New York State Department of Environmental Conservation

Quarterly Report

TIOGA CASTING SITE QUARTERLY REPORT AND ANNUAL GROUNDWATER SAMPLING SUMMARY

Site Number 7-54-012

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

Prepared by:

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SEPTEMBER 2007
0266362

INDEPENDENT ENVIRONMENTAL ENGINEERS, SCIENTISTS AND CONSULTANTS

MALCOLM PIRNIE

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1.0 INTRODUCTION

The New York State Department of Environmental Conservation (NYSDEC) has issued a Work Assignment (# D004443-8) to Malcolm Pirnie, Inc. (Malcolm Pirnie) for Operation, Maintenance, and Monitoring at the Tioga Casting Site in New York State. Malcolm Pirnie has prepared this Quarterly Report in accordance with the NYSDEC-approved Work Plan to summarize site activities, including the third-quarter 2007 groundwater sampling results.

2.0 SITE ACTIVITIES

2.1 SITE DESCRIPTION

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

2.2 OPERATION AND MAINTENANCE

The following site repairs or upgrades were performed during the third quarter of 2007:

- As requested by NYSDEC, locks on all of the groundwater monitoring wells were replaced with new keyed-alike locks.
- As requested by NYSDEC, the lock on the landfill gate was replaced with a new combination lock.

2.3 GROUNDWATER MONITORING PROGRAM

Groundwater monitoring wells were sampled on August 2, 2007 to provide information on groundwater quality, monitor contaminant migration in the groundwater at the site, and assess hydrogeologic site conditions, including groundwater flow and velocity. Figure 2-2 shows the location of the groundwater monitoring wells.

2.3.1 Well Inspection

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

2.3.2 Water Level Survey

Prior to collecting samples, water levels were measured to the nearest hundredth of a foot and recorded on a groundwater level data form (Appendix B). Table 2-1 summarizes the groundwater levels and elevations from the site. As shown in Table 2-1, groundwater elevations ranged from 792-feet above mean sea level (amsl) to 795-feet amsl. A potentiometric surface map is provided on Figure 2-3. As shown on Figure 2-3, the direction of groundwater flow in the vicinity of the site is generally to the south toward the Susquehanna River.

2.3.3 Groundwater Sampling

Groundwater samples from monitoring wells MW-2, MW-4, and MW-5 were collected using low-flow groundwater purging and sampling procedures in accordance with the Work Plan. Prior to collecting groundwater samples, pH, conductivity, turbidity, dissolved oxygen (DO), temperature, salinity, total dissolved solids (TDS), and oxidation-reduction potential (REDOX) were measured using a Horiba U-22 water quality meter and recorded on groundwater sampling purge logs. Groundwater sampling purge logs are presented in Appendix C.

Prior to purging and sampling, the height of the static water column in monitoring wells MW-1 and MW-3 was less than 0.5-feet. The water level in these wells could not be sustained during low-flow purging and both wells subsequently were purged dry. The water level in monitoring well MW-1 and MW-3 did not recover by the end of the sampling event, therefore, no groundwater samples were collected from these locations. Based on historical information, these wells have each previously been dry or have been purged dry and could not be sampled (April 1, 2005 NYSDEC Fact Sheet and hand-written field notes in NYSDEC O&M Manual).

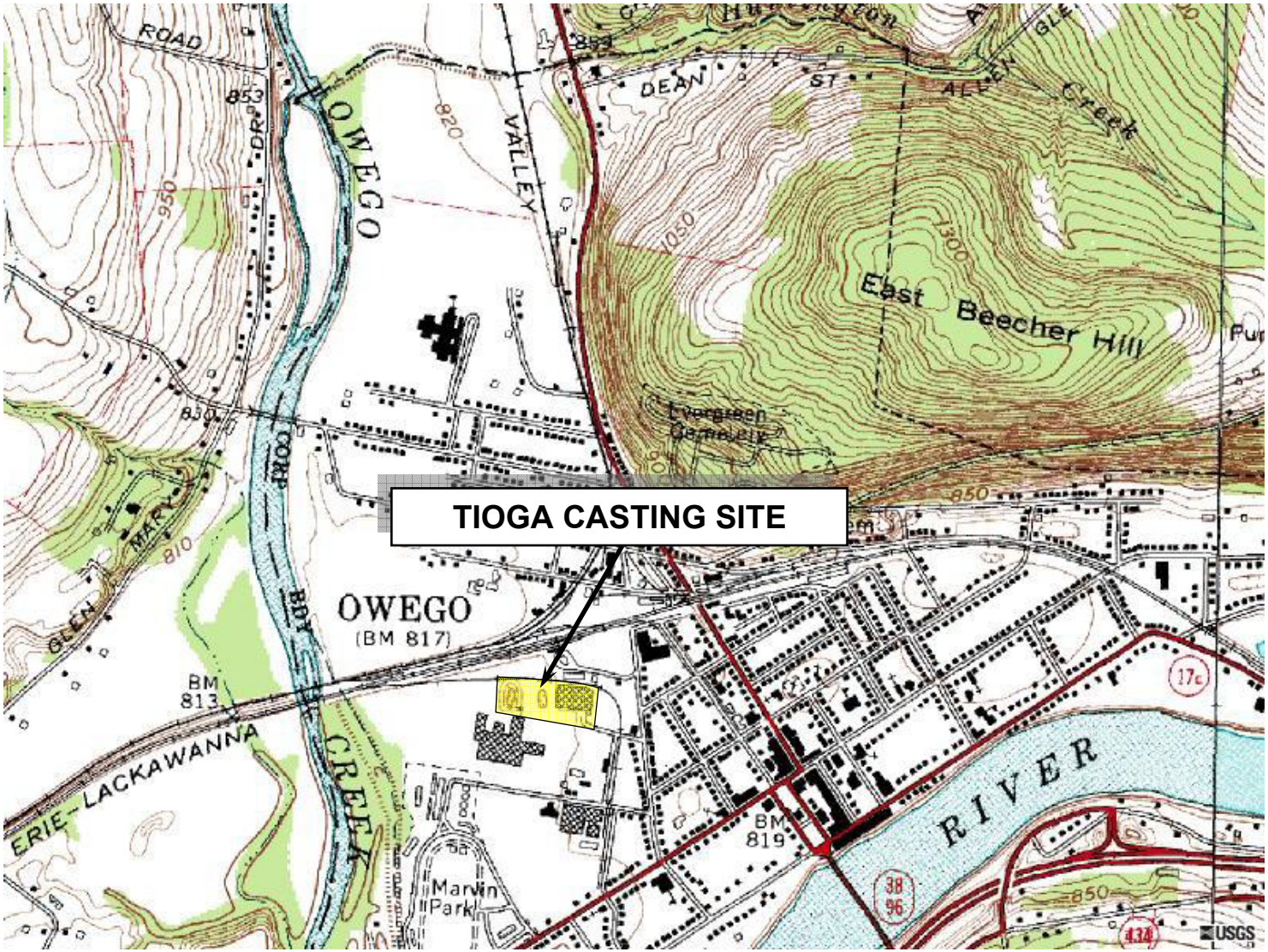
Groundwater samples collected during the groundwater monitoring program were sent to Test America – Connecticut (formerly STL-Connecticut) by chain-of-custody procedures and analyzed for TAL metals. Analytical data packages are provided in Appendix D.

2.4 SAMPLE RESULTS

Groundwater sampling results for the third quarter 2007 sampling event are summarized in Table 2-2. As shown in Table 2-2, the sample collected from monitoring well MW-2 was the only sample that contained a metal concentration that exceeded the corresponding NYSDEC Class GA Standard. The sodium concentration in the sample from MW-2 was 36,100ug/L, which is greater than the respective NYSDEC Class GA Standard of 20,000 ug/L. Sodium was present in all of the samples collected from the site and may result from the local use of snow-melting agents (i.e. road salts). One duplicate sample (MW-X) was collected from monitoring well MW-5 and submitted as a laboratory quality assurance/quality control check. As shown in Table 2-2, the results from these two samples correlate well.

3.0 SUMMARY

With the exception of new locks on groundwater monitoring wells and the landfill perimeter gate, no repairs or upgrades were performed during the third quarter, 2007 operation and maintenance of the Tioga Casting site. Groundwater monitoring wells are in acceptable condition. Based on the water level survey, groundwater flow across the site is generally toward the south. Due to insufficient water in monitoring wells MW-1 and MW-3, groundwater samples were not collected from these wells. The sample collected from MW-2 was the only sample that contained a metal concentration greater than the applicable NYSDEC Class GA Standard. The sodium exceedance in the sample from MW-2 may be from snow-melting agents.



SCALE IN FEET

0 500 1000 2000

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

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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

N.

MW-4

LANDFILL AREA

MW-3

MW-5

MW-2

LEVELED FOUNDRY SITE

MW-1

MCMASTER ST.

PARKING AREA

FOUNDRY ST.

ARMSTRONG PL.

FORMER OWEGO APALACHIN MIDDLE SCHOOL

LEGEND:

- MW-3 — MONITORING WELL LOCATION
- RAILROAD TRACKS
- ROADWAY/DRIVEWAY
- BUILDING
- FENCE
- PROPERTY LINE

20 0 20 40

SCALE: 1" = 40'

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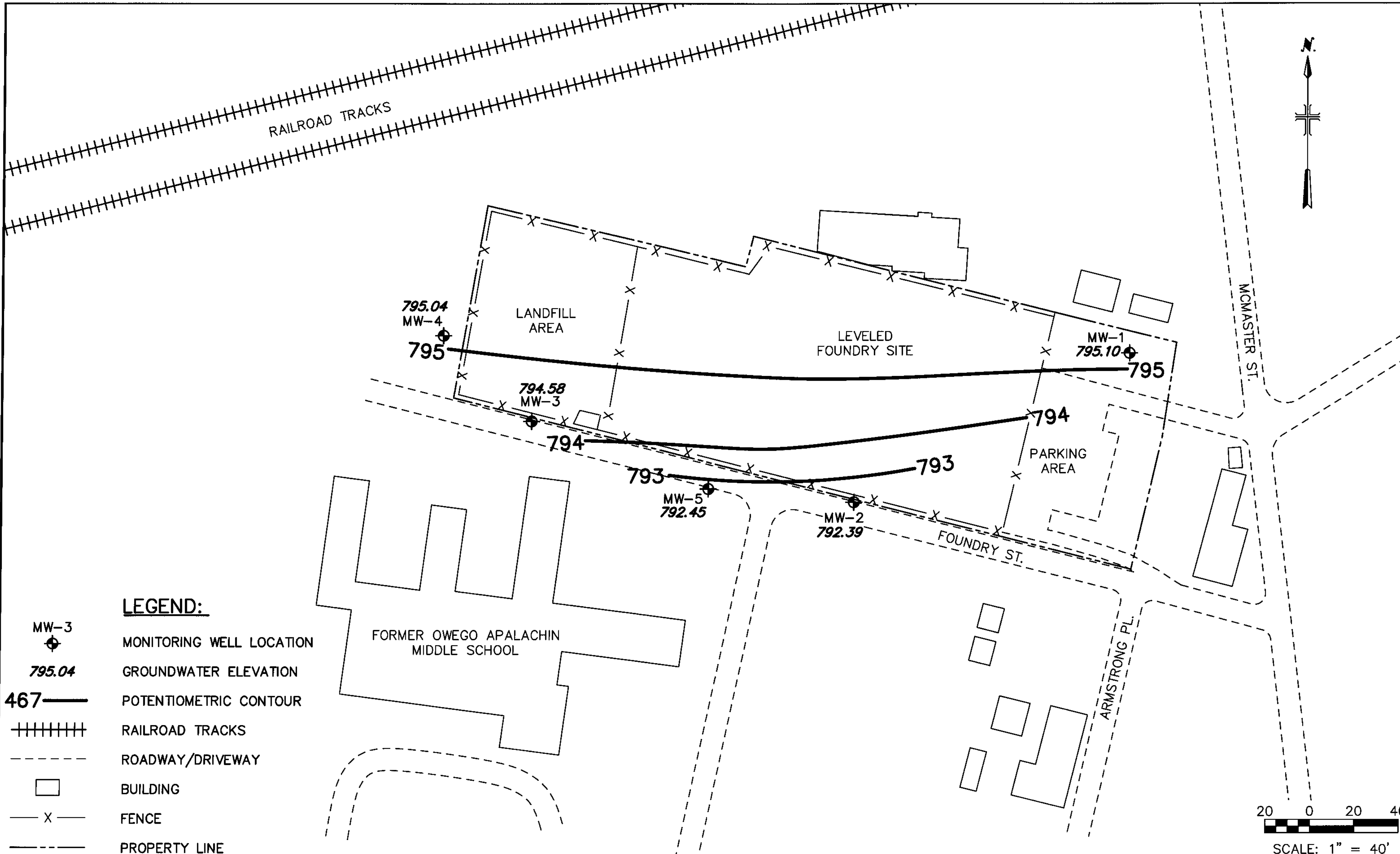
NYSDEC STANDBY CONTRACT NO. D004443-8
NYSDEC SITE NO. 7-54-012
TIOGA CASTING FACILITY
OWEGO, NEW YORK

GROUNDWATER MONITORING WELL LOCATIONS

SCALE: 1" = 40'

MALCOLM PIRNIE, INC.
SEPTEMBER 2007
FIGURE 2-2


RAILROAD TRACKS
LANDFILL AREA
LEVELED FOUNDRY SITE
PARKING AREA
MCMASTER ST.
FOUNDRY ST.
ARMSTRONG PL.
FORMER OWEGO APALACHIN MIDDLE SCHOOL
N.
795.04
MW-4
795
MW-1
795.10
795
794.58
MW-3
794
794
793
793
MW-5
792.45
MW-2
792.39
LEGEND:
MW-3
MONITORING WELL LOCATION
795.04
GROUNDWATER ELEVATION
467
POTENTIOMETRIC CONTOUR
RAILROAD TRACKS
ROADWAY/DRIVEWAY
BUILDING
X
FENCE
PROPERTY LINE
20 0 20 40
SCALE: 1" = 40'

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

POTENTIOMETRIC SURFACE MAP (08/02/2007)

SCALE: 1" = 40'

MALCOLM PIRNIE, INC.
SEPTEMBER 2007
FIGURE 2-3

Table 2-1
Summary of Groundwater Elevations
Tioga Casting
Owego, New York
NYSDEC Site No. 7-54-012

Well	Measuring Point Elevation [1] (feet)	8/2/2007	
		DTW (feet)	Elevation (feet)
MW-1	810.49	15.39	795.10
MW-2	807.68	15.29	792.39
MW-3	812.61	18.03	794.58
MW-4	806.33	11.29	795.04
MW-5	803.89	11.44	792.45

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

Table 2-2
Summary of Groundwater Sampling Results (2007)
Tioga Castings
Owego, New York
NYSDEC Site No. 7-54-012

Well Date Units	NYSDEC Class GA Standards	MW-2 8/2/2007 ug/L		MW-4 8/2/2007 ug/L		MW-5 8/2/2007 ug/L		MW-X [(1)] 8/2/2007 ug/L	
Metals (total)									
Aluminum		60.2	B	40.0	U	79.0	B	85.3	B
Antimony		5.6	U	5.6	U	5.6	U	5.6	U
Arsenic	25	4.2	U	4.2	U	4.2	U	4.2	U
Barium	1000	61.6	B	40.0	B	56.4	B	56.1	B
Beryllium		0.40	B	0.27	U	0.51	B	0.52	B
Cadmium	5	0.36	U	0.36	U	0.36	U	0.36	U
Calcium		54500	E	42700	E	44400	E	44600	E
Chromium	50	0.84	U	0.84	U	0.84	U	0.84	U
Cobalt		1.1	B	0.89	U	0.89	U	0.89	U
Copper		1.3	U	1.4	B	1.3	U	1.3	U
Iron		19.3	U	47.6	B	19.3	U	19.3	U
Lead	25	2.9	U	2.9	U	2.9	U	2.9	U
Magnesium		8650	E	8190	E	7600	E	7730	E
Manganese		2.8	B	0.79	B	0.90	B	0.75	B
Mercury	0.7	0.12	U	0.12	U	0.12	U	0.12	U
Nickel		1.2	U	1.2	U	1.2	U	1.2	U
Potassium		4710	BE	1020	BE	3330	BE	3240	BE
Selenium	10	6.1	U	6.1	U	6.1	U	6.1	U
Silver	50	1.7	B	1.0	U	1.6	B	1.0	U
Sodium	20000	**36100**	**E**	12000	E	14200	E	14200	E
Thallium		7.0	U	7.0	U	7.0	U	7.0	U
Vanadium		0.80	B	0.78	U	0.80	B	0.78	U
Zinc		3.6	U	3.6	U	3.6	U	3.6	U

Notes:
- Concentration exceeds corresponding NYSDEC Class GA Standard
U - Analyte not detected at the indicated quantitation limit
B - Value greater than or equal to the instrument detection limit but less than the quantitation limit
E - Estimated concentration
(1) - MW-X is a duplicate sample collected at MW-5

APPENDIX A

Well Inspection Forms

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Tioga Casting PROJECT NUMBER: _____

DATE OF INSPECTION: 8/2/07 INSPECTOR: JW/KAM

WELL DESIGNATION: MW-1

WELL LOCATION: _____

Outward Appearance

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

Inner Appearance

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

Downhole

Odor	Yes [ ]	No [X] Describe: _____
PID Reading	_____ ppm	
Depth to Water (to top of casing)	15.39 feet (nearest 0.01)	Depth to LNAPL N/A feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	15.12 feet (nearest 0.1)	
Sediment (Hard/Soft Bottom)	Describe: firm	

Additional Comments:

_____

_____

_____

_____

_____

_____

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Tioga Castings PROJECT NUMBER: 02660362

DATE OF INSPECTION: 8/2/07 INSPECTOR: JW/KAM

WELL DESIGNATION: MW-2

WELL LOCATION: rear

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	2.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: good - drain not working		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: OK		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: ____
Well ID. Visible?	Yes [X]	No [ ]	Describe: ____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: cut off
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: good		
Integrity of Cap Seal	Describe: good		
Surface Water in Casing?	~~Yes [X]~~ (KAM)	No [X]	Describe: ____
Well Casing Diameter	____ inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [X]	Expansion Plug [ ] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____

Downhole

Odor	Yes [ ]	No [X]	Describe: ____
PID Reading	____ ppm		
Depth to Water (to top of casing)	15.29 feet (nearest 0.01)	Depth to LNAPL	N/A feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	~~19~~ 19.55 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: ____		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Tioga Casting PROJECT NUMBER: 02666362

DATE OF INSPECTION: 8/3/07 INSPECTOR: JW/KAM

WELL DESIGNATION: MW-3

WELL LOCATION: _____

Outward Appearance

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

Inner Appearance

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

Downhole

Odor	Yes [ ]	No [X] Describe:	
PID Reading	____ ppm		
Depth to Water (to top of casing)	18.03 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [X]
Total Well Depth (to top of casing)	18.47 feet (nearest 0.1)		
Sediment (Hard/(Soft)/Bottom)	Describe:		

Additional Comments:

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Tioga Castings PROJECT NUMBER: 02 1ele 31e 2

DATE OF INSPECTION: 8/2/07 INSPECTOR: JAN | KAM

WELL DESIGNATION: MW-4

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Cover good - concrete deteriorated		
Protective Casing Material	~~Steel [X]~~ (KAM)	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	_____ inches		
Weep Hole in Protective Casing	Yes [ ]	No [X] N/A	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: water in manhole - concrete		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [X]	~~No [X]~~ (KAM)	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

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

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	_____ ppm		
Depth to Water (to top of casing)	11.29 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [X]
Total Well Depth (to top of casing)	15.84 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: _____		

Additional Comments:

_____

_____

_____

_____

_____

_____

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Tioga Casting PROJECT NUMBER: 026626362

DATE OF INSPECTION: 8/2/07 INSPECTOR: JW | KAM

WELL DESIGNATION: MW-5

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: good		
Protective Casing Material	Steel [ ]	Stainless Steel [ ]	Other N/A
Protective Casing Width or Dia.	_____ inches N/A		
Weep Hole in Protective Casing	Yes [ ]	No [ ] N/A	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: water in manhole		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [X]	slightly
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [ ]	Describe: _____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: had to be cut off
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: good		
Integrity of Cap Seal	Describe: Good - water above cap in roadbox		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [X] added mark
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	_____ ppm		
Depth to Water (to top of casing)	11.44 feet (nearest 0.01)	Depth to LNAPL	N/A feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	16.18 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: firm		

Additional Comments:

APPENDIX B

Groundwater Level Data Forms

GROUNDWATER LEVEL DATA FORM

PROJECT NAME: Tioga Casting
PROJECT NUMBER: 0266362

DATE: 8/2/2007
PERSONNEL: JRW (MPI), KAM (Aztech)

WELL ID	Date	Time	Headspace VOCs (ppm)	Depth to LNAPL (feet)	Depth to Water (feet)	Reference Point
MW-1	8/2/2007	10:10	0	-	15.39	TOC
MW-2	8/2/2007	10:00	0	-	15.29	TOC
MW-3	8/2/2007	9:40	0	-	18.03	TOC
MW-4	8/2/2007	9:25	0	-	11.29	TOC
MW-5	8/2/2007	9:50	0	-	11.44	TOC

Notes:

APPENDIX C

Groundwater Sampling Purge Logs

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-1 DATE: 8-2-07

PROJECT NAME: Tioga Castings

PROJECT NUMBER: 0266362

SAMPLERS: JW KM (Altech)

A: Total Casing and Screen Length: 16.52

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: 15.39

D: Volume of Water in Casing: 0.2 gallons

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

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

$v = 0.0408\ (\quad)^2 \times (\quad - \quad) = \_\_\_\_\_$ gal.

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	1030													
Gallons	0													
Depth to Water														
pH														
Conductivity (mohm/cm)														
Turbidity (ntu)														
Dissolved Oxygen (mg/l)														
Temperature (°C)														
Salinity														
TDS														
REDOX (mV)														

Notes: 1030 - Initiate purge.
- well purged dry, NOT enough volume to fill flow cell. (~100mL)
- will attempt to sample @ end of day

1350 - attempt to ~~re~~sample - well dry

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WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-2 DATE: 8/2/07

PROJECT NAME: Tioga Castings

PROJECT NUMBER: 02ale362

SAMPLERS: JW | Kam

A: Total Casing and Screen Length: 19.55

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: 15.29

D: Volume of Water in Casing: 0.7 gallons

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

v = 0.0408 ( )^2 x (-) = _____ gal.

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

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	1055	1100	1105	1110	1115	1120	1125	1130	1135	1140				
Gallons	0						2.0			4 gal				
Depth to Water	15.29	15.42	15.47	15.48	15.46	15.46	15.46	15.47	15.47	15.47				
pH	6.95	6.32	6.03	6.05	6.09	6.12	6.14	6.17	6.19	6.20				
Conductivity (mohm/cm)	0.600	0.539	0.537	0.532	0.534	0.529	0.531	0.530	0.528	0.529				
Turbidity (ntu)	52.5	18.1	14.8	3.3	5.0	0.7	1.3	0.8	0.8	0.8				
Dissolved Oxygen (mg/l)	4.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Temperature (°C)	13.19	12.97	13.1	13.07	12.95	13.11	13.15	12.87	12.93	12.90				
Salinity	0	0	0	0	0	0	0	0	0	0				
TDS	0.37	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34				
REDOX (mV)	193	217	230	227	224	222	220	218	217	216				

Notes: 1055 - initiate purging
1140 - finish purge/collect samples (purge 4 gallons)

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-3 DATE: 8/2/07

PROJECT NAME: Tioga Castings

PROJECT NUMBER: 026636.2

SAMPLERS: JW, KM (Aztech)

A: Total Casing and Screen Length: 18.47

B: Casing Internal Diameter: 2

C: Water Level Below Top of Casing: 18.03

D: Volume of Water in Casing: JW ~~0.44~~ .07 gallons

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

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

$v = 0.0408 (\quad)^2 \times (\quad - \quad) = \_\_\_\_\_$ gal.

PARAMETER	ACCUMULATED VOLUME PURGED														
Time	1220														
Gallons	0														
Depth to Water															
pH	6.73														
Conductivity (mohm/cm)	0.484														
Turbidity (ntu)	97.9														
Dissolved Oxygen (mg/l)	2.18														
Temperature (°C)	18.02														
Salinity	0.0														
TDS	0.31														
REDOX (mV)	190														

Notes: 1220 - Initiate purge.
- Purged dry w/ ~ 500ml
- will check later to see if recovers.
1400 - attempt to sample - well dry

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-4 DATE: 8/2/07

PROJECT NAME: Tioga Castings

PROJECT NUMBER: 02606362

SAMPLERS: JW | KAM-Aztech

A: Total Casing and Screen Length: 15.84

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: 11.29

D: Volume of Water in Casing: 0.8 gallons

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

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

$v = 0.0408\ (\quad)^2 \times (\quad - \quad) = \_\_\_\_\_$ gal.

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	1230	1235	1240	1245	1250	1255								
Gallons	—					2gal								
Depth to Water	11.29	11.31	11.31	11.31	11.31	11.31								
pH	6.97	6.70	6.45	6.30	6.27	6.30								
Conductivity (mohm/cm)	0.369	0.376	0.370	0.368	0.368	0.366								
Turbidity (ntu)	11.8	12.0	0	0	0	0								
Dissolved Oxygen (mg/l)	3.07	0.00	0	0	0	0								
Temperature (°C)	14.04	13.83	13.71	13.69	13.67	13.79								
Salinity	0.0	0	0	0	0	0								
TDS	0.25	0.24	0.24	0.24	0.24	0.24								
REDOX (mV)	179	187	199	205	205	202								

Notes:

1230 - initiated purging

1255 - finish purging | collect samples (2 gallons purged)

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-5 DATE: 8/2/07

PROJECT NAME: Tioga Castings

PROJECT NUMBER: 02666362

SAMPLERS: JW | KAM

A: Total Casing and Screen Length: 16.18

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: 11.44

D: Volume of Water in Casing: 0.8 gallons

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

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

v = 0.0408 ( )^2 x (-) = _____ gal.

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	1310	1315	1320	1325	1330									
Gallons					1.5									
Depth to Water	11.44	12.11	12.19	12.31	12.41									
pH	6.90	6.49	6.45	6.41	6.38									
Conductivity (mohm/cm)	0.402	0.389	0.386	0.384	0.396									
Turbidity (ntu)	0	0.6	0	0	0									
Dissolved Oxygen (mg/l)	1.37	0	0	0	0									
Temperature (°C)	16.53	16.12	16.28	16.15	15.88									
Salinity	0	0	0	0	0									
TDS	0.26	0.25	0.25	0.25	0.25									
REDOX (mV)	183	184	184	184	184									

Notes: 1310 - Initiate purging
1330 - finish purge/ Collect sample (1.5 gallons purged)

APPENDIX D

Analytical Data Packages

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-2326-1

SDG Number: 220-2326

Job Description: NYSDEC Standby - Tioga Castings #7-54-01

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

Attention: Mr. Bruce Nelson

Designee for
Jill M Duhancik
Project Manager I
jill.duhancik@testamericainc.com
08/21/2007

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

TestAmerica Laboratories, Inc.
TestAmerica Connecticut 128 Long Hill Cross Road, Shelton, CT 06484
Tel (203) 929-8140 Fax (203) 929-8142 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

Job Narrative
220-J2326-1

Comments
No additional comments.

Receipt
No analytical or quality issues were noted.

Subcontracted Data
The following analyses were subcontracted out to the indicated laboratories:

Metals sent to TestAmerica, Buffalo, 10 Hazelwood Drive, Suite 106, Amherst, NY 14228

METHOD SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-2326-1
Sdg Number: 220-2326

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

Lab References:

TAL BUF = TestAmerica Buffalo

Method References:

ILM05.3 =

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-2326-1
Sdg Number: 220-2326

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-2326-1	MW-2	Water	08/02/2007 1140	08/03/2007 0945
220-2326-2	MW-4	Water	08/02/2007 1255	08/03/2007 0945
220-2326-3	MW-X	Water	08/02/2007 0000	08/03/2007 0945
220-2326-4	MW-5	Water	08/02/2007 1330	08/03/2007 0945

SEVERN TRENT STL

MISCELLANEOUS DOCUMENTS

Chain of Custody Record

Sub to Buffalo

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

2326
761

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
Malcolm Pirnie, INC	Bruce Nelson	8/2/07	350338
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
43 British American Blvd	518-782-2100 518-782-0583		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	**Analysis (Attach list if more space is needed)**
Latham / NY / 12110	J. Wyckoff	J. Dubnuskus	
Project Name and Location (State)	**Carrier/Waybill Number**		
Tioga Castings Owego, NY	Fed Ex		
Contract/Purchase Order/Quote No.			
0266362			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Metals 6010 ILM 05.3		Special Instructions/ Conditions of Receipt
MW-2	8/2/07	1140		X					1				X	X	Turbidity <50 NTU
MW-4	8/2/07	1255		X					1				X	X	For all samples
MW-X	8/2/07	-		X					1				X	X	
MW-5	8/2/07	1330		X					1				X	X	

"PASSED RAD SCREEN"

0.7°C

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard

QC Requirements (Specify)

Per Contract

	Date	Time		Date	Time
1. Relinquished By	8/2/07	1445	1. Received By		
2. Relinquished By			2. Received By	8/3/07	9:45
3. Relinquished By			3. Received By		

Comments

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

STL/CT PRESERVATIVE RECORD

Job Number: 220-2326, 761
Client: Malcolm & Arnie
Client Project: NYSDEC STAN B4
Talosa castings

Lab Number	Preservative	pH	Adjustment	PH after Adjustment	Chlorine Residual	Initials	Date
1	HNO_3	<2	NA	NA	NA	LJ	8/3/07
2	HNO_3	<2	NA	NA	NA	LJ	8/3/07
3	HNO_3	<2	NA	NA	NA	LJ	8/3/07
4	HNO_3	<2	NA	NA	NA	LJ	8/3/07
			LJ 8/3				

STL Form# SMF00203.CT

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Malcolm Pirnie, Inc.

Job Number: 220-2326-1
Sdg Number: 220-2326

Login Number: 2326

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

SUBCONTRACTED DATA

STL

STL Buffalo
10 Hazelwood Drive, Suite 106
Amherst, NY 14228

Tel: 716 691 2600 Fax: 716 691 7991
www.stl-inc.com

ANALYTICAL REPORT

Job#: A07-8772

Project#: NY9A8398
SDG#: 2326
Site Name: TestAmerica Connecticut
Task: NYSDEC Standby - Tioga Castings

Ms. Johanna Dubauskas
128 Long Hill Cross Road
Shelton, CT 06484

STL Buffalo

Sally Hoffman
Project Manager

08/16/2007

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

STL Buffalo
Current Certifications

As of 5/16/2007

STATE	Program	Cert # / Lab ID
Arkansas	SDWA, 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
USDA	FOREIGN SOIL PERMIT	S-41579
USDOE	Department of Energy	DOECAP-STB
Virginia	SDWA	278
Washington	CWA,RCRA	C1677
West Virginia	CWA,RCRA	252
Wisconsin	CWA, RCRA	998310390

Sample Data Summary Package

SAMPLE SUMMARY

SDG#: 2326

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A7877201	MW-2	WATER	08/02/2007	11:40	08/04/2007	09:00
A7877202	MW-4	WATER	08/02/2007	12:55	08/04/2007	09:00
A7877204	MW-5	WATER	08/02/2007	13:30	08/04/2007	09:00
A7877203	MW-X	WATER	08/02/2007		08/04/2007	09:00

METHODS SUMMARY

Job#: A07-8772

Project#: NY9A8398
SDG#: 2326
Site Name: TestAmerica Connecticut

PARAMETER	ANALYTICAL METHOD
Aluminum - Total	ILM5.3 CLP-M
Antimony - Total	ILM5.3 CLP-M
Arsenic - Total	ILM5.3 CLP-M
Barium - Total	ILM5.3 CLP-M
Beryllium - Total	ILM5.3 CLP-M
Cadmium - Total	ILM5.3 CLP-M
Calcium - Total	ILM5.3 CLP-M
Chromium - Total	ILM5.3 CLP-M
Cobalt - Total	ILM5.3 CLP-M
Copper - Total	ILM5.3 CLP-M
Iron - Total	ILM5.3 CLP-M
Lead - Total	ILM5.3 CLP-M
Magnesium - Total	ILM5.3 CLP-M
Manganese - Total	ILM5.3 CLP-M
Mercury - Total	ILM5.3 CLP-M
Nickel - Total	ILM5.3 CLP-M
Potassium - Total	ILM5.3 CLP-M
Selenium - Total	ILM5.3 CLP-M
Silver - Total	ILM5.3 CLP-M
Sodium - Total	ILM5.3 CLP-M
Thallium - Total	ILM5.3 CLP-M
Vanadium - Total	ILM5.3 CLP-M
Zinc - Total	ILM5.3 CLP-M

References:

ILM5.3 "Statement of Work for Inorganics Analysis", ILM05.3 USEPA Contract Laboratory Program, Multi-media, Multi-concentration.

SDG NARRATIVE

Job#: A07-8772

Project#: NY9A8398
SDG#: 2326
Site Name: TestAmerica Connecticut

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

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. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A07-8772
Sample Cooler(s) were received at the following temperature(s); 2.0 °C
All samples were received in good condition.

Metals Data

The Serial Dilution of sample MW-2 exceeded the quality control limits for Calcium and Sodium. However, the Post Spike of this sample was compliant. Therefore, no corrective action was necessary.

"I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this Sample Data package and in the electronic data deliverables has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature."

Sally Hoffman
Project Manager

8-17-07
Date

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION
AND
ANALYTICAL REQUEST SUMMARY

LAB NAME: SEVERN TRENT LABORATORIES, INC.

CUSTOMER SAMPLE ID	LABORATORY SAMPLE ID	ANALYTICAL REQUIREMENTS						
		VOA GC/MS	BNA GC/MS	VOA GC	PEST PCB	METALS	TCLP HERB	WATER QUALITY
MW-2	A7877201	-	-	-	-	ILM5.3	-	-
MW-4	A7877202	-	-	-	-	ILM5.3	-	-
MW-5	A7877204	-	-	-	-	ILM5.3	-	-
MW-X	A7877203	-	-	-	-	ILM5.3	-	-

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYTICAL SUMMARY
INORGANIC ANALYSIS

LAB NAME: SEVERN TRENT LABORATORIES, INC.

SAMPLE IDENTIFICATION	MATRIX	METALS REQUESTED	DATE RECEIVED AT LAB	DATE DIGESTED	DATE ANALYZED
MW-2	WATER	TAL ME	08/04/2007	08/08-09/2007	08/08-15/2007
MW-4	WATER	TAL ME	08/04/2007	08/08-09/2007	08/08-15/2007
MW-5	WATER	TAL ME	08/04/2007	08/08-09/2007	08/08-15/2007
MW-X	WATER	TAL ME	08/04/2007	08/08-09/207	08/08-15/2007

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSIS

LAB NAME: SEVERN TRENT LABORATORIES, INC.

LABORATORY SAMPLE CODE	MATRIX	ANALYTICAL PROTOCOL	DIGESTION PROCEDURE	MATRIX MODIFIER	DIL/CONC FACTOR
MW-2	WATER	ILM5.3	ILM5.3	AS REQUIRED	AS REQUIRED
MW-4	WATER	ILM5.3	ILM5.3	AS REQUIRED	AS REQUIRED
MW-5	WATER	ILM5.3	ILM5.3	AS REQUIRED	AS REQUIRED
MW-X	WATER	ILM5.3	ILM5.3	AS REQUIRED	AS REQUIRED

STL

DATA QUALIFIER PAGE

These definitions are provided in the event the data in this report requires the use of one or more of the qualifiers. Not all qualifiers defined below are necessarily used in the accompanying data package.

ORGANIC DATA QUALIFIERS

ND or U	Indicates compound was analyzed for, but not detected.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	This flag is used when the analyte is found in the associated blank, as well as in the sample.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at the secondary dilution factor.
N	Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
P	This flag is used for CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P".
A	This flag indicates that a TIC is a suspected aldol-condensation product.
1	Indicates coelution.
*	Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U	Indicates element was analyzed for, but not detected. Report with the detection limit value.
J or B	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Indicates spike sample recovery is not within the quality control limits.
S	Indicates value determined by the Method of Standard Addition.
E	Indicates a value estimated or not reported due to the presence of interferences.
H	Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
G	Indicates a value greater than or equal to the project reporting limit but less than the laboratory quantitation limit
*	Indicates the spike or duplicate analysis is not within the quality control limits.
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-2

Lab Name: STL BUFFALO Contract: NY99-091

Lab Code: STLBFLO Case No.: NRAS No.: SDG NO.: 2326

Matrix (soil/water): WATER Lab Sample ID: AD744874

Level (low/med): LOW Date Received: 8/4/2007

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	60.2	B		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	61.6	B		P
7440-41-7	Beryllium	0.40	B		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	54500		E	P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	1.1	B		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	8650			P
7439-96-5	Manganese	2.8	B		P
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	4710	B		P
7782-49-2	Selenium	35.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-22-4	Silver	1.7	B		P
7440-23-5	Sodium	36100		E	P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	0.80	B		P
7440-66-6	Zinc	60.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4

Lab Name: STL BUFFALO Contract: NY99-091

Lab Code: STLBFLO Case No.: NRAS No.: SDG NO.: 2326

Matrix (soil/water): WATER Lab Sample ID: AD744877

Level (low/med): LOW Date Received: 8/4/2007

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	40.0	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	42700		E	P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	1.4	B		P
7439-89-6	Iron	47.6	B		P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	8190			P
7439-96-5	Manganese	0.79	B		P
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	1020	B		P
7782-49-2	Selenium	35.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	12000		E	P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	60.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5

Lab Name: STL BUFFALO Contract: NY99-091

Lab Code: STLBFLO Case No.: NRAS No.: SDG NO.: 2326

Matrix (soil/water): WATER Lab Sample ID: AD744879

Level (low/med): LOW Date Received: 8/4/2007

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	79.0	B		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	56.4	B		P
7440-41-7	Beryllium	0.51	B		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	44400		E	P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	7600			P
7439-96-5	Manganese	0.90	B		P
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	3330	B		P
7782-49-2	Selenium	35.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-22-4	Silver	1.6	B		P
7440-23-5	Sodium	14200		E	P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	0.80	B		P
7440-66-6	Zinc	60.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-X

Lab Name: STL BUFFALO Contract: NY99-091

Lab Code: STLBFLO Case No.: NRAS No.: SDG NO.: 2326

Matrix (soil/water): WATER Lab Sample ID: AD744878

Level (low/med): LOW Date Received: 8/4/2007

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	85.3	B		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	56.1	B		P
7440-41-7	Beryllium	0.52	B		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	44600		E	P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	7730			P
7439-96-5	Manganese	0.75	B		P
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	3240	B		P
7782-49-2	Selenium	35.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	14200		E	P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	60.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: