Beryllium	**0.176**	J	0.611	0.012	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Calcium	**1120**	B	611	12.2	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Chromium	**13.5**		1.22	0.110	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Cobalt	**7.03**		6.11	0.061	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Copper	**14.1**		3.1	0.1	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Iron	**20000**	B, E	12.2	3.7	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Lead	**70.2**	B	1.2	0.1	mg/kg dry	1.00	08/07/09 16:54	AMH	9G31048	CLP-M
Magnesium	**2850**	B	24.4	1.1	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Manganese	**507**	B, E	1.8	0.04	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Mercury	**0.109**	J	0.120	0.0097	mg/kg dry	1.00	07/31/09 17:29	MXM	9G31042	CLP-M
Nickel	**17.4**		4.89	0.098	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Potassium	**753**		611	5.9	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Vanadium	**14.9**		6.11	0.116	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Zinc	**91.7**	B	7.3	0.2	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**86**		0.010	NR	%	1.00	07/31/09 10:22	KMB/C	9G30063	Dry Weight
Sample ID: RSG1084-10 (DRAFT: BG-SS-04 - Solid)						**Sampled: 07/29/09 13:00**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**9480**	E	19.0	1.2	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Arsenic	**15.0**		1.0	0.2	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Barium	**85.9**		19.0	0.025	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Beryllium	**0.153**	J	0.475	0.010	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Calcium	**3370**	B	475	9.5	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Chromium	**12.1**		0.951	0.086	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Cobalt	**6.80**		4.75	0.048	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Copper	**25.0**		2.4	0.1	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Iron	**16800**	B, E	9.5	2.9	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Lead	**208**	B	1.0	0.1	mg/kg dry	1.00	08/07/09 16:59	AMH	9G31048	CLP-M
Magnesium	**2580**	B	19.0	0.9	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Manganese	**492**	B, E	1.4	0.03	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Mercury	**0.757**		0.0938	0.0076	mg/kg dry	1.00	07/31/09 17:31	MXM	9G31042	CLP-M
Nickel	**15.6**		3.80	0.076	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Potassium	**956**		475	4.6	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Sodium	**78.0**	J	475	29.5	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Vanadium	**13.2**		4.75	0.090	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Zinc	**101**	E, B	5.7	0.1	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-10 (DRAFT: BG-SS-04 - Solid) - cont.						**Sampled: 07/29/09 13:00**		**Recvd: 07/30/09 11:30**		
DRAFT: General Chemistry Parameters										
Percent Solids	**96**		0.010	NR	%	1.00	07/31/09 10:24	KMB/C	9G30063	Dry Weight
Sample ID: RSG1084-11 (DRAFT: BG-SS-05 - Solid)						**Sampled: 07/29/09 13:40**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**14700**	E	27.1	1.7	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Arsenic	**6.7**		1.4	0.3	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Barium	**152**	E	27.1	0.035	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Beryllium	**0.387**	J	0.678	0.014	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Calcium	**3360**	B	678	13.6	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Chromium	**15.5**		1.36	0.122	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Cobalt	**10.5**		6.78	0.068	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Copper	**13.1**		3.4	0.2	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Iron	**22500**	B, E	13.6	4.1	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Lead	**27.6**	B	1.4	0.2	mg/kg dry	1.00	08/07/09 17:04	AMH	9G31048	CLP-M
Magnesium	**3680**	B	27.1	1.3	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Manganese	**1030**	B, E	2.0	0.04	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Mercury	**0.0908**	J	0.140	0.0113	mg/kg dry	1.00	07/31/09 17:33	MXM	9G31042	CLP-M
Nickel	**22.4**		5.43	0.109	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Potassium	**1560**		678	6.6	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Vanadium	**18.5**		6.78	0.129	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Zinc	**70.9**	B	8.1	0.2	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**68**		0.010	NR	%	1.00	07/31/09 10:26	KMB/C	9G30063	Dry Weight
Sample ID: RSG1084-12 (DRAFT: BG-SS-06 - Solid)						**Sampled: 07/29/09 13:50**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**10000**	E	19.6	1.2	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Arsenic	**7.7**		1.0	0.2	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Barium	**98.6**	E	19.6	0.025	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Beryllium	**0.132**	J	0.489	0.010	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Calcium	**1890**	B	489	9.8	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Chromium	**13.4**		0.979	0.088	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Cobalt	**7.41**		4.89	0.049	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Copper	**13.7**		2.4	0.1	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Iron	**17900**	E, B	9.8	2.9	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Lead	**42.7**	B	1.0	0.1	mg/kg dry	1.00	08/07/09 17:42	AMH	9G31048	CLP-M
Magnesium	**2750**	B	19.6	0.9	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Manganese	**467**	B, E	1.5	0.03	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Mercury	**0.0551**	J	0.0962	0.0078	mg/kg dry	1.00	07/31/09 17:34	MXM	9G31042	CLP-M
Nickel	**17.7**		3.92	0.078	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Potassium	**764**		489	4.8	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Vanadium	**12.1**		4.89	0.093	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Zinc	**78.2**	B	5.9	0.1	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										

Malcolm Pirnie - Clifton Park, NY
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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-12 (DRAFT: BG-SS-06 - Solid) - cont.						**Sampled: 07/29/09 13:50**		**Recvd: 07/30/09 11:30**		
DRAFT: General Chemistry Parameters - cont.										
Percent Solids	**96**		0.010	NR	%	1.00	07/31/09 10:28	KMB/C	9G30063	Dry Weight

