



## ***2010 Periodic Review Report***

# **Groundwater Monitoring and Sampling Annual Report**

## **Roblin Steel Site City of North Tonawanda**

**February 2011**

**Amherst, New York**

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**2010 PERIODIC REVIEW REPORT**

**GROUNDWATER MONITORING AND SAMPLING  
ANNUAL REPORT**

**ROBLIN STEEL SITE  
CITY OF NORTH TONAWANDA**

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## TABLE OF CONTENTS

	<u>Page</u>
SECTION 1 - SITE BACKGROUND.....	1
1.1 Site Location .....	1
1.2 Site History .....	1
1.3 Regulatory History .....	2
1.4 Remediation Activities .....	3
SECTION 2 - GROUNDWATER MONITORING ACTIVITIES .....	5
2.1 Site Hydrology .....	5
2.2 Monitoring Requirements .....	5
2.3 Groundwater Monitoring .....	5
2.4 2010 Groundwater Monitoring .....	7
SECTION 3 - GROUNWATER MONITORING RESULTS.....	8
SECTION 4 - SOIL MANAGEMENT PLAN .....	9
4.1 Description of Institutional and Engineering Controls .....	9
4.2 Nature and Extent of Contamination .....	9
4.3 Contemplated Use.....	10
4.4 Purpose and Description of Surface Cover System .....	10
4.5 Management of Soils/Fill and Long Term Maintenance .....	10
4.6 Excavated and Stockpiled Soil/Fill Disposal.....	12
4.7 Subgrade Materials .....	13
4.8 2010 Site Usage .....	14
SECTION 5 - CONCLUSIONS .....	15

## LIST OF FIGURES

### Figure No.

- 1 Site Location Map
- 2 Monitoring Well Locations

## LIST OF TABLES

### Table No.

- 1 Volatile Organic Compounds
- 2 Semi Volatile Organic Compounds
- 3 PCBs
- 4 Metals

## **TABLE OF CONTENTS (Continued)**

### **LIST OF APPENDICES**

#### **Appendix**

- A Groundwater Monitoring Program Revision
- B Institutional & Engineering Controls Certification Form
- C Sampling and Well Logs
- D Analytical Test Results
- E Data Usability Reporting

## **SECTION 1 - SITE BACKGROUND**

### **1.1 Site Location**

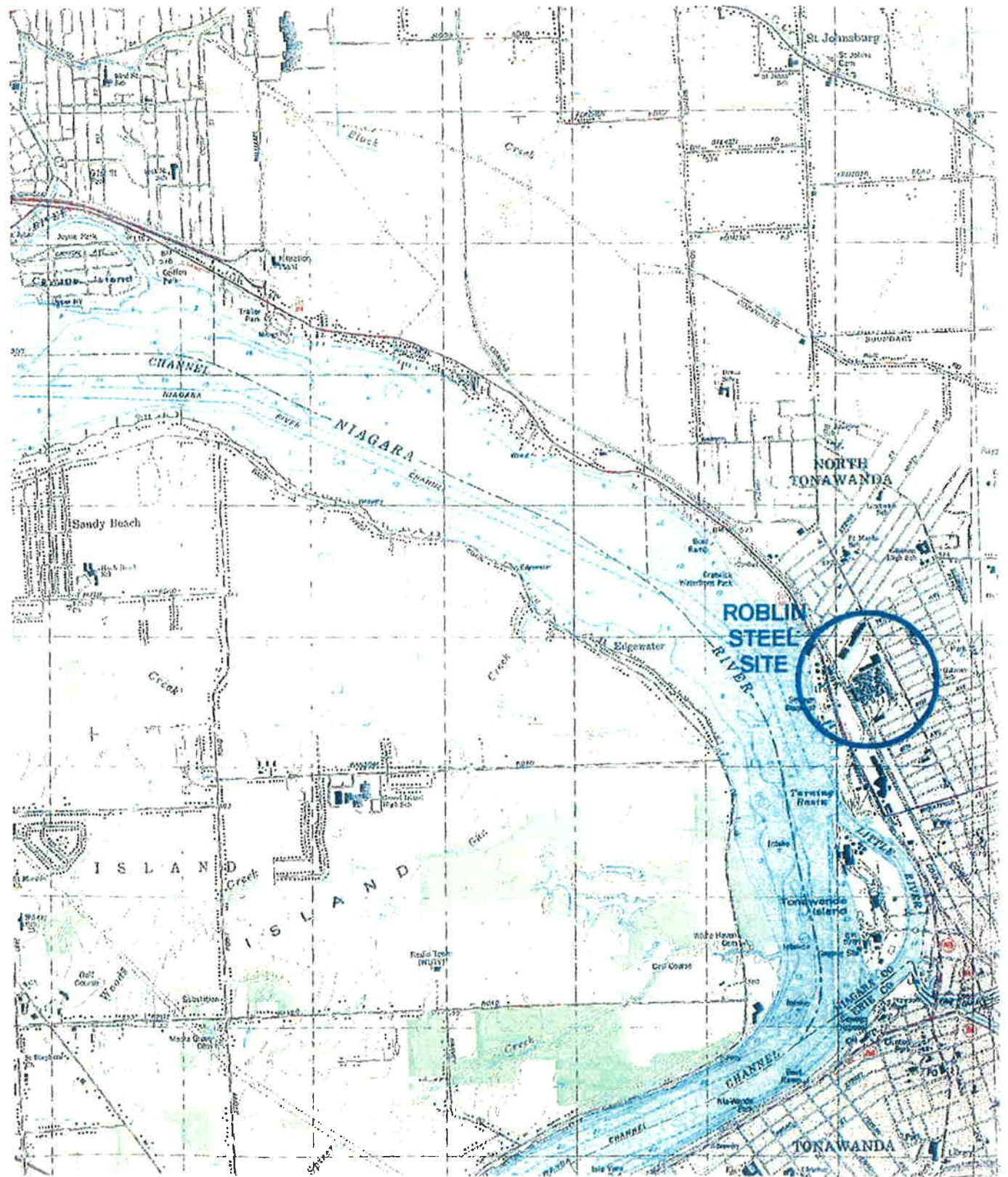
The Roblin Steel site was an inactive steel processing manufacturing facility in the City of North Tonawanda, Niagara County, NY. The site is bounded by East Avenue on the north, Oliver Street on the east, and Eighth Avenue on the south, and the Conrail-Erie Lackawanna railroad tracks on the west. One building, located on a 4.9-acre parcel adjacent to the northwest part of the site, represents an active facility occupied by Armstrong Pumps since 1985. In 1997, through tax delinquency, the City of North Tonawanda obtained the former Roblin Steel facility. A site location map is presented on Figure 1.

### **1.2 Site History**

Manufacturing operations were reported to have begun at the site in 1918, when the Buffalo Bolt Company owned the property. Roblin Seaway Industries, Inc. (a precursor to Roblin Industries, Inc.) purchased the manufacturing plant and property in 1961. From 1977 to 1987, Confer Plastics leased two long, narrow buildings on the west side of the site. In 1985, Roblin Industries sold a 4.9-acre portion of the site and the building on that portion of the site to Armstrong Pumps, Inc. In 1987, Roblin Industries declared bankruptcy, and all activities ceased at the site. In 1989, the property owned by Roblin Industries was divided. As a result of foreclosure for back taxes, the City of North Tonawanda assumed ownership of 11.5 acres of the former Roblin Steel site in 1992. At that time, Banac Enterprises owned the remaining 11.8 acres of the Roblin site. In 1995, this portion of the site was being used as an automobile salvage operation. The City of North Tonawanda currently owns the 11.8-acre parcel previously owned by Banac Enterprises, also acquired through foreclosure actions.

During the time that Roblin Industries owned the site from 1961 to 1987, operations taking place in the buildings included hot rolling of steel rods and bars, sulfuric acid pickling of steel coils, lime and oil coating of steel coils, annealing of steel coils, wire drawing and melting, and casting of nickel. Wastes were regularly staged near the center of the southern portion of the site prior to being sent off site for disposal. Wastes generated at the site included sludge from the phosphate tank, iron oxide scale, lime, spent pickle liquor, and waste oil.

ROBLIN STEEL SITE  
CITY OF NORTH TONAWANDA, NEW YORK  
USGS QUAD: TONAWANDA WEST



5/31/01

Figure 1.

Most of the site consisted of empty buildings in various states of disrepair and overgrown undeveloped property. Confer Plastics previously occupied two buildings on the western portion of the site, both of which had been burned prior to remediation efforts. The location of one of these buildings was identified only by the presence of brick piles, while the other building still had sections of walls standing.

The western portion of the rolling mill building that remained from the demolition project completed in 2000, contained flooring which consisted of stained, contaminated wood blocks. The block flooring had lifted off from the sub floor due to moisture. Trenches in the building appeared to be full of sediment and sludge. A soil floor comprised the eastern side of the building. Concrete-lined trenches were present in this portion of the building. Concrete-lined pickling tanks were present in the northwest portion of the mill building.

Waste piles, some from the previous operations at the site (identified as slag and scale during previous site investigations), and some containing building rubble/materials, were present on the western and southern sides of the site. Drums of various materials were present outside, near the southeast corner of the former mill building, and inside the large brick building, located in the center of the site. Transformer cases were adjacent to the southeast side of the former mill building. Most of the area not covered by buildings or heavy vegetative cover contained areas of black, stained soil. A concrete reservoir from a former quenching pond was located in the approximate center of the site.

### **1.3 Regulatory History**

In 1998, Stearns & Wheler, LLC was contracted by the City of North Tonawanda, New York to provide engineering services and perform a Site Investigation/Remedial Alternatives Report (SI/RAR). The SI report and the preliminary RAR report were completed in 1999. In 2002, Stearns & Wheler developed a phased project approach for the site remediation based on the 1999 SI/RAR findings and earlier investigation completed in 1995 by the New York State Department of Environmental Conservation (NYSDEC). Based on the conclusions of the Site Investigation Report, Areas of Concern (AOC) were identified. The Remedial Alternatives Report addressed, defined and selected the most feasible remedial alternatives for the areas of concern.

The project was divided into two separate contracts due to the condition of the building ruins. Expedited demolition activities under emergency circumstances was required at the site

responding to building conditions in close proximity to the adjacent, occupied business, Armstrong Pumps. The unsafe building conditions were the result of a fire in September 2002, which caused concern to the insurance carrier for Armstrong Pumps. Therefore, demolition of the site buildings and removal of asbestos containing materials was completed under the Phase I Contract. Remediation of site contamination and concrete foundation demolition was completed as Phase II.

#### **1.4 Remediation Activities**

Several waste removal and disposal operations have taken place since manufacturing operations ceased at the site. In 1990, a drum removal and disposal operations were conducted.

In 1992, a transformer was cleaned out and PCB-impacted soil from the area surrounding the transformer pad was excavated and disposed off site. The former wire mill building was demolished in 2000 so that the steel in the structure could be salvaged. An asbestos survey was completed prior to demolition.

In 2001, one (1) 2,000-gallon and two (2) 5,000-gallon steel storage tanks (USTs) were removed from the site. In addition, one (1) 10,000-gallon fiberglass storage tank was excavated and demolished on-site. Approximately, 30 CY of contaminated soil related to the UST removal remained on site for later removal and disposal off-site during the Site remediation activities scheduled for 2003 to 2004. Underground storage tank removal and disposal activities can be referenced in the Tank Closure Report dated May 2001.

The City received a “brownfields” redevelopment grant through the 1996 New York State Clean Water/Clean Air Bond Act to facilitate the rehabilitation of the site. Site buildings were condemned by the City of North Tonawanda due to the deteriorated condition of building structure which posed a safety concern to the public. Immediate demolition of site buildings was required due to structural damage and the close proximity of the existing adjacent business known as Armstrong Pumps. This work was performed under Phase I construction and completed in 2003. Phase I construction also involved remediation of Areas of Concern.

Phase II was undertaken in 2004. Final completion occurred during June 2005. Phase II work included the remediation of the site as recommended in the Remedial Alternatives Report



(RAR), Proposed Remedial Action Plan (PRAP) and Record of Decision (ROD). Phase II construction involved remediation of the impacted soil and remediation of the former quench pond. Once the site was remediated, the site can be returned to beneficial use without posing an unacceptable risk to new occupants, neighbors, or the environment in the vicinity of the site.

## **SECTION 2 - GROUNDWATER MONITORING ACTIVITIES**

The Monitoring Plan will include the necessary actions required to ready and maintain the site for monitoring once remedial construction is complete. The Monitoring Plan will be implemented once both remediation phases identified as Phases I and II are complete.

### **2.1 Site Hydrogeology**

Results of groundwater sampling indicate that constituents in the soil/fill material have slightly impacted groundwater quality with volatile organic compounds (VOCs). Groundwater in the southeast corner of the site has been impacted with low concentrations of chlorinated VOCs. Groundwater in this portion of the site presumably flows toward the combined sewer line that runs down the west side of Oliver Street.

### **2.2 Monitoring Requirements**

Annual monitoring will be performed on groundwater samples for a minimum period of 30 years or at reduced frequency and period as approved by NYSDEC. Groundwater monitoring will initially be conducted after the remediation has been completed and thereafter on an annual basis. Methods used will be consistent with NYSDEC requirements. The extent and frequency of the sampling and analysis will be evaluated with the NYSDEC after the first year and then every five years to determine if sampling points or analytes can be dropped from the monitoring program. The NYSDEC will be notified in advance of each sampling event and summary reports of the data will be submitted to NYSDEC for review. Annual summary reports will be submitted to the NYSDEC.

### **2.3 Groundwater Monitoring**

The groundwater monitoring system will be maintained and sampled during the post-remediation period. The extent and frequency of the sampling and analysis will be evaluated by NYSDEC periodically on an annual basis to determine if the sampling points or analytes should be changed. The NYSDEC will detail changes as appropriate after reviewing the annual summary reports. Under the approved Site Management Plan dated March 2007, the following groundwater monitoring locations were to be sampled and designated as GW-3S, GW-3, GW-11S, GW-12S, and GW-18S and tested for Volatile Organic Compounds (VOCs) under EPA Method 8260 TCL.

The groundwater monitoring program was modified as proposed in the City of North Tonawanda's letter dated January 7, 2010 and presented in Appendix A. The City proposed to the NYSDEC to sample groundwater from one location at MW-3S. Analytical testing will include VOCs under EPA Method 8260 TCL. The NYSDEC has approved this change. As reported in the Site Investigation Report, impact to groundwater was localized detecting concentrations of volatile compounds in groundwater from only monitoring well MW-3S. Volatile concentrations were detected above groundwater standards in groundwater sampled during the Site Investigation dated 1999 and as presented in Appendix A on Table 3. Groundwater from all other monitoring wells sampled was reported at non-detectable results or as estimated concentrations below groundwater standards.

Since the Site Management Plan has been finalized, some changes have occurred to the site. All monitoring wells as listed in the Site Management Plan except for MW-11S have been reported from a recent site inspection as either damaged or missing. The City began site development in March 2010 which includes a 10th Avenue roadway extension with water and sewer utilities. The proposed roadway and 8-inch diameter waterline conflicted with monitoring well MW-3S location. As a result of this conflict, the City has requested to the NYSDEC to replace monitoring well MW-3S and move its location approximately 65-feet to the north of its present location as stated in a letter dated January 7, 2010 and presented in Appendix A. Well relocation will require drilling and installation of a new monitoring well. The NYSDEC has approved this change.

However, during construction of the 10th Avenue roadway extension, the waterline was moved to the other side of the street which allowed for new monitoring well MW-3S to be installed at approximately the same location as the original monitoring well MW-3S location. The location of monitoring well MW-3S is presented in Appendix A.

## **2.4 2010 Groundwater Monitoring**

The 2010 monitoring program at the Roblin Steel site will consist of one annual sampling event. Groundwater was sampled from monitoring well MW-3S on July 1, 2010. This sampling event represents the first event of the Roblin Steel groundwater monitoring program.

Groundwater sampling of monitoring MW-3S was collected using low-flow purging and sampling techniques. Prior to sampling, the monitoring well was purged using a submersible well pump and dedicated tubing. Groundwater parameters of pH, conductance, dissolved

oxygen (DO), temperature, and oxidation-reduction potential (ORP) were recorded. After the field parameters are recorded, groundwater sampling was collected with a disposable bailer into sample containers provided by the testing laboratory. Groundwater elevation data was recorded. Purge water generated from monitoring well MW-3S was discharged to the ground.

Several quality control samples, including a trip blank, a field blank, and a field duplicate were collected during the sampling event. Samples were delivered under a chain of custody to ESC Lab Sciences for analysis of VOCs by USEPA SW-846 Method 8260. The specific sampling protocol to be used, including sample preservation techniques, QA/QC objectives, a description of chain-of-custody documentation, and analytical parameters are included in the approved Site Management Plan.

Decommissioning of existing site monitoring wells was completed in 2010. During the drilling and installation of monitoring well MW-3S, the well installer decommissioned (8) existing monitoring wells. Decommissioned monitoring well locations are presented on Figure 2. Well decommissioning procedure included the removal of well casings and filling the well hole with a cement bentonite grout.



### **SECTION 3 - GROUNDWATER MONITORING RESULTS**

This section includes the analytical test results of the 2010 annual groundwater sampling event and is presented in Table 1. Included in this section are descriptions of the identification and distribution of constituents present in groundwater, and a comparison of historical data. Constituents are compared to the applicable NYSDEC Division of Water Technical and Operational Guidance Series (TOGS 1.1.1) Groundwater Standards and Guidance Values.

Analytical testing from the 2010 sampling event detected cis-1,2-dichloroethene at concentrations that exceeded the groundwater standards. Concentrations of acetone, cyclohexane, methyl-t-butyl ether (MTBE), trans-1,2-dichloroethene, trichloroethene, and vinyl chloride at concentrations were detected and estimated below detection limits and the groundwater standards.

Trend analysis of volatile compounds from the comparison of site historical data dated 1999 and 2010 analytical test results showed that decreasing concentrations of cis-1,2-dichloroethene. Concentrations of tetrachloroethene and trichloroethene as detected in groundwater samples in 1999 were not detected in groundwater samples in 2010.

Total VOCs detected in groundwater decreased from 1999 to 2010.

TABLE 1  
MONITORING WELL MW-3S  
VOLATILE ORGANIC ANALYTICAL TEST RESULTS  
ROBLIN STEEL SITE

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards <sup>1</sup>	Units	09/29/99	07/01/10
1,1,1-Trichloroethane	5	µg/L	U	U
1,1,2,2-Tetrachloroethane	5	µg/L	U	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	µg/L	-	U
1,1,2-Trichloroethane	1	µg/L	U	U
1,1-Dichloroethane	5	µg/L	U	U
1,1-Dichloroethene	5	µg/L	U	U
1,2,3-Trichlorobenzene	5	µg/L	-	U
1,2,4-Trichlorobenzene	5	µg/L	-	U
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	-	U
1,2-Dibromoethane (EDB)	NE	µg/L	-	U
1,2-Dichlorobenzene	3	µg/L	-	U
1,2-Dichloroethane	0.6	µg/L	U	U
1,2-Dichloropropane	5	µg/L	U	U
1,3-Dichlorobenzene	3	µg/L	-	U
1,4-Dichlorobenzene	3	µg/L	-	U
2-Hexanone	50	µg/L	U	U
Acetone	50	µg/L	UJ	<b>29 J</b>
Benzene	1	µg/L	U	U
Bromoform	50	µg/L	U	U
Bromomethane	5	µg/L	UJ	U
Bromodichloromethane	50.0	µg/L	U	U
Carbon disulfide	60	µg/L	U	U
Carbon tetrachloride	5	µg/L	U	U
Chlorobenzene	5	µg/L	U	U
Chloroethane	5	µg/L	UJ	U
Chloroform	7	µg/L	U	U
Chloromethane	NE	µg/L	U	U
cis-1,2-Dichloroethene	5	µg/L	<b>62</b>	<b>28</b>
cis-1,3-Dichloropropene	0.40	µg/L	U	U
Cyclohexane	NE	µg/L	-	<b>0.31J</b>
Dibromochloromethane	50	µg/L	U	-
Dichlorobromoethane	NE	µg/L	-	U
Dichlorodifluoromethane	5	µg/L	-	U
Ethylbenzene	5	µg/L	U	U
Isopropylbenzene	5	µg/L	-	U
Methyl acetate	NE	µg/L	-	U
Methyl Ethyl Ketone	50	µg/L	U	U
Methylcyclohexane	NE	µg/L	-	U
Methylene chloride	5	µg/L	U	U
Methyl-t-Butyl Ether (MTBE)	10	µg/L	U	<b>4.9J</b>
m,p-Xylene	5	µg/L	U	U
o-Xylene	5	µg/L	U	U
Styrene	5	µg/L	U	UJ
Tetrachloroethene	5	µg/L	<b>40</b>	U
Toluene	5	µg/L	U	U
Total Xylenes	5	µg/L	U	U
trans-1, 2-Dichloroethene	5	µg/L	U	<b>0.43J</b>
trans-1,3-Dichloropropene	0.4	µg/L	U	U
Trichloroethene	5	µg/L	<b>56</b>	<b>0.34J</b>
Trichlorofluoromethane	5	µg/L	-	U
Vinyl Chloride	2	µg/L	U	<b>0.74J</b>
Total VOCs		µg/L	158	64
Total VOCs		mg/L	0.158	0.064

**Notes:**

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1:  
Ambient Water Quality Standards and Guidance Values (µg/L)

Bolded concentrations indicated the analyte was detected.

Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.

NE = NYSDEC TOGS 1.1.1 water quality standard not established.

U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.

J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

- = The analyte was not sampled for.

## **SECTION 4 - SOIL MANAGEMENT PLAN**

The objective of this Soils Management Plan (SMP) is to set guidelines for management of soil material during any future activities which would breach the cover system at the site. This SMP addresses environmental concerns related to soil management and has been reviewed and approved by the New York State Department of Environmental Conservation (NYSDEC).

### **4.1 Description of Institutional and Engineering Controls**

Institutional and engineering controls are required by the NYSDEC Record of Decision (ROD) dated February 2002 and include the environmental easement for future redevelopment and ownership of the site. The approved soils management plan addresses the excavation procedures for the remaining soils during future redevelopment. The soil management plan includes soil management, characterization and disposal of excavated soils in accordance with the applicable NYSDEC regulations.

The ROD and environmental easement require the imposition of a deed restriction that requires compliance with the approved soils management plan and the future use of groundwater from the site. Deed restrictions are to be instituted that prohibit the installation of potable wells at the site. Any future use of groundwater at the site is prohibited. Annually, the future owners will be required to certify to the NYSDEC that the implemented remedy has been maintained in accordance with the soils management plan.

The site owner as required by the NYSDEC has included the signed Institutional & Engineering Controls Certification Form as presented in Appendix B.

### **4.2 Nature and Extent of Contamination**

During the site investigation activities, six areas of impacted soil were identified. These six impacted soil areas were excavated, removed and disposed off-site during the site remediation. Impacted soils were sampled and categorized to delineate the extent of the contamination for waste characterization for off-site disposal. The impacted soils were excavated to a depth of 1-foot as defined in the NYSDEC issued Record of Decision.



Five impacted soil areas contained semi-volatile chemical compounds which included polycyclic aromatic hydrocarbons (PAHs) and metals. The removed impacted soils were confined to surficial soils. Any visual soil impacted as defined as darken, oily materials beyond the depth of the first 12-inches were also removed. The potential exposure pathways include inhalation, absorption, ingestion and contact. Health effects from exposure to these chemical compounds are skin and respiratory irritants.

The sixth impacted soil area contained poly chlorinated byphenyls (PCBs), which was excavated, removed and disposed off-site to a depth ranging from 12 to 18-inches. After excavation of the PCB impacted soils, confirmatory soil samples were collected to confirm no PCB impacted soils were present. The potential exposure pathways include inhalation, absorption, ingestion and contact. Health effects from exposure to these chemical compounds are eye, skin and acne form irritants.

#### **4.3 Contemplated Use**

As part of the redevelopment project, the property has been identified for light industrial/commercial usage. Residential redevelopment will not be permitted. Deed restrictions will require compliance with the approved soil management plan. The future use of site groundwater will be prohibited.

#### **4.4 Purpose and Description of Surface Cover System**

The purpose of the surface cover system is to eliminate the potential for human contact with fill material and eliminate the potential for contaminated runoff from the property. The cover system that was used to fill the excavated impacted soil areas was 12-inches of crushed concrete that was recycled from demolished site concrete foundations. An additional 4-inches of topsoil was spread over the crushed concrete fill to provide a vegetative supporting soil cover.

#### **4.5 Management of Soils/Fill and Long Term Maintenance**

The purpose of this section is to provide environmental guidelines for management of subsurface soils/fill and the long-term maintenance of the cover system during any future intrusive work which breaches the cover system. The Soil Management Plan includes the following conditions:

- Any breach of the cover system, including for the purposes of construction or utilities work, must be replaced or repaired using an acceptable borrow source free of industrial and/or other potential sources of chemical or petroleum contamination. The repaired area must be covered with clean soil and reseeded or covered with impervious product such as concrete or asphalt, as described in Section 4, to prevent erosion in the future.
- The immediate work area that will be disturbed must be monitored for particulate air monitoring. Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the work area at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (MIE DataRAM Aerosol Monitor) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level.

If the downwind particulate level is 100 micrograms per cubic meter ( $\text{mcg}/\text{m}^3$ ) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind particulate levels do not exceed  $150 \text{ mcg}/\text{m}^3$  above the upwind level and provided that no visible dust is migrating from the work area.

If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than  $150 \text{ mcg}/\text{m}^3$  above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within  $150 \text{ mcg}/\text{m}^3$  of the upwind level and in preventing visible dust migration.

- Control of surface erosion and run-off of the entire property at all times, including during construction activities. This includes proper maintenance of the vegetative cover established on the property. Maintenance of the surface drainage system located at the north eastern corner of the site at Oliver Street and East Avenue will be required.
- Site soil that is excavated and is intended to be removed from the property must be managed, characterized, and properly disposed of in accordance with NYSDEC regulations and directives.

- Soil excavated at the site may be reused as backfill material on-site provided it contains no visual or olfactory evidence of contamination, and is placed beneath a cover system component of 12-inches of clean fill from an acceptable source area.
- Any off-site fill material brought to the site for filling and grading purposes shall be from an acceptable borrow source free of industrial and/or other potential sources of chemical or petroleum contamination.
- Prior to any construction activities, workers are to be notified of the site conditions with clear instructions regarding how the work is to proceed. Invasive work performed at the property will be performed in accordance with all applicable local, state, and federal regulations to protect worker health and safety.

#### **4.6 Excavated and Stockpiled Soil/Fill Disposal**

Every effort will be made to keep excavated soils on site. Soil/fill that is excavated as part of redevelopment that can not be used as fill below the cover system will be characterized prior to transportation off-site for disposal at a permitted facility. For excavated soil/fill with visual evidence of contamination (i.e., staining or elevated PID measurements), one composite sample and a duplicate sample will be collected for each 100 cubic yards of stockpiled soil/fill. For excavated soil/fill that does not exhibit visual evidence of contamination but must be sent for off-site disposal, one composite sample and a duplicate sample will be collected for 2,000 cubic yards of stockpiled soil, and a minimum of 1 sample will be collected for volumes less than 2,000 cubic yards.

The composite sample will be collected from five locations within each stockpile. A duplicate composite sample will also be collected. PID measurements will be recorded for each of the five individual locations. One grab sample will be collected from the individual location with the highest PID measurement. If none of the five individual sample locations exhibit PID readings, one location will be selected at random. The composite sample will be analyzed by a NYSDOH ELAP-certified laboratory for pH (EPA Method 9045C), Target Compound List (TCL), semi volatile organic compounds (SVOCs), pesticides, and PCBs, and TAL metals. The grab sample will be analyzed for TCL VOCs.

Additional characterization sampling for off-site disposal may be required by the disposal facility. To potentially reduce off-site disposal requirements/costs, the owner or site developer may also choose to characterize each stockpile individually. If the analytical results indicate

that concentrations exceed the standards for RCRA characteristics, the material will be considered a hazardous waste and must be properly disposed off-site at a permitted disposal facility within 90 days of excavation. If the analytical results indicate that the soil is not a hazardous waste, the material will be properly disposed off-site at a non-hazardous waste facility. Stockpiled soil cannot be transported on or off-site until the analytical results are received.

#### **4.7 Subgrade Materials**

Subgrade material used to backfill excavations or placed to increase site grades or elevation shall meet the following criteria.

- Subgrade material stockpiled on the surface for re-use must be placed on a liner material or other suitable surface to avoid the commingling of this material with clean topsoil or other surface materials. Stockpiled subgrade material should also be managed to prevent erosion and runoff of precipitation waters which may contact this material.
- Excavated on-site soil/fill which appears to be visually impacted shall be sampled and analyzed. If analytical results indicate that the contaminants, if any, are present at concentrations below the Soil Cleanup Objectives and Cleanup Levels (SCOCLs) as presented in Tables 2, 3, and 4, the soil/fill can be used as backfill on-site.
- Any off-site fill material brought to the site for filling and grading purposes shall be from an acceptable borrow source free of industrial and/or other potential sources of chemical or petroleum contamination.
- Off-site soils intended for use as site backfill cannot otherwise be defined as a solid waste in accordance with 6 NYCRR Part 360-1.2(a).
- If the contractor designates a source as "virgin" soil, it shall be further documented in writing to be native soil material from areas not having supported any known prior industrial or commercial development or agricultural use.
- Virgin soils should be subject to collection of one representative composite sample per source. The sample should be analyzed for TCL VOCs, SVOCs, pesticides, PCBs,

arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. The soil will be acceptable for use as backfill provided that all parameters meet the SCOCLs.

- Non-virgin soils will be tested via collection of one composite sample per 500 cubic yards of material from each source area. If more than 1,000 cubic yards of soil are borrowed from a given off-site non-virgin soil source area and both samples of the first 1,000 cubic yards meet SCOCLs, the sample collection frequency will be reduced to one composite for every 2,500 cubic yards of additional soils from the same source, up to 5,000 cubic yards. For borrow sources greater than 5,000 cubic yards, sampling frequency may be reduced to one sample per 5,000 cubic yards, provided all earlier samples met the SCOCLs.

#### **4.8 2010 Site Usage**

No excavation took place on-site in 2009. Site development design was completed to provide the 10th Street Extension roadway including water, sewer and natural gas mains. Construction for the 10<sup>th</sup> Street Extension was implemented and completed during 2010. Excavation and removal of soil was conducted in accordance with the Soil management Plan. Site development is anticipated since construction is complete preparing lots with utility service connections. Additional site disturbances will occur once new development moves into the site. Future excavation will follow Soil Management Plan guidelines.

**Table 2**  
**SEMI-VOLATILE ORGANIC COMPOUNDS**

<b>Compound</b>	<b>Soil Standard (mg/kg)</b>
Naphthalene	500
Acenaphthylene	500
Acenaphthene	500
Fluorene	500
Phenanthrene	500
Anthracene	500
Fluoranthene	500
Pyrene	500
Benzo (a) anthracene	5.6
Chrysene	56
Benzo (b) fluoranthene	5.6
Benzo (k) fluoranthene	5.6
Benzo (a) pyrene	1
Indeno (1,2,3-c,d) pyrene	5.6
Dibenzo (a,h) anthracene	0.56
Benzo (g,h,i) perylene	500

*Note: Standards based on Restricted Use Soil Cleanup Objectives for Commercial Use (NYSDEC, effective December 14, 2006)*

**Table 3**  
**PCBs**

<b>Compound</b>	<b>Soil Standard (ug/kg)</b>
Aroclor 1016	1,000
Aroclor 1221	1,000
Aroclor 1232	1,000
Aroclor 1242	1,000
Aroclor 1248	1,000
Aroclor 1254	1,000
Aroclor 1260	1,000

*Note: Standards based on Determination of Soil Cleanup Objectives and Cleanup Levels (NYSDEC, January 1994)*

**Table 4**  
**METALS**

<b>Compound</b>	<b>Soil Standard (mg/kg)</b>
Aluminum	SB
Antimony	SB
Arsenic	16
Barium	400
Beryllium	590
Cadmium	9.3
Calcium	SB
Chromium	400
Cobalt	SB
Copper	270
Iron	SB
Lead	SB*
Magnesium	SB
Manganese	10,000
Mercury	2.8
Nickel	310
Potassium	SB
Selenium	1500
Silver	1500
Sodium	SB
Thallium	SB
Vanadium	SB
Zinc	10,000

*Note: Standards based on Determination of Soil Cleanup  
(NYSDEC, effective December 14, 2006)*

*\*Background levels for lead vary widely*

*SB = Site Background*

## **SECTION 5 - CONCLUSIONS**

Analytical testing from the 2010 sampling event detected cis-1,2-dichloroethene at concentrations that exceeded the groundwater standards. Concentrations of acetone, cyclohexane, methyl-t-butyl ether (MTBE), trans-1, 2-dichloroethene, trichloroethene, and vinyl chloride at concentrations were detected and estimated below detection limits and the groundwater standards.

Trend analysis of volatile compounds from the comparison of site historical data dated 1999 and 2010 analytical test results showed that decreasing concentrations of cis-1,2-dichloroethene. Concentrations of tetrachloroethene and trichloroethene as detected in groundwater samples in 1999 were not detected in groundwater samples in 2010. Total VOCs detected in groundwater decreased from 1999 to 2010.



# APPENDICES

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**STEARNS & WHEELER**  
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# APPENDIX A

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## GROUNDWATER MONITORING PROGRAM REVISION



STEARNS & WHEELER  
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**City of North Tonawanda**  
**Department of Engineering**  
City Hall, 216 Payne Avenue  
North Tonawanda, NY 14120-5493  
www.northtonawanda.org

**Dale W. Marshall, P. E.**  
*City Engineer*  
Phone: (716) 695-8565  
Fax: (716) 695-8568

January 7, 2010

Mr. Jeffrey Konsella, P.E.  
New York State Department of Environmental Conservation  
270 Michigan Avenue  
Buffalo, New York 14203

**Re: Roblin Steel Groundwater Monitoring**

Dear Mr. Konsella:

The City of North Tonawanda proposes modifications to the groundwater monitoring at the Roblin Steel Site. As stated in the approved Site Management Plan dated March 2007, annual monitoring will be performed on groundwater samples for a minimum period of 30 years or at a reduced frequency and period as approved by NYSDEC. Groundwater monitoring will initially be conducted after the remediation has been completed and thereafter on an annual basis. As stated in the Site Management Plan, groundwater samples will be collected from monitoring wells: GW-3S, GW-3, GW-11S, GW-12S, and GW-18S and tested for Volatile Organic Compounds (VOCs) under EPA Method 8260 TCL.

As reported in the Site Investigation Report, impacts to groundwater were localized detecting concentrations of volatile compounds in groundwater from only monitoring well MW-3S. Detected volatile concentrations were above groundwater standards as presented on the attached Table 3 of the Site Investigation Report. Groundwater from all other wells sampled was reported at non-detectable results or as estimated concentrations below groundwater standards.

Since the Site Management Plan has been finalized, some changes have occurred to the site. All monitoring wells as listed in the Site Management Plan except for MW-11S have been reported from a recent site inspection as either damaged or missing. The City has begun site development which includes a roadway extension of Tenth Avenue as presented on Figure 1. The proposed roadway and 8-inch diameter waterline conflicts with monitoring well MW-3S location.

The City proposes to replace monitoring well MW-3S and move its location approximately 65-feet to the north of its old location. The new location would be located within the proposed road right-of-way area outside from proposed pavement and curb area. The proposed location of monitoring well MW-3S is presented on Figure 1. The City proposes to only sample groundwater from monitoring well MW-3S. Analytical testing will include Volatile Organic Compounds (VOCs) under EPA Method 8260 TCL.

Very truly yours,

  
Dale Marshall, P.E.  
City Engineer

Cc: file, w/a  
David Rowlinson, Stearns & Wheler, LLC - GHD



**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS**  
**VOLATILE ORGANIC COMPOUNDS**

TCL Volatiles

Dec-98

Roblin Steel Site Investigation  
City of North Tonawanda, NY

Analyte (ug/l)	Well ID										GW Std.
	GW-1	GW-2	GW-2S	GW-3	GW-3S	GW-4	GW-1S	GW-5	GW-5S	GW-6	
Chloromethane	U	U	U	U	U	U	U	U	U	U	NS
Bromomethane	UJ	UJ	UJ	UJ	UJ	UJ	UJ	UJ	UJ	UJ	5
Vinyl Chloride	U	U	U	U	U	U	U	U	U	U	2
Chloroethane	UJ	UJ	UJ	UJ	UJ	U	UJ	U	U	U	5
Methylene Chloride	U	U	U	U	U	U	U	U	U	U	5
Acetone	6UJ	UJ	UJ	UJ	UJ	UJ	UJ	UJ	U	UJ	50G
Carbon Disulfide	U	U	U	U	U	U	U	U	U	U	NS
Vinyl Acetate	U	U	U	U	U	U	U	U	U	U	NS
1,1-Dichloroethene	U	U	U	U	U	U	U	U	U	U	5
1,1-Dichloroethane	U	2J	2J	U	U	U	U	U	U	U	5
cis-1,2-Dichloroethene	U	U	U	U	62	U	U	U	U	U	5
Trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	U	U	5
Chloroform	U	U	U	U	U	U	U	U	U	U	7
1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	0.6
2-Butanone	U	U	U	U	U	U	U	U	U	U	50G
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	U	U	5
Carbon Tetrachloride	U	U	U	U	U	U	U	U	U	U	5
Bromodichloromethane	U	U	U	U	U	U	U	U	U	U	50G
1,2-Dichloropropane	U	U	U	U	U	U	U	U	U	U	1
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	0.4
Trichloroethene	U	U	U	U	56	U	U	U	U	U	5
Dibromochloromethane	U	U	U	U	U	U	U	U	U	U	5
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	U	U	1
Benzene	U	U	U	U	U	U	U	U	U	U	1
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	0.4
Bromoform	U	U	U	U	U	U	U	U	U	U	50G
4-Methyl-2-Pentanone	U	U	U	U	U	U	U	U	U	U	NS
2-Hexanone	U	U	U	U	U	U	U	U	U	U	50G
Tetrachloroethene	U	U	4J	U	40	U	U	U	U	U	5
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	U	U	5
Toluene	U	U	U	U	U	U	U	U	U	U	5
Chlorobenzene	U	U	U	U	U	U	U	U	U	U	5
Ethylbenzene	U	U	U	U	U	U	U	U	U	U	5
Styrene	U	U	U	U	U	U	U	U	U	U	5
Xylene (total)	U	U	U	U	U	U	U	U	U	U	5

Standards based on Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (NYSDEC June 1998)

Bold face indicates locations of concentrations above standards

NS: No Standard

G: Guidance Value

NOTE: Data has been validated

# **APPENDIX B**

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## **INSTITUTIONAL & ENGINEERING CONTROLS CERTIFICATION FORM**



**STEARNS & WHEELER**  
CLIENTS | PEOPLE | PERFORMANCE



**New York State Department of Environmental Conservation**  
**Division of Environmental Remediation, 11th Floor**  
625 Broadway, Albany, New York 12233  
**Phone:** (518) 402-9553 **Fax:** (518) 402-9577  
**Website:** www.dec.ny.gov



**45-Day Reminder Notice: Site Management Periodic Review Report**

Mr. Dale Marshall  
City Engineer  
Municipal  
216 Payne Avenue  
City Of North Tonawanda, NY 14120

January 21, 2011  
**Site Name:** Former Roblin Steel Site  
**Site No.:** B00025  
**Site Address:** 101 East Avenue  
North Tonawanda, NY 14120

RECEIVED  
ENGINEERING DEPT  
CITY OF N. TONAWANDA  
2011 JAN 26 PM 12:17

Dear Mr. Dale Marshall:

This letter serves as a reminder that sites in active Site Management (SM) require the submittal of a periodic progress report. This report, referred to as the Periodic Review Report (PRR), must document the implementation of, and compliance with, site specific SM requirements. Section 6.3(b) of DER-10 *Technical Guidance for Site Investigation and Remediation* (available online) provides guidance regarding the information that must be included in the PRR. Further, if the site is comprised of multiple parcels, then you as the Certifying Party must arrange to submit one PRR for all parcels that comprise the site. The PRR must be received by the Department no later than **March 16, 2011**.

Site Management is defined in regulation (6 NYCRR 375-1.2(at)) and in Chapter 6 of DER-10. Depending on when the remedial program for your site was completed, SM may be governed by multiple documents (e.g., Operation, Maintenance, and Monitoring Plan; Soil Management Plan) or one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you submit the PRR (by the due date above), include the enclosed forms documenting that all SM requirements are being met. The Institutional Controls (ICs) portion of the form must be signed by you or your designated representative. The Engineering Controls (ECs) portion of the form must be signed by a Professional Engineer (PE). If you cannot certify that all SM requirements are being met, you must submit a Corrective Measures Work Plan that identifies the actions to be taken to restore compliance. The work plan must include a schedule to be approved by the Department. The Periodic Review process will not be considered complete until all necessary corrective measures are completed and all required controls are certified. Instructions for completing the certifications are enclosed.

The certification forms should be submitted in both paper and electronic formats. All supporting documentation (e.g., data, reports) should be submitted in electronic format only. These documents and electronic submissions should be sent to Brian Sadowski, Project Manager.

New York State Department of Environmental Conservation  
270 Michigan Ave  
Buffalo, NY 14203-2915

Phone number: 716-851-7220. E-mail: bpsadows@gw.dec.state.ny.us

Enclosures

cc: Brian Sadowski, Project Manager  
Michael Cruden, Bureau Director  
Greg Sutton/Marty Doster, Hazardous Waste Remediation Engineer, Region 9  
Steven Bates, DOH



**Enclosure**  
**Periodic Review Report (PRR) General Guidance**

**I. Introduction: (½-page or less)**

- A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
- B. Effectiveness of the Remedial Program - Provide overall conclusions regarding:
  - 1. progress made during the reporting period toward meeting the remedial objectives for the site
  - 2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
- C. Compliance
  - 1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
  - 2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
- D. Recommendations
  - 1. recommend whether any changes to the SMP are needed
  - 2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
  - 3. recommend whether the requirements for discontinuing site management have been met.

**II. Site Overview (one page or less)**

- A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
- B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy and site that have been made since remedy selection.

**III. Evaluate Remedy Performance, Effectiveness, and Protectiveness**

- A. Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations should be presented simply and concisely.

**IV. IC/EC Plan Compliance Report (if applicable)**

- A. IC/EC Requirements and Compliance
  - 1. Describe each control, its objective, and how performance of the control is evaluated.
  - 2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
  - 3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
  - 4. Conclusions and recommendations for changes.
- B. IC/EC Certification
  - 1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

**V. Monitoring Plan Compliance Report (if applicable)**

- A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
- B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
- C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
- D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
- E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

**VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)**

- A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
- B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
- C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluate the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.
- D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.
- E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify problems, their severity, and any suggested improvements requiring changes in the O&M Plan.

**VII. Overall PRR Conclusions and Recommendations**

- A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
  - 1. whether all requirements of each plan were met during the reporting period
  - 2. any requirements not met such as new completed exposure pathways resulting in unacceptable risk
  - 3. proposed plans and a schedule for coming into full compliance.
- B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.
- C. Future PRR Submittals
  - 1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
  - 2. If the requirements for site closure have been achieved, contact the Department's Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

**VIII. Additional Guidance**

- A. Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Department's Project Manager for the site.



Enclosure 1  
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**Site Management Periodic Review Report Notice**  
**Institutional and Engineering Controls Certification Form**



Site Details		Box 1	
Site No.	B00025		
Site Name <b>Former Roblin Steel Site</b>			
Site Address: 101 East Avenue      Zip Code: 14120 City/Town: North Tonawanda County: Niagara Site Acreage: 23.7			
Reporting Period: September 01, 2008 to February 14, 2011			
		YES	NO
1.	Is the information above correct?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.			
2.	Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.	Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.	Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.</b>			
5.	Is the site currently undergoing development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<b>Box 2</b>	
		YES	NO
6.	Is the current site use consistent with the use(s) listed below? Commercial and Industrial	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.	Are all ICs/ECs in place and functioning as designed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM.</b>			
<b>A Corrective Measures Work Plan must be submitted along with this form to address these issues.</b>			
_____ Signature of Owner, Remedial Party or Designated Representative		_____ Date	

**SITE NO. B00025**

**Box 3**

**Description of Institutional Controls**

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
181.12-1-14.11	City of North Tonawanda	Ground Water Use Restriction Landuse Restriction Soil Management Plan

**Box 4**

**Description of Engineering Controls**

<u>Parcel</u>	<u>Engineering Control</u>
181.12-1-14.11	Cover System

---

**Control Description for Site No. B00025**

**Parcel: 181.12-1-14.11**

The summary of the Environmental Easement is as follows:

The property may be used for commercial/industrial purposes (excluding uses for day care, child care, and medical care, unless such use is approved in writing by the DEC and NYSDOH) as long as the following long-term engineering controls are employed:

(i) Soils and fill materials encountered during any construction or development activity below the crushed concrete cover layer must be handled in accordance with provisions of the Roblin Steel Site Soils Management Plan, dated February, 2006. Excavated soil must be managed, characterized, and properly disposed of in accordance with NYSDEC regulations and directives.

(ii) Should subsequent construction or development activities require the decommissioning (removal) of existing groundwater monitoring wells, the wells will be decommissioned in accordance with DEC guidance. Replacement monitoring wells may be required by the DEC.

(iii) A long term ground water monitoring program is required per the approved Roblin Steel Operation, Maintenance, and Monitoring Plan, which is contained in the approved Roblin Steel Site Management Plan, dated February, 2006. The City of North Tonawanda is required to conduct the periodic sampling, analysis, and reporting for the groundwater monitoring program.

(iv) Future uses of the site groundwater are prohibited unless authorized in writing by the DEC and NYSDOH.

The property may not be used for a higher level of use such as residential use and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of the Environmental Easement.

The City or any future owners will submit annual (or such intervals as NYSDEC may allow) certification that the controls employed at the property are unchanged from the previous certification, or that any changes to the controls employed at the Controlled Property were approved by the NYSDEC, and that nothing has occurred that would impair the ability of such controls to protect the public health and environment.

**Periodic Review Report (PRR) Certification Statements**

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☒ ☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

☒ ☐

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and  
DO NOT COMPLETE THE REST OF THIS FORM.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

\_\_\_\_\_  
Signature of Owner, Remedial Party or Designated Representative

\_\_\_\_\_  
Date

IC CERTIFICATIONS  
SITE NO. B00025

Box 6

**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

I certify that all information and statements in Boxes 2 and/or 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Dale W. Marshall at 216 Payne Ave NT/NY 14120  
print name print business address

am certifying as North Tonawanda City Engineer (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Dale W. Marshall PE  
Signature of Owner or Remedial Party Rendering Certification

2/11/11  
Date

IC/EC CERTIFICATIONS

Box 7

**Professional Engineer Signature**

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Robert Armstrong at 415 NORTH FRENCH RD, AMHERST, NY  
print name print business address

am certifying as a Professional Engineer for the GHD, INC.  
(Owner or Remedial Party)

Robert Armstrong  
Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification



2/12/11  
Date

## Enclosure 2

### Certification Instructions

#### I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

#### II. Certification of Institutional / Engineering Controls (Boxes 3, 4, and 5)

1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

#### III. IC/EC Certification by Signature (Box 6 and Box 7):

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- Where the only control is an Institutional Control on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner.
- Where the site has Institutional and Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

# APPENDIX C

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## SAMPLING AND WELL LOGS



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**STEARNS & WHEELER, LLC**  
**GROUNDWATER FIELD SAMPLING RECORD**

SITE Roblin Steel Site

DATE 07/01/10

Sampler: Brian Doyle

SAMPLE ID GW-3S

Depth of well (from top of casing).....

15 ft EL 562.04

Initial static water level (from top of casing)....

7.5 ft EL 569.5

Top of PVC Casing Elevation

577.04

Evacuation Method:

Well Volume Calculation

Peristaltic \_\_\_\_\_ Centrifugal \_\_\_\_\_

1 in. casing: \_\_\_\_\_ ft. of water x .09 = \_\_\_\_\_ gallons

Airlift \_\_\_\_\_ Pos. Displ. \_\_\_\_\_

2 in. casing: 7.5 ft. of water x .16 = 1.20 gallons

Bailer X >>> No. of bails \_\_\_\_\_

3 in. casing: \_\_\_\_\_ ft. of water x .36 = \_\_\_\_\_ gallons

Volume of water removed 3.60 gals.

> 3 volumes: ☒ yes ☐ no

dry: ☐ yes ☒ no

Field Tests: Temp: 13.1 C  
pH 7.05  
Conductivity 1.35 mS/cm  
DO 7.16 mg/L  
Turbidity 542 NTUs  
Oxidation Reduction Potential (ORP) 61.0 mV

Sampling:

Time: 10:15 AM

Sampling Method: Peristaltic Pump \_\_\_\_\_  
Disposable Bailer X  
Disposable Tubing \_\_\_\_\_

Observations:

Weather/Temperature: Clear, 70° F

Physical Appearance and Odor of Sample: Initially clear, then gray and cloudy. No odor.

Comments: 9/16" socket needed to open cover.  
Well is at grade.



# Stearns & Wheler, LLC

Environmental Engineers and Scientists

Boring/Well: MW-3S

Page 1 of 1

Project No. 8612403

Date: 06/25/10

Weather: Partly Clear 70°

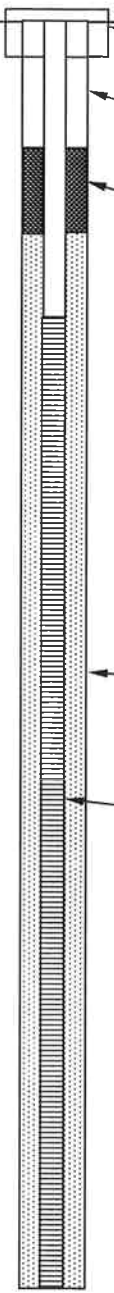
**Project Name:** Roblin Steel Groundwater Monitoring

Drilling Co.: SJB Services

S&W Representative: BPD

Drill Rig Type: Hollow Stem Auger

Drilling Method: Spilt Spoon

Depth (ft)	Sample No.	Recovery (%)	# of Blows	USCS Classification	Sample Description	Well Schematic	Comments	
	S-1	88	3	GM	Black Silt (Fill) - contains gravel with large cobbles  2.0'			
1			5					
			7					
2			7					
	S-2	75	4	ML	Reddish Tan Sandy Silt - dry - grades to rust/gray silt  5.0'			
3			8					
			10					
4			8					
	S-3	88	4	ML	Grayish Tan Sandy Silt - wet  10.0'			
5			6					
			6					
6			8					
	S-4	63	6					ML
7			6					
			8					
8			10					
	S-5	50	5	ML				
9			7					
			8					
10			8					
	S-6	88	7		CH	Reddish Gray Clay - dry - some sand  14.5'		
11			8					
			5					
12			9					
	S-7	88	6	CH				
13			6					
			8					
14			8					
	S-8	100	2		OH	Reddish Gray Clay - wet 15.5'		
15			2					
			2					
16			2					
					Augered to 16.0'			

**ROBLIN STEEL SITE  
CITY OF NORTH TONAWANDA, NEW YORK  
SITE INSPECTION LOG SHEET**

Inspector (Print): Brain Doyle

Inspector (Signature): \_\_\_\_\_

Date of Inspection: 6/26/2010

**1. Fencing, Gates, and Access**

Fence Intact	<u>Yes, fencing around east and west sides of the perimeter</u>
Gates Working	<u>NA</u>
Locks Operable	<u>NA</u>
Access Road Condition	<u>Good</u>

**2. Waterways and Ditches**

Signs of Erosion	<u>None</u>
Blockage of Drainage Pathway	<u>None</u>
Culverts Clear of Obstructions	<u>Yes</u>
Ponded Water Areas	<u>None</u>

**3. Monitoring Wells - Well Casing, Cap, and Locks in Place and in Good Condition**

New monitoring well MW-3S was installed flush mount near the original well location.

Remaining original monitoring wells were abandoned and filled with grout

\_\_\_\_\_

**4. Evidence of Vandalism/Site Usage by Others**

None

\_\_\_\_\_

\_\_\_\_\_

Comments/Action Required:

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# APPENDIX D

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## ANALYTICAL TEST RESULTS



STEARNS & WHEELER  
CLIENTS | PEOPLE | PERFORMANCE





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(615) 758-5858  
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Est. 1970

Mr. Dave Rowlinson  
Stearns and Wheeler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

### Report Summary

Monday November 29, 2010

Report Number: L467193

Samples Received: 07/02/10

Client Project: 8612403

Description: Roblin Steel

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Leslie Newton, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,  
TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Est. 1970

# REPORT OF ANALYSIS

November 29, 2010

Mr. Dave Rowlinson  
Stearns and Wheler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

Date Received : July 02, 2010  
Description : Roblin Steel

Sample ID : MW-35

Collected By : Brian Doyle  
Collection Date : 07/01/10 10:15

ESC Sample # : L467193-01

Site ID :

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Volatile Organics								
Acetone	0.029	0.016	0.050	mg/l	J	8260B	07/14/10	1
Benzene	U	0.00023	0.0010	mg/l		8260B	07/14/10	1
Bromochloromethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
Bromodichloromethane	U	0.00023	0.0010	mg/l		8260B	07/14/10	1
Bromoform	U	0.00037	0.0010	mg/l		8260B	07/14/10	1
Bromomethane	U	0.0016	0.0050	mg/l		8260B	07/14/10	1
Carbon disulfide	U	0.00028	0.0010	mg/l		8260B	07/14/10	1
Carbon tetrachloride	U	0.00020	0.0010	mg/l		8260B	07/14/10	1
Chlorobenzene	U	0.00030	0.0010	mg/l		8260B	07/14/10	1
Chlorodibromomethane	U	0.00024	0.0010	mg/l		8260B	07/14/10	1
Chloroethane	U	0.00087	0.0050	mg/l		8260B	07/14/10	1
Chloroform	U	0.00027	0.0050	mg/l		8260B	07/14/10	1
Chloromethane	U	0.00076	0.0025	mg/l		8260B	07/14/10	1
Cyclohexane	0.00031	0.00030	0.0010	mg/l	J	8260B	07/14/10	1
1,2-Dibromo-3-Chloropropane	U	0.0013	0.0050	mg/l		8260B	07/14/10	1
1,2-Dibromoethane	U	0.00027	0.0010	mg/l		8260B	07/14/10	1
1,2-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
1,3-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
1,4-Dichlorobenzene	U	0.00031	0.0010	mg/l		8260B	07/14/10	1
Dichlorodifluoromethane	U	0.0016	0.0050	mg/l		8260B	07/14/10	1
1,1-Dichloroethane	U	0.00032	0.0010	mg/l		8260B	07/14/10	1
1,2-Dichloroethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
1,1-Dichloroethene	U	0.00041	0.0010	mg/l		8260B	07/14/10	1
cis-1,2-Dichloroethene	0.028	0.00034	0.0010	mg/l		8260B	07/14/10	1
trans-1,2-Dichloroethene	0.00043	0.00026	0.0010	mg/l	J	8260B	07/14/10	1
1,2-Dichloropropane	U	0.00039	0.0010	mg/l		8260B	07/14/10	1
cis-1,3-Dichloropropene	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
trans-1,3-Dichloropropene	U	0.00024	0.0010	mg/l		8260B	07/14/10	1
Ethylbenzene	U	0.00022	0.0010	mg/l		8260B	07/14/10	1
2-Hexanone	U	0.0036	0.010	mg/l		8260B	07/14/10	1
Isopropylbenzene	U	0.00020	0.0010	mg/l		8260B	07/14/10	1
2-Butanone (MEK)	U	0.0034	0.010	mg/l		8260B	07/14/10	1
Methyl Acetate	U	0.0066	0.020	mg/l		8260B	07/14/10	1
Methyl Cyclohexane	U	0.00033	0.0010	mg/l		8260B	07/14/10	1
Methylene Chloride	U	0.00091	0.0050	mg/l		8260B	07/14/10	1
4-Methyl-2-pentanone (MIBK)	U	0.0017	0.010	mg/l		8260B	07/14/10	1
Methyl tert-butyl ether	0.0049	0.00063	0.0010	mg/l		8260B	07/14/10	1
Styrene	U	0.00024	0.0010	mg/l	J4	8260B	07/14/10	1
1,1,2,2-Tetrachloroethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
Tetrachloroethene	U	0.00032	0.0010	mg/l		8260B	07/14/10	1
Toluene	U	0.00032	0.0050	mg/l		8260B	07/14/10	1
1,2,3-Trichlorobenzene	U	0.00032	0.0010	mg/l		8260B	07/14/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Est. 1970

# REPORT OF ANALYSIS

Mr. Dave Rowlinson  
Stearns and Wheeler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

November 29, 2010

Date Received : July 02, 2010  
Description : Roblin Steel  
Sample ID : MW-35  
Collected By : Brian Doyle  
Collection Date : 07/01/10 10:15

ESC Sample # : L467193-01

Site ID :

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,2,4-Trichlorobenzene	U	0.00035	0.0010	mg/l		8260B	07/14/10	1
1,1,1-Trichloroethane	U	0.00031	0.0010	mg/l		8260B	07/14/10	1
1,1,2-Trichloroethane	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
Trichloroethene	0.00034	0.00031	0.0010	mg/l	J	8260B	07/14/10	1
Trichlorofluoromethane	U	0.0011	0.0050	mg/l		8260B	07/14/10	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00039	0.0010	mg/l		8260B	07/14/10	1
Vinyl chloride	0.00074	0.00034	0.0010	mg/l	J	8260B	07/14/10	1
Xylenes, Total	U	0.00086	0.0030	mg/l		8260B	07/14/10	1
Surrogate Recovery								
Toluene-d8	98.8			% Rec.		8260B	07/14/10	1
Dibromofluoromethane	103.			% Rec.		8260B	07/14/10	1
a,a,a-Trifluorotoluene	104.			% Rec.		8260B	07/14/10	1
4-Bromofluorobenzene	105.			% Rec.		8260B	07/14/10	1

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# REPORT OF ANALYSIS

Mr. Dave Rowlinson  
Stearns and Wheler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

November 29, 2010

Date Received : July 02, 2010  
Description : Roblin Steel

Sample ID : FD

Collected By : Brian Doyle  
Collection Date : 07/01/10 10:15

ESC Sample # : L467193-02

Site ID :

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Volatile Organics								
Acetone	U	0.016	0.050	mg/l		8260B	07/13/10	1
Benzene	U	0.00023	0.0010	mg/l		8260B	07/13/10	1
Bromochloromethane	U	0.00025	0.0010	mg/l		8260B	07/13/10	1
Bromodichloromethane	U	0.00023	0.0010	mg/l		8260B	07/13/10	1
Bromoform	U	0.00037	0.0010	mg/l		8260B	07/13/10	1
Bromomethane	U	0.0016	0.0050	mg/l		8260B	07/13/10	1
Carbon disulfide	U	0.00028	0.0010	mg/l		8260B	07/13/10	1
Carbon tetrachloride	U	0.00020	0.0010	mg/l		8260B	07/13/10	1
Chlorobenzene	U	0.00030	0.0010	mg/l		8260B	07/13/10	1
Chlorodibromomethane	U	0.00024	0.0010	mg/l		8260B	07/13/10	1
Chloroethane	U	0.00087	0.0050	mg/l		8260B	07/13/10	1
Chloroform	U	0.00027	0.0050	mg/l		8260B	07/13/10	1
Chloromethane	U	0.00076	0.0025	mg/l		8260B	07/13/10	1
Cyclohexane	U	0.00030	0.0010	mg/l		8260B	07/13/10	1
1,2-Dibromo-3-Chloropropane	U	0.0013	0.0050	mg/l		8260B	07/13/10	1
1,2-Dibromoethane	U	0.00027	0.0010	mg/l		8260B	07/13/10	1
1,2-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/13/10	1
1,3-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/13/10	1
1,4-Dichlorobenzene	U	0.00031	0.0010	mg/l		8260B	07/13/10	1
Dichlorodifluoromethane	U	0.0016	0.0050	mg/l		8260B	07/13/10	1
1,1-Dichloroethane	U	0.00032	0.0010	mg/l		8260B	07/13/10	1
1,2-Dichloroethane	U	0.00025	0.0010	mg/l		8260B	07/13/10	1
1,1-Dichloroethene	U	0.00041	0.0010	mg/l		8260B	07/13/10	1
cis-1,2-Dichloroethene	0.028	0.00034	0.0010	mg/l		8260B	07/13/10	1
trans-1,2-Dichloroethene	0.00043	0.00026	0.0010	mg/l	J	8260B	07/13/10	1
1,2-Dichloropropane	U	0.00039	0.0010	mg/l		8260B	07/13/10	1
cis-1,3-Dichloropropene	U	0.00025	0.0010	mg/l		8260B	07/13/10	1
trans-1,3-Dichloropropene	U	0.00024	0.0010	mg/l		8260B	07/13/10	1
Ethylbenzene	U	0.00022	0.0010	mg/l		8260B	07/13/10	1
2-Hexanone	U	0.0036	0.010	mg/l		8260B	07/13/10	1
Isopropylbenzene	U	0.00020	0.0010	mg/l		8260B	07/13/10	1
2-Butanone (MEK)	U	0.0034	0.010	mg/l		8260B	07/13/10	1
Methyl Acetate	U	0.0066	0.020	mg/l		8260B	07/13/10	1
Methyl Cyclohexane	U	0.00033	0.0010	mg/l		8260B	07/13/10	1
Methylene Chloride	U	0.00091	0.0050	mg/l	J3	8260B	07/13/10	1
4-Methyl-2-pentanone (MIBK)	U	0.0017	0.010	mg/l		8260B	07/13/10	1
Methyl tert-butyl ether	0.0037	0.00063	0.0010	mg/l		8260B	07/13/10	1
Styrene	U	0.00024	0.0010	mg/l		8260B	07/13/10	1
1,1,2,2-Tetrachloroethane	U	0.00025	0.0010	mg/l		8260B	07/13/10	1
Tetrachloroethene	0.0013	0.00032	0.0010	mg/l		8260B	07/13/10	1
Toluene	U	0.00032	0.0050	mg/l		8260B	07/13/10	1
1,2,3-Trichlorobenzene	U	0.00032	0.0010	mg/l		8260B	07/13/10	1

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REPORT OF ANALYSIS

Mr. Dave Rowlinson  
Stearns and Wheeler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

November 29, 2010

Date Received : July 02, 2010  
Description : Roblin Steel

Sample ID : FD

Collected By : Brian Doyle  
Collection Date : 07/01/10 10:15

ESC Sample # : L467193-02

Site ID :

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,2,4-Trichlorobenzene	U	0.00035	0.0010	mg/l		8260B	07/13/10	1
1,1,1-Trichloroethane	U	0.00031	0.0010	mg/l		8260B	07/13/10	1
1,1,2-Trichloroethane	U	0.00029	0.0010	mg/l		8260B	07/13/10	1
Trichloroethene	0.00045	0.00031	0.0010	mg/l	J	8260B	07/13/10	1
Trichlorofluoromethane	U	0.0011	0.0050	mg/l		8260B	07/13/10	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00039	0.0010	mg/l		8260B	07/13/10	1
Vinyl chloride	0.00083	0.00034	0.0010	mg/l	J	8260B	07/13/10	1
Xylenes, Total	U	0.00086	0.0030	mg/l		8260B	07/13/10	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	07/13/10	1
Dibromofluoromethane	108.			% Rec.		8260B	07/13/10	1
a,a,a-Trifluorotoluene	105.			% Rec.		8260B	07/13/10	1
4-Bromofluorobenzene	89.8			% Rec.		8260B	07/13/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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REPORT OF ANALYSIS

Mr. Dave Rowlinson  
Stearns and Wheler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

November 29, 2010

Date Received : July 02, 2010  
Description : Roblin Steel

Sample ID : TRIP BLANK

Collected By : Brian Doyle  
Collection Date : 07/01/10 00:00

ESC Sample # : L467193-03

Site ID :

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Volatile Organics								
Acetone	U	0.016	0.050	mg/l		8260B	07/14/10	1
Benzene	U	0.00023	0.0010	mg/l		8260B	07/14/10	1
Bromochloromethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
Bromodichloromethane	U	0.00023	0.0010	mg/l		8260B	07/14/10	1
Bromoform	U	0.00037	0.0010	mg/l		8260B	07/14/10	1
Bromomethane	U	0.0016	0.0050	mg/l		8260B	07/14/10	1
Carbon disulfide	U	0.00028	0.0010	mg/l		8260B	07/14/10	1
Carbon tetrachloride	U	0.00020	0.0010	mg/l		8260B	07/14/10	1
Chlorobenzene	U	0.00030	0.0010	mg/l		8260B	07/14/10	1
Chlorodibromomethane	U	0.00024	0.0010	mg/l		8260B	07/14/10	1
Chloroethane	U	0.00087	0.0050	mg/l		8260B	07/14/10	1
Chloroform	U	0.00027	0.0050	mg/l		8260B	07/14/10	1
Chloromethane	U	0.00076	0.0025	mg/l		8260B	07/14/10	1
Cyclohexane	U	0.00030	0.0010	mg/l		8260B	07/14/10	1
1,2-Dibromo-3-Chloropropane	U	0.0013	0.0050	mg/l		8260B	07/14/10	1
1,2-Dibromoethane	U	0.00027	0.0010	mg/l		8260B	07/14/10	1
1,2-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
1,3-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
1,4-Dichlorobenzene	U	0.00031	0.0010	mg/l		8260B	07/14/10	1
Dichlorodifluoromethane	U	0.0016	0.0050	mg/l		8260B	07/14/10	1
1,1-Dichloroethane	U	0.00032	0.0010	mg/l		8260B	07/14/10	1
1,2-Dichloroethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
1,1-Dichloroethene	U	0.00041	0.0010	mg/l		8260B	07/14/10	1
cis-1,2-Dichloroethene	U	0.00034	0.0010	mg/l		8260B	07/14/10	1
trans-1,2-Dichloroethene	U	0.00026	0.0010	mg/l		8260B	07/14/10	1
1,2-Dichloropropane	U	0.00039	0.0010	mg/l		8260B	07/14/10	1
cis-1,3-Dichloropropene	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
trans-1,3-Dichloropropene	U	0.00024	0.0010	mg/l		8260B	07/14/10	1
Ethylbenzene	U	0.00022	0.0010	mg/l		8260B	07/14/10	1
2-Hexanone	U	0.0036	0.010	mg/l		8260B	07/14/10	1
Isopropylbenzene	U	0.00020	0.0010	mg/l		8260B	07/14/10	1
2-Butanone (MEK)	U	0.0034	0.010	mg/l		8260B	07/14/10	1
Methyl Acetate	U	0.0066	0.020	mg/l		8260B	07/14/10	1
Methyl Cyclohexane	U	0.00033	0.0010	mg/l		8260B	07/14/10	1
Methylene Chloride	U	0.00091	0.0050	mg/l		8260B	07/14/10	1
4-Methyl-2-pentanone (MIBK)	U	0.0017	0.010	mg/l		8260B	07/14/10	1
Methyl tert-butyl ether	U	0.00063	0.0010	mg/l		8260B	07/14/10	1
Styrene	U	0.00024	0.0010	mg/l	J4	8260B	07/14/10	1
1,1,2,2-Tetrachloroethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
Tetrachloroethene	U	0.00032	0.0010	mg/l		8260B	07/14/10	1
Toluene	U	0.00032	0.0050	mg/l		8260B	07/14/10	1
1,2,3-Trichlorobenzene	U	0.00032	0.0010	mg/l		8260B	07/14/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

The reported analytical results relate only to the sample submitted.

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Dave Rowlinson  
Stearns and Wheler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

November 29, 2010

Date Received : July 02, 2010  
Description : Roblin Steel  
Sample ID : TRIP BLANK  
Collected By : Brian Doyle  
Collection Date : 07/01/10 00:00

ESC Sample # : L467193-03

Site ID :

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,2,4-Trichlorobenzene	U	0.00035	0.0010	mg/l		8260B	07/14/10	1
1,1,1-Trichloroethane	U	0.00031	0.0010	mg/l		8260B	07/14/10	1
1,1,2-Trichloroethane	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
Trichloroethene	U	0.00031	0.0010	mg/l		8260B	07/14/10	1
Trichlorofluoromethane	U	0.0011	0.0050	mg/l		8260B	07/14/10	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00039	0.0010	mg/l		8260B	07/14/10	1
Vinyl chloride	U	0.00034	0.0010	mg/l		8260B	07/14/10	1
Xylenes, Total	U	0.00086	0.0030	mg/l		8260B	07/14/10	1
Surrogate Recovery								
Toluene-d8	98.9			% Rec.		8260B	07/14/10	1
Dibromofluoromethane	105.			% Rec.		8260B	07/14/10	1
a,a,a-Trifluorotoluene	101.			% Rec.		8260B	07/14/10	1
4-Bromofluorobenzene	104.			% Rec.		8260B	07/14/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L467193-01	WG488348	SAMP	Acetone	R1285869	J
	WG488348	SAMP	Cyclohexane	R1285869	J
	WG488348	SAMP	trans-1,2-Dichloroethene	R1285869	J
	WG488348	SAMP	Styrene	R1285869	J4
	WG488348	SAMP	Trichloroethene	R1285869	J
	WG488348	SAMP	Vinyl chloride	R1285869	J
L467193-02	WG488122	SAMP	trans-1,2-Dichloroethene	R1284971	J
	WG488122	SAMP	Methylene Chloride	R1284971	J3
	WG488122	SAMP	Trichloroethene	R1284971	J
	WG488122	SAMP	Vinyl chloride	R1284971	J
L467193-03	WG488348	SAMP	Styrene	R1285869	J4

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

**Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

**Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

**Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

**TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed  
11/29/10 at 12:08:48

TSR Signing Reports: 044

Sample: L467193-01 Account: STEARNSANY Received: 07/02/10 09:00 Due Date: 12/01/10 00:00 RPT Date: 11/29/10 12:00  
MS/MSD Sample;UNINV 540392. ln 11/23/10  
Sample: L467193-02 Account: STEARNSANY Received: 07/02/10 09:00 Due Date: 12/01/10 00:00 RPT Date: 11/29/10 12:00  
Sample: L467193-03 Account: STEARNSANY Received: 07/02/10 09:00 Due Date: 12/01/10 00:00 RPT Date: 11/29/10 12:00

# Stearns and Wheler

415 North French Rd. Ste. 100  
Amherst, NY 14228

Mr. Dave Rowlinson  
415 North French Rd., Ste. 100  
Amherst, NY 14228

## Billing Information:

## Analysis/Container/Preservative

Chain of Custody  
Page 1 of 1

Report to: Mr. Dave Rowlinson

Email: dave.rowlinson@ghd.com

Project Description: Roblin Steel

City/State Collected: North Tonawanda, NY

Phone: (716) 691-8503  
FAX:

Client Project #: 8612403

Lab Project #: STEARNSANY-ROBLIN

Collected by (print): Brian Doyle

Site/Facility ID#:

P.O.#:

Collected by (signature): *Brian Doyle*

Rush? (Lab MUST Be Notified)

Date Results Needed

Immediately  
Packed on Ice N Y X

Same Day ..... 200%  
Next Day ..... 100%  
Two Day ..... 50%  
Three Day ..... 25%

Email? ☒ No ☐ Yes  
FAX? ☐ No ☐ Yes

No. of Cntrs

V8260TCL 40mlAmb-HCl

V8260TCL 40mlAmb-HCl-Blk



L.A.B. S.C.-I-E-N-C-E-S  
12065 Lebanon Road  
Mt Juliet, TN 37122

Phone: (800) 767-5859  
Phone: (615) 758-5858  
Fax: (615) 758-5859

D210

Accum: STEARNSANY (lab use only)  
Template/Prelogin T65569 P324160  
Cooler #: 6/31/12 ACC  
Shipped Via: FedEx 2nd Day

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Remarks/Contaminant	Sample # (lab only)
MW-35	Comp	GW		7/1/10	10:15	2		46719301
MS	Comp	GW		7/1/10	10:15	2		01
MSD	Comp	GW		7/1/10	10:15	2		01
FD	Comp	GW		7/1/10	10:15	2		02
		GW				2		
		GW				2		
Trig Blank		GW				1		03

\*Matrix: SS - Soil GW - Groundwater WW - Wastewater DW - Drinking Water OT - Other \_\_\_\_\_

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Remarks: ESC Quote: STEWYEANY051509S2

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Bottles Received: 9	COC Seal Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	22-10 0900	PH Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA

4355 9302 8054

# **APPENDIX E**

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## **DATA USABILITY REPORTING**



**STEARNS & WHEELER**  
CLIENTS | PEOPLE | PERFORMANCE





Vali-Data of WNY, LLC  
1514 Davis Rd.  
West Falls, NY 14170

RECEIVED  
GHD, Inc.

DEC -1 2010

November 30, 2010  
Mr. David Rowlinson  
Stearns & Wheeler, LLC  
415 N. French Road  
Amherst, NY

Dear Mr. Rowlinson,

I would like to thank you for using Vali-Data of WNY, LLC for your data validation needs.

Attached is the DUSR for Roblin Steel, SDG# L467193 and the corresponding invoice. If you have any questions, please feel free to contact me at (716) 655-6530. I look forward to working together in the future.

Sincerely,

A handwritten signature in black ink, appearing to read "Jodi Zimmerman", with a stylized, cursive script.

Jodi Zimmerman  
Vali-Data of WNY, LLC

## **Data Usability Summary Report**

Vali-Data of WNY, LLC  
1514 Davis Rd.  
West Falls, NY 14170

Roblin Steel  
Project # 8612403  
ESC Lab Sciences SDG#L467193  
October 14, 2010  
Sampling date: 07/01/2010

Prepared by:  
Jodi Zimmerman  
Vali-Data of WNY, LLC  
1514 Davis Rd.  
West Falls, NY 14170

Roblin Steel  
SDG# L467193

## **DELIVERABLES**

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for Stearns and Wheler, project located at Roblin Steel, project # 8612403, SDG#L467193, submitted to Vali-Data of WNY, LLC on August 9, 2010. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol and USEPA National Functional Guidelines. The laboratory performed the analysis using USEPA method 8260 (Volatile Organics).

## **VOLATILE ORGANIC COMPOUNDS**

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Sample Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

## **OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES**

The data are acceptable for use except where cited below in Continuing Calibration. Data are qualified below in Method Blank, Field Duplicate Sample Precision, Compound Quantitation and Continuing Calibration.

## **DATA COMPLETENESS**

All criteria were met.

## **NARRATIVE AND DATA REPORTING FORMS**

All criteria were met except the MDL's were not part of the original package. They are included in the attached, updated Form 1's.

## **CHAIN OF CUSTODY AND TRAFFIC REPORTS**

All criteria were met except no relinquished by time and signature were recorded. An updated page is attached.

Roblin Steel  
SDG# L467193

**HOLDING TIMES**

All holding times were met except the pH was not recorded. Correspondence with ESC Lab Sciences indicated that if the pH had not been within limits, then outliers would have been recorded at the bottom of the injection logs. No outliers were recorded.

**INTERNAL STANDARD (IS)**

All criteria were met.

**SURROGATE SPIKE RECOVERIES**

All criteria were met within ASP limits. ASP surrogate 1,2-Dichloroethane-d<sub>4</sub> was not used but Dibromofluoromethane and a,a,a-Trichlorotoluene were used instead.

**METHOD BLANK**

All criteria were met except Methylcyclohexane was detected in Blank WG-488122 and trans-1,3-Dichloropropene was detected in Blank WG-488348 above the MDL, below the MRL and should be recorded as estimated. ESC Lab Sciences has reviewed the data and does not believe these target analytes to be present. No supporting data has been included in the package.

**FIELD DUPLICATE SAMPLE PRECISION**

All criteria were met except Acetone, Cyclohexane and trans-1,3-Dichloropropene were detected in MW-35 but not in FD. Methylcyclohexane and Tetrachloroethene were detected in FD but not in MW-35.

Trans-1,3-Dichloropropene in MW-35 and Methylcyclohexane in FD were not recorded as detected. ESC Lab Sciences has reviewed the data and does not believe these target analytes to be present. No supporting data has been included in the package.

**LABORATORY CONTROL SAMPLES**

All criteria were met except the %RPD of Methylene Chloride was outside QC limits in the LCS performed as part of batch WG488122. The %Rec of Styrene was outside QC limits, high, in the LCS performed as part of batch WG488348.

**MS/MSD**

All criteria were met.

**COMPOUND QUANTITATION**

All criteria were met except Methylcyclohexane was detected in FD and trans-1,3-Dichloropropene was detected in MW-35 and Trip Blank above the MDL, below the MRL and should be recorded as estimated. ESC Lab Sciences has reviewed the data and does not believe these target analytes to be present. No supporting data has been included in the package.

**INITIAL CALIBRATION**

All criteria were met except the RRF of Trichloroethene was outside QC limits in the initial calibration performed on 7/8/10. ASP allows for up to 4 target analytes to be outside QC limits without further action.

ESC Lab Sciences used linear regression on all target analytes whose %RSD > 15% in the initial calibration performed on 7/8/10 except 1,2-Dibromo-3-chloropropane. ESC Lab Sciences used linear regression on all target analytes whose %RSD > 15% in the initial calibration performed on 7/6/10 except 2-Hexanone,

Roblin Steel  
SDG# L467193

Styrene and 4-Methyl-2-pentanone. The %RSD for these target analytes were within ASP QC limits, so no further action is required.

#### **CONTINUING CALIBRATION**

All criteria were met except the %D of Tetrachloroethene, Bromoform, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene were outside ASP QC limits in V820G07J.M. ASP allows for up to two target analytes to be outside QC limits without further action. National Functional Guidelines does not limit the number of target analytes that fall outside QC limits, but states that the target analytes that fall outside QC limits should be estimated.

Cyclohexane, Methyl acetate and Methylcyclohexane were not monitored in the continuing calibrations. The data for these target analytes should be considered unusable.

#### **GC/MS PERFORMANCE CHECK**

All criteria were met.



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# REPORT OF ANALYSIS

Mr. Dave Rowlinson  
Stearns and Wheler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

November 29, 2010

Date Received : July 02, 2010  
Description : Roblin Steel

ESC Sample # : L467193-01

Sample ID : MW-35

Site ID :

Collected By : Brian Doyle  
Collection Date : 07/01/10 10:15

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Volatile Organics								
Acetone	0.029	0.016	0.050	mg/l	J	8260B	07/14/10	1
Benzene	U	0.00023	0.0010	mg/l		8260B	07/14/10	1
Bromochloromethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
Bromodichloromethane	U	0.00023	0.0010	mg/l		8260B	07/14/10	1
Bromoform	U	0.00037	0.0010	mg/l		8260B	07/14/10	1
Bromomethane	U	0.0016	0.0050	mg/l		8260B	07/14/10	1
Carbon disulfide	U	0.00028	0.0010	mg/l		8260B	07/14/10	1
Carbon tetrachloride	U	0.00020	0.0010	mg/l		8260B	07/14/10	1
Chlorobenzene	U	0.00030	0.0010	mg/l		8260B	07/14/10	1
Chlorodibromomethane	U	0.00024	0.0010	mg/l		8260B	07/14/10	1
Chloroethane	U	0.00087	0.0050	mg/l		8260B	07/14/10	1
Chloroform	U	0.00027	0.0050	mg/l		8260B	07/14/10	1
Chloromethane	U	0.00076	0.0025	mg/l		8260B	07/14/10	1
Cyclohexane	0.00031 R	0.00030	0.0010	mg/l	J	8260B	07/14/10	1
1,2-Dibromo-3-Chloropropane	U	0.0013	0.0050	mg/l		8260B	07/14/10	1
1,2-Dibromoethane	U	0.00027	0.0010	mg/l		8260B	07/14/10	1
1,2-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
1,3-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
1,4-Dichlorobenzene	U	0.00031	0.0010	mg/l		8260B	07/14/10	1
Dichlorodifluoromethane	U	0.0016	0.0050	mg/l		8260B	07/14/10	1
1,1-Dichloroethane	U	0.00032	0.0010	mg/l		8260B	07/14/10	1
1,2-Dichloroethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
1,1-Dichloroethene	U	0.00041	0.0010	mg/l		8260B	07/14/10	1
cis-1,2-Dichloroethene	0.028	0.00034	0.0010	mg/l		8260B	07/14/10	1
trans-1,2-Dichloroethene	0.00043	0.00026	0.0010	mg/l	J	8260B	07/14/10	1
1,2-Dichloropropane	U	0.00039	0.0010	mg/l		8260B	07/14/10	1
cis-1,3-Dichloropropene	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
trans-1,3-Dichloropropene	0.00077 J	0.00024	0.0010	mg/l		8260B	07/14/10	1
Ethylbenzene	U	0.00022	0.0010	mg/l		8260B	07/14/10	1
2-Hexanone	U	0.0036	0.010	mg/l		8260B	07/14/10	1
Isopropylbenzene	U	0.00020	0.0010	mg/l		8260B	07/14/10	1
2-Butanone (MEK)	U	0.0034	0.010	mg/l		8260B	07/14/10	1
Methyl Acetate	J R	0.0066	0.020	mg/l		8260B	07/14/10	1
Methyl Cyclohexane	J R	0.00033	0.0010	mg/l		8260B	07/14/10	1
Methylene Chloride	U	0.00091	0.0050	mg/l		8260B	07/14/10	1
4-Methyl-2-pentanone (MIBK)	U	0.0017	0.010	mg/l		8260B	07/14/10	1
Methyl tert-butyl ether	0.0049	0.00063	0.0010	mg/l		8260B	07/14/10	1
Styrene	U	0.00024	0.0010	mg/l	J4	8260B	07/14/10	1
1,1,2,2-Tetrachloroethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
Tetrachloroethene	U	0.00032	0.0010	mg/l		8260B	07/14/10	1
Toluene	U	0.00032	0.0050	mg/l		8260B	07/14/10	1
1,2,3-Trichlorobenzene	U	0.00032	0.0010	mg/l		8260B	07/14/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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REPORT OF ANALYSIS

Mr. Dave Rowlinson  
Stearns and Wheler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

November 29, 2010

Date Received : July 02, 2010  
Description : Roblin Steel  
Sample ID : MW-35  
Collected By : Brian Doyle  
Collection Date : 07/01/10 10:15

ESC Sample # : L467193-01

Site ID :

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,2,4-Trichlorobenzene	U	0.00035	0.0010	mg/l		8260B	07/14/10	1
1,1,1-Trichloroethane	U	0.00031	0.0010	mg/l		8260B	07/14/10	1
1,1,2-Trichloroethane	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
Trichloroethene	0.00034	0.00031	0.0010	mg/l	J	8260B	07/14/10	1
Trichlorofluoromethane	U	0.0011	0.0050	mg/l		8260B	07/14/10	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00039	0.0010	mg/l		8260B	07/14/10	1
Vinyl chloride	0.00074	0.00034	0.0010	mg/l	J	8260B	07/14/10	1
Xylenes, Total	U	0.00086	0.0030	mg/l		8260B	07/14/10	1
Surrogate Recovery								
Toluene-d8	98.8			% Rec.		8260B	07/14/10	1
Dibromofluoromethane	103.			% Rec.		8260B	07/14/10	1
a,a,a-Trifluorotoluene	104.			% Rec.		8260B	07/14/10	1
4-Bromofluorobenzene	105.			% Rec.		8260B	07/14/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 11/29/10 12:00 Printed: 11/29/10 12:08

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YOUR LAB OF CHOICE

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REPORT OF ANALYSIS

November 29, 2010

Mr. Dave Rowlinson  
Stearns and Wheler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

Date Received : July 02, 2010  
Description : Roblin Steel

Sample ID : FD

Collected By : Brian Doyle  
Collection Date : 07/01/10 10:15

ESC Sample # : L467193-02

Site ID :

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Volatile Organics								
Acetone	U	0.016	0.050	mg/l		8260B	07/13/10	1
Benzene	U	0.00023	0.0010	mg/l		8260B	07/13/10	1
Bromochloromethane	U	0.00025	0.0010	mg/l		8260B	07/13/10	1
Bromodichloromethane	U	0.00023	0.0010	mg/l		8260B	07/13/10	1
Bromoform	U	0.00037	0.0010	mg/l		8260B	07/13/10	1
Bromomethane	U	0.0016	0.0050	mg/l		8260B	07/13/10	1
Carbon disulfide	U	0.00028	0.0010	mg/l		8260B	07/13/10	1
Carbon tetrachloride	U	0.00020	0.0010	mg/l		8260B	07/13/10	1
Chlorobenzene	U	0.00030	0.0010	mg/l		8260B	07/13/10	1
Chlorodibromomethane	U	0.00024	0.0010	mg/l		8260B	07/13/10	1
Chloroethane	U	0.00087	0.0050	mg/l		8260B	07/13/10	1
Chloroform	U	0.00027	0.0050	mg/l		8260B	07/13/10	1
Chloromethane	U	0.00076	0.0025	mg/l		8260B	07/13/10	1
Cyclohexane	U	0.00030	0.0010	mg/l		8260B	07/13/10	1
1,2-Dibromo-3-Chloropropane	U	0.0013	0.0050	mg/l		8260B	07/13/10	1
1,2-Dibromoethane	U	0.00027	0.0010	mg/l		8260B	07/13/10	1
1,2-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/13/10	1
1,3-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/13/10	1
1,4-Dichlorobenzene	U	0.00031	0.0010	mg/l		8260B	07/13/10	1
Dichlorodifluoromethane	U	0.0016	0.0050	mg/l		8260B	07/13/10	1
1,1-Dichloroethane	U	0.00032	0.0010	mg/l		8260B	07/13/10	1
1,2-Dichloroethane	U	0.00025	0.0010	mg/l		8260B	07/13/10	1
1,1-Dichloroethene	U	0.00041	0.0010	mg/l		8260B	07/13/10	1
cis-1,2-Dichloroethene	0.028	0.00034	0.0010	mg/l		8260B	07/13/10	1
trans-1,2-Dichloroethene	0.00043	0.00026	0.0010	mg/l	J	8260B	07/13/10	1
1,2-Dichloropropane	U	0.00039	0.0010	mg/l		8260B	07/13/10	1
cis-1,3-Dichloropropene	U	0.00025	0.0010	mg/l		8260B	07/13/10	1
trans-1,3-Dichloropropene	U	0.00024	0.0010	mg/l		8260B	07/13/10	1
Ethylbenzene	U	0.00022	0.0010	mg/l		8260B	07/13/10	1
2-Hexanone	U	0.0036	0.010	mg/l		8260B	07/13/10	1
Isopropylbenzene	U	0.00020	0.0010	mg/l		8260B	07/13/10	1
2-Butanone (MEK)	U	0.0034	0.010	mg/l		8260B	07/13/10	1
Methyl Acetate	U	0.0066	0.020	mg/l		8260B	07/13/10	1
Methyl Cyclohexane	U	0.00033	0.0010	mg/l		8260B	07/13/10	1
Methylene Chloride	U	0.00091	0.0050	mg/l	J3	8260B	07/13/10	1
4-Methyl-2-pentanone (MIBK)	U	0.0017	0.010	mg/l		8260B	07/13/10	1
Methyl tert-butyl ether	0.0037	0.00063	0.0010	mg/l		8260B	07/13/10	1
Styrene	U	0.00024	0.0010	mg/l		8260B	07/13/10	1
1,1,2,2-Tetrachloroethane	U	0.00025	0.0010	mg/l		8260B	07/13/10	1
Tetrachloroethene	0.0013	0.00032	0.0010	mg/l		8260B	07/13/10	1
Toluene	U	0.00032	0.0050	mg/l		8260B	07/13/10	1
1,2,3-Trichlorobenzene	U	0.00032	0.0010	mg/l		8260B	07/13/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Dave Rowlinson  
Stearns and Wheler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

November 29, 2010

Date Received : July 02, 2010  
Description : Roblin Steel

ESC Sample # : L467193-02

Sample ID : FD

Site ID :

Collected By : Brian Doyle  
Collection Date : 07/01/10 10:15

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,2,4-Trichlorobenzene	U J	0.00035	0.0010	mg/l		8260B	07/13/10	1
1,1,1-Trichloroethane	U	0.00031	0.0010	mg/l		8260B	07/13/10	1
1,1,2-Trichloroethane	U	0.00029	0.0010	mg/l		8260B	07/13/10	1
Trichloroethene	0.00045	0.00031	0.0010	mg/l	J	8260B	07/13/10	1
Trichlorofluoromethane	U	0.0011	0.0050	mg/l		8260B	07/13/10	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00039	0.0010	mg/l		8260B	07/13/10	1
Vinyl chloride	0.00083	0.00034	0.0010	mg/l	J	8260B	07/13/10	1
Xylenes, Total	U	0.00086	0.0030	mg/l		8260B	07/13/10	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	07/13/10	1
Dibromofluoromethane	108.			% Rec.		8260B	07/13/10	1
a,a,a-Trifluorotoluene	105.			% Rec.		8260B	07/13/10	1
4-Bromofluorobenzene	89.8			% Rec.		8260B	07/13/10	1

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REPORT OF ANALYSIS

November 29, 2010

Mr. Dave Rowlinson  
Stearns and Wheler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

Date Received : July 02, 2010  
Description : Roblin Steel

ESC Sample # : L467193-03

Sample ID : TRIP BLANK

Site ID :

Collected By : Brian Doyle  
Collection Date : 07/01/10 00:00

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Volatile Organics								
Acetone	U	0.016	0.050	mg/l		8260B	07/14/10	1
Benzene	U	0.00023	0.0010	mg/l		8260B	07/14/10	1
Bromochloromethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
Bromodichloromethane	U	0.00023	0.0010	mg/l		8260B	07/14/10	1
Bromoform	U	0.00037	0.0010	mg/l		8260B	07/14/10	1
Bromomethane	U	0.0016	0.0050	mg/l		8260B	07/14/10	1
Carbon disulfide	U	0.00028	0.0010	mg/l		8260B	07/14/10	1
Carbon tetrachloride	U	0.00020	0.0010	mg/l		8260B	07/14/10	1
Chlorobenzene	U	0.00030	0.0010	mg/l		8260B	07/14/10	1
Chlorodibromomethane	U	0.00024	0.0010	mg/l		8260B	07/14/10	1
Chloroethane	U	0.00087	0.0050	mg/l		8260B	07/14/10	1
Chloroform	U	0.00027	0.0050	mg/l		8260B	07/14/10	1
Chloromethane	U	0.00076	0.0025	mg/l		8260B	07/14/10	1
Cyclohexane	U R	0.00030	0.0010	mg/l		8260B	07/14/10	1
1,2-Dibromo-3-Chloropropane	U	0.0013	0.0050	mg/l		8260B	07/14/10	1
1,2-Dibromoethane	U	0.00027	0.0010	mg/l		8260B	07/14/10	1
1,2-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
1,3-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
1,4-Dichlorobenzene	U	0.00031	0.0010	mg/l		8260B	07/14/10	1
Dichlorodifluoromethane	U	0.0016	0.0050	mg/l		8260B	07/14/10	1
1,1-Dichloroethane	U	0.00032	0.0010	mg/l		8260B	07/14/10	1
1,2-Dichloroethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
1,1-Dichloroethene	U	0.00041	0.0010	mg/l		8260B	07/14/10	1
cis-1,2-Dichloroethene	U	0.00034	0.0010	mg/l		8260B	07/14/10	1
trans-1,2-Dichloroethene	U	0.00026	0.0010	mg/l		8260B	07/14/10	1
1,2-Dichloropropane	U	0.00039	0.0010	mg/l		8260B	07/14/10	1
cis-1,3-Dichloropropene	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
trans-1,3-Dichloropropene , 00078	U J	0.00024	0.0010	mg/l		8260B	07/14/10	1
Ethylbenzene	U	0.00022	0.0010	mg/l		8260B	07/14/10	1
2-Hexanone	U	0.0036	0.010	mg/l		8260B	07/14/10	1
Isopropylbenzene	U	0.00020	0.0010	mg/l		8260B	07/14/10	1
2-Butanone (MEK)	U	0.0034	0.010	mg/l		8260B	07/14/10	1
Methyl Acetate	U R	0.0066	0.020	mg/l		8260B	07/14/10	1
Methyl Cyclohexane	U R	0.00033	0.0010	mg/l		8260B	07/14/10	1
Methylene Chloride	U	0.00091	0.0050	mg/l		8260B	07/14/10	1
4-Methyl-2-pentanone (MIBK)	U	0.0017	0.010	mg/l		8260B	07/14/10	1
Methyl tert-butyl ether	U	0.00063	0.0010	mg/l		8260B	07/14/10	1
Styrene	U	0.00024	0.0010	mg/l	J4	8260B	07/14/10	1
1,1,2,2-Tetrachloroethane	U	0.00025	0.0010	mg/l		8260B	07/14/10	1
Tetrachloroethene	U	0.00032	0.0010	mg/l		8260B	07/14/10	1
Toluene	U	0.00032	0.0050	mg/l		8260B	07/14/10	1
1,2,3-Trichlorobenzene	U	0.00032	0.0010	mg/l		8260B	07/14/10	1

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REPORT OF ANALYSIS

Mr. Dave Rowlinson  
Stearns and Wheler  
415 North French Rd., Ste. 100  
Amherst, NY 14228

November 29, 2010

Date Received : July 02, 2010  
Description : Roblin Steel

ESC Sample # : L467193-03

Sample ID : TRIP BLANK

Site ID :

Collected By : Brian Doyle  
Collection Date : 07/01/10 00:00

Project # : 8612403

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,2,4-Trichlorobenzene	U	0.00035	0.0010	mg/l		8260B	07/14/10	1
1,1,1-Trichloroethane	U	0.00031	0.0010	mg/l		8260B	07/14/10	1
1,1,2-Trichloroethane	U	0.00029	0.0010	mg/l		8260B	07/14/10	1
Trichloroethene	U	0.00031	0.0010	mg/l		8260B	07/14/10	1
Trichlorofluoromethane	U	0.0011	0.0050	mg/l		8260B	07/14/10	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00039	0.0010	mg/l		8260B	07/14/10	1
Vinyl chloride	U	0.00034	0.0010	mg/l		8260B	07/14/10	1
Xylenes, Total	U	0.00086	0.0030	mg/l		8260B	07/14/10	1
Surrogate Recovery								
Toluene-d8	98.9			% Rec.		8260B	07/14/10	1
Dibromofluoromethane	105.			% Rec.		8260B	07/14/10	1
a,a,a-Trifluorotoluene	101.			% Rec.		8260B	07/14/10	1
4-Bromofluorobenzene	104.			% Rec.		8260B	07/14/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L467193-01	WG488348	SAMP	Acetone	R1285869	J
	WG488348	SAMP	Cyclohexane	R1285869	J
	WG488348	SAMP	trans-1,2-Dichloroethene	R1285869	J
	WG488348	SAMP	Styrene	R1285869	J4
	WG488348	SAMP	Trichloroethene	R1285869	J
	WG488348	SAMP	Vinyl chloride	R1285869	J
L467193-02	WG488122	SAMP	trans-1,2-Dichloroethene	R1284971	J
	WG488122	SAMP	Methylene Chloride	R1284971	J3
	WG488122	SAMP	Trichloroethene	R1284971	J
	WG488122	SAMP	Vinyl chloride	R1284971	J
L467193-03	WG488348	SAMP	Styrene	R1285869	J4

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed  
11/29/10 at 12:08:48

TSR Signing Reports: 044

Sample: L467193-01 Account: STEARNSANY Received: 07/02/10 09:00 Due Date: 12/01/10 00:00 RPT Date: 11/29/10 12:00  
MS/MSD Sample;UNINV 540392. In 11/23/10  
Sample: L467193-02 Account: STEARNSANY Received: 07/02/10 09:00 Due Date: 12/01/10 00:00 RPT Date: 11/29/10 12:00  
Sample: L467193-03 Account: STEARNSANY Received: 07/02/10 09:00 Due Date: 12/01/10 00:00 RPT Date: 11/29/10 12:00

<b>Stearns and Wheler</b> 415 North French Rd., Ste. 100 Amherst, NY 14228		<b>Billing information:</b> Mr. Dave Rowlinson 415 North French Rd., Ste. 100 Amherst, NY 14228		<b>Chain of Custody</b> Page <u>1</u> of <u>1</u>	
<b>Report to:</b> Mr. Dave Rowlinson Roblin Steel	<b>Project Description:</b> Client Project #: 8612403 Site/Facility ID#:	<b>Email:</b> dave.rowlinson@ghd.com	<b>Analysis/Container/Preservative</b> V8260TCL 40ml Amb-HCl V8260TCL 40ml Amb-HCl-BLK		
<b>Phone:</b> (716) 691-8503 <b>FAX:</b>	<b>City/State Collected:</b> North Tonawanda, NY <b>Lab Project #:</b> STEARNSANY-ROBLIN <b>P.O.#:</b>	<b>Account:</b> STEARNSANY (lab use only) <b>Template/Protocol:</b> T65569 P324160 <b>Cooler #:</b> 613112 MC <b>Shipped Via:</b> FedEx 2nd Day			
<b>Collected by (print):</b> Brian Doyle <b>Collected by (signature):</b> <i>B.D. Doyle</i> <b>Immediately Packed on Ice:</b> N <u>Y</u> X	<b>Rush? (Lab MUST Be Notified)</b> Same Day ..... 200% Next Day ..... 100% Two Day ..... 50% Three Day ..... 25%	<b>Date Results Needed</b> Email? <u>X</u> No <u>Yes</u> FAX? <u>No</u> Yes	<b>Date</b> 7/1/10	<b>Time</b> 10:15	<b>No. of Cntrs</b> 2
<b>Sample ID</b> MW-3S MS MSD FD Trip Blank	<b>Comp/Grab</b> Comp Comp Comp Comp	<b>Matrix*</b> GW GW GW GW GW GW	<b>Depth</b>	<b>Date</b> 7/1/10 7/1/10 7/1/10 7/1/10	<b>Time</b> 10:15 10:15 10:15 10:15
<b>Remarks/Contaminant</b> 246719301 01 01 02 03			<b>Sample # (lab only)</b>		

\*Matrix: SS - Soil GW - Groundwater WW - Waste Water DW - Drinking Water OT - Other  
 Remarks: ESC Quote: STEWYEANY051509S2  
 pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_

<b>Relinquished by (Signature)</b> 	<b>Date:</b>	<b>Time:</b>	<b>Received by (Signature)</b> 	<b>Date:</b>	<b>Time:</b>	<b>Samples returned via:</b> <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier	<b>Condition:</b> OK
<b>Relinquished by (Signature)</b> 	<b>Date:</b>	<b>Time:</b>	<b>Received by (Signature)</b> 	<b>Date:</b>	<b>Time:</b>	<b>Temp:</b> 31.0 <b>Bottles Received:</b> 9	<b>COC Seal Intact:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
<b>Relinquished by (Signature)</b> 	<b>Date:</b>	<b>Time:</b>	<b>Received by (Signature)</b> 	<b>Date:</b>	<b>Time:</b>	<b>PH Checked:</b>	<b>NOF:</b>

4355 9302 8054



**Quality Control Summary**  
**SDG: L467193**  
**Stearns and Wheler**

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Est. 1970

Test: Volatile Organic Compounds by Method 8260B

Project: Roblin Steel

Instrument ID: VOCMS18

Method Name : V818G13J.M

**Relative Response Factor Summary**

Compound Name	Lvl 1.0	Lvl 2.5	Lvl 5.0	Lvl 7.5	Lvl 10	Lvl 12.5	Lvl 15	Lvl 17.5	Lvl 20	Lvl 250	Lvl 300	Lvl 350	Lvl 400	Ave RRF	%RSD	LR
---------------	---------	---------	---------	---------	--------	----------	--------	----------	--------	---------	---------	---------	---------	---------	------	----

Methyl Acetate

Cyclohexane

Methyl Cyclohexane

1.542	1.291	1.361	1.257	1.291	1.269	1.237	1.245	0.558	0.521	0.561	0.535	0.515	0.542	0.560	0.544	0.205	3.38
1.137	0.741	0.653	0.565	0.569	0.539	0.512	0.507	1.287								1.309	7.23
								0.522								0.638	31.64
																	0.998





# Quality Control Summary SDG: L467193 Stearns and Wheler

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Est. 1970

Test: Volatile Organic Compounds by Method 8260B

Project: Roblin Steel

Instrument ID: VOCMS20

Method Name : V820G071.M

## Relative Response Factor Summary

Compound Name	Lvl 1.0	Lvl 2.5	Lvl 5.0	Lvl 7.5	Lvl 10	Lvl 12.5	Lvl 15	Lvl 17.5	Lvl 20	Lvl 50	Lvl 150	Lvl 200	Lvl 250	Lvl 300	Lvl 350	Lvl 400	Ave RRF	%RSD	LR
Methyl Acetate	0.936	0.832	0.831	0.858	0.862	0.849	0.839	0.822	0.843	0.369	0.382	0.338	0.343	0.334	0.374	0.330	0.337	0.350	5.66
Cyclohexane	0.534	0.773	0.675	0.630	0.583	0.580	0.584	0.594	0.565								0.852	3.97	
Methyl Cyclohexane																	0.613	11.73	

## Quality Control Summary

### SDG: L467193

### Stearns and Wheler

Test: Volatile Organic Compounds by Method 8260B  
Project No: 8612403  
Project: Roblin Steel  
Collection Date: 7/1/2010  
Analysis Date: 7/13/2010  
Instrument ID: VOCMS20  
Sample Numbers: L467193-02, -03

Matrix: Water - mg/L  
EPA ID: TN00003  
Analytic Batch: WG488122  
Analyst: 498

#### Method Blank

Analyte	CAS	PQL	Qualifiers
Dichlorodifluoromethane	75-71-8	<0.0050	
Chloromethane	74-87-3	<0.0025	
Vinyl chloride	75-01-4	<0.0010	
Bromomethane	74-83-9	<0.0050	
Chloroethane	75-00-3	<0.0050	
Trichlorofluoromethane	75-69-4	<0.0050	
1,1-Dichloroethene	75-35-4	<0.0010	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	<0.0010	
Acetone	67-64-1	<0.0500	
Carbon disulfide	75-15-0	<0.0010	
Methylene Chloride	75-09-2	<0.0050	
trans-1,2-Dichloroethene	156-60-5	<0.0010	
Methyl tert-butyl ether	1634-04-4	<0.0010	
1,1-Dichloroethane	75-34-3	<0.0010	
cis-1,2-Dichloroethene	156-59-2	<0.0010	
2-Butanone (MEK)	78-93-3	<0.0100	
Bromochloromethane	74-97-5	<0.0010	
Chloroform	67-66-3	<0.0050	
1,1,1-Trichloroethane	71-55-6	<0.0010	
Carbon tetrachloride	56-23-5	<0.0010	
Benzene	71-43-2	<0.0010	
1,2-Dichloroethane	107-06-2	<0.0010	
Trichloroethene	79-01-6	<0.0010	
1,2-Dichloropropane	78-87-5	<0.0010	
Bromodichloromethane	75-27-4	<0.0010	
cis-1,3-Dichloropropene	10061-01-5	<0.0010	
4-Methyl-2-pentanone (MIBK)	108-10-1	<0.0100	
Toluene	108-88-3	<0.0050	
trans-1,3-Dichloropropene	10061-02-6	<0.0010	
1,1,2-Trichloroethane	79-00-5	<0.0010	
Tetrachloroethene	127-18-4	<0.0010	J
2-Hexanone	591-78-6	<0.0100	
Chlorodibromomethane	124-48-1	<0.0010	
1,2-Dibromoethane	106-93-4	<0.0010	
Chlorobenzene	108-90-7	<0.0010	



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Est. 1970

## Quality Control Summary

### SDG: L467193

### Stearns and Wheler

Test: Volatile Organic Compounds by Method 8260B  
Project No: 8612403  
Project: Roblin Steel  
Collection Date: 7/1/2010  
Analysis Date: 7/13/2010  
Instrument ID: VOCMS20  
Sample Numