SITE CHARACTERIZATION LETTER REPORT
TRIPLE CITIES METALS FINISHING
SITE NO. 808045
CHEMUNG COUNTY, ELMIRA, NEW YORK

PREPARED FOR:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
WORK ASSIGNMENT NUMBER D007622-19

PREPARED BY:

URS CORPORATION
77 GOODELL STREET
BUFFALO, NEW YORK 14203

FINAL
DECEMBER 2013

December 31, 2013

Mr. Edward Hampston
Project Manager
Division of Environmental Remediation
NYS Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7016

Re: NYSDEC Standby Contract, Work Assignment No. D007622-19
Triple Cities Metal Finishing, Site No. 808045
Site Characterization Letter Report

Dear Mr. Hampston:

URS Corporation (URS) has prepared this Site Characterization Letter Report to summarize field activities performed under NYDEC Work Assignment No. D007622-19 at the Triple Cities Metal Finishing site during the period of August 2013 through December 2013. The Triple Cities Metal Finishing (TCMF) site is located in Elmira, NY (Figure 1). Relevant site features are shown on Figure 2. The site characterization consisted of:

- Collection of eight surface soils from around the perimeter of the property;
- Installation of three monitoring wells and collection of groundwater samples;
- Collection of one subsurface soil sample at each newly installed monitoring well location;
- Collection of subslab soil from eight locations within building footprint;
- Collection of concrete chip samples from five locations within building footprint;
- Collection of one solid and one aqueous investigation-derived waste (IDW) sample for waste profiling and disposal; and
- Analysis of soil, groundwater, and concrete chip samples for site contaminants of concern and IDW samples for waste disposal parameters.

1.0 FIELD ACTIVITIES

Prior to commencing field activities, representatives from NYSDEC, URS, the owner of TCMF, the owner of an adjacent property (Schulman Company, Inc.), and drilling contractors (i.e., SJB Services, Inc. and Nature's Way Environmental) conducted site walkovers to discuss specific drilling, well installation and sampling activities and locations.

Field activities began in late August 2013: surface soils were collected on August 26 and 28, 2013; monitoring wells were installed on August 28 and 29, 2013; subslab soil samples were collected on August 29-30, 2013; concrete chip samples were collected August 29, 2013; IDW samples were collected on August 30, 2013; and groundwater samples were collected on September 5, 2013.

Per the Scope of Work (SOW), a formal sample location survey was not performed. However, URS' Geologist measured most of the sample locations using a hand-held global positioning system (GPS) unit with sub-foot accuracy. URS also used the GPS to locate building features to enable the GPS survey tie-in with aerial photographs. Sample locations within the building footprint, which were not accessible using a GPS, were measured manually by tying into a fixed location. To better define the direction of groundwater flow, URS returned to the site in December to survey the well locations and elevations. Details of the field investigation activities are described below.

1.1 Surface Soil Sampling and Analysis

Surface Soil Sampling

On August 26 and 28, 2013, URS collected surface soil samples from 0- to 6-inches below ground surface (bgs) from seven locations (i.e., SS-01 to SS-06 and SS-08) around the TCMF building. Sample SS-07 was collected from the property across Stowell Street. Quality control (QC) samples were also collected.

Figure 3 shows the surface soil sample locations. A copy of the field notes is provided in Attachment 1. Photographs showing the locations of the surface soil samples are provided in Attachment 2.

Chain-of-custody (COC) records were maintained and accompanied the surface soil sample containers to Spectrum Analytical, Inc. (Spectrum Analytical) of North Kingstown, Rhode Island, a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) approved laboratory. The samples collected were analyzed for the parameters listed in Table 1.

Surface Soil Analytical Results

A summary of the detected results is provided in Table 2 and Figure 4. The complete validated analytical results of the surface soil samples are presented in the Data Usability Summary Report (DUSR) in Attachment 3.

Review of Table 2 and Figure 4 shows that one or more of the following detected analytes exceeded 6 NYCRR Part 375.6 (including CP-51) soil cleanup guidance (SCG) for Unrestricted Use, Protection to Groundwater, and/or Commercial Use criteria:

- 4,4'-DDE
- 4,4'-DDT
- Dieldrin
- Total PCBs
- Aluminum
- Antimony
- Arsenic
- Cadmium
- Calcium
- Chromium
- Copper
- Iron
- Mercury
- Nickel
- Silver
- Zinc

All other results were below criteria or non-detect.

1.2 Monitoring Well Installation and Soil Sampling

Drilling and Well Installation

On August 27, 28, and 29, 2013, three monitoring wells were installed (i.e., MW-01, MW-02, and MW-03, see Figure 3). Well MW-01 was installed in the southwestern portion of the study area, well MW-02 was installed in the northern portion of the study area, and well MW-03 was installed east of the site on the Schulman Property.

Each well boring was hand cleared to 5 feet bgs prior to drilling. The borings were advanced and sampled using a drill rig equipped with 4¼-inch hollow stem augers (HSAs). Soils were sampled using a two-inch split spoon sampler. The boring for well MW-01 was continuously sampled to a depth of 46 feet. Well MW-02 was sampled at 5-foot intervals to a depth of 22 feet and then at 2-foot intervals to a depth of 28 feet. Well MW-03 was continuously sampled to a depth of 8 feet. Upon recovery, each soil sample was inspected for evidence of contamination (e.g., staining and odors) and screened for volatile organic vapors using a photoionization detector (PID).

Per the scope of work, one soil sample was to be retained for laboratory analysis from the most impacted interval in each boring (i.e., highest PID reading and/or evidence of staining, odors, etc.). However, no evidence of contamination was observed. Therefore, the soil samples were collected from the interval at or just about the water table.

The three borings were completed as monitoring wells. Each well was constructed with 15-foot long, 2-inch inside diameter polyvinyl chloride (PVC) screens and equivalent risers. To facilitate well installation, the boring for well MW-01 was advanced to a depth of 50 feet, MW-02 to a depth of 35 feet, and MW-03 to a depth of 20 feet. The screen intervals for MW-01, MW-02, and MW-03 were set at 35-50 ft, 20-35 ft, and 5-20 ft, respectively.

MW-01 was finished with a flush-mount protective casing and concrete pad. Wells MW-02 and MW-03 were finished with stick-up protective casings and concrete-filled bollards. A copy of the URS Geologist's field notes, daily drilling records, test boring logs, and well construction logs are provided in Attachments 1, 4, 5, and 6, respectively. Photographs showing the monitoring well locations are provided in Attachment 2.

Site Hydrogeology

The site is located in a relatively flat lying valley. Locally, the elevation of the site is higher at the southern end, near well MW-01, and drops approximately 8 feet to the north to the MW-02 well area. The eastern boundary of the site drops off sharply by almost 30 feet to the adjacent property where well MW-03 is located.

Based on drilling observations, the site area is underlain by glaciofluvial deposits comprised predominantly of very fine sand and silt deposits with gravel ranging in concentration from 10% to 50%. The large percentage of fines (e.g., silt) results in turbid groundwater conditions as observed during well development. Locally, developed portions of the site are underlain by as much as 20 feet of manmade fill (e.g., MW-02) which is comprised of sand with some gravel and varying amounts of brick and glass.

Apparent hydraulic conductivities range from low, in the MW-01 area, to moderate in the MW-02 and MW-03 areas.

Well elevations were surveyed on December 15, 2013. Coordinates and elevations of the wells are presented in Attachment 1 (Field Notes).

COCs were maintained and accompanied the MW soil sample containers

Well Borehole Soil Sample Analyses

The well borehole soil samples were submitted under proper COC protocol to Spectrum Analytical. The soil samples were analyzed for the parameters listed in Table 1. The duplicate sample from MW-03 was not analyzed for semi-volatile organic compounds (SVOCs), pesticides or polychlorinated biphenyls (PCBs) due to insufficient sample volume.

The well borehole soil analytical results are presented in Table 3 and Figure 5. One or more of the following detected analytes exceeded 6 NYCRR Part 375.6 (including CP-51) soil cleanup guidance (SCG) criteria for Unrestricted Use, Protection to Groundwater, and/or Commercial Use:

- 2,6-Dinitrotoluene,
- Aluminum
- Arsenic
- Calcium
- Iron
- Nickel
- Zinc

All other results were below criteria or non-detect. The complete validated analytical results are presented in the DUSR in Attachment 3.

1.3 Monitoring Well Development and Groundwater Sampling

Monitoring Well Development

URS developed the newly installed wells on August 29 and 30, 2013. Approximately 100 gallons of development water was removed from MW-02 and MW-03. Due to slow recharge, URS was only able to remove 15 gallons of water from well MW-01 as the well went dry several times during development. Wells MW-02 and MW-03 were fast to re-charge and did not purge to dryness.

The water quality parameters pH, specific conductivity, temperature, and turbidity were measured during the well development process. In all three wells, the turbidity remained very high (i.e., >1,000 Nephelometric Turbidity Units [NTUs]) throughout the well development process, reflecting the high silt content in the formation. A copy of the well development logs are provided in Attachment 7.

Groundwater Sampling and Analysis

The wells were sampled on September, 5, 2013 using the low-flow sampling procedure. Each well was purged using a Grundfos submersible pump and dedicated, per well, disposable high-density polyethylene

(HDPE) tubing. During the purging process, the water quality parameters pH, temperature, specific conductivity, dissolved oxygen, turbidity, and oxidation-reduction potential were measured utilizing a flow-through cell. These parameters were measured until they stabilized.

The three wells, MW-01, MW-02, and MW-03, were purged at rates of 150-225 milliliters per minute (mL/min), 700 mL/min, and 850 mL/min, respectively. The purging rates were adjusted to prevent the water levels in the wells from dropping more than 0.3 feet from the static water levels. It is noted that the turbidity recorded during the low-flow purging process was significantly lower, compared to the turbidity recorded during development, in wells MW-02 and MW-03, which were able to be purged to below the 50 NTU criterion. Due to the very low recharge rate, the turbidity in well MW-01 remained elevated, at 772 NTU, which was well above the 50 NTU criterion. A copy of the low-flow purge logs is provided in Attachment 8.

The groundwater samples were submitted to Spectrum Analytical under COC protocol. The groundwater samples were analyzed for the parameters listed in Table 1. The detected analytical results are summarized in Table 4 and Figure 6. The complete validated groundwater analytical results are presented in the DUSR in Attachment 3.

Review of the results indicates that the following analytes exceeded NYSDEC TOGS 1.1.1 criteria for Class GA groundwater at least once in the groundwater samples:

- 1,1,1-Trichloroethane
- 1,1-Dichloroethene
- Trichloroethene
- Chromium
- Iron
- Manganese
- Nickel
- Sodium
- Hexavalent Chromium

All other results were below criteria. It is noted that the elevated concentrations of some metals (e.g., iron) in MW-01 may be biased high due to the high turbidity (i.e., fines) present in the sample at the time of sampling.

Groundwater flow was determined from the elevations of the water table at each well. Figure 7 shows the December 2013 contours. Elevations in September were roughly one foot lower in all three wells. Groundwater flows to the northeast, reflecting the surface topography.

The complete validated analytical results of the groundwater samples are presented in the DUSR in Attachment 9.

1.4 Subslab Soil and Concrete Chip Sampling

Subslab Soil Sampling and Analysis

On August 29 and 30, 2013, eight soil borings (i.e., GS-01 to GS-08) were advanced inside the TCMF building using a hydraulic direct-push unit (see Figure 8). The concrete floor slabs were initially cored and then an acetate-lined macro core sampler was advanced to a 4 foot depth at each location.

The soil samples were submitted under COC protocol to Spectrum Analytical and were analyzed for the parameters listed in Table 1.

The subslab soil sampling detected analytical results are presented in Table 5 and Figure 9. Review of the results indicates that one or more of the following detected analytes exceeded 6 NYCRR Part 375.6 (including CP-51) soil cleanup guidance (SCG) for Unrestricted Use, Protection to Groundwater, and/or Commercial Use criteria:

- cis-1,2-Dichloroethene
- Trichloroethene
- 4,4'-DDT
- Aluminum
- Arsenic
- Cadmium
- Calcium
- Chromium
- Copper
- Iron
- Lead
- Nickel
- Silver
- Zinc
- Hexavalent Chromium
- Total cyanide

All other results were below criteria or non-detect.

Concrete Chip Sampling and Analysis

Concurrent with the subslab sampling, URS collected concrete chip samples from five locations (i.e., CC-01 to CC-05) inside the TCMF building. These sample locations coincided with the subslab soil sample locations GS-01 to GS-05, respectively. Figure 4 shows the concrete chip sample locations.

The concrete chip samples were submitted under COC protocol to Spectrum Analytical and were analyzed for the parameters listed in Table 1, except VOCs.

The concrete chip analytical results are presented in Table 6. There are no cleanup criteria specific to concrete chip samples. However, review results indicates that one or more of the following analytes were detected:

- bis-(2-Ethylhexyl)phthalate,
- Di-n-butylphthalate,
- Aroclor 1254,
- 20 TAL Metals,
- Hexavalent Chromium,
- Cyanide.

1.5 Investigation-Derived Waste Characterization and Disposal

Liquid and solid investigation-derived waste (IDW) was generated during the field investigation. The IDW generated during drilling and sampling activities included soil cuttings, decontamination fluids, development and purge water, plastic sheeting and personal protective equipment (PPE). All IDW was segregated and stored in DOT approved 55-gallon 1A2 steel drums. The drums were temporarily staged in three areas: seven drums (4 solid and 3 aqueous) outside southeast corner of the TCMF building; two drums (1 solid and 1 aqueous) at location MW-02; and two drums (1 solid and 1 aqueous) at location MW-03. Photographs of the drum staging areas are provided in Attachment 2.

On August 30, 2013, URS collected one composite sample representing the solid IDW and one composite sample representing the aqueous IDW. The samples were submitted following COC protocol to Spectrum Analytical for waste characterization analyses. The IDW samples were analyzed for the following Resource Conservation and Recovery Act (RCRA) characteristic hazardous waste (40 CFR 261, Subpart C) parameters:

Parameter	Method
Toxicity Characteristic Leaching Procedure (TCLP) Volatile Organic Compounds (VOCs)	SW1311/8260C
TCLP Semivolatile Organic Compounds (SVOC)	SW1311/8270D
TCLP Pesticides	SW1311/8081B
TCLP Herbicides	SW1311/8151A
TCLP Metals	SW1311/6010C/7470A
Reactive Cyanide and Sulfide	SW-846 Section 7.3
Corrosivity (as pH)	SW9040B/9045C
Ignitability	SW1010

The analytical results are presented in Table 7. None of the detected analytes exceeded 40 CFR 261, Subpart C criteria. Therefore, the IDW was considered non-RCRA hazardous.

The drums were picked up on October 8, 2013 for proper disposal by Frank's Vacuum Truck Service, of Niagara Falls, New York. Copies of the IDW disposal manifests are provided in Attachment 9.

2.0 TABLES, FIGURES, AND ATTACHMENTS

The following tables, figures, and attachments are included as part of this letter report:

Tables (following Text)

Table 1 Summary of Analytical Parameters for Soil, Concrete Chip and Groundwater Samples
Table 2 Summary of Detected Results in Surface Soil Samples
Table 3 Summary of Detected Results in Monitoring Well Soil Samples
Table 4 Summary of Detected Results in Groundwater Samples
Table 5 Summary of Detected Results in Subslab Soil Samples
Table 6 Summary of Detected Results in Concrete Chip Samples
Table 7 Summary of Investigation-Derived Waste Sample Results

Figures (following Tables)

Figure 1	Site Location
Figure 2	Floor Plan Overlay
Figure 3	Monitoring Well and Surface Soil Sample Locations
Figure 4	Surface Soil Analytical Results Exceeding Guidance Criteria (August 2013)
Figure 5	Monitoring Well Soil Analytical Results Exceeding Guidance Criteria (August 2013)
Figure 6	Groundwater Analytical Results Exceeding Guidance Criteria (September 2013)
Figure 7	Groundwater Contours December 14, 2013
Figure 8	Subslab Boring and Concrete Chip Sample Locations
Figure 9	Subslab Boring Analytical Results Exceeding Guidance Criteria (August 2013)

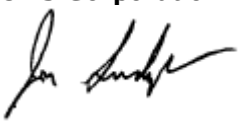
Attachments (following Figures)

Attachment 1	Field Notes
Attachment 2	Photographs
Attachment 3	Data Usability Summary Report (DUSR) (on CD-ROM)
Attachment 4	Daily Drilling Records
Attachment 5	Test Boring Logs
Attachment 6	Monitoring Well Construction Logs
Attachment 7	Monitoring Well Development Logs
Attachment 8	Low-Flow Purge Logs
Attachment 9	Investigation Derived Waste (IDW) Disposal Documents

Should you have any questions or comments, please do not hesitate to contact me at 716-856-5636.

Sincerely,

URS Corporation



Jon Sundquist, Ph.D.
Project Manager

cc: Peter Fairbanks, URS
Tim Iflovich, URS
URS File: 11176967 (C-1)

TABLES

TABLE 1
SUMMARY OF ANALYTICAL PARAMETERS ANALYZED FOR SOIL, CONCRETE CHIP, AND GROUNDWATER SAMPLES
TRIPLE CITIES METAL FINISHING

Parameter	**Method**
Target Compound List (TCL) Volatile Organic Compounds (VOCs) plus tentatively identified compounds (TICs)	SW8260C
TCL Semivolatile Organic Compounds (SVOC) plus TICs	SW8270D
TCL Pesticides	SW8081B
TCL Polychlorinated Biphenyls (PCBs)	SW8082A
Target Analyte List (TAL) Metals	SW6010C/7470A/7471A
Total Cyanide	SW9012B
Hexavalent Chromium	SW7196A

TABLE 2
SUMMARY OF DETECTED RESULTS IN SURFACE SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					SS-01	SS-02	SS-02	SS-03	SS-04
Sample ID					SS-01	FD-082613	SS-02	SS-03	SS-04
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-	-
Date Sampled					08/26/13	08/26/13	08/26/13	08/26/13	08/26/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Volatile Organic Compounds									
Acetone	UG/KG	50	50	5.00E+05					
Trichloroethene	UG/KG	470	470	2.00E+05					
Semivolatile Organic Compounds									
Anthracene	UG/KG	100000	1.00E+06	5.00E+05		86 J			
Benzo(a)anthracene	UG/KG	1000	1000	5600	210 J	270 J	180 J		130 J
Benzo(a)pyrene	UG/KG	1000	22000	1000	200 J	250 J	200 J		120 J
Benzo(b)fluoranthene	UG/KG	1000	1700	5600	280 J	430	330 J		170 J
Benzo(g,h,i)perylene	UG/KG	100000	1.00E+06	5.00E+05	140 J	200 J	140 J		99 J
Benzo(k)fluoranthene	UG/KG	800	1700	56000	120 J	160 J	140 J		75 J
bis(2-Ethylhexyl)phthalate	UG/KG	50000	4.35E+05	-		89 J		130 J	96 J
Chrysene	UG/KG	1000	1000	56000	260 J	300 J	240 J		180 J
Di-n-butylphthalate	UG/KG	-	8100	-	160 J	190 J	180 J	210 J	180 J
Fluoranthene	UG/KG	100000	1.00E+06	5.00E+05	420	420	290 J	100 J	220 J
Indeno(1,2,3-cd)pyrene	UG/KG	500	8200	5600	130 J	190 J	150 J		87 J
Phenanthrene	UG/KG	100000	1.00E+06	5.00E+05	240 J	120 J	120 J		190 J
Pyrene	UG/KG	100000	1.00E+06	5.00E+05	350 J	390 J	300 J	110 J	220 J
Pesticide Organic Compounds									
4,4'-DDE	UG/KG	3.3	17000	62000					
4,4'-DDT	UG/KG	3.3	1.36E+05	47000		5.4 J			

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

J - The reported concentration is an estimated value.

(J-) - The reported concentration is an estimated value, biased low. NJ - Tentatively identified, value represents an approximate concentration.

NA - Not analyzed.

Only Detected Results Reported.

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[LOGDATE] >= #8/26/2013# AND [LOCID] LIKE 'SS*' AND [MATRIX] = 'SO

TABLE 2
SUMMARY OF DETECTED RESULTS IN SURFACE SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					SS-01	SS-02	SS-02	SS-03	SS-04
Sample ID					SS-01	FD-082613	SS-02	SS-03	SS-04
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-	-
Date Sampled					08/26/13	08/26/13	08/26/13	08/26/13	08/26/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Pesticide Organic Compounds									
Dieldrin	UG/KG	5	100	1400					
Endosulfan I	UG/KG	2400	1.02E+05	2.00E+05					
Endosulfan sulfate	UG/KG	2400	1.00E+06	2.00E+05					
Endrin aldehyde	UG/KG	-	-	-			6.2		
Endrin ketone	UG/KG	-	-	-					
gamma-Chlordane	UG/KG	540	14000	-		3.1 J			
Heptachlor epoxide	UG/KG	20	20	-					
Polychlorinated Biphenyls									
Aroclor 1254	UG/KG	-	-	-					
Aroclor 1260	UG/KG	-	-	-	35 J				
Total Polychlorinated Biphenyls	UG/KG	100	3200	1000	35	ND	ND	ND	ND
Metals									
Aluminum	MG/KG	10000	-	-	10,700	11,400	11,100	13,500	8,960
Antimony	MG/KG	12	-	-	1.7 J	1.7 J	1.8 J	187 J	1.9 J
Arsenic	MG/KG	13	16	16	13.9 J	13.2 J	13.3 J	28.5 J	18.0 J
Barium	MG/KG	350	820	400	130	137	140	162	145
Beryllium	MG/KG	7.2	47	590	0.59	0.58	0.59	0.67	0.68
Cadmium	MG/KG	2.5	7.5	9.3	1.2	1.8	1.9	2.9	1.5
Calcium	MG/KG	10000	-	-	3,440	4,310	3,320	1,900	12,100

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Border Concentration Exceeds Criteria (3)

J - The reported concentration is an estimated value.

(J-) - The reported concentration is an estimated value, biased low. NJ - Tentatively identified, value represents an approximate concentration.

NA - Not analyzed.

Only Detected Results Reported.

TABLE 2
SUMMARY OF DETECTED RESULTS IN SURFACE SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					SS-01	SS-02	SS-02	SS-03	SS-04
Sample ID					SS-01	FD-082613	SS-02	SS-03	SS-04
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-	-
Date Sampled					08/26/13	08/26/13	08/26/13	08/26/13	08/26/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Metals									
Chromium	MG/KG	30	NS	1500	33.5 J-	65.2 J-	62.0 J-	189 J-	50.6 J-
Cobalt	MG/KG	20	-	-	12.9	10.4	10.8	12.0	9.7
Copper	MG/KG	50	1720	270	72.9	84.9	99.8	78.0	73.4
Iron	MG/KG	2000	-	-	21,300	28,100	30,900	26,100	35,400
Magnesium	MG/KG	-	-	-	2,920	3,610	2,950	3,500	3,430
Manganese	MG/KG	1600	2000	10000	369	397	424	877	335
Mercury	MG/KG	0.18	0.73	2.8	0.085	0.30	0.29	0.15	0.19
Nickel	MG/KG	30	130	310	26.2	40.2	58.9	54.0	29.3
Potassium	MG/KG	-	-	-	847	599	609	685	781
Selenium	MG/KG	3.9	4	1500	1.1 J	1.7	1.4 J	1.2 J	1.3 J
Silver	MG/KG	2	8.3	1500					
Sodium	MG/KG	-	-	-	137	47.2			108
Thallium	MG/KG	5	-	-	0.53 J	0.47 J	0.46 J	0.99 J	0.54 J
Vanadium	MG/KG	39	-	-	20.8	20.3	21.3	23.8	22.5
Zinc	MG/KG	109	2480	10000	1,300 J	286 J	285 J	283 J	326 J
Miscellaneous Parameters									
Cyanide (total)	MG/KG	27	40	27					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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Border Concentration Exceeds Criteria (3)

J - The reported concentration is an estimated value.

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NA - Not analyzed.

Only Detected Results Reported.

TABLE 2
SUMMARY OF DETECTED RESULTS IN SURFACE SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					SS-05	SS-06	SS-07	SS-08
Sample ID					SS-05	SS-06	SS-07	SS-08
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-
Date Sampled					08/26/13	08/26/13	08/28/13	08/28/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				
Volatile Organic Compounds								
Acetone	UG/KG	50	50	5.00E+05	6.8			
Trichloroethene	UG/KG	470	470	2.00E+05				2.9 J
Semivolatile Organic Compounds								
Anthracene	UG/KG	100000	1.00E+06	5.00E+05				
Benzo(a)anthracene	UG/KG	1000	1000	5600	89 J	110 J		
Benzo(a)pyrene	UG/KG	1000	22000	1000	94 J	110 J		
Benzo(b)fluoranthene	UG/KG	1000	1700	5600	140 J	140 J	85 J	120 J
Benzo(g,h,i)perylene	UG/KG	100000	1.00E+06	5.00E+05	87 J	94 J		
Benzo(k)fluoranthene	UG/KG	800	1700	56000				
bis(2-Ethylhexyl)phthalate	UG/KG	50000	4.35E+05	-	1,400	280 J		180 J
Chrysene	UG/KG	1000	1000	56000	120 J	130 J		130 J
Di-n-butylphthalate	UG/KG	-	8100	-	110 J	180 J	170 J	210 J
Fluoranthene	UG/KG	100000	1.00E+06	5.00E+05	180 J	220 J	94 J	140 J
Indeno(1,2,3-cd)pyrene	UG/KG	500	8200	5600	74 J	80 J		
Phenanthrene	UG/KG	100000	1.00E+06	5.00E+05	95 J	160 J		85 J
Pyrene	UG/KG	100000	1.00E+06	5.00E+05	180 J	190 J	83 J	100 J
Pesticide Organic Compounds								
4,4'-DDE	UG/KG	3.3	17000	62000				7.0 NJ
4,4'-DDT	UG/KG	3.3	1.36E+05	47000	5.8	20 NJ		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

J - The reported concentration is an estimated value.

(J-) - The reported concentration is an estimated value, biased low. NJ - Tentatively identified, value represents an approximate concentration.

NA - Not analyzed.

Only Detected Results Reported.

TABLE 2
SUMMARY OF DETECTED RESULTS IN SURFACE SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					SS-05	SS-06	SS-07	SS-08
Sample ID					SS-05	SS-06	SS-07	SS-08
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-
Date Sampled					08/26/13	08/26/13	08/28/13	08/28/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				
Pesticide Organic Compounds								
Dieldrin	UG/KG	5	100	1400				5.6 NJ
Endosulfan I	UG/KG	2400	1.02E+05	2.00E+05		2.0 J		
Endosulfan sulfate	UG/KG	2400	1.00E+06	2.00E+05				11 NJ
Endrin aldehyde	UG/KG	-	-	-	5.6	6.5 J		
Endrin ketone	UG/KG	-	-	-		4.6 NJ		15
gamma-Chlordane	UG/KG	540	14000	-				
Heptachlor epoxide	UG/KG	20	20	-	2.1 J			
Polychlorinated Biphenyls								
Aroclor 1254	UG/KG	-	-	-	66 J	150 J		94 J
Aroclor 1260	UG/KG	-	-	-				
Total Polychlorinated Biphenyls	UG/KG	100	3200	1000	66	150	ND	94
Metals								
Aluminum	MG/KG	10000	-	-	7,910	11,900	10,200	8,560
Antimony	MG/KG	12	-	-	5.4 J	2.4 J		
Arsenic	MG/KG	13	16	16	23.5 J	11.3 J	10.1 J	13.3 J
Barium	MG/KG	350	820	400	88.0	133	116	104
Beryllium	MG/KG	7.2	47	590	0.30	0.52	0.55	0.28 J
Cadmium	MG/KG	2.5	7.5	9.3	64.3	13.3	0.72	4.7
Calcium	MG/KG	10000	-	-	64,300	7,570	9,080	2,980

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

J - The reported concentration is an estimated value.

(J-) - The reported concentration is an estimated value, biased low. NJ - Tentatively identified, value represents an approximate concentration.

NA - Not analyzed.

Only Detected Results Reported.

TABLE 2
SUMMARY OF DETECTED RESULTS IN SURFACE SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					SS-05	SS-06	SS-07	SS-08
Sample ID					SS-05	SS-06	SS-07	SS-08
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-
Date Sampled					08/26/13	08/26/13	08/28/13	08/28/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				
Metals								
Chromium	MG/KG	30	NS	1500	1,220 J-	298 J-	17.4 J-	544 J-
Cobalt	MG/KG	20	-	-	10.9	14.6	9.6	8.9
Copper	MG/KG	50	1720	270	640	819	43.2	211
Iron	MG/KG	2000	-	-	43,100	46,000	22,400	21,600
Magnesium	MG/KG	-	-	-	17,900	4,240	3,850	1,880
Manganese	MG/KG	1600	2000	10000	533	596	406	284
Mercury	MG/KG	0.18	0.73	2.8	0.16	0.17	0.12	0.31
Nickel	MG/KG	30	130	310	423	1,320	23.0	73.1
Potassium	MG/KG	-	-	-	789	738	852	598
Selenium	MG/KG	3.9	4	1500			2.1	1.8
Silver	MG/KG	2	8.3	1500	6.4	3.2		
Sodium	MG/KG	-	-	-	104	58.5		65.4
Thallium	MG/KG	5	-	-	1.1	0.41 J		0.56 J
Vanadium	MG/KG	39	-	-	15.4	17.7	18.1	18.0
Zinc	MG/KG	109	2480	10000	3,260 J	1,390 J	146 J	603 J
Miscellaneous Parameters								
Cyanide (total)	MG/KG	27	40	27	10.8	3.8		2.2

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

J - The reported concentration is an estimated value.

(J-) - The reported concentration is an estimated value, biased low. NJ - Tentatively identified, value represents an approximate concentration.

NA - Not analyzed.

Only Detected Results Reported.

TABLE 3
SUMMARY OF DETECTED RESULTS IN MONITORING WELL SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					MW-01	MW-02	MW-03	MW-03
Sample ID					MW-01	MW-02	FD-082913-MW	MW-03
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					44.0-46.0	23.0-25.0	6.0-7.0	6.0-7.0
Date Sampled					08/28/13	08/28/13	08/29/13	08/29/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)	
Semivolatile Organic Compounds								
2,6-Dinitrotoluene	UG/KG	170	170	-	1,200	1,300	NA	
bis(2-Ethylhexyl)phthalate	UG/KG	50000	4.35E+05	-			NA	150 J
Di-n-butylphthalate	UG/KG	-	8100	-	180 J	170 J	NA	140 J
Metals								
Aluminum	MG/KG	10000	-	-	9,280	11,600	15,000	14,400
Antimony	MG/KG	12	-	-		1.1 J		
Arsenic	MG/KG	13	16	16	6.6	18.7	5.8	7.4
Barium	MG/KG	350	820	400	47.6	73.3	104	116
Beryllium	MG/KG	7.2	47	590	0.37	0.45	0.48	0.51
Cadmium	MG/KG	2.5	7.5	9.3	0.28 J	0.58 J	2.2	1.7
Calcium	MG/KG	10000	-	-	26,200	2,600	1,630 J	3,270 J
Chromium	MG/KG	30	NS	1500	12.3 J	16.4 J	17.8 J	18.3 J
Cobalt	MG/KG	20	-	-	8.7	10.5	10.9 J	15.0 J
Copper	MG/KG	50	1720	270	18.6	35.6	11.0	15.3
Iron	MG/KG	2000	-	-	19,500	26,900	26,300 J	33,600 J
Lead	MG/KG	63	450	1000	8.3 J	23.9 J	15.4 J	12.7 J
Magnesium	MG/KG	-	-	-	8,680	3,890	4,080 J	4,640 J
Manganese	MG/KG	1600	2000	10000	448	522	298 J	453 J
Mercury	MG/KG	0.18	0.73	2.8	0.010 J	0.021 J	0.0069 J	0.033 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

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[LOGDATE] >= #8/26/2013# AND [LOCID] LIKE 'MW*' AND [MATRIX] = 'SC

TABLE 3
SUMMARY OF DETECTED RESULTS IN MONITORING WELL SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					MW-01	MW-02	MW-03	MW-03
Sample ID					MW-01	MW-02	FD-082913-MW	MW-03
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					44.0-46.0	23.0-25.0	6.0-7.0	6.0-7.0
Date Sampled					08/28/13	08/28/13	08/29/13	08/29/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)	
Metals								
Nickel	MG/KG	30	130	310	19.8	33.1	22.5 J	24.5 J
Potassium	MG/KG	-	-	-	820 J	740 J	766	769
Selenium	MG/KG	3.9	4	1500		0.78 J	1.3 J	1.2 J
Sodium	MG/KG	-	-	-	67.2	40.0 J	92.9	87.9
Thallium	MG/KG	5	-	-		0.36 J		
Vanadium	MG/KG	39	-	-	12.1	15.6	18.6	18.6
Zinc	MG/KG	109	2480	10000	48.7 J	137 J	64.1 J	58.0 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

J - The reported concentration is an estimated value.
NA - Not analyzed.

Only Detected Results Reported.

TABLE 4
SUMMARY OF DETECTED RESULTS IN GROUNDWATER SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID			MW-01	MW-02	MW-02	MW-03
Sample ID			MW-01	FD-090513	MW-02	MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			09/05/13	09/05/13	09/05/13	09/05/13
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)		
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	5		0.57 J		39
1,1-Dichloroethane	UG/L	5		1.2 J	1.2 J	1.7 J
1,1-Dichloroethene	UG/L	5				13
1,2-Dichloroethene (cis)	UG/L	5		3.8 J	3.3 J	3.9 J
1,2-Dichloroethene (trans)	UG/L	5		4.3 J	4.1 J	1.0 J
Acetone	UG/L	50	6.6			
Methyl tert-butyl ether	UG/L	10		2.9 J	2.9 J	
Tetrachloroethene	UG/L	5				4.8 J
Toluene	UG/L	5	0.66 J			
Trichloroethene	UG/L	5	1.0 J	7.7	8.1	220 D
Semivolatile Organic Compounds						
Di-n-butylphthalate	UG/L	50	1.3 J		1.3 J	1.1 J
Metals						
Aluminum	UG/L	-	8,180	576	651	2,800
Arsenic	UG/L	25	7.0 J			
Beryllium	UG/L	3	0.40 J			
Cadmium	UG/L	5		3.6 J	3.3 J	
Calcium	UG/L	-	37,100	132,000	131,000	118,000
Chromium	UG/L	50	493	11.6 J	11.8 J	883
Cobalt	UG/L	-	17.6 J	6.7 J	5.8 J	3.7 J
Copper	UG/L	200	42.6	4.8 J	4.5 J	7.5 J
Iron	UG/L	300	19,200	927	982	4,890

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 4
SUMMARY OF DETECTED RESULTS IN GROUNDWATER SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID			MW-01	MW-02	MW-02	MW-03
Sample ID			MW-01	FD-090513	MW-02	MW-03
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			09/05/13	09/05/13	09/05/13	09/05/13
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)		
Metals						
Lead	UG/L	25	13.5			5.5 J
Magnesium	UG/L	35000	28,700	30,300	30,100	24,900
Manganese	UG/L	300	360	1,380	1,370	337
Nickel	UG/L	100	317			
Potassium	UG/L	-	61,800	22,600	20,500	5,360
Silver	UG/L	50	8.5 J			
Sodium	UG/L	20000	77,800	180,000	177,000	76,800
Zinc	UG/L	2000	61.9	17.9 J	16.6 J	19.5 J
Miscellaneous Parameters						
Cyanide (total)	UG/L	200				13.1 J
Hexavalent Chromium	MG/L	0.05				1.0

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 5
SUMMARY OF DETECTED RESULTS IN SUBSLAB SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					GS-01	GS-02	GS-03	GS-04	GS-05
Sample ID					GS-01	GS-02	GS-03	GS-04	GS-05
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-	-
Date Sampled					08/29/13	08/29/13	08/29/13	08/29/13	08/29/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	680	680	5.00E+05					
1,1-Dichloroethane	UG/KG	270	270	2.40E+05					
1,1-Dichloroethene	UG/KG	330	330	5.00E+05					
1,2-Dichloroethene (cis)	UG/KG	250	250	5.00E+05		59			
1,2-Dichloroethene (trans)	UG/KG	190	190	5.00E+05					
Acetone	UG/KG	50	50	5.00E+05				4.6 J	
Ethylbenzene	UG/KG	1000	1000	3.90E+05					
m&p-Xylene	UG/KG	260	1600	1600					
o-Xylene	UG/KG	260	1600	1600					
Trichloroethene	UG/KG	470	470	2.00E+05		170	23	3.1 J	5.5
Semivolatile Organic Compounds									
Anthracene	UG/KG	100000	1.00E+06	5.00E+05					
Benzo(a)anthracene	UG/KG	1000	1000	5600			110 J		
Benzo(a)pyrene	UG/KG	1000	22000	1000		160 J	94 J		
Benzo(b)fluoranthene	UG/KG	1000	1700	5600		120 J	130 J		
Benzo(g,h,i)perylene	UG/KG	100000	1.00E+06	5.00E+05		180 J	80 J		
Benzo(k)fluoranthene	UG/KG	800	1700	56000					
bis(2-Ethylhexyl)phthalate	UG/KG	50000	4.35E+05	-			170 J	400	77 J
Butylbenzylphthalate	UG/KG	100000	1.22E+05	-		120 J			
Carbazole	UG/KG	-	-	-					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

D - Result reported from a secondary dilution analysis.
J - The reported concentration is an estimated value.
UJ - Not detected. The reported quantitation limit is an estimated value.

Only Detected Results Reported.

TABLE 5
SUMMARY OF DETECTED RESULTS IN SUBSLAB SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					GS-01	GS-02	GS-03	GS-04	GS-05
Sample ID					GS-01	GS-02	GS-03	GS-04	GS-05
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-	-
Date Sampled					08/29/13	08/29/13	08/29/13	08/29/13	08/29/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Chrysene	UG/KG	1000	1000	56000		85 J	110 J		
Dibenz(a,h)anthracene	UG/KG	330	1.00E+06	560					
Di-n-butylphthalate	UG/KG	-	8100	-	160 J	180 J	190 J	180 J	170 J
Fluoranthene	UG/KG	100000	1.00E+06	5.00E+05			170 J		
Indeno(1,2,3-cd)pyrene	UG/KG	500	8200	5600					
Phenanthrene	UG/KG	100000	1.00E+06	5.00E+05			150 J		
Pyrene	UG/KG	100000	1.00E+06	5.00E+05			170 J		
Pesticide Organic Compounds									
4,4'-DDT	UG/KG	3.3	1.36E+05	47000					6.5 J
Polychlorinated Biphenyls									
Aroclor 1254	UG/KG	-	-	-					72
Total Polychlorinated Biphenyls	UG/KG	100	3200	1000	ND	ND	ND	ND	72
Metals									
Aluminum	MG/KG	10000	-	-	16,300	16,100	12,900	12,000	14,800
Antimony	MG/KG	12	-	-	0.39 J				
Arsenic	MG/KG	13	16	16	12.6	9.2	7.8	6.3	9.9
Barium	MG/KG	350	820	400	60.5	283	82.6	76.8	107
Beryllium	MG/KG	7.2	47	590	0.69	0.69	0.62	0.44	0.63
Cadmium	MG/KG	2.5	7.5	9.3	0.35	0.92	18.0	23.6	113
Calcium	MG/KG	10000	-	-	1,780	1,640	14,000	75,300	14,300

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

D - Result reported from a secondary dilution analysis.
J - The reported concentration is an estimated value.
UJ - Not detected. The reported quantitation limit is an estimated value.

Only Detected Results Reported.

TABLE 5
SUMMARY OF DETECTED RESULTS IN SUBSLAB SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					GS-01	GS-02	GS-03	GS-04	GS-05
Sample ID					GS-01	GS-02	GS-03	GS-04	GS-05
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-	-
Date Sampled					08/29/13	08/29/13	08/29/13	08/29/13	08/29/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Chromium	MG/KG	30	NS	1500	24.2	111	456	1,190	288
Cobalt	MG/KG	20	-	-	17.2	15.5	15.0	11.8	12.5
Copper	MG/KG	50	1720	270	25.7	111	330	260	332
Iron	MG/KG	2000	-	-	43,700	28,500	32,500	21,200	33,000
Lead	MG/KG	63	450	1000	18.1	268	325	319	158
Magnesium	MG/KG	-	-	-	6,030	4,040	5,790	7,520	4,540
Manganese	MG/KG	1600	2000	10000	609	378	573	577	618
Mercury	MG/KG	0.18	0.73	2.8	0.018 J	0.074	0.11	0.020 J	0.13
Nickel	MG/KG	30	130	310	38.2	40.9	434	231	462
Potassium	MG/KG	-	-	-	840	1,820	970	1,290	1,530
Selenium	MG/KG	3.9	4	1500	0.68 J	1.6 J	0.90 J		0.96 J
Silver	MG/KG	2	8.3	1500			2.4	1.1 J	3.9
Sodium	MG/KG	-	-	-	430	727	103	144	596
Vanadium	MG/KG	39	-	-	20.3	23.1	20.7	16.0	20.7
Zinc	MG/KG	109	2480	10000	106	484	524	469	2,110
Miscellaneous Parameters									
Cyanide (total)	MG/KG	27	40	27			5.4	38.6	32.1
Hexavalent Chromium	MG/KG	1	19	-				180	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

D - Result reported from a secondary dilution analysis.
J - The reported concentration is an estimated value.
UJ - Not detected. The reported quantitation limit is an estimated value.

Only Detected Results Reported.

TABLE 5
SUMMARY OF DETECTED RESULTS IN SUBSLAB SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					GS-06	GS-07	GS-08	GS-08
Sample ID					GS-06	GS-07	FD-082913-GS	GS-08
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-
Date Sampled					08/29/13	08/30/13	08/29/13	08/29/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)	
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	680	680	5.00E+05			14	16
1,1-Dichloroethane	UG/KG	270	270	2.40E+05			33	35
1,1-Dichloroethene	UG/KG	330	330	5.00E+05			5.2 J	5.4 J
1,2-Dichloroethene (cis)	UG/KG	250	250	5.00E+05			4,300 D	4,100 D
1,2-Dichloroethene (trans)	UG/KG	190	190	5.00E+05			18	19
Acetone	UG/KG	50	50	5.00E+05			5.4 J	
Ethylbenzene	UG/KG	1000	1000	3.90E+05			2.5 J	2.3 J
m&p-Xylene	UG/KG	260	1600	1600			8.5	7.6
o-Xylene	UG/KG	260	1600	1600			3.9 J	3.7 J
Trichloroethene	UG/KG	470	470	2.00E+05		410	2,500 D	2,500 D
Semivolatile Organic Compounds								
Anthracene	UG/KG	100000	1.00E+06	5.00E+05	75 J			
Benzo(a)anthracene	UG/KG	1000	1000	5600	370 J			89 J
Benzo(a)pyrene	UG/KG	1000	22000	1000	420			
Benzo(b)fluoranthene	UG/KG	1000	1700	5600	700			120 J
Benzo(g,h,i)perylene	UG/KG	100000	1.00E+06	5.00E+05	350 J			
Benzo(k)fluoranthene	UG/KG	800	1700	56000	340 J			
bis(2-Ethylhexyl)phthalate	UG/KG	50000	4.35E+05	-		160 J		
Butylbenzylphthalate	UG/KG	100000	1.22E+05	-				
Carbazole	UG/KG	-	-	-	130 J			

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

UJ - Not detected. The reported quantitation limit is an estimated value.

Only Detected Results Reported.

TABLE 5
SUMMARY OF DETECTED RESULTS IN SUBSLAB SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					GS-06	GS-07	GS-08	GS-08
Sample ID					GS-06	GS-07	FD-082913-GS	GS-08
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-
Date Sampled					08/29/13	08/30/13	08/29/13	08/29/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)	
Semivolatile Organic Compounds								
Chrysene	UG/KG	1000	1000	56000	710			90 J
Dibenz(a,h)anthracene	UG/KG	330	1.00E+06	560	100 J			
Di-n-butylphthalate	UG/KG	-	8100	-	150 J		130 J	160 J
Fluoranthene	UG/KG	100000	1.00E+06	5.00E+05	1,300	87 J		120 J
Indeno(1,2,3-cd)pyrene	UG/KG	500	8200	5600	330 J			
Phenanthrene	UG/KG	100000	1.00E+06	5.00E+05	1,300			
Pyrene	UG/KG	100000	1.00E+06	5.00E+05	1,200	96 J		130 J
Pesticide Organic Compounds								
4,4'-DDT	UG/KG	3.3	1.36E+05	47000				
Polychlorinated Biphenyls								
Aroclor 1254	UG/KG	-	-	-	38			
Total Polychlorinated Biphenyls	UG/KG	100	3200	1000	38	ND	ND	ND
Metals								
Aluminum	MG/KG	10000	-	-	14,300	14,100	14,400	14,100
Antimony	MG/KG	12	-	-		0.41 J		
Arsenic	MG/KG	13	16	16	15.3	14.5	17.5	11.7
Barium	MG/KG	350	820	400	67.4	157	150 J	81.4 J
Beryllium	MG/KG	7.2	47	590	0.55	0.72	0.68	0.61
Cadmium	MG/KG	2.5	7.5	9.3	11.8	1.5	3.1	2.7
Calcium	MG/KG	10000	-	-	2,930	8,960	4,510	3,030

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

UJ - Not detected. The reported quantitation limit is an estimated value.

Only Detected Results Reported.

TABLE 5
SUMMARY OF DETECTED RESULTS IN SUBSLAB SOIL SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID					GS-06	GS-07	GS-08	GS-08
Sample ID					GS-06	GS-07	FD-082913-GS	GS-08
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					-	-	-	-
Date Sampled					08/29/13	08/30/13	08/29/13	08/29/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)	
Metals								
Chromium	MG/KG	30	NS	1500	171	38.9	39.7	39.4
Cobalt	MG/KG	20	-	-	12.3	14.2	27.3	27.6
Copper	MG/KG	50	1720	270	151	138	71.4	59.6
Iron	MG/KG	2000	-	-	33,600	37,800	30,200	32,100
Lead	MG/KG	63	450	1000	91.3	211	468	84.1
Magnesium	MG/KG	-	-	-	4,430	3,900	3,950	4,340
Manganese	MG/KG	1600	2000	10000	427	512	451	438
Mercury	MG/KG	0.18	0.73	2.8	0.060	0.16	0.15 J	0.087 J
Nickel	MG/KG	30	130	310	172	33.9	138	170
Potassium	MG/KG	-	-	-	1,340	1,010	3,340	3,570
Selenium	MG/KG	3.9	4	1500	1.3 J	1.4	1.7 J	1.3 J
Silver	MG/KG	2	8.3	1500	1.6	3.2		
Sodium	MG/KG	-	-	-	289	707	810	641
Vanadium	MG/KG	39	-	-	18.8	22.4	26.6	23.7
Zinc	MG/KG	109	2480	10000	1,490	290	763	714
Miscellaneous Parameters								
Cyanide (total)	MG/KG	27	40	27	44.4			
Hexavalent Chromium	MG/KG	1	19	-				

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

D - Result reported from a secondary dilution analysis.
J - The reported concentration is an estimated value.
UJ - Not detected. The reported quantitation limit is an estimated value.

Only Detected Results Reported.

TABLE 6
SUMMARY OF DETECTED RESULTS IN CONCRETE CHIP SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID		CC-01	CC-02	CC-03	CC-04	CC-04
Sample ID		CC-01	CC-02	CC-03	CC-04	FD-082913-CC
Matrix		Concrete Chip	Concrete Chip	Concrete Chip	Concrete Chip	Concrete Chip
Depth Interval (ft)		-	-	-	-	-
Date Sampled		08/29/13	08/29/13	08/29/13	08/29/13	08/29/13
Parameter	**Units**					Field Duplicate (1-1)
Semivolatile Organic Compounds						
bis(2-Ethylhexyl)phthalate	UG/KG				140 J	320 J
Di-n-butylphthalate	UG/KG	91 J	98 J	93 J	88 J	120 J
Polychlorinated Biphenyls						
Aroclor 1254	UG/KG				32 J	40
Total Polychlorinated Biphenyls	UG/KG	ND	ND	ND	32	40
Metals						
Aluminum	MG/KG	9,310	10,600	9,470	9,150	8,710
Arsenic	MG/KG	7.8 J	3.6 J	5.8 J	2.7 J	2.8 J
Barium	MG/KG	63.2	60.9	76.5	52.7	60.9
Beryllium	MG/KG		0.34	0.51	0.34	0.34
Cadmium	MG/KG	0.22 J	0.24 J	9.4	9.9	8.7
Calcium	MG/KG	86,500	66,500	91,800	112,000	132,000
Chromium	MG/KG	133 J	11.8 J	257 J	5,460 J	6,540 J
Cobalt	MG/KG	5.4 J	5.0 J	6.5 J	4.0 J	3.5 J
Copper	MG/KG	39.1	25.0	100	189	257
Iron	MG/KG	12,100 J	14,700 J	14,700 J	12,100 J	10,300 J
Lead	MG/KG	21.7 J	7.6 J	23.4 J	50.1 J	178 J
Magnesium	MG/KG	7,690 J	4,380 J	5,260 J	8,170 J	10,200 J
Manganese	MG/KG	443 J	340 J	684 J	288 J	270 J
Mercury	MG/KG	0.012 J	0.0067 J	0.0046 J	0.090	0.0049 J
Nickel	MG/KG	21.2 J	12.7 J	59.3 J	257 J	315 J
Potassium	MG/KG	1,250	616	633	1,510	1,800
Silver	MG/KG	0.82 J		0.36 J	0.44 J	0.72 J

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 6
SUMMARY OF DETECTED RESULTS IN CONCRETE CHIP SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID		CC-01	CC-02	CC-03	CC-04	CC-04
Sample ID		CC-01	CC-02	CC-03	CC-04	FD-082913-CC
Matrix		Concrete Chip	Concrete Chip	Concrete Chip	Concrete Chip	Concrete Chip
Depth Interval (ft)		-	-	-	-	-
Date Sampled		08/29/13	08/29/13	08/29/13	08/29/13	08/29/13
Parameter	Units					Field Duplicate (1-1)
Metals						
Sodium	MG/KG	406	203	137	766	942
Thallium	MG/KG					0.39 J
Vanadium	MG/KG	26.4	14.3	14.4	16.1	17.6
Zinc	MG/KG	464 J	108 J	280 J	404 J	194 J
Miscellaneous Parameters						
Cyanide (total)	MG/KG		0.62 J	16.0	13.4 J	23.5 J
Hexavalent Chromium	MG/KG	19		6.4	3,600 J	1,600 J

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 6
SUMMARY OF DETECTED RESULTS IN CONCRETE CHIP SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID		CC-05
Sample ID		CC-05
Matrix		Concrete Chip
Depth Interval (ft)		-
Date Sampled		08/29/13
Parameter	**Units**	
Semivolatile Organic Compounds		
bis(2-Ethylhexyl)phthalate	UG/KG	180 J
Di-n-butylphthalate	UG/KG	94 J
Polychlorinated Biphenyls		
Aroclor 1254	UG/KG	
Total Polychlorinated Biphenyls	UG/KG	ND
Metals		
Aluminum	MG/KG	7,590
Arsenic	MG/KG	2.4 J
Barium	MG/KG	46.5
Beryllium	MG/KG	0.26
Cadmium	MG/KG	0.59
Calcium	MG/KG	159,000
Chromium	MG/KG	70.8 J
Cobalt	MG/KG	4.1 J
Copper	MG/KG	20.1
Iron	MG/KG	11,100 J
Lead	MG/KG	5.5 J
Magnesium	MG/KG	45,100 J
Manganese	MG/KG	317 J
Mercury	MG/KG	0.0060 J
Nickel	MG/KG	15.2 J
Potassium	MG/KG	1,390
Silver	MG/KG	0.31 J

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 6
SUMMARY OF DETECTED RESULTS IN CONCRETE CHIP SAMPLES
TRIPLE CITIES METAL FINISHING

Location ID		CC-05
Sample ID		CC-05
Matrix		Concrete Chip
Depth Interval (ft)		-
Date Sampled		08/29/13
Parameter	**Units**	
Metals		
Sodium	MG/KG	958
Thallium	MG/KG	
Vanadium	MG/KG	19.8
Zinc	MG/KG	160 J
Miscellaneous Parameters		
Cyanide (total)	MG/KG	3.0
Hexavalent Chromium	MG/KG	30

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 7
SUMMARY OF INVESTIGATION-DERIVED WASTE SAMPLE RESULTS
TRIPLE CITIES METAL FINISHING

Location ID			IDW-GW	IDW-SO
Sample ID			IDW-GW	IDW-SO
Matrix			Groundwater	Soil
Depth Interval (ft)			-	-
Date Sampled			08/30/13	08/30/13
Parameter	**Units**	**Criteria***		
TCLP Volatile Organic Compounds				
1,1-Dichloroethene	MG/L	0.7	0.013	0.005 U
1,2-Dichloroethane	MG/L	0.5	0.005 U	0.005 U
Benzene	MG/L	0.5	0.005 U	0.0019 J
Carbon tetrachloride	MG/L	0.5	0.005 U	0.005 U
Chlorobenzene	MG/L	100	0.005 U	0.005 U
Chloroform	MG/L	6	0.005 U	0.005 U
Methyl ethyl ketone (2-Butanone)	MG/L	200	0.005 U	0.005 U
Tetrachloroethene	MG/L	0.7	0.005 J	0.005 U
Trichloroethene	MG/L	0.5	0.23 D	0.0036 J
Vinyl chloride	MG/L	0.2	0.005 U	0.005 U
TCLP Semivolatile Organic Compounds				
1,4-Dichlorobenzene	MG/L	7.5	0.033 U	0.033 U
2,4,5-Trichlorophenol	MG/L	400	0.067 U	0.067 U
2,4,6-Trichlorophenol	MG/L	2	0.033 U	0.033 U
2,4-Dinitrotoluene	MG/L	0.13	0.033 U	0.033 U
2-Methylphenol (o-cresol)	MG/L	200	0.033 U	0.033 U
4-Methylphenol	MG/L	200	0.033 U	0.033 U
Hexachlorobenzene	MG/L	0.13	0.033 U	0.033 U
Hexachlorobutadiene	MG/L	0.5	0.033 U	0.033 U
Hexachloroethane	MG/L	3	0.033 U	0.033 U
Nitrobenzene	MG/L	2	0.033 U	0.033 U
Pentachlorophenol	MG/L	100	0.067 U	0.067 U

*Criteria- Hazardous Waste Criteria, 40 CFR Part 261, Subpart C - Characteristics of Hazardous Waste

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit.

J - The reported concentration is an estimated value.

E - The serial dilution was above QC limits.

Detection Limits shown are PQL

TABLE 7
SUMMARY OF INVESTIGATION-DERIVED WASTE SAMPLE RESULTS
TRIPLE CITIES METAL FINISHING

Location ID			IDW-GW	IDW-SO
Sample ID			IDW-GW	IDW-SO
Matrix			Groundwater	Soil
Depth Interval (ft)			-	-
Date Sampled			08/30/13	08/30/13
Parameter	**Units**	**Criteria***		
TCLP Semivolatile Organic Compounds				
Pyridine	MG/L	5	0.067 U	0.067 U
TCLP Pesticide Organic Compounds				
Endrin	MG/L	0.02	0.00033 U	0.00033 U
gamma-BHC (Lindane)	MG/L	0.4	0.00017 U	0.00017 U
Heptachlor	MG/L	0.008	0.00017 U	0.00017 U
Heptachlor epoxide	MG/L	0.008	0.00017 U	0.00017 U
Methoxychlor	MG/L	10	0.0017 U	0.0017 U
Technical Chlordane	MG/L	0.03	0.0083 U	0.0083 U
Toxaphene	MG/L	0.5	0.017 U	0.017 U
TCLP Herbicides				
2,4,5-TP (Silvex)	MG/L	1	0.00033 U	0.00033 U
2,4-D	MG/L	10	0.0033 U	0.0033 U
TCLP Metals				
Arsenic	MG/L	5	0.02 U	0.02 U
Barium	MG/L	100	0.101 J	1.21 E
Cadmium	MG/L	1	0.005 U	0.019
Chromium	MG/L	5	0.252	0.02 U
Lead	MG/L	5	0.01 U	0.01 U
Mercury	MG/L	0.2	0.0002 U	0.0002 U
Selenium	MG/L	1	0.03 U	0.03 U
Silver	MG/L	5	0.03 U	0.03 U

*Criteria- Hazardous Waste Criteria, 40 CFR Part 261, Subpart C - Characteristics of Hazardous Waste

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit.

J - The reported concentration is an estimated value.

E - The serial dilution was above QC limits.

Detection Limits shown are PQL

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[LOCID] LIKE 'IDW*'

TABLE 7
SUMMARY OF INVESTIGATION-DERIVED WASTE SAMPLE RESULTS
TRIPLE CITIES METAL FINISHING

Location ID			IDW-GW	IDW-SO
Sample ID			IDW-GW	IDW-SO
Matrix			Groundwater	Soil
Depth Interval (ft)			-	-
Date Sampled			08/30/13	08/30/13
Parameter	**Units**	**Criteria***		
RCRA Characteristics				
Corrosivity (pH)	S.U.	2-12.5	7.0	8.2
Ignitability	DEG F	<140	200 U	200 U
Cyanide, Reactive	MG/L	250	0.020 U	NA
Reactive Cyanide	MG/KG	250	NA	1.2 U
Reactive Sulfide	MG/KG	500	NA	1.8
Sulfide, Reactive	MG/L	500	0.030 U	NA

*Criteria- Hazardous Waste Criteria, 40 CFR Part 261, Subpart C - Characteristics of Hazardous Waste

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit.

J - The reported concentration is an estimated value.

E - The serial dilution was above QC limits.

Detection Limits shown are PQL

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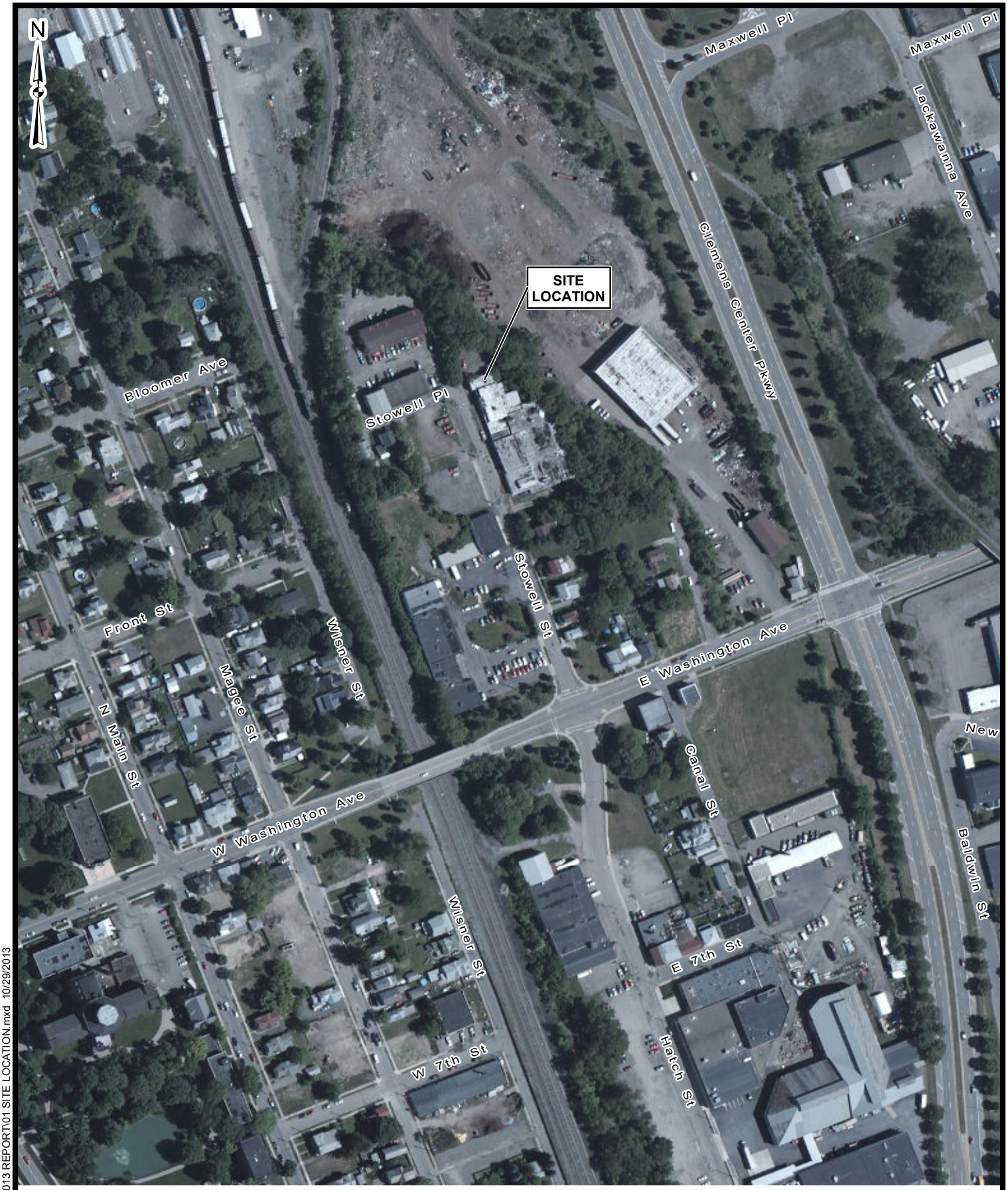
FIGURES



Source: ESRI World Imagery

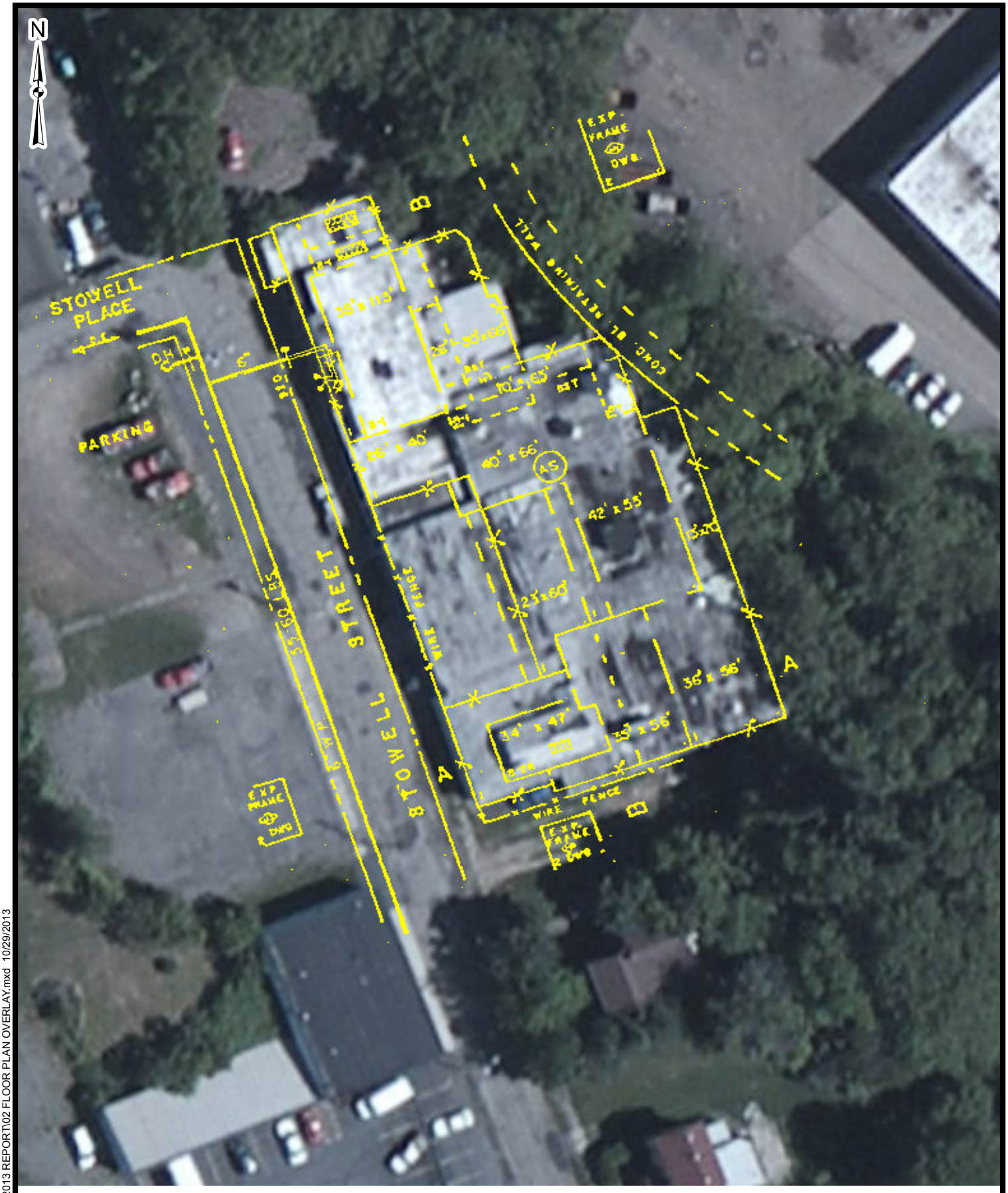
250 0 250 Feet

URS

TRIPLE CITIES METAL FINISHING
ELMIRA, NEW YORK
SITE LOCATION

FIGURE 1

I:\11176967\DB\GIS\MAPS\SC 2013 REPORT\01 SITE LOCATION.mxd 10/29/2013



Source: ESRI World Imagery

50 0 50 Feet

URS

TRIPLE CITIES METAL FINISHING
ELMIRA, NEW YORK
FLOOR PLAN OVERLAY

FIGURE 2

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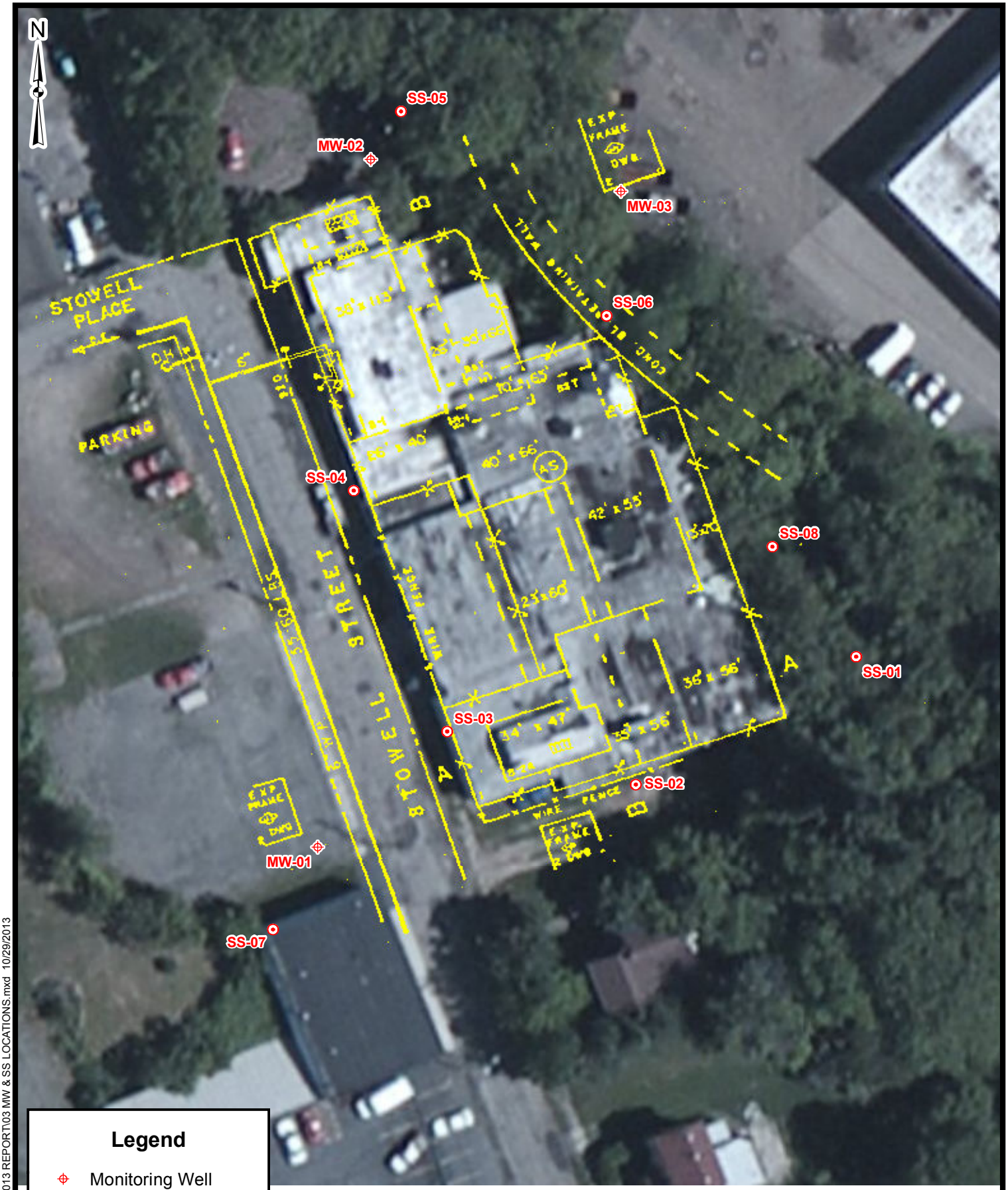

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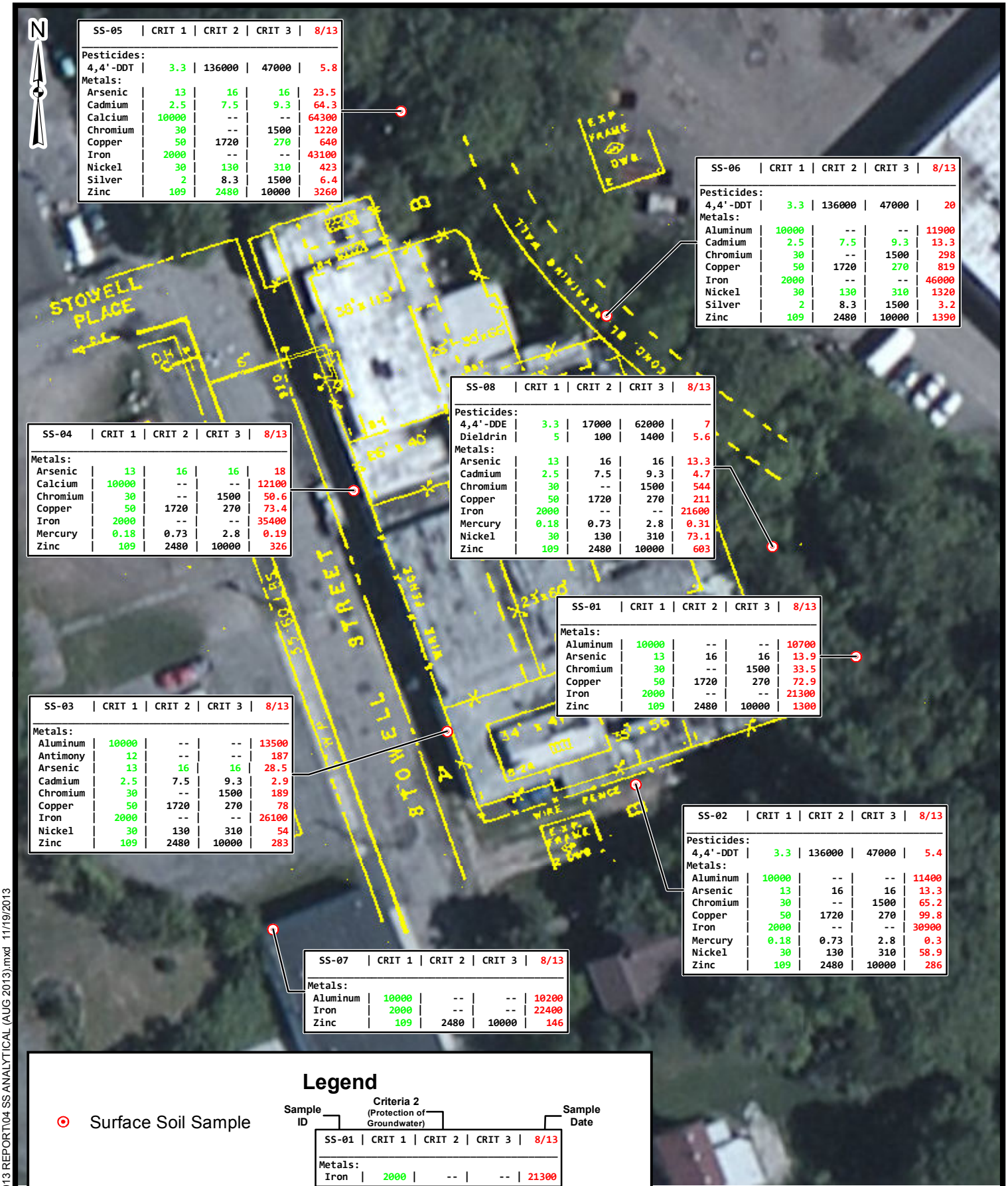
URS

TRIPLE CITIES METAL FINISHING
ELMIRA, NEW YORK
MONITORING WELL & SURFACE SOIL
SAMPLE LOCATIONS

FIGURE 3



SS-05	CRIT 1	CRIT 2	CRIT 3	8/13
Pesticides:				
4,4'-DDT	3.3	136000	47000	5.8
Metals:				
Arsenic	13	16	16	23.5
Cadmium	2.5	7.5	9.3	64.3
Calcium	10000	--	--	64300
Chromium	30	--	1500	1220
Copper	50	1720	270	640
Iron	2000	--	--	43100
Nickel	30	130	310	423
Silver	2	8.3	1500	6.4
Zinc	109	2480	10000	3260

SS-06	CRIT 1	CRIT 2	CRIT 3	8/13
Pesticides:				
4,4'-DDT	3.3	136000	47000	20
Metals:				
Aluminum	10000	--	--	11900
Cadmium	2.5	7.5	9.3	13.3
Chromium	30	--	1500	298
Copper	50	1720	270	819
Iron	2000	--	--	46000
Nickel	30	130	310	1320
Silver	2	8.3	1500	3.2
Zinc	109	2480	10000	1390

SS-08	CRIT 1	CRIT 2	CRIT 3	8/13
Pesticides:				
4,4'-DDE	3.3	17000	62000	7
Dieldrin	5	100	1400	5.6
Metals:				
Arsenic	13	16	16	13.3
Cadmium	2.5	7.5	9.3	4.7
Chromium	30	--	1500	544
Copper	50	1720	270	211
Iron	2000	--	--	21600
Mercury	0.18	0.73	2.8	0.31
Nickel	30	130	310	73.1
Zinc	109	2480	10000	603

SS-04	CRIT 1	CRIT 2	CRIT 3	8/13
Metals:				
Arsenic	13	16	16	18
Calcium	10000	--	--	12100
Chromium	30	--	1500	50.6
Copper	50	1720	270	73.4
Iron	2000	--	--	35400
Mercury	0.18	0.73	2.8	0.19
Zinc	109	2480	10000	326

SS-01	CRIT 1	CRIT 2	CRIT 3	8/13
Metals:				
Aluminum	10000	--	--	10700
Arsenic	13	16	16	13.9
Chromium	30	--	1500	33.5
Copper	50	1720	270	72.9
Iron	2000	--	--	21300
Zinc	109	2480	10000	1300

SS-03	CRIT 1	CRIT 2	CRIT 3	8/13
Metals:				
Aluminum	10000	--	--	13500
Antimony	12	--	--	187
Arsenic	13	16	16	28.5
Cadmium	2.5	7.5	9.3	2.9
Chromium	30	--	1500	189
Copper	50	1720	270	78
Iron	2000	--	--	26100
Nickel	30	130	310	54
Zinc	109	2480	10000	283

SS-02	CRIT 1	CRIT 2	CRIT 3	8/13
Pesticides:				
4,4'-DDT	3.3	136000	47000	5.4
Metals:				
Aluminum	10000	--	--	11400
Arsenic	13	16	16	13.3
Chromium	30	--	1500	65.2
Copper	50	1720	270	99.8
Iron	2000	--	--	30900
Mercury	0.18	0.73	2.8	0.3
Nickel	30	130	310	58.9
Zinc	109	2480	10000	286

SS-07	CRIT 1	CRIT 2	CRIT 3	8/13
Metals:				
Aluminum	10000	--	--	10200
Iron	2000	--	--	22400
Zinc	109	2480	10000	146

Legend

Surface Soil Sample

Sample ID | Criteria 2 (Protection of Groundwater) | Sample Date

SS-01	CRIT 1	CRIT 2	CRIT 3	8/13
Metals:				
Iron	2000	--	--	21300

Compound | Criteria 1 (Unrestricted) | Criteria 3 (Commercial) | Result (Pesticides in µg/kg; Metals in mg/kg)

Criteria: 6NYCRR Part 375-6, CP-51
Source: ESRI World Imagery
Notes: Green denotes criteria exceeded by sample
Red denotes sample result exceeds one or more criteria

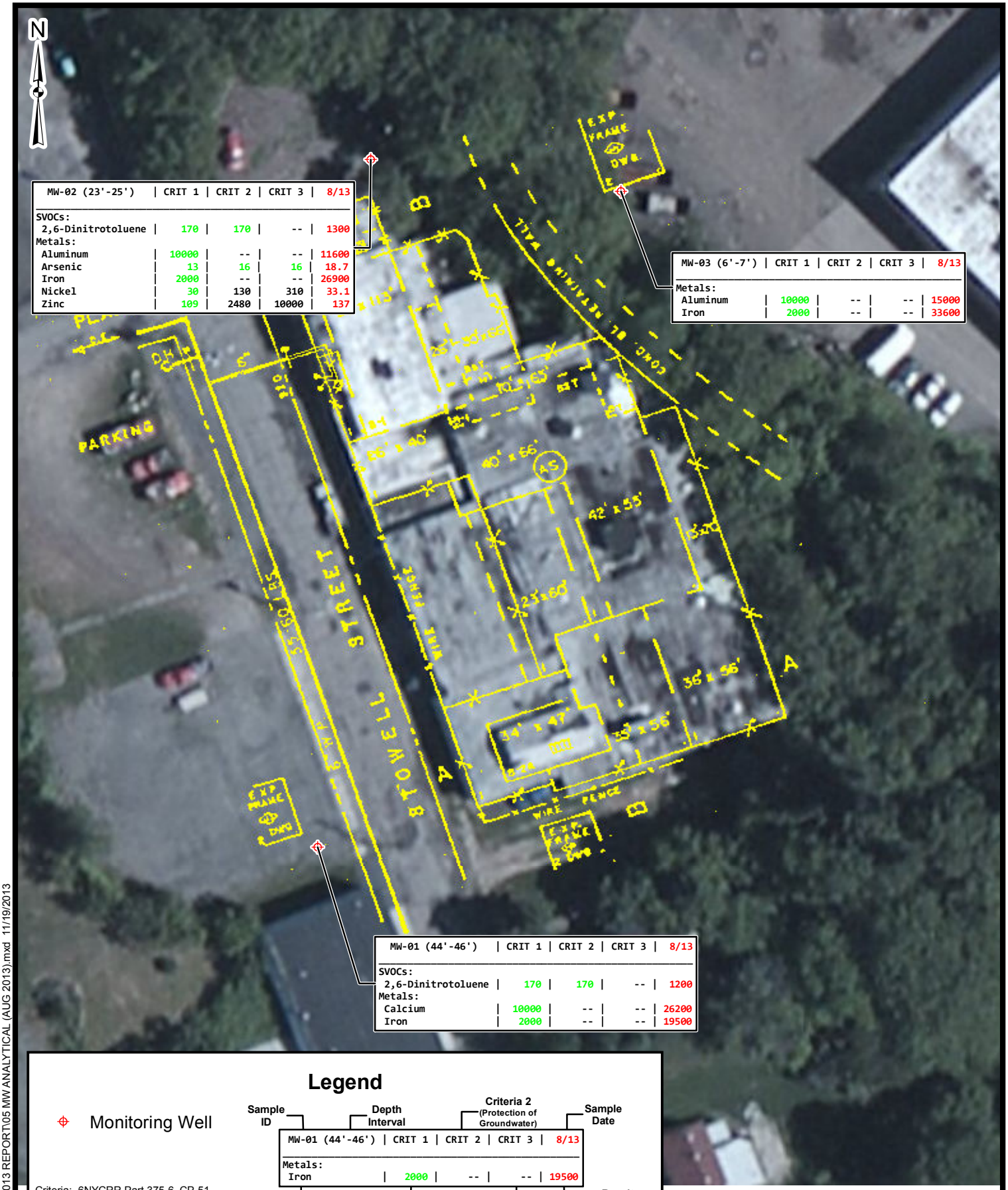
50 0 50 Feet

URS

TRIPLE CITIES METAL FINISHING
ELMIRA, NEW YORK
SURFACE SOIL ANALYTICAL RESULTS EXCEEDING GUIDANCE CRITERIA (AUGUST 2013)

FIGURE 4

I:\11176967\DB\GIS\MAPS\SC 2013 REPORT\04 SS ANALYTICAL (AUG 2013).mxd 11/19/2013



Legend

Monitoring Well

Sample ID | Depth Interval | Criteria 2 (Protection of Groundwater) | Sample Date

MW-01 (44'-46') | CRIT 1 | CRIT 2 | CRIT 3 | 8/13

Metals:
Iron | 2000 | -- | -- | 19500

Compound | Criteria 1 (Unrestricted) | Criteria 3 (Commercial) | Result (SVOCs in µg/kg; Metals in mg/kg)

Criteria: 6NYCRR Part 375-6, CP-51
Source: ESRI World Imagery
Notes: Green denotes criteria exceeded by sample
Red denotes sample result exceeds one or more criteria

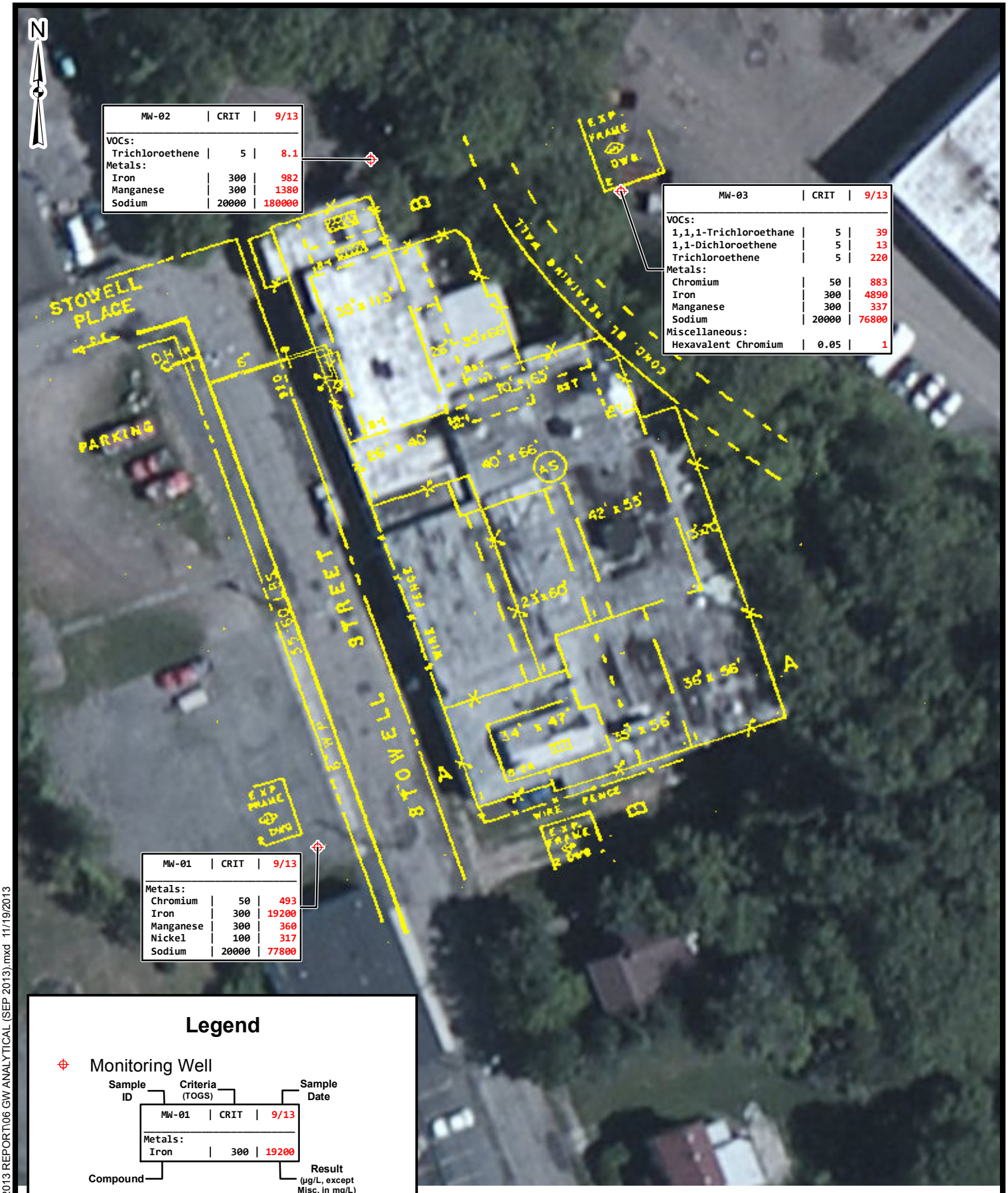
50 0 50 Feet

URS

TRIPLE CITIES METAL FINISHING
ELMIRA, NEW YORK
MONITORING WELL SOIL ANALYTICAL RESULTS EXCEEDING GUIDANCE CRITERIA (AUGUST 2013)

FIGURE 5

I:\11176967\DB\GIS\MAPS\SC 2013 REPORT\05 MW ANALYTICAL (AUG 2013).mxd 11/19/2013

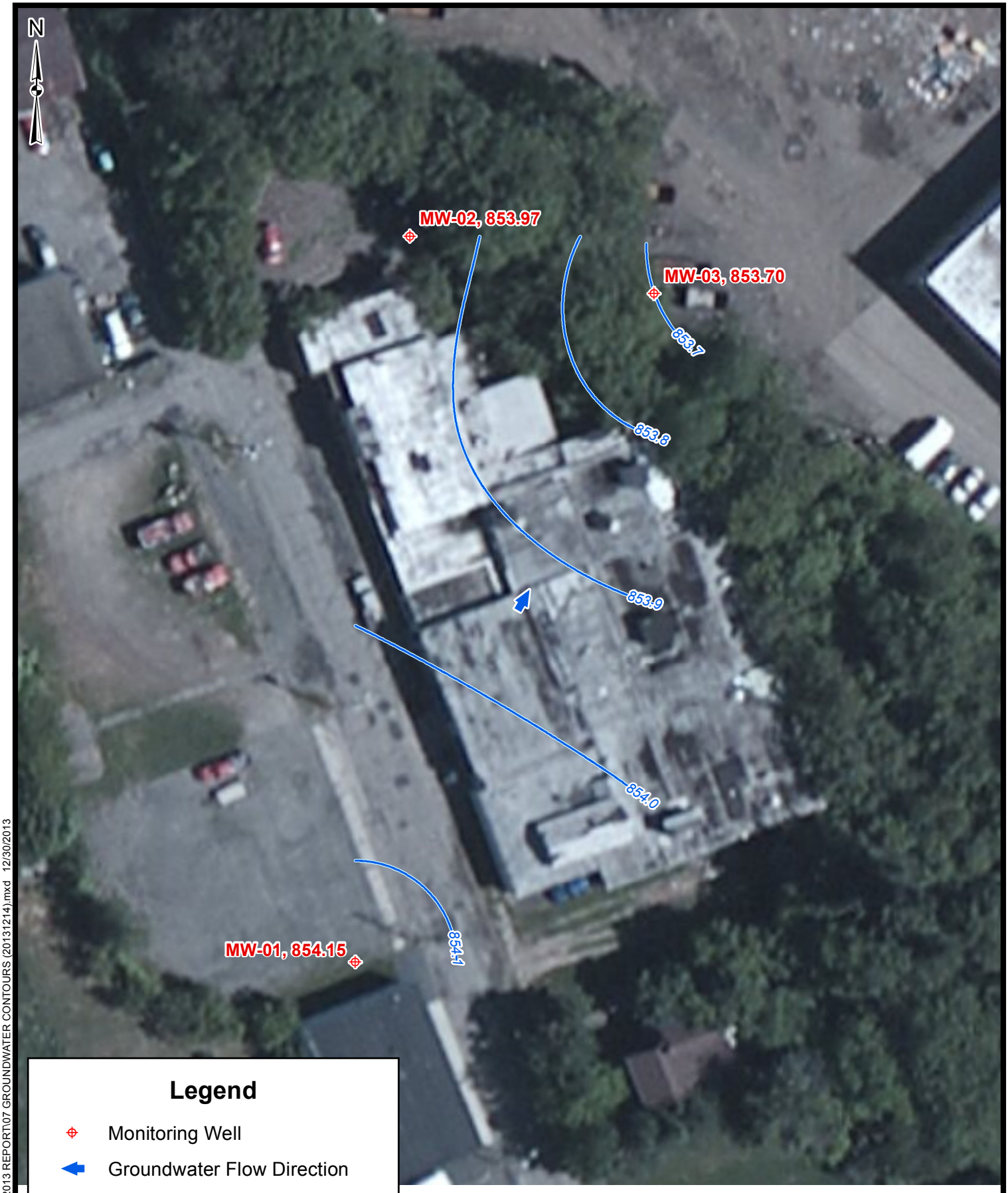


I:\11176967\DB\GIS\MAPS\SC 2013 REPORT\06 GW ANALYTICAL (SEP 2013).mxd 11/19/2013

URS

TRIPLE CITIES METAL FINISHING
ELMIRA, NEW YORK
GROUNDWATER ANALYTICAL RESULTS
EXCEEDING GUIDANCE CRITERIA (SEPTEMBER 2013)

FIGURE 6

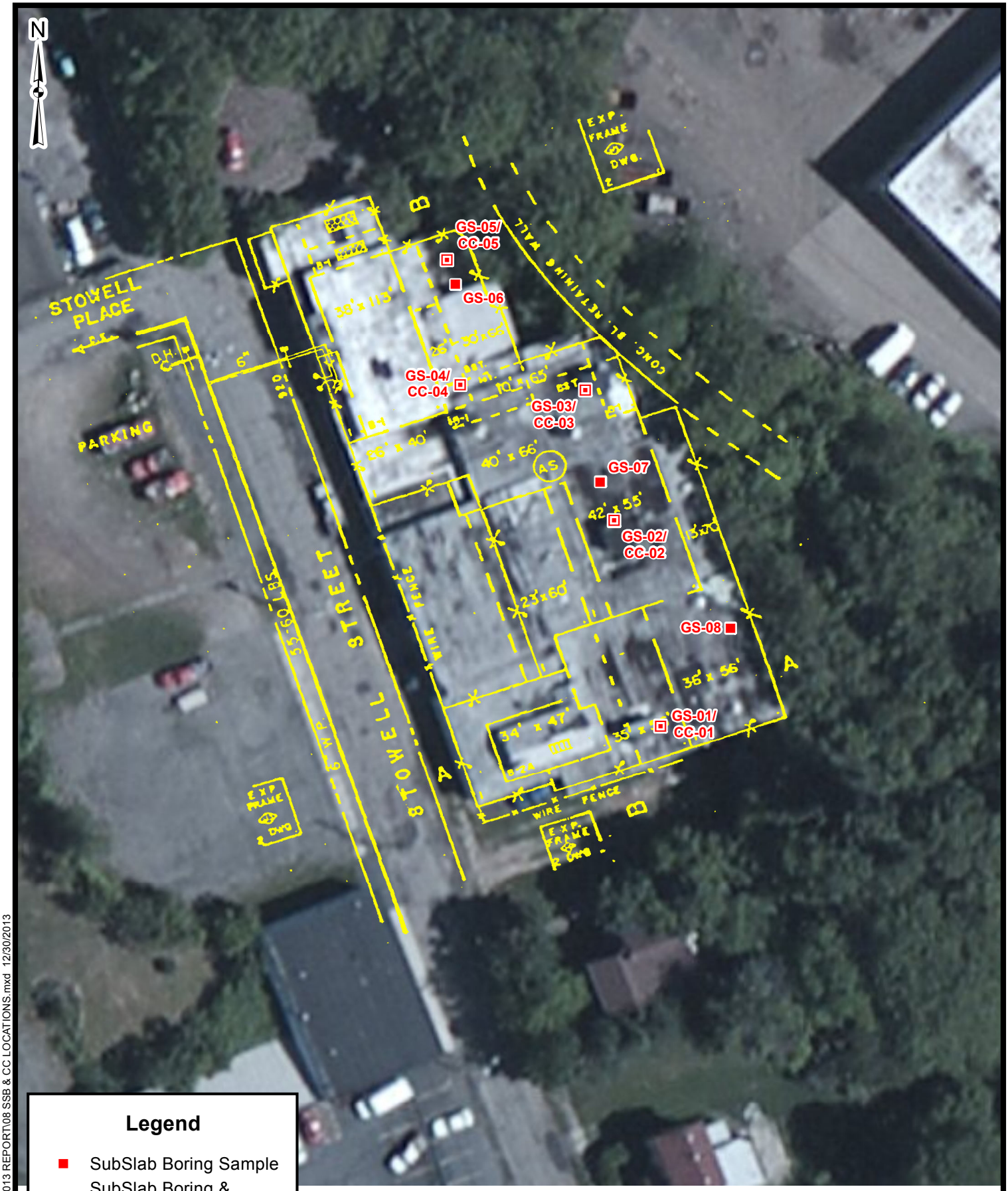


I:\11176967\DB\GIS\MAPS\SC 2013 REPORT\07 GROUNDWATER CONTOURS (20131214).mxd 12/30/2013

URS

TRIPLE CITIES METAL FINISHING
ELMIRA, NEW YORK
GROUNDWATER CONTOURS
DECEMBER 14, 2013

FIGURE 7



Legend

- SubSlab Boring Sample
- SubSlab Boring & Concrete Chip Sample

Source: ESRI World Imagery

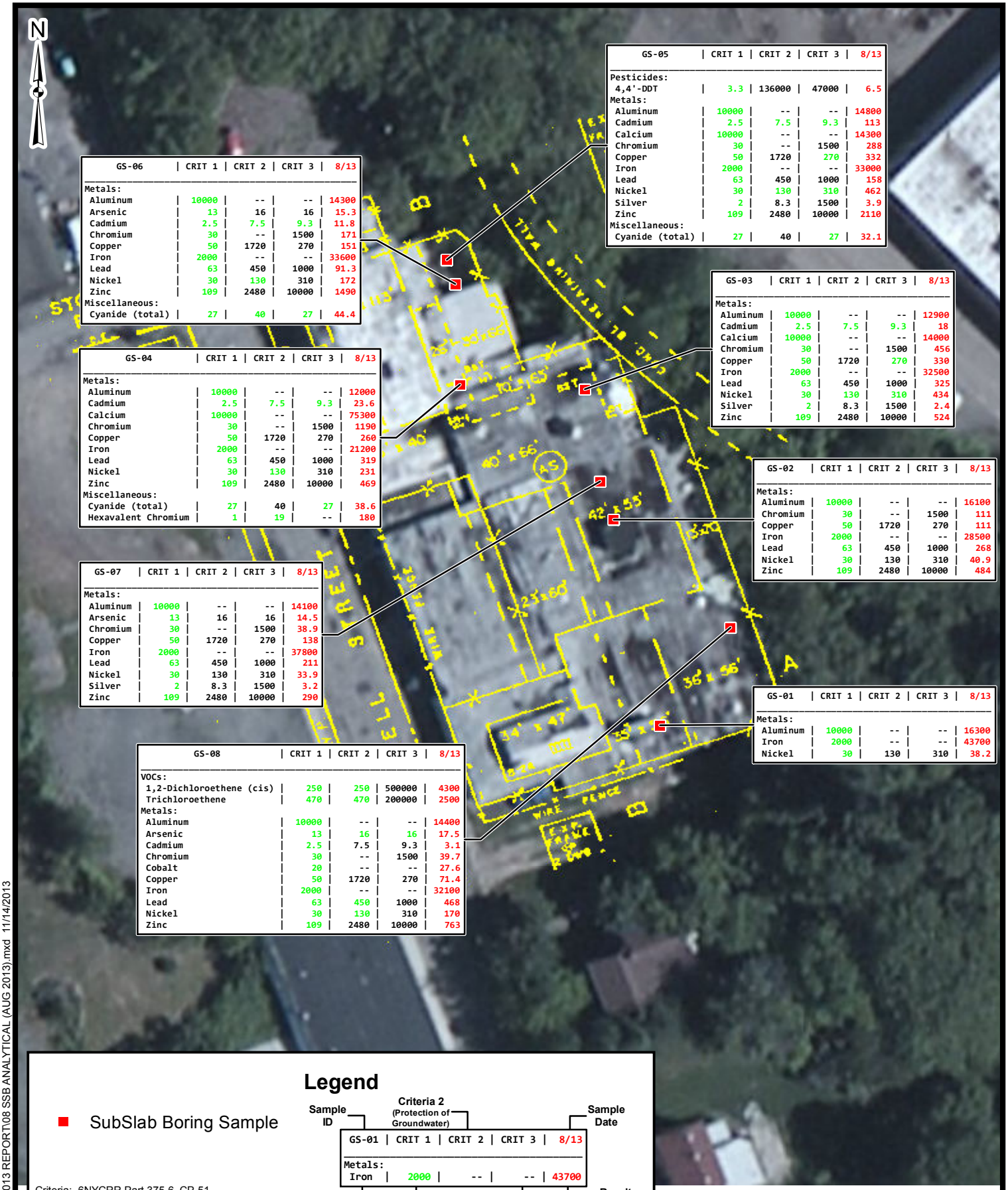
50 0 50 Feet

URS

TRIPLE CITIES METAL FINISHING
ELMIRA, NEW YORK
SUBSLAB BORING & CONCRETE CHIP
SAMPLE LOCATIONS

FIGURE 8

I:\11176967\DB\GIS\MAPS\SC 2013 REPORT\08 SSB & CC LOCATIONS.mxd 12/30/2013



I:\11176967\DB\GIS\MAPS\SC 2013 REPORT\08 SSB ANALYTICAL (AUG 2013).mxd 11/14/2013

URS

TRIPLE CITIES METAL FINISHING
ELMIRA, NEW YORK
SUBSLAB BORING ANALYTICAL RESULTS EXCEEDING GUIDANCE CRITERIA (AUGUST 2013)

FIGURE 9

ATTACHMENT 1

FIELD NOTES

CONTENTS

PAGE	REFERENCE	DATE

Location Elmira - Triple Cities Date 8/20/13

Project / Client 11176967.00002

Weather - Partly Sunny, Scattered Showers ~75°

1000 - Arrive onsite @ Elmira Triple Cities Site
URS Personnel - Jon Sundquist - PM
Tim Ifkovich - Geologist
- Conduct Site walkover

1030 - Meet w/ representatives from Schulman (Recycling), David Leonardo - discuss the drilling that will be done to install a monitoring well on their property.

1045 - Meet w/ Gesol (?) current owner of the Triple Cities building. check out inside of building. he will move a truck & trailer to allow access inside w/ a Bobcat geoprobe rig

~~1215~~ 1130 - Break for lunch

1215 - Begin to collect surface soil samples around the building
- SS-01 - DK Brn sandy topsoil, w/ organics (roots), gravel, moist
1225 - SS-02 - DK Brn, sandy topsoil w/ organics (roots), little gravel, moist
also collected Field Dup.

Location Elmira Triple Cities Date 8/26/13

Project / Client 111769670000 2 NYSDEC

1235 - Collected surface soil sample @ SS-03
Lt - Dk Brown sandy topsoil, w/ little clay, moist, organics (roots), gravel
also collected MS/MSD

1250 - collected SS-04, Dk Brown sandy topsoil organics (roots), gravel, moist

1300 - collected SS-05, Dk Brown sandy topsoil organics (roots), gravel, moist

1310 - collected SS-06, Dk Brown, sandy topsoil organics (roots), gravel, moist

1340 - JS offsite

1545 - Drop off cooler @ Fedex

Samples will be analyzed for:
TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals, Mercury, Cyanide, Hexavalent Chromium. by Spectrum Analytical

Location Elmira Triple Cities Date 8/27/13

Project / Client 111769670000 2 NYSDEC

0800 - URS onsite - Tim Ifkovic
Weather - Partly Cloudy ~75°
- will meet w/ drillers from SJB to begin to drill & install 3 monitoring wells around the site. Continuous split spoon sampling will be performed until we find the water table. A 15' screen (2" ø sch 40 PVC) will be installed straddling the water table, 5' above, 10' below. A soil sample will be collected from the interval w/ the highest PID or just above the water table. The sample will be sent to Spectrum Analytical in North Kingstown, RI, for analysis:
TCL VOC, TCL SVOCs, Pesticides, PCBs, TAL Metals, Mercury, Cyanide, Hex. Chrom.

1000 - SJB arrives onsite
Driller - Bryan Delude Helper - Dan Delude
- Held HSS meeting. Breathing zone will be monitored w/ a MultiRAE PID5 meter from Pine Environmental

Location: Elmira Triple Cities Date: 8/27/13

Project / Client: 111769670000 2 NYSDEC

1000 - Drillers informed that they do not have all their equipment, only have 2 drums and missing PVC riser & decon unit.

1015 - Drillers offsite for gloves & early lunch

1050 - Return to site, begin to setup on MW-01

1100 - Begin to sample MW-01

- Drillers are using a Model TCX-850 track rig to drill the wells w/ a HSA

1230 - Geosol on site, moved truck & trailer out of way on north side of building

1430 - Geosol offsite

1605 - Drilled & sampled to 42', have not found water yet

- spoke w/ Jon Sundquist, will keep drilling to water, SJB needs to pick up more augers to keep drilling

1615 - Drillers offsite, will bring more 5' auger sections, Drums, PVC Riser

Location: Elmira Triple Cities 8/27/13

Project / Client: 111769670000 2 NYSDEC

MW-01

SS #	Depth	Rec.	Desc.	PID
1	0-2	0.5'	Brown sand, gravel Dry	0.0
2	2-4	1.6'	Lt Brown vf sand & some gravel silt, trace clay, Dry	0.0
3	4-6	1.6'	SAA	0.0
4	6-8	1.3'	SAA	0.0
5	8-10	2'	Lt Brown silt, vf sand & gravel, Dry	0.0
6	10-12	1.6'	Lt Brn, silt & vf sand, some gravel, dry	0.0
7	12-14	1.7'	SAA	0.0
8	14-16	2'	Gray SAA	0.0
9	16-18	2'	SAA	0.0
10	18-20	1.5'	SAA	0.0

Elmira Triple Cities 8/27/13
11176967.00002 / NYSDEC

MW-01 cont.

SS#	Depth	Rec.	Desc.	PID
11	20-22	1.5'	Gray vf sand & silt Dry	0.0
12	22-24	0.5'	Gray vf sand & silt + gravel, Dry	0.0
13	24-26	1.5'	Gray vf sand & silt, little gravel, Dry	0.0
14	26-28	1.6'	SAA, some gravel	0.0
15	28-30	1.6'	Gray, vf sand, silt & gravel, dry	0.0
16	30-32	1.5'	SAA	0.0
17	32-34	2'	SAA	0.0
18	34-36	2'	SAA	0.0
19	36-38	1.5'	Gray vf sand & silt, little gravel, Moist	0.0

Elmira Triple Cities 8/27/13 / 8/28/13
11176967.00002 / NYSDEC

MW-01 cont

	SS#	Depth	Rec	Desc.	PID
	20	38-40		No Recovery	
8/27/13	21	40-42	1.5'	Gray vf sand & silt, some gravel, moist	0.0
	22	42-44	0.7	Gray vf sand & silt, some gravel moist	0.0
8/28/13	23	44-46	1'	Gray vf sand & silt moist	0.0

EOSampling

will set well 35' - 50' screen
0 35' Riser
sand to 33'
bentonite to 31'

I:\11176967\Field Work\Monitoring Well Purge Logs

Location: Elmira Triple Cities Date: 8/28/13

Project/Client: 111.76967.00007 NYSDEC

Weather - Cloudy, Muggy 80°

1015- SSB onsite, Driller- Brian Delude
Helper - Dan Delude
- Held H&S meeting.
- Will continue to drill @ MW-01 w/ continuous s/s sampling to the water table

1030- DEC onsite Ed Hampton & Dave
- Pulled up rods out of hole, rods were wet @ 25' but sampling showed no wetness.
- s/s sample from 42-44 showed 1' of wet slough out sample (0.7') was only moist. Collected sample from 44-46 (Tim) in accordance w/ Ed

1057- In discussion w/ Ed, will set the screen 35-50' (See page 7, 8 & 9)

1100- Drillers begin to set the well. Take a site walkthrough through the building to mark out Geoprobe & Concrete chip samples.

1225- Collected SS-07 sample near MW-01 as a background surface soil sample

1245- DEC offsite

1250- Collected surface soil sample @ SS-08

1330- Spoke w/ Jon Sundquist. For MW-02 (North side of building) we will collect

Location: Elmira Triple Cities Date: 8/28/13

Project/Client:

a s/s sample every 5' until 20', then continue w/ continuous s/s sampling until water.

1345- Lunch

1415- Return to work, MW-01 was grouted up, will set flush mount tomorrow.

1440- Begin to drill/sample MW-02.

1540- Found water table ~25'.
- will drill to 35 & set the well (see page 12)
- Collected soil sample from 23-25' as well as MS/MSD & Equipment Blank

1615- Drillers will set well in the morning, offsite

Elmira - Triple Cities 8/28/13
11176967.00002 / NYSDEC

Weather - Cloudy, 80°
0800 - URS onsite - Tim Ifkovich
0815 - SSB onsite Driller - Brian Delude
Helper - Dan Delude
- Held H&S meeting,
will continue to set well MW-02
1000 - Natures Way onsite
Dan McDavid (URS) onsite
Dan will work w/ Natures Way to
collect 8 geoprobe samples &
5 concrete chip samples from inside
the building. Drillers will use a
skid steer ~~mounted unit~~ w/ a geoprobe
attached, to grab a sample 0-4'
Holes will be cored & 5 of them
will be kept for analysis
1215 - Drillers head to Lowes for more
concrete & take lunch
1245 - Return to the site.
- Move to MW-03 & begin
drilling w/ cont. s/s sampling
1330 - Found water table ~6', will drill
& set the well @ 20' (see page 15)

Elmira - Triple Cities 8/28/13
11176967.00002 / NYSDEC

MW-02

SS #	Depth	Rec.	Desc.	P.I.D
1	0-2	0.5'	3" Asphalt, Fill - sand, glass, gravel dry, Gray	0.0
2	5-7	0.6'	Fill Blk-Red, sand, glass, brick fragments, dry	0.0
3	10-12	0.4'	Fill, SAA	0.0
4	15-17	0.3'	Fill, Brown SAA	0.0
5	20-22	1'	~~Fill~~ Brown vf sand, silt & gravel, moist	0.0
6	22-24	0.8'	SAA	0.0
7	24-26	1.2'	Brown vf sand & silt, some gravel wet @ 25'	0.0
8	26-28	0.3'	SAA, wet	0.0

Will set screen 20-35'
Sand - 18-35'
Bent - 16-18'

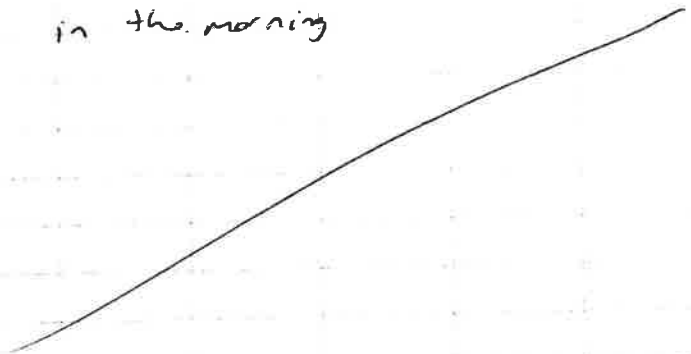
Location Elmira - Triple Cities Date 8/29/13

Project / Client 111769G7.00002 NYSDEC

1600- Set MW-03 (stick up) w/ 2 Bollards
Drillers will return tomorrow to max drums & finish setting MW-01 (flush mount)
- Note - Field Dup for Geoprobe Sample - GS-08
Field Dup for Concrete Chip - CC-01

~~1705~~ - SJB offsite
Dan McDaid offsite to Fedex

1715- Attempted to develop MW-01.
Purged 6 gal & well went dry.
W.L. was @ 23.39 initially, w/ DTB @ 47' w/ soft bottom.
Lots of silt is in the bottom of the well. well has very slow recharge (0.1' ≈ 1.5 min)
- will let recharge & purge again in the morning



Location Elmira - Triple Cities Date 8/29/13

Project / Client 111769G7.00002 NYSDEC

MW-03

SS#	Depth	Rec.	Desc.	PID
1	0-2	1.6'	0-0.8' - DK Brn V Fine Sand, Silt, gravel, Moist, organics	0.0
			0.8-1.6 Gray Same VF sand, silt, gravel moist	0.0
2	2-4	0.3'	Gray VF sand & silt Moist	0.0
3	4-6	1.4'	Brn - Gray VF sand & S.H, little clay, moist	0.0
4	6-8	0.8'	SAA, wet @ 7'	0.0

Will set screen 5-20'
sand 3-20'
bentonite 1-3'

URS

Page 1 of 1

Job TRIPLE CITIES - NYSDEC | Project No. | Sheet ___ of ___

Description ELEVATION SURVEY | Computed by RJM | Date 9/5/13

Checked by SCM | Date 9/6/13

Reference

BS	INT	FS	HI	ELEV	REMARKS	
3.26			103.26	100.00	ARBITRARY DATUM = 100.00' MH-02	
	3.16			100.10	MH-01 (Stowell St/Stowell Pl)	
	2.39			100.87	MW-01 GRD	
	2.67			100.59	MW-01 RISER	
	10.88			92.38	MW-02 GRD	
	7.75			95.51	MW-02 RISER	
0.27		3.26	100.27	100.00	MH-02/TP #1	
0.43		7.67	93.03	92.60	TP #2	
0.62		14.10	79.55	78.93	TP #3	
5.41		8.86	76.10	70.69	TP #4	
	6.34			69.76	MW-03 GRD	
	3.03			73.07	MW-03 RISER	
8.64		5.42	79.32	70.68	TP #5	
14.27		0.40	93.19	78.92	TP #6	
6.76		0.90	99.05	92.29	TP #7	
6.84		0.98	104.91	98.07	TP #8	
	4.88			100.03	MH-02	CLOSE PT
	4.01			100.90	MW-01 GRD	CLOSE PT
					+0.03' @ END OF LOOP	

Monitoring Well Survey Results
Triple Cities Metal Finishing
Elmira, NY

LOCATION	NORTHING (Y)	EASTING (X)	GROUND	CASING	RISER	DTW 12/14/13	NOTES
MW-01	765596.785	758415.946	887.298	NA	886.988	32.84	flushmount
MW-02	765881.292	758437.367	878.856	882.106	881.966	28.00	stick-up
MW-03	765858.891	758533.056	856.438	859.908	859.728	6.03	stick-up

X/Y IN STATE PLANE NY CENTRAL NAD 83
Z IN NAVD 88

ATTACHMENT 2

PHOTOGRAPHS

TRIPLE CITIES METALS FINISHING
PHOTOGRAPHIC LOG
ELMIRA, NEW YORK

Photo 1: 08/26/13 – Triple Cities Metals Finishing building – south end.

Photo 2: 08/26/13 – Triple Cities Metals Finishing building – north end.

TRIPLE CITIES METALS FINISHING
PHOTOGRAPHIC LOG
ELMIRA, NEW YORK

Photo 3: 08/26/13 – Drilling equipment.

Photo 4: 08/26/13 – Setting up drill rig at location MW-01.

TRIPLE CITIES METALS FINISHING
PHOTOGRAPHIC LOG
ELMIRA, NEW YORK

Photo 5: 08/27/13 – Drilling at location MW-01.

Photo 6: 08/29/13 – Monitoring well MW-01.

TRIPLE CITIES METALS FINISHING
PHOTOGRAPHIC LOG
ELMIRA, NEW YORK

Photo 7: 09/05/13 – Equipment setup at monitoring well MW-01.

Photo 8: 08/28/13 – Drilling at location MW-02.

TRIPLE CITIES METALS FINISHING
PHOTOGRAPHIC LOG
ELMIRA, NEW YORK

Photo 9: 08/29/13 – Well development at monitoring well location MW-02.

Photo 10: 09/05/13 – Sampling equipment setup at monitoring well location MW-02.

TRIPLE CITIES METALS FINISHING
PHOTOGRAPHIC LOG
ELMIRA, NEW YORK

Photo 11: 08/28/13 – Drilling at location MW-03.

Photo 12: 08/29/13 – 55-gal IDW drums at location MW-03.

TRIPLE CITIES METALS FINISHING
PHOTOGRAPHIC LOG
ELMIRA, NEW YORK

Photo 13: 09/05/13 – Sampling equipment setup at monitoring well location MW-03.

Photo 14: 08/29/13 – Hydraulic direct-push unit (geoprobe) location GS-01/CC-01.

TRIPLE CITIES METALS FINISHING
PHOTOGRAPHIC LOG
ELMIRA, NEW YORK

Photo 15: 08/29/13 – Hydraulic direct-push unit (geoprobe) location GS-02/CC-02.

Photo 16: 08/29/13 – Hydraulic direct-push unit (geoprobe) location GS-04/CC-04.

Photo 17: 08/29/13 – Hydraulic direct-push unit (geoprobe) location GS-06.

Photo 18: 08/29/13 – Hydraulic direct-push unit (geoprobe) location GS-08.

TRIPLE CITIES METALS FINISHING
PHOTOGRAPHIC LOG
ELMIRA, NEW YORK

Photo 19: 08/30/13 – Drum staging area – SW corner of TCMF building.

ATTACHMENT 3

DATA USABILITY SUMMARY REPORT (DUSR)

(on CD-ROM)

ATTACHMENT 4

DAILY DRILLING RECORDS

DAILY DRILLING RECORD

URS Corporation

PROJECT TITLE: Elmira - Triple Cities DATE: 8/27/13

CLIENT: NYSDEC CONTRACTOR: SJB

FROM	TO	PRODUCTIVE HOURS	ACTIVITIES/COMMENTS
1000	1015	0.25	Health & Safety
1015	1045	—	Lunch
1045	1600	5.25	Begin to drill @ MW-01
			Drilled 0-42 w/ HSA and
			continuous split spoon samples
			(21 Total)
TOTAL PRODUCTIVE HOURS		5.5	LEVEL B / LEVEL C / (LEVEL D) (CIRCLE ONE SELCTION)

LABOR: Driller - Brian Delude
Helper - Dan Delude

MATERIALS / SUPPLIES:

UNITS		UNITS	
		21	S/S samples
		3	Drums

WEATHER: Sunny 80°

Tim Howard
URS ONSITE COORDINATOR

CONTRACTOR REPRESENTATIVE

DAILY DRILLING RECORD

URS Corporation

PROJECT TITLE: Elmira - Triple Cities DATE: 8/28/13

CLIENT: NYSDEC CONTRACTOR: SJB

FROM	TO	PRODUCTIVE HOURS	ACTIVITIES/COMMENTS
1015	1345	3.5	Set sand, bentonite & grout @
1345	1415	— Lunch	MW-01
1415	1615	2	Drilled & Sampled MW-02
			Drilled to 35', 8 s/s samples
TOTAL PRODUCTIVE HOURS		5.5	LEVEL B / LEVEL C / (LEVEL D) (CIRCLE ONE SELCTION)

LABOR: Driller - Brian Delude
Helper - Dan Delude

MATERIALS / SUPPLIES:

UNITS		UNITS	
		8	s/s samples
		1	Drum

WEATHER: Sunny 80°

Tim Ahearn
URS ONSITE COORDINATOR

CONTRACTOR REPRESENTATIVE

DAILY DRILLING RECORD

URS Corporation

PROJECT TITLE: Elmira - Triple Cities DATE: 8/29/13

CLIENT: NYSDEC CONTRACTOR: SJB ~~Watrous Corp~~

FROM	TO	PRODUCTIVE HOURS	ACTIVITIES/COMMENTS
0800	1215	4.25	Set Sand, Bentonite, grout & stick-up
1215	1245	—	for MW-02.
1245	1600	3.25	Drilled to 20' @ MW-03 w/
			4 s/s samples. Set sand, bentonite,
			grout, stick-up w/ 2 Bollards (filled
			w/ concrete)
TOTAL PRODUCTIVE HOURS		7.5	LEVEL B / LEVEL C / (LEVEL D) (CIRCLE ONE SELCTION)

LABOR: Driller - Brian Deluca
Helper - Dan Deluca

MATERIALS / SUPPLIES:

UNITS		UNITS	
		2	Drums
		4	s/s samples
		2	Bollards

WEATHER: Sunny 80°

Tim Dilworth
URS ONSITE COORDINATOR

CONTRACTOR REPRESENTATIVE

DAILY DRILLING RECORD

URS Corporation

PROJECT TITLE: Elmira - Triple Cities DATE: 8/30/13

CLIENT: NYSDEC CONTRACTOR: SJB

FROM	TO	PRODUCTIVE HOURS	ACTIVITIES/COMMENTS
			Moved drums to staging area.
			Set flush-mount casing @
			MW-01
TOTAL PRODUCTIVE HOURS			LEVEL B / LEVEL C / LEVEL D (CIRCLE ONE SELCTION)

LABOR: Driller - Brian Delude
Helper - Dan Delude

MATERIALS / SUPPLIES:

UNITS		UNITS	

WEATHER:

Tim Blakeslee
URS ONSITE COORDINATOR

CONTRACTOR REPRESENTATIVE

ATTACHMENT 5

TEST BORING LOGS

URS Corporation

TEST BORING LOG

BORING NO. : MW-01

PROJECT/PROJECT LOCATION: Elmira - Triple Cities Metal Finishing

SHEET: 1 **OF** 2

CLIENT: New York State Department of Environmental Conservation

JOB NO. : 11176967

BORING CONTRACTOR: SJB Services, Inc.

NORTHING: 765596.785 **EASTING:** 758415.946

GROUNDWATER: 25 ft

GROUND ELEVATION: 887.30 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Split Spoon		
				DIA.		2 in		
				WT.		140 lbs.		
				FALL		30 in		

DATE STARTED: 8/27/13

DATE FINISHED: 8/28/13

DRILLER: Brian Delude

GEOLOGIST: T. Ifkovich

REVIEWED BY: K. Connare

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		25	Brown		Fine SAND and GRAVEL	SP/GW	0.0	Dry
		2		80	Lt Brown		Very Fine SAND and SILT, some gravel, trace clay	SM	0.0	
-5		3		80					0.0	
		4		65					0.0	
		5		100			Very fine SAND, SILT, and GRAVEL	SM/GW	0.0	
-10		6		80			Very fine SAND and SILT, some gravel	SM	0.0	
		7		85					0.0	
		8		100	Gray				0.0	
-15		9		100					0.0	
		10		75					0.0	
		11		75					0.0	
-20		12		25			Very fine SAND, SILT, and GRAVEL	SM/GW	0.0	
		13		75			Very fine SAND and SILT, little to some gravel	SM	0.0	Rods wet @ 25'
-25										

COMMENTS: Boring advanced with a track-mounted TCX-850 drill rig using a 4-1/4-inch HSA and 2-inch split spoon sampler. Collected sample from 44 to 46 ft for TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals, Mercury, Cyanide, and Hexavalent Chromium analysis.

URS Corporation

TEST BORING LOG

BORING NO. : MW-01

PROJECT: Elmira - Triple Cities Metal Finishing

SHEET: 2 OF 2

CLIENT: New York State Department of Environmental Conservation

JOB NO. :11176967

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC % / RQD %	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
		14		80					0.0	
		15		80			Very fine SAND, SILT, and GRAVEL	SM/GW	0.0	
-30		16		75					0.0	
		17		100					0.0	
-35		18		100					0.0	
		19		75			Very fine SAND and SILT, little to some gravel	SM	0.0	Moist
		20		0					0.0	
-40		21		75					0.0	Stopped on 8/27/13
		22		35					0.0	Resumed on 8/28/13
-45		23		50					0.0	
							Boring advanced to 50 ft without sampling			
-50										
-55										

COMMENTS: Boring advanced with a track-mounted TCX-850 drill rig using a 4-1/4-inch HSA and 2-inch split spoon sampler. Collected sample from 44 to 46 ft for TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals, Mercury, Cyanide, and Hexavalent Chromium analysis.

URS Corporation

TEST BORING LOG

BORING NO. : MW-02

PROJECT/PROJECT LOCATION: Elmira - Triple Cities Metal Finishing

SHEET: 1 **OF** 2

CLIENT: New York State Department of Environmental Conservation

JOB NO. : 11176967

BORING CONTRACTOR: SJB Services, Inc.

NORTHING: 765881.292 **EASTING:** 758437.367

GROUNDWATER: ~25 ft

GROUND ELEVATION: 878.86 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
				DIA.		2 in		
				WT.		140 lbs.		
				FALL		30 in		

DATE STARTED: 8/28/2013

DATE FINISHED: 8/28/2013

DRILLER: Brian Delude

GEOLOGIST: T. Ifkovich

REVIEWED BY: K. Connare

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		25	Gray		ASPHALT	FILL	0.0	Strata between sample intervals is based on drill cuttings.
							FILL: sand, gravel, some glass			Dry
-5		2		30	Black to Red		FILL: sand, some glass and brick fragments		0.0	
				20						
-10		3							0.0	
-15		4		15	Brown				0.0	
-20		5		50			Very fine SAND, SILT, and GRAVEL	SM/GW	0.0	Moist
		6		40					0.0	
-25		7		60			Very fine SAND and SILT, some gravel	SM	0.0	Wet

COMMENTS: Boring advanced with a track-mounted TCX-850 drill rig using a 4-1/4-inch HSA and 2-inch split spoon sampler. Collected soil sample from 23 to 25 ft for TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals, Mercury, Cyanide, and Hexavalent Chromium for analysis.

URS Corporation

TEST BORING LOG

BORING NO. : MW-02

PROJECT: Elmira - Triple Cities Metal Finishing

SHEET: 2 OF 2

CLIENT: New York State Department of Environmental Conservation

JOB NO. :11176967

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC % / RQD %	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
		8		40					0.0	
-30							Boring advanced to 35 ft without sampling.			
							Very fine SAND and SILT, some gravel			
-35							End of boring at 35 ft.			
-40										
-45										
-50										
-55										

COMMENTS: Boring advanced with a track-mounted TCX-850 drill rig using a 4-1/4-inch HSA and 2-inch split spoon sampler. Collected soil sample from 23 to 25 ft for TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals, Mercury, Cyanide, and Hexavalent Chromium for analysis.

URS Corporation

TEST BORING LOG

BORING NO. : MW-03

PROJECT/PROJECT LOCATION: Elmira - Triple Cities Metal Finishing

SHEET: 1 **OF** 1

CLIENT: New York State Department of Environmental Conservation

JOB NO. : 11176967

BORING CONTRACTOR: SJB Services, Inc.

NORTHING: 765858.891 **EASTING:** 758533.056

GROUNDWATER: ~7 ft

GROUND ELEVATION: 856.44 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Split Spoon		
				DIA.		2 in		
				WT.		140 lbs.		
				FALL		30 in		

DATE STARTED: 8/29/2013

DATE FINISHED: 8/29/2013

DRILLER: Brian Delude

GEOLOGIST: T. Ifkovich

REVIEWED BY: K. Connare

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1		80	Brown / Gray		Very fine SAND, SILT, and GRAVEL, little organic material	SM/GW	0.0	Moist
		2		15			Very fine SAND and SILT, some gravel	SM	0.0	
-5		3		70	Brown to Gray				0.0	
		4		40					0.0	Wet
-10							Boring advanced to 20 ft without sampling.			
-15										
-20										
-25										

COMMENTS: Boring advanced with a track-mounted TCX-850 drill rig using a 4-1/4-inch HSA and 2-inch split spoon sampler. Collected soil sample from 6 to 7 ft for TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals, Mercury, Cyanide, and Hexavalent Chromium for analysis.

ATTACHMENT 6

MONITORING WELL CONSTRUCTION LOGS

DRILLING SUMMARY

Geologist: Tim Ifkovich

Drilling Company: SJB Services, Inc.

Driller: Brian Delude

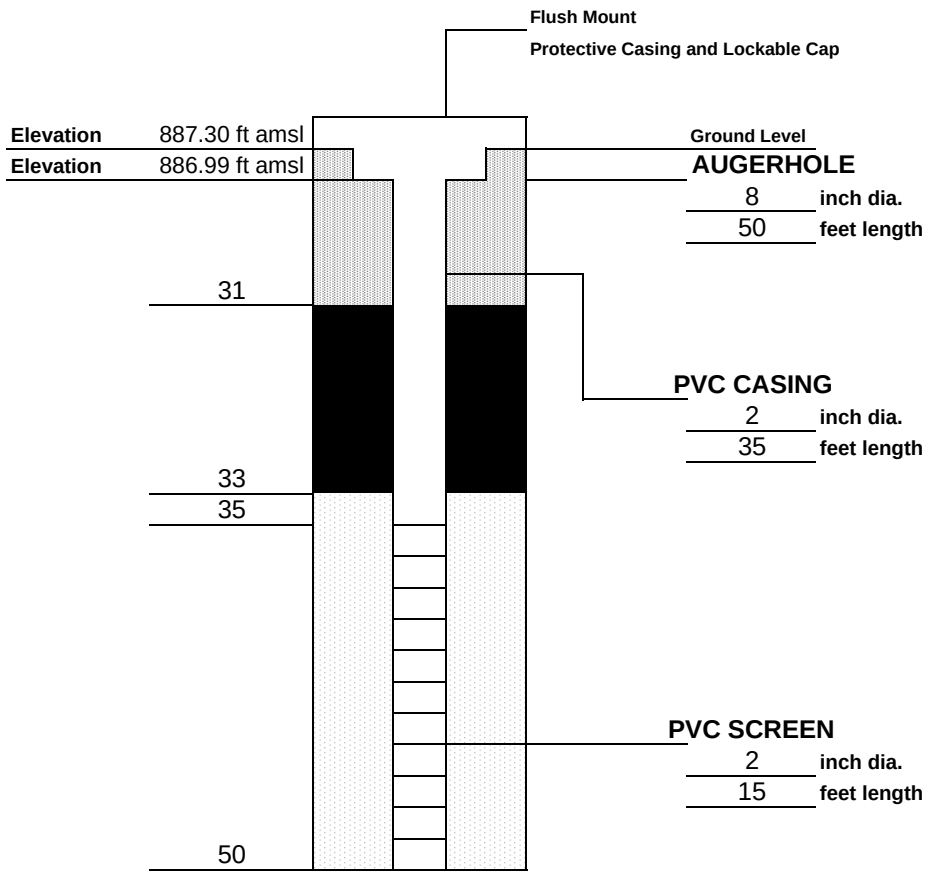
Rig Make/Model: TCX-850 track-mount

Date: 8/28/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.

DEPTH



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** #2 Sand **Setting:** 33 to 50 ft
Monitor: 2" PVC	**Slot Size:** .010"	***SEAL MATERIAL*** **Type:** Bentonite **Setting:** 31 to 33 ft

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	**Location: Elmira - Triple Cities**	**Project No.:** 11176967.00002
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-01

DRILLING SUMMARY

Geologist: Tim Ifkovich

Drilling Company: SJB Services, Inc.

Driller: Brian Delude

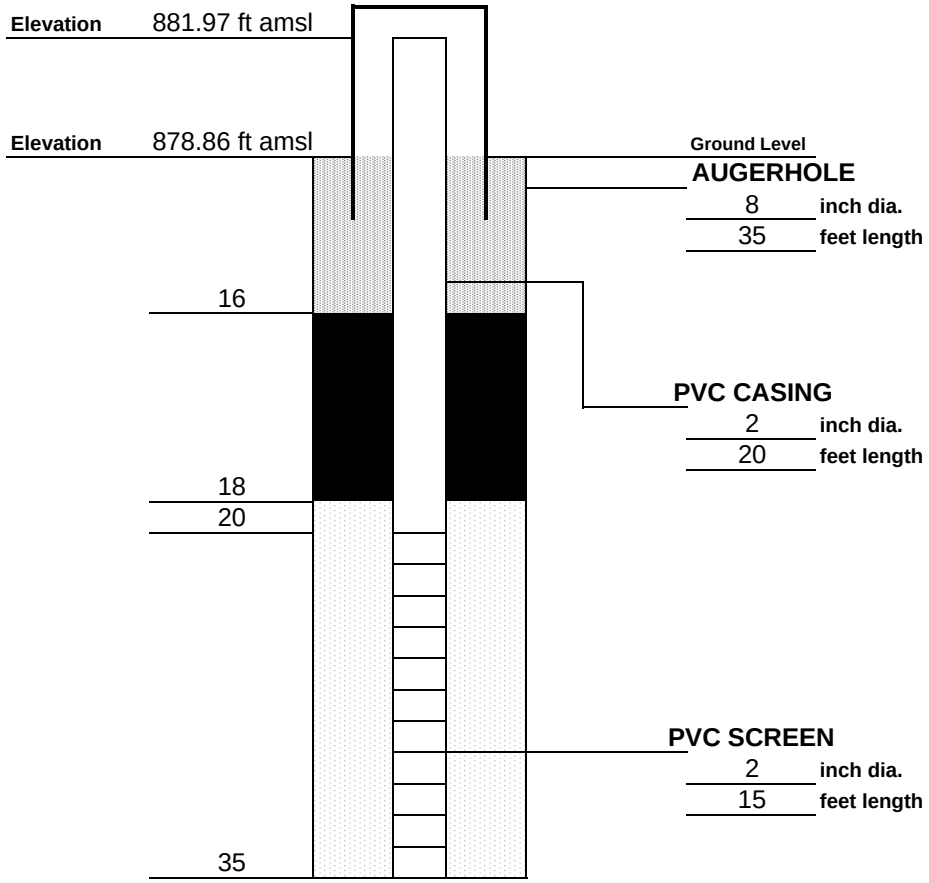
Rig Make/Model: TCX-850 track-mount

Date: 8/28/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.

DEPTH



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** #2 Sand **Setting:** 18 to 35 ft
Monitor: 2" PVC	**Slot Size:** .010"	***SEAL MATERIAL*** **Type:** Bentonite **Setting:** 16 to 18 ft

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	**Location: Elmira - Triple Cities**	**Project No.:** 11176967.00002
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-02

DRILLING SUMMARY

Geologist: Tim Ifkovich

Drilling Company: SJB Services, Inc.

Driller: Brian Delude

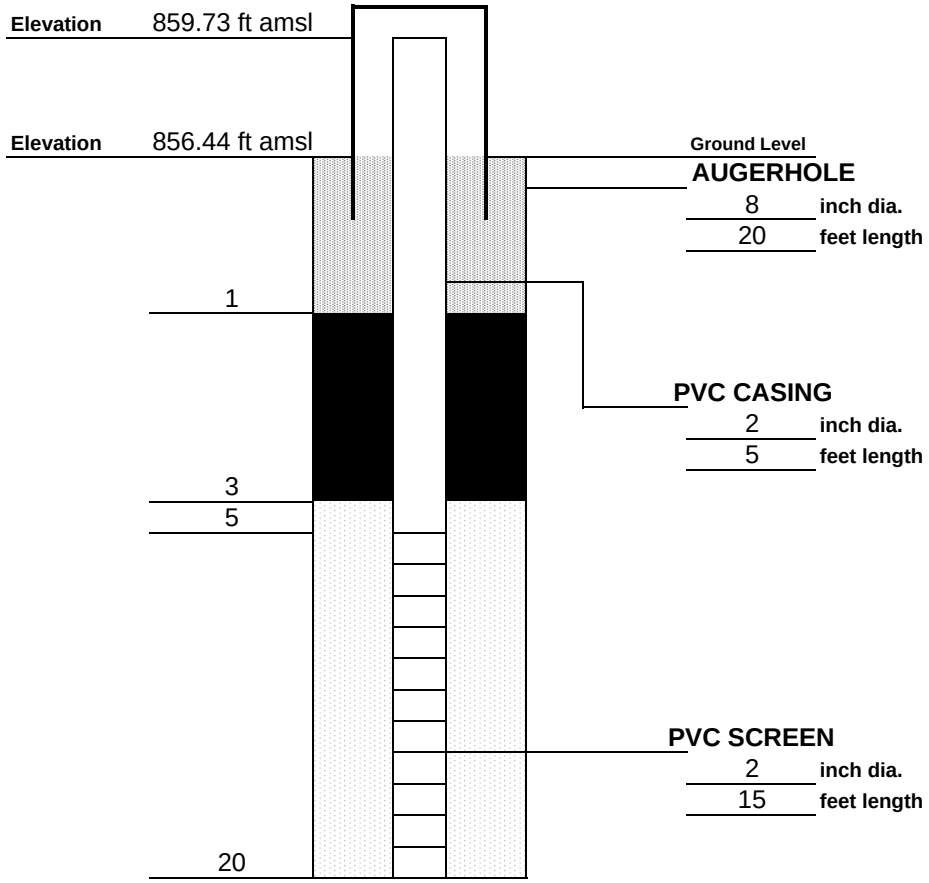
Rig Make/Model: TCX-850 track-mount

Date: 8/29/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.

DEPTH



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** #2 Sand **Setting:** 3 to 20 ft
Monitor: 2" PVC	**Slot Size:** .010"	***SEAL MATERIAL*** **Type:** Bentonite **Setting:** 1 to 3ft

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	**Location: Elmira - Triple Cities**	**Project No.: 11176967.00002**
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: MW-03**

ATTACHMENT 7

MONITORING WELL DEVELOPMENT LOGS

WELL DEVELOPMENT LOG

URS Corporation

PROJECT TITLE: Elmira - Triple Cities Metal Finishin(WELL NO.: MW-01

PROJECT NO.: 11176967.00002

STAFF: T. Ifkovich

DATE(S): 8/29/2013, 8/30/2013

			WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	48.00	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	23.39	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	24.61	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	4.18	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	=	12.55	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	15.00	8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)												
	8/29/2013			8/30/2013									
PARAMETERS	Initial	5	6	10	15								
pH	11.39	8.27	8.01	7.79	7.59								
SPEC. COND. (mS)	1.79	1.07	1.76	1.01	0.89								
TURBIDITY	>1,000	>1,000	>1,000	>1,000	>1,000								
TEMPERATURE (°C)	27.0	20.5	29.6	17.0	23.8								
APPEARANCE	Gray, Cloudy	Gray, Cloudy	Gray, Cloudy	Gray, Cloudy	Gray, Cloudy								
TIME	1605	1615	1645	745	1155								

COMMENTS:

Well was purged dry during each reading.
8/30/13 - WL at 0730 = 34.33 ft
8/30/13 - WL at 1146 = 35.80 ft

Very silty, slow recharge.

WELL DEVELOPMENT LOG

URS Corporation

PROJECT TITLE: Elmira - Triple Cities Metal Finishin(WELL NO.: MW-02 PAGE: 1 of 2

PROJECT NO.: 11176967.00002

STAFF: T. Ifkovich

DATE(S): 8/30/2013

			WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	38.10	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	28.73	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	9.37	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	1.59	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	=	4.78	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	100.00	8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
PARAMETERS	Initial	5	10	15	20	25	30	35	40	45	50	55
pH	7.25	6.99	7.16	7.18	7.21	7.19	7.20	7.23	7.35	7.32	7.30	7.25
SPEC. COND. (mS)	1.38	1.56	1.56	1.56	1.55	1.55	1.56	1.55	1.55	1.55	1.54	1.55
TURBIDITY	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000
TEMPERATURE (°C)	20.1	13.6	12.5	12.4	12.3	12.5	12.6	12.8	12.9	12.9	12.7	12.6
APPEARANCE	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy
TIME	820	830	835	839	843	847	851	855	858	901	904	907

COMMENTS:

Very silty.
Fast recharge.

WELL DEVELOPMENT LOG

URS Corporation

PROJECT TITLE: Elmira - Triple Cities Metal Finishin | WELL NO.: MW-02 | PAGE: 2 of 2

PROJECT NO.: 11176967.00002

STAFF: T. Ifkovich

DATE(S): 8/30/2013

			WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	38.10	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	28.73	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	9.37	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	1.59	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	=	4.78	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	100.00	8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
PARAMETERS	60	65	70	75	80	85	90	95	100			
pH	7.21	7.14	7.15	7.16	7.16	7.16	7.18	7.18	7.19			
SPEC. COND. (mS)	1.55	1.56	1.56	1.55	1.56	1.56	1.56	1.56	1.56			
TURBIDITY	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000			
TEMPERATURE (°C)	12.6	12.5	12.7	12.6	12.8	12.8	13.1	13.1	13.2			
APPEARANCE	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy			
TIME	909	911	915	918	922	926	930	934	938			

COMMENTS:

Very silty.
Fast recharge.

WELL DEVELOPMENT LOG

URS Corporation

PROJECT TITLE: Elmira - Triple Cities Metal Finishin(WELL NO.: MW-03 PAGE: 1 of 2

PROJECT NO.: 11176967.00002

STAFF: T. Ifkovich

DATE(S): 8/30/2013

			WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	23.21	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	6.84	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	16.37	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	2.78	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	=	8.35	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	100.00	8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
PARAMETERS	Initial	5	10	15	20	25	30	35	40	45	50	55
pH	6.67	6.90	7.01	7.34	7.15	7.09	7.09	7.10	7.10	7.11	7.11	7.10
SPEC. COND. (mS)	1.46	1.31	1.20	1.09	1.10	1.12	1.11	1.08	1.08	1.09	1.09	1.07
TURBIDITY	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000
TEMPERATURE (°C)	15.7	15.4	15.1	14.9	14.4	14.3	14.3	14.3	14.4	14.5	14.4	14.1
APPEARANCE	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy
TIME	1005	1007	1010	1013	1017	1021	1027	1033	1036	1039	1041	1045

COMMENTS:

Very silty.
Fast recharge.

WELL DEVELOPMENT LOG

URS Corporation

PROJECT TITLE: Elmira - Triple Cities Metal Finishin | WELL NO.: MW-03 | PAGE: 2 of 2

PROJECT NO.: 11176967.00002

STAFF: T. Ifkovich

DATE(S): 8/30/2013

			WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	23.21	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	6.84	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	16.37	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	2.78	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	=	8.35	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	100.00	8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)											
PARAMETERS	60	65	70	75	80	85	90	95	100			
pH	7.11	7.11	7.11	7.13	7.14	7.14	7.16	7.16	7.18			
SPEC. COND. (mS)	1.04	1.03	1.03	1.03	1.02	1.02	1.02	1.03	1.03			
TURBIDITY	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000	>1,000			
TEMPERATURE (°C)	14.2	14.1	14.0	14.1	14.0	14	14.1	14	13.9			
APPEARANCE	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy	Brown, Cloudy			
TIME	1050	1055	1101	1104	1108	1112	1115	1118	1122			

COMMENTS:

Very silty.
Fast recharge.

ATTACHMENT 8

LOW-FLOW PURGE LOGS

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 11176967.00002 Site: Elmira - Triple Cities Well I.D.: MW-01

Date: 9/5/2013 Sampling Personnel: T. Ifkovich Company: URS Corporation

Purging/Sampling Device: Grundfos Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 33.63 Depth to Well Bottom: 49.53 Well Diameter: 2" Screen Length: 15'

Casing Type: PVC Volume in 1 Well Casing (liters): 9.8 Estimated Purge Volume (liters): 12.4

Sample ID: MW-01 Sample Time: 1717 QA/QC: --

Sample Parameters: TCL VOCs + 10 TICs, TCL SVOCs + 20 TICs, TCL Pesticides/PCBs, TAL Metals (22) ICP, Mercury, Cyanide, Hexavalent Chromium

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1036	11.57	18.58	1.35	3.94	676	-202	225	33.63
1041	11.51	19.05	1.15	1.63	310	-291	225	35.53
1046	11.55	19.27	1.21	2.20	458	-280	225	36.86
1051	11.37	19.39	1.13	1.68	471	-301	150	37.41
1056	11.37	19.56	1.08	1.09	488	-321	150	38.53
1101	11.54	20.52	1.09	1.09	345	-338	150	39.05
1106	11.52	21.15	1.08	1.00	250	-352	150	39.29
1111	11.51	21.45	1.04	1.00	341	-345	150	39.50
1116	11.50	21.52	0.976	0.88	514	-353	150	39.68
1121	11.34	21.80	0.881	0.80	>800	-353	150	39.97
1126	11.13	21.86	0.857	0.81	>800	-358	150	--
1131	10.96	21.90	0.831	0.86	>800	-362	150	41.22
1136	10.43	22.97	0.817	0.40	581	-366	150	41.71
1141	10.45	23.18	0.798	0.22	339	-413	150	41.75
1146	10.46	23.63	0.767	0.21	298	-432	150	41.71
1151	10.49	23.26	0.729	0.25	273	-341	150	41.91
1717	9.38	17.70	0.707	3.91	772	-254	--	34.04
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

Monitoring well is very silty with slow recharge.
A high silt content in the well kept slowing down the purge rate, therefore the pump rate on the grundfos was continuously increased to try and keep a constant flow rate. This increasing/decreasing of the flow rate may have caused high turbidity readings.
Purging was stopped at 1151 to allow the well to recharge. A sample was collected at 1717.

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 11176967.00002 Site: Elmira - Triple Cities Well I.D.: MW-02

Date: 9/5/2013 Sampling Personnel: T. Ifkovich Company: URS Corporation

Purging/Sampling Device: Grundfos Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 29.08 Depth to Well Bottom: 38.35 Well Diameter: 2" Screen Length: 15'

Casing Type: PVC Volume in 1 Well Casing (liters): 5.7 Estimated Purge Volume (liters): 35.0

Sample ID: MW-02 FD-090513 Sample Time: 1510 QA/QC: Field Duplicate

Sample Parameters: TCL VOCs + 10 TICs, TCL SVOCs + 20 TICs, TCL Pesticides/PCBs, TAL Metals (22) ICP, Mercury, Cyanide, Hexavalent Chromium

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1420	8.61	12.53	1.30	1.22	605	-96	700	29.08
1425	7.64	15.15	1.39	0.30	373	-116	700	29.36
1430	7.32	15.64	1.38	0.27	280	-105	700	29.40
1435	7.18	15.58	1.39	0.16	227	-109	700	29.41
1440	7.10	15.61	1.39	0.00	167	-115	700	29.47
1445	7.29	14.37	1.42	0.00	137	-134	700	29.47
1450	7.05	14.33	1.44	0.00	85.7	-131	700	29.44
1455	7.09	14.37	1.44	0.00	63.4	-145	700	29.45
1500	7.12	14.44	1.45	0.00	47.3	-155	700	29.46
1505	7.14	14.49	1.46	0.00	36.1	-161	700	29.47
1510	7.15	14.56	1.47	0.00	34.1	-163	700	29.48
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 11176967.00002 Site: Elmira - Triple Cities Well I.D.: MW-03

Date: 9/5/2013 Sampling Personnel: T. Ifkovich Company: URS Corporation

Purging/Sampling Device: Grundfos Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 7.20 Depth to Well Bottom: 23.10 Well Diameter: 2" Screen Length: 15'

Casing Type: PVC Volume in 1 Well Casing (liters): 9.8 Estimated Purge Volume (liters): 25.5

Sample ID: MW-03, MW-03-MS, MW-03-MSD Sample Time: 1640 QA/QC: MS/MSD

Sample Parameters: TCL VOCs + 10 TICs, TCL SVOCs + 20 TICs, TCL Pesticides/PCBs, TAL Metals (22) ICP, Mercury, Cyanide, Hexavalent Chromium

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1610	7.34	13.59	0.863	1.51	>800	-181	850	7.20
1615	7.07	14.53	0.855	0.00	215	-181	850	8.55
1620	6.95	14.55	0.851	0.00	117	-177	850	8.48
1625	6.81	14.49	0.852	0.00	76.3	-176	850	8.48
1630	6.97	14.45	0.849	0.00	49.7	-178	850	8.48
1635	6.92	14.41	0.850	0.00	42.5	-179	850	8.48
1640	6.89	14.39	0.848	0.00	40.2	-176	850	8.48
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

ATTACHMENT 9

INVESTIGATION DERIVED WASTE (IDW) DISPOSAL DOCUMENTS

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	1	800-535-5053	14569

GENERATOR

5. Generator's Name and Mailing Address
NYS DEC Site (Triple Cities Metal Finishing)
329 Stowell St.
Binira, NY 13904
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Environmental Service Group, Inc 716.695.6720 — U.S. EPA ID Number: NYD986903904

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
American Recyclers Inc.
177 Wales Ave
Tonawanda, NY 14150
Facility's Phone: 716.695.6720 — U.S. EPA ID Number: NYR000030809

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1	Non RCRA Non DOT Regulated, (Ground water)	003	DM	1255	G	
2	Non RCRA Non DOT Regulated, (Soil Cuttings)	006	DM	3440	P	
3						
4						

13. Special Handling Instructions and Additional Information

ERG:	Approval #:	Handling Codes:
1.	1. B-04731N	1. None
2.	2. A-04741	2. None
3.	3.	3.
4.	4.	4.

24 Hour Emergency Contact: INFOTRAC (Caller Must ID 800)

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name — Signature — Month — Day — Year

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month — Day — Year

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month — Day — Year

GENERATOR'S/SHIPPER'S INITIAL COPY