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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Sample Summary

Sample Identification	Lab Number	Client Matrix	Date/Time Sampled	Date/Time Received	Sample Qualifiers
DRAFT: SS-01	RSG1084-01	Solid	07/29/09 10:20	07/30/09 11:30	
DRAFT: SS-02	RSG1084-02	Solid	07/29/09 10:30	07/30/09 11:30	
DRAFT: SS-03	RSG1084-03	Solid	07/29/09 10:40	07/30/09 11:30	
DRAFT: SS-04	RSG1084-04	Solid	07/29/09 10:55	07/30/09 11:30	
DRAFT: SS-05	RSG1084-05	Solid	07/29/09 11:13	07/30/09 11:30	
DRAFT: SS-06	RSG1084-06	Solid	07/29/09 11:30	07/30/09 11:30	
DRAFT: BG-SS-01	RSG1084-07	Solid	07/29/09 11:40	07/30/09 11:30	
DRAFT: BG-SS-02	RSG1084-08	Solid	07/29/09 12:05	07/30/09 11:30	
DRAFT: BG-SS-03	RSG1084-09	Solid	07/29/09 13:05	07/30/09 11:30	
DRAFT: BG-SS-04	RSG1084-10	Solid	07/29/09 13:00	07/30/09 11:30	
DRAFT: BG-SS-05	RSG1084-11	Solid	07/29/09 13:40	07/30/09 11:30	
DRAFT: BG-SS-06	RSG1084-12	Solid	07/29/09 13:50	07/30/09 11:30	

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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-01 (DRAFT: SS-01 - Solid)						**Sampled: 07/29/09 10:20**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**4760**		20.6	1.3	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Antimony	ND		6.2	0.6	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Arsenic	**2.8**		1.0	0.2	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Barium	**62.5**		20.6	0.027	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Beryllium	**0.022**	J	0.515	0.010	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Cadmium	ND		0.515	0.041	mg/kg dry	1.00	08/07/09 15:42	AMH	9G31048	CLP-M
Calcium	**12800**	B, E	515	10.3	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Chromium	**25.7**		1.03	0.093	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Cobalt	**2.46**	J	5.15	0.052	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Copper	**33.2**		2.6	0.1	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Iron	**23400**	E, B	10.3	3.1	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Lead	**101**	B	1.0	0.1	mg/kg dry	1.00	08/07/09 15:42	AMH	9G31048	CLP-M
Magnesium	**1460**	B	20.6	1.0	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Manganese	**973**	B, E	1.5	0.03	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Mercury	**0.0402**	J	0.101	0.0082	mg/kg dry	1.00	07/31/09 17:09	MXM	9G31042	CLP-M
Nickel	**23.6**		4.12	0.082	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Potassium	**523**		515	5.0	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Selenium	ND		3.6	0.6	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Silver	ND		1.03	0.072	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Sodium	**133**	J	515	31.9	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Thallium	ND		2.6	0.3	mg/kg dry	1.00	08/07/09 15:42	AMH	9G31048	CLP-M
Vanadium	**5.46**		5.15	0.098	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
Zinc	**173**	E, B	6.2	0.2	mg/kg dry	1.00	08/06/09 22:13	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**93**		0.010	NR	%	1.00	07/31/09 10:06	KMB/C	9G30063	Dry Weight

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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-02 (DRAFT: SS-02 - Solid)						**Sampled: 07/29/09 10:30**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**9880**	E	23.3	1.5	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Antimony	ND		7.0	0.6	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Arsenic	**5.2**		1.2	0.3	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Barium	**48.7**		23.3	0.030	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Beryllium	**0.137**	J	0.582	0.012	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Cadmium	ND		0.582	0.047	mg/kg dry	1.00	08/07/09 15:47	AMH	9G31048	CLP-M
Calcium	**34500**	B, E	582	11.6	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Chromium	**12.1**		1.16	0.105	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Cobalt	**7.04**		5.82	0.058	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Copper	**14.3**		2.9	0.1	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Iron	**18000**	B, E	11.6	3.5	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Lead	**10.8**	B	1.2	0.1	mg/kg dry	1.00	08/07/09 15:47	AMH	9G31048	CLP-M
Magnesium	**18000**	B, E	23.3	1.1	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Manganese	**556**	B, E	1.7	0.04	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Mercury	**0.0360**	J	0.106	0.0086	mg/kg dry	1.00	07/31/09 17:15	MXM	9G31042	CLP-M
Nickel	**16.8**		4.66	0.093	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Potassium	**813**		582	5.7	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Selenium	ND		4.1	0.7	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Silver	ND		1.16	0.082	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Sodium	**46.7**	J	582	36.1	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Thallium	ND		2.9	0.3	mg/kg dry	1.00	08/07/09 15:47	AMH	9G31048	CLP-M
Vanadium	**14.1**		5.82	0.111	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
Zinc	**49.3**	B	7.0	0.2	mg/kg dry	1.00	08/06/09 22:18	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**94**		0.010	NR	%	1.00	07/31/09 10:08	KMB/C	9G30063	Dry Weight

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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-03 (DRAFT: SS-03 - Solid)						**Sampled: 07/29/09 10:40**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**5650**	E	20.4	1.3	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Antimony	ND		6.1	0.6	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Arsenic	**3.7**		1.0	0.2	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Barium	**40.9**		20.4	0.026	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Beryllium	**0.068**	J	0.509	0.010	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Cadmium	ND		0.509	0.041	mg/kg dry	1.00	08/07/09 15:52	AMH	9G31048	CLP-M
Calcium	**64500**	D08, B	5090	102	mg/kg dry	10.0	08/07/09 17:47	AMH	9G31048	CLP-M
Chromium	**8.45**		1.02	0.092	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Cobalt	**4.93**	J	5.09	0.051	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Copper	**22.2**		2.5	0.1	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Iron	**13500**	B, E	10.2	3.1	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Lead	**26.3**	B	1.0	0.1	mg/kg dry	1.00	08/07/09 15:52	AMH	9G31048	CLP-M
Magnesium	**9250**	B, E	20.4	0.9	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Manganese	**424**	B, E	1.5	0.03	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Mercury	**0.0199**	J	0.102	0.0083	mg/kg dry	1.00	07/31/09 17:17	MXM	9G31042	CLP-M
Nickel	**13.3**		4.07	0.081	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Potassium	**777**		509	5.0	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Selenium	ND		3.6	0.6	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Silver	ND		1.02	0.071	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Sodium	**62.5**	J	509	31.6	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Thallium	ND		2.5	0.3	mg/kg dry	1.00	08/07/09 15:52	AMH	9G31048	CLP-M
Vanadium	**8.95**		5.09	0.097	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
Zinc	**121**	E, B	6.1	0.2	mg/kg dry	1.00	08/06/09 22:23	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**94**		0.010	NR	%	1.00	07/31/09 10:10	KMB/C	9G30063	Dry Weight

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-04 (DRAFT: SS-04 - Solid)						**Sampled: 07/29/09 10:55**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**9780**	E	25.0	1.6	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Antimony	ND		7.5	0.7	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Arsenic	**5.3**		1.2	0.3	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Barium	**53.0**		25.0	0.032	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Beryllium	**0.049**	J	0.624	0.012	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Cadmium	ND		0.624	0.050	mg/kg dry	1.00	08/07/09 16:18	AMH	9G31048	CLP-M
Calcium	**20200**	B, E	624	12.5	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Chromium	**19.0**		1.25	0.112	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Cobalt	**7.82**		6.24	0.062	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Copper	**24.4**		3.1	0.1	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Iron	**22100**	B, E	12.5	3.7	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Lead	**21.6**	B	1.2	0.1	mg/kg dry	1.00	08/07/09 16:18	AMH	9G31048	CLP-M
Magnesium	**6310**	B, E	25.0	1.2	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Manganese	**571**	B, E	1.9	0.04	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Mercury	**0.0362**	J	0.113	0.0092	mg/kg dry	1.00	07/31/09 17:18	MXM	9G31042	CLP-M
Nickel	**25.0**		4.99	0.100	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Potassium	**1040**		624	6.1	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Selenium	ND		4.4	0.7	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Silver	ND		1.25	0.087	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Sodium	ND		624	38.7	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Thallium	ND		3.1	0.4	mg/kg dry	1.00	08/07/09 16:18	AMH	9G31048	CLP-M
Vanadium	**14.4**		6.24	0.119	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
Zinc	**87.5**	B	7.5	0.2	mg/kg dry	1.00	08/06/09 22:48	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**87**		0.010	NR	%	1.00	07/31/09 10:12	KMB/C	9G30063	Dry Weight

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-05 (DRAFT: SS-05 - Solid)						**Sampled: 07/29/09 11:13**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**6750**	E	21.0	1.3	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Antimony	ND		6.3	0.6	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Arsenic	**4.1**		1.0	0.2	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Barium	**80.3**		21.0	0.027	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Beryllium	**0.126**	J	0.525	0.010	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Cadmium	ND		0.525	0.042	mg/kg dry	1.00	08/07/09 16:34	AMH	9G31048	CLP-M
Calcium	**80200**	D08, B	2620	52.5	mg/kg dry	5.00	08/07/09 18:12	AMH	9G31048	CLP-M
Chromium	**15.1**		1.05	0.094	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Cobalt	**5.59**		5.25	0.052	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Copper	**37.7**		2.6	0.1	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Iron	**14000**	B, E	10.5	3.1	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Lead	**163**	B	1.0	0.1	mg/kg dry	1.00	08/07/09 16:34	AMH	9G31048	CLP-M
Magnesium	**8800**	B, E	21.0	1.0	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Manganese	**708**	B, E	1.6	0.03	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Mercury	**0.107**		0.106	0.0086	mg/kg dry	1.00	07/31/09 17:20	MXM	9G31042	CLP-M
Nickel	**16.5**		4.20	0.084	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Potassium	**1500**		525	5.1	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Selenium	ND		3.7	0.6	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Silver	ND		1.05	0.073	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Sodium	**94.8**	J	525	32.5	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Thallium	ND		2.6	0.3	mg/kg dry	1.00	08/07/09 16:34	AMH	9G31048	CLP-M
Vanadium	**16.2**		5.25	0.100	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
Zinc	**127**	E, B	6.3	0.2	mg/kg dry	1.00	08/06/09 23:05	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**89**		0.010	NR	%	1.00	07/31/09 10:14	KMB/C	9G30063	Dry Weight

Malcolm Pirnie - Clifton Park, NY
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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-06 (DRAFT: SS-06 - Solid)						**Sampled: 07/29/09 11:30**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**7640**	E	22.9	1.4	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Antimony	**0.6**	J	6.9	0.6	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Arsenic	**8.4**		1.1	0.3	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Barium	**93.9**		22.9	0.030	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Beryllium	**0.040**	J	0.571	0.011	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Cadmium	ND		0.571	0.046	mg/kg dry	1.00	08/07/09 16:39	AMH	9G31048	CLP-M
Calcium	**13900**	B, E	571	11.4	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Chromium	**35.3**		1.14	0.103	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Cobalt	**5.22**	J	5.71	0.057	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Copper	**62.1**		2.9	0.1	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Iron	**23400**	B, E	11.4	3.4	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Lead	**327**	B	1.1	0.1	mg/kg dry	1.00	08/07/09 16:39	AMH	9G31048	CLP-M
Magnesium	**2900**	B	22.9	1.1	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Manganese	**865**	B, E	1.7	0.04	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Mercury	**0.122**		0.105	0.0085	mg/kg dry	1.00	07/31/09 17:22	MXM	9G31042	CLP-M
Nickel	**30.5**		4.57	0.091	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Potassium	**1210**		571	5.6	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Selenium	ND		4.0	0.7	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Silver	**0.256**	J	1.14	0.080	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Sodium	**146**	J	571	35.4	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Thallium	ND		2.9	0.3	mg/kg dry	1.00	08/07/09 16:39	AMH	9G31048	CLP-M
Vanadium	**13.8**		5.71	0.109	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
Zinc	**395**	E, B	6.9	0.2	mg/kg dry	1.00	08/06/09 23:10	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**89**		0.010	NR	%	1.00	07/31/09 10:16	KMB/C	9G30063	Dry Weight

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-07 (DRAFT: BG-SS-01 - Solid)						**Sampled: 07/29/09 11:40**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**11300**	E	26.1	1.6	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Antimony	ND		7.8	0.7	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Arsenic	**5.0**		1.3	0.3	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Barium	**122**		26.1	0.034	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Beryllium	**0.175**	J	0.654	0.013	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Cadmium	ND		0.654	0.052	mg/kg dry	1.00	08/07/09 16:44	AMH	9G31048	CLP-M
Calcium	**1920**	B	654	13.1	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Chromium	**14.0**		1.31	0.118	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Cobalt	**8.41**		6.54	0.065	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Copper	**14.6**		3.3	0.2	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Iron	**19900**	B, E	13.1	3.9	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Lead	**33.1**	B	1.3	0.2	mg/kg dry	1.00	08/07/09 16:44	AMH	9G31048	CLP-M
Magnesium	**3060**	B	26.1	1.2	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Manganese	**577**	B, E	2.0	0.04	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Mercury	**0.0728**	J	0.137	0.0111	mg/kg dry	1.00	07/31/09 17:23	MXM	9G31042	CLP-M
Nickel	**19.3**		5.23	0.105	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Potassium	**986**		654	6.4	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Selenium	**0.8**	J	4.6	0.8	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Silver	ND		1.31	0.092	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Sodium	ND		654	40.5	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Thallium	ND		3.3	0.4	mg/kg dry	1.00	08/07/09 16:44	AMH	9G31048	CLP-M
Vanadium	**13.3**		6.54	0.124	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
Zinc	**69.6**	B	7.8	0.2	mg/kg dry	1.00	08/06/09 23:15	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**73**		0.010	NR	%	1.00	07/31/09 10:18	KMB/C	9G30063	Dry Weight

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
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Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-08 (DRAFT: BG-SS-02 - Solid)						**Sampled: 07/29/09 12:05**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**10700**	E	26.7	1.7	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Antimony	ND		8.0	0.7	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Arsenic	**7.6**		1.3	0.3	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Barium	**104**		26.7	0.035	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Beryllium	**0.130**	J	0.668	0.013	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Cadmium	ND		0.668	0.053	mg/kg dry	1.00	08/07/09 16:49	AMH	9G31048	CLP-M
Calcium	**2010**	B	668	13.4	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Chromium	**13.7**		1.34	0.120	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Cobalt	**7.72**		6.68	0.067	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Copper	**14.8**		3.3	0.2	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Iron	**18800**	B, E	13.4	4.0	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Lead	**42.3**	B	1.3	0.2	mg/kg dry	1.00	08/07/09 16:49	AMH	9G31048	CLP-M
Magnesium	**2900**	B	26.7	1.2	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Manganese	**475**	B, E	2.0	0.04	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Mercury	**0.0565**	J	0.109	0.0088	mg/kg dry	1.00	07/31/09 17:28	MXM	9G31042	CLP-M
Nickel	**18.7**		5.34	0.107	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Potassium	**905**		668	6.5	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Selenium	ND		4.7	0.8	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Silver	ND		1.34	0.093	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Sodium	ND		668	41.4	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Thallium	ND		3.3	0.4	mg/kg dry	1.00	08/07/09 16:49	AMH	9G31048	CLP-M
Vanadium	**12.9**		6.68	0.127	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
Zinc	**78.7**	B	8.0	0.2	mg/kg dry	1.00	08/06/09 23:20	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**81**		0.010	NR	%	1.00	07/31/09 10:20	KMB/C	9G30063	Dry Weight

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-09 (DRAFT: BG-SS-03 - Solid)						**Sampled: 07/29/09 13:05**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**12000**	E	24.4	1.5	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Antimony	ND		7.3	0.7	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Arsenic	**7.4**		1.2	0.3	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Barium	**109**		24.4	0.032	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Beryllium	**0.176**	J	0.611	0.012	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Cadmium	ND	D02	3.06	0.244	mg/kg dry	5.00	08/11/09 14:23	AMH	9G31048	CLP-M
Calcium	**1120**	B	611	12.2	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Chromium	**13.5**		1.22	0.110	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Cobalt	**7.03**		6.11	0.061	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Copper	**14.1**		3.1	0.1	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Iron	**20000**	B, E	12.2	3.7	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Lead	**70.2**	B	1.2	0.1	mg/kg dry	1.00	08/07/09 16:54	AMH	9G31048	CLP-M
Magnesium	**2850**	B	24.4	1.1	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Manganese	**507**	B, E	1.8	0.04	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Mercury	**0.109**	J	0.120	0.0097	mg/kg dry	1.00	07/31/09 17:29	MXM	9G31042	CLP-M
Nickel	**17.4**		4.89	0.098	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Potassium	**753**		611	5.9	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Selenium	ND		4.3	0.7	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Silver	ND		1.22	0.086	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Sodium	ND		611	37.9	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Thallium	ND		3.1	0.4	mg/kg dry	1.00	08/07/09 16:54	AMH	9G31048	CLP-M
Vanadium	**14.9**		6.11	0.116	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
Zinc	**91.7**	B	7.3	0.2	mg/kg dry	1.00	08/06/09 23:25	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**86**		0.010	NR	%	1.00	07/31/09 10:22	KMB/C	9G30063	Dry Weight

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-10 (DRAFT: BG-SS-04 - Solid)						**Sampled: 07/29/09 13:00**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**9480**	E	19.0	1.2	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Antimony	ND		5.7	0.5	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Arsenic	**15.0**		1.0	0.2	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Barium	**85.9**		19.0	0.025	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Beryllium	**0.153**	J	0.475	0.010	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Cadmium	ND		0.475	0.038	mg/kg dry	1.00	08/07/09 16:59	AMH	9G31048	CLP-M
Calcium	**3370**	B	475	9.5	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Chromium	**12.1**		0.951	0.086	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Cobalt	**6.80**		4.75	0.048	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Copper	**25.0**		2.4	0.1	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Iron	**16800**	B, E	9.5	2.9	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Lead	**208**	B	1.0	0.1	mg/kg dry	1.00	08/07/09 16:59	AMH	9G31048	CLP-M
Magnesium	**2580**	B	19.0	0.9	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Manganese	**492**	B, E	1.4	0.03	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Mercury	**0.757**		0.0938	0.0076	mg/kg dry	1.00	07/31/09 17:31	MXM	9G31042	CLP-M
Nickel	**15.6**		3.80	0.076	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Potassium	**956**		475	4.6	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Selenium	ND		3.3	0.6	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Silver	ND		0.951	0.067	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Sodium	**78.0**	J	475	29.5	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Thallium	ND		2.4	0.3	mg/kg dry	1.00	08/07/09 16:59	AMH	9G31048	CLP-M
Vanadium	**13.2**		4.75	0.090	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
Zinc	**101**	E, B	5.7	0.1	mg/kg dry	1.00	08/06/09 23:30	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**96**		0.010	NR	%	1.00	07/31/09 10:24	KMB/C	9G30063	Dry Weight

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-11 (DRAFT: BG-SS-05 - Solid)						**Sampled: 07/29/09 13:40**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**14700**	E	27.1	1.7	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Antimony	ND		8.1	0.7	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Arsenic	**6.7**		1.4	0.3	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Barium	**152**	E	27.1	0.035	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Beryllium	**0.387**	J	0.678	0.014	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Cadmium	ND	D02	3.39	0.271	mg/kg dry	5.00	08/11/09 14:28	AMH	9G31048	CLP-M
Calcium	**3360**	B	678	13.6	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Chromium	**15.5**		1.36	0.122	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Cobalt	**10.5**		6.78	0.068	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Copper	**13.1**		3.4	0.2	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Iron	**22500**	B, E	13.6	4.1	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Lead	**27.6**	B	1.4	0.2	mg/kg dry	1.00	08/07/09 17:04	AMH	9G31048	CLP-M
Magnesium	**3680**	B	27.1	1.3	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Manganese	**1030**	B, E	2.0	0.04	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Mercury	**0.0908**	J	0.140	0.0113	mg/kg dry	1.00	07/31/09 17:33	MXM	9G31042	CLP-M
Nickel	**22.4**		5.43	0.109	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Potassium	**1560**		678	6.6	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Selenium	ND		4.7	0.8	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Silver	ND		1.36	0.095	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Sodium	ND		678	42.1	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Thallium	ND		3.4	0.4	mg/kg dry	1.00	08/07/09 17:04	AMH	9G31048	CLP-M
Vanadium	**18.5**		6.78	0.129	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
Zinc	**70.9**	B	8.1	0.2	mg/kg dry	1.00	08/06/09 23:35	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**68**		0.010	NR	%	1.00	07/31/09 10:26	KMB/C	9G30063	Dry Weight

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RSG1084-12 (DRAFT: BG-SS-06 - Solid)						**Sampled: 07/29/09 13:50**		**Recvd: 07/30/09 11:30**		
DRAFT: CLP Metals										
Aluminum	**10000**	E	19.6	1.2	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Antimony	ND		5.9	0.5	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Arsenic	**7.7**		1.0	0.2	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Barium	**98.6**	E	19.6	0.025	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Beryllium	**0.132**	J	0.489	0.010	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Cadmium	ND		0.489	0.039	mg/kg dry	1.00	08/07/09 17:42	AMH	9G31048	CLP-M
Calcium	**1890**	B	489	9.8	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Chromium	**13.4**		0.979	0.088	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Cobalt	**7.41**		4.89	0.049	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Copper	**13.7**		2.4	0.1	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Iron	**17900**	E, B	9.8	2.9	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Lead	**42.7**	B	1.0	0.1	mg/kg dry	1.00	08/07/09 17:42	AMH	9G31048	CLP-M
Magnesium	**2750**	B	19.6	0.9	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Manganese	**467**	B, E	1.5	0.03	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Mercury	**0.0551**	J	0.0962	0.0078	mg/kg dry	1.00	07/31/09 17:34	MXM	9G31042	CLP-M
Nickel	**17.7**		3.92	0.078	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Potassium	**764**		489	4.8	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Selenium	ND		3.4	0.6	mg/kg dry	1.00	08/11/09 14:33	AMH	9G31048	CLP-M
Silver	ND		0.979	0.069	mg/kg dry	1.00	08/07/09 17:42	AMH	9G31048	CLP-M
Sodium	ND		489	30.3	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Thallium	ND		2.4	0.3	mg/kg dry	1.00	08/07/09 17:42	AMH	9G31048	CLP-M
Vanadium	**12.1**		4.89	0.093	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
Zinc	**78.2**	B	5.9	0.1	mg/kg dry	1.00	08/07/09 00:13	AMH	9G31048	CLP-M
DRAFT: General Chemistry Parameters										
Percent Solids	**96**		0.010	NR	%	1.00	07/31/09 10:28	KMB/C	9G30063	Dry Weight

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracte	Units	Extract Volume	Units	Date Prepared	Lab Tech	Extraction Method
DRAFT: CLP Metals									
CLP-M	9G31048	RSG1084-02	0.46	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31048	RSG1084-04	0.46	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31048	RSG1084-08	0.46	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31048	RSG1084-09	0.47	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31048	RSG1084-06	0.49	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31048	RSG1084-03	0.52	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31048	RSG1084-01	0.52	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31048	RSG1084-07	0.53	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31048	RSG1084-12	0.53	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31048	RSG1084-05	0.54	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31048	RSG1084-11	0.54	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31048	RSG1084-10	0.55	g	50.00	mL	08/04/09 09:15	KCW	3050B
CLP-M	9G31042	RSG1084-09	0.19	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
CLP-M	9G31042	RSG1084-07	0.20	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
CLP-M	9G31042	RSG1084-02	0.20	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
CLP-M	9G31042	RSG1084-04	0.20	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
CLP-M	9G31042	RSG1084-03	0.21	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
CLP-M	9G31042	RSG1084-11	0.21	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
CLP-M	9G31042	RSG1084-05	0.21	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
CLP-M	9G31042	RSG1084-01	0.21	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
CLP-M	9G31042	RSG1084-06	0.21	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
CLP-M	9G31042	RSG1084-12	0.22	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
CLP-M	9G31042	RSG1084-10	0.22	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
CLP-M	9G31042	RSG1084-08	0.23	g	50.00	mL	07/31/09 15:00	MXM	CLP-M_Hg_Prep
DRAFT: General Chemistry Parameters									
Dry Weight	9G30063	RSG1084-01	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight
Dry Weight	9G30063	RSG1084-02	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight
Dry Weight	9G30063	RSG1084-03	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight
Dry Weight	9G30063	RSG1084-04	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight
Dry Weight	9G30063	RSG1084-05	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight
Dry Weight	9G30063	RSG1084-06	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight
Dry Weight	9G30063	RSG1084-07	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight
Dry Weight	9G30063	RSG1084-08	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight
Dry Weight	9G30063	RSG1084-09	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight
Dry Weight	9G30063	RSG1084-10	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight
Dry Weight	9G30063	RSG1084-11	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracte	Units	Extract Volume	Units	Date Prepared	Lab Tech	Extraction Method
Dry Weight	9G30063	RSG1084-12	10.00	g	10.00	g	07/30/09 21:00	KMB	Dry Weight

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
DRAFT: CLP Metals											
Blank Analyzed: 07/31/09 (Lab Number:9G31042-BLK1, Batch: 9G31042)											
Mercury			0.0995	0.0081	mg/kg wet	ND					
Duplicate Analyzed: 07/31/09 (Lab Number:9G31042-DUP1, Batch: 9G31042)											
QC Source Sample: RSG1084-01											
Mercury	0.0402		0.102	0.0083	mg/kg dry	0.0289			33	20	R4,J
Matrix Spike Analyzed: 07/31/09 (Lab Number:9G31042-MS1, Batch: 9G31042)											
QC Source Sample: RSG1084-01											
Mercury	0.0402	0.258	0.103	0.0083	mg/kg dry	0.307	103	75-125			
Reference Analyzed: 07/31/09 (Lab Number:9G31042-SRM1, Batch: 9G31042)											
Mercury		1.77	0.176	0.0142	mg/kg wet	1.54	87	68.4-132.2			
DRAFT: CLP Metals											
Blank Analyzed: 08/06/09 (Lab Number:9G31048-BLK1, Batch: 9G31048)											
Aluminum			20.0	1.3	mg/kg wet	ND					
Antimony			6.0	0.5	mg/kg wet	ND					
Arsenic			1.0	0.2	mg/kg wet	ND					
Barium			20.0	0.026	mg/kg wet	ND					
Beryllium			0.500	0.010	mg/kg wet	ND					
Cadmium			0.500	0.040	mg/kg wet	ND					
Calcium			500	10.0	mg/kg wet	13.1					B,J
Chromium			1.00	0.090	mg/kg wet	ND					
Cobalt			5.00	0.050	mg/kg wet	ND					
Copper			2.5	0.1	mg/kg wet	ND					
Iron			10.0	3.0	mg/kg wet	5.9					B,J
Lead			1.0	0.1	mg/kg wet	0.1					B,J
Magnesium			20.0	0.9	mg/kg wet	1.8					B,J
Manganese			1.5	0.03	mg/kg wet	0.07					B,J
Nickel			4.00	0.080	mg/kg wet	ND					
Potassium			500	4.9	mg/kg wet	ND					
Selenium			3.5	0.6	mg/kg wet	ND					
Silver			1.00	0.070	mg/kg wet	ND					
Sodium			500	31.0	mg/kg wet	ND					
Thallium			2.5	0.3	mg/kg wet	0.9					B,J
Vanadium			5.00	0.095	mg/kg wet	ND					
Zinc			6.0	0.2	mg/kg wet	0.5					B,J
Duplicate Analyzed: 08/06/09 (Lab Number:9G31048-DUP1, Batch: 9G31048)											

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885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
DRAFT: CLP Metals											
Duplicate Analyzed: 08/06/09 (Lab Number:9G31048-DUP1, Batch: 9G31048)											
QC Source Sample: RSG1084-03											
Aluminum	5650		21.0	1.3	mg/kg dry	6190			9	20	E
Antimony	ND		6.3	0.6	mg/kg dry	ND				20	
Arsenic	3.67		1.1	0.2	mg/kg dry	3.99			9	20	
Barium	40.9		21.0	0.027	mg/kg dry	44.3			8	20	
Beryllium	0.0682		0.525	0.011	mg/kg dry	0.0882			26	20	R3,J
Cadmium	ND		0.525	0.042	mg/kg dry	ND				20	
Calcium	64500		5250	105	mg/kg dry	65300			1	20	D08,B,E
Chromium	8.45		1.05	0.095	mg/kg dry	9.79			15	20	
Cobalt	4.93		5.25	0.053	mg/kg dry	5.37			9	20	
Copper	22.2		2.6	0.1	mg/kg dry	24.3			9	20	
Iron	13500		10.5	3.2	mg/kg dry	14000			3	20	B,E
Lead	26.3		1.1	0.1	mg/kg dry	30.1			13	20	B
Magnesium	9250		21.0	1.0	mg/kg dry	9810			6	20	B,E
Manganese	424		1.6	0.03	mg/kg dry	527			22	20	R3,B,E
Nickel	13.3		4.20	0.084	mg/kg dry	13.9			4	20	
Potassium	777		525	5.1	mg/kg dry	811			4	20	
Selenium	ND		3.7	0.6	mg/kg dry	ND				20	
Silver	ND		1.05	0.074	mg/kg dry	ND				20	
Sodium	62.5		525	32.6	mg/kg dry	67.7			8	20	J
Thallium	ND		2.6	0.3	mg/kg dry	ND				20	
Vanadium	8.95		5.25	0.100	mg/kg dry	9.65			7	20	
Zinc	121		6.3	0.2	mg/kg dry	81.7			39	20	R3,B
Matrix Spike Analyzed: 08/06/09 (Lab Number:9G31048-MS1, Batch: 9G31048)											
QC Source Sample: RSG1084-03											
Aluminum	5650	424	21.2	1.3	mg/kg dry	6940	304	75-125			MHA,E
Antimony	ND	21.2	6.4	0.6	mg/kg dry	7.65	36	75-125			M1
Arsenic	3.67	8.48	1.1	0.2	mg/kg dry	11.5	92	75-125			
Barium	40.9	424	21.2	0.028	mg/kg dry	440	94	75-125			E
Beryllium	0.0682	10.6	0.530	0.011	mg/kg dry	9.85	92	75-125			
Cadmium	ND	10.6	0.530	0.042	mg/kg dry	0.0934	1	75-125			M1,J
Calcium	64500		5300	106	mg/kg dry	62400		75-125			D08,B,E
Chromium	8.45	42.4	1.06	0.095	mg/kg dry	48.0	93	75-125			
Cobalt	4.93	106	5.30	0.053	mg/kg dry	103	93	75-125			
Copper	22.2	53.0	2.7	0.1	mg/kg dry	72.3	95	75-125			
Iron	13500	212	10.6	3.2	mg/kg dry	15100	726	75-125			MHA,B,E
Lead	26.3	4.24	1.1	0.1	mg/kg dry	48.7	527	75-125			MHA,B

Malcolm Pirnie - Clifton Park, NY
885 Route 16, Suite 210
Clifton Park, NY 12065

Work Order: RSG1084

Project: Tioga Castings
Project Number: [none]

Received: 07/30/09
Reported: 08/13/09 17:02

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
DRAFT: CLP Metals											
Matrix Spike Analyzed: 08/06/09 (Lab Number:9G31048-MS1, Batch: 9G31048)											
QC Source Sample: RSG1084-03											
Magnesium	9250		21.2	1.0	mg/kg dry	10100		75-125			B,E
Manganese	424	106	1.6	0.03	mg/kg dry	634	198	75-125			MHA,B,E
Nickel	13.3	106	4.24	0.085	mg/kg dry	108	89	75-125			E
Potassium	777		530	5.2	mg/kg dry	798		75-125			
Selenium	ND	10.6	3.7	0.6	mg/kg dry	9.18	87	75-125			
Silver	ND	10.6	1.06	0.074	mg/kg dry	9.80	92	75-125			
Sodium	62.5		530	32.9	mg/kg dry	64.4		75-125			J
Thallium	ND	10.6	2.7	0.3	mg/kg dry	8.46	80	75-125			B
Vanadium	8.95	106	5.30	0.101	mg/kg dry	107	92	75-125			E
Zinc	121	106	6.4	0.2	mg/kg dry	173	49	75-125			M1,B,E

[redacted]

Chain of Custody Record

Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Tel: 203-929-8140
Fax: 203-929-8142

TAL-0015 (0508)

Client	Project Manager	Date	Chain of Custody Number
Malcolm Pirnie, Inc.	Jeremy Wyckoff	7/29/09	19989
Address	**Telephone Number (Area Code)/Fax Number/e-mail address**	**Field Telephone Number**	**Page 1 of 2**
855 Route 146, Suite 210	518-250-7300/7301/jwyckoff@pirnie.com	607-434-3926	
City / State / Zip Code	**Site Contact**	**Lab Contact**	
Clifton Park / NY / 12065	J Wyckoff	J. Dodonus Kas	
Project Name and Location (State)	**Sample Disposal**		
Tioga Castings	☒ Disposal By Lab ☐ Return To Client ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)		
Contract/Purchase Order/Project No.			
0266362			

Field Sample I.D. (Containers for each sample may be combined on one line)	Collection Date	Collection Time	Matrix: Aqueous	Matrix: Solid	Matrix: Other	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Other	Analysis: Tal Metals	Comments
SS-01	7/29/09	1020		X		—							X	
SS-02		1030												
SS-03		1040												
SS-04		1055												
SS-05		1113												
SS-06		1130												
~~SS-07~~ BG-SS-01		1140												
BG-SS-02		1205												
BG-SS-03		1305												
BG-SS-04		1300												
BG-SS-05		1340												

Turn Around Time Required (business days) Report / EDD Requirements

☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☒ 10 Days ☐ 15 Days ☐ Other ____

State Regulatory QC Requirements

1. Relinquished By	Date	Time	1. Received By	Date	Time
[signature]	7/29/09	1430	[signature]	7/30/09	1132
2. Relinquished By	**Date**	**Time**	**2. Received By**	**Date**	**Time**
[signature]					
3. Received By	**Date**	**Time**	**Cooler Temps**	**Passed Rad. Screen (Lab Use Only)**	
				☐ Yes ☐ No	

Comments

2.0°C

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy

[redacted]

Chain of Custody Record

Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Tel: 203-929-8140
Fax: 203-929-8142

TAL-0015 (0508)

Client: Malcolm Pirnie, Inc.	Project Manager: Jeremy Wyckoff	Date: 7/29/09	Chain of Custody Number: 19990
Address: 855 Route 146, Suite 210	Telephone Number (Area Code)/Fax Number/e-mail address: 518-250-7300/12301 / jwyckoff@pirnie.com	Field Telephone Number: 607-434-3826	Page 2 of 2
City: Clifton Park / State: NY / Zip Code: 12065	Site Contact: J. Wyckoff	Lab Contact: J. Dubauskas	Analysis (Attach list if more space is needed)
Project Name and Location (State): Tioga Castings	Sample Disposal: Disposal By Lab / Return To Client / Archive For ___ Months (A fee may be assessed if samples are retained longer than 1 month)		Comments
Contract/Purchase Order/Project No.: 026362			

Field Sample I.D. (Containers for each sample may be combined on one line)	Collection Date	Collection Time	Matrix: Aqueous	Solid	Oil/Waste	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Other	TAL Metals								
BG-SS-06	7/29/09	1350		X		1							X								

Turn Around Time Required (business days) Report / EDD Requirements
☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☒ 10 Days ☐ 15 Days ☐ Other ___

State Regulatory QC Requirements

	Date	Time
1. Relinquished By: [signature]	7/29/09	1430
2. Relinquished By:	Date	Time
3. Received By	Date	Time

	Date	Time
1. Received By: [signature]	7/30/09	1130
2. Received By	Date	Time
Cooler Temps	Passed Rad. Screen (Lab Use Only): ☐ Yes ☐ No	

Comments

2.6°C

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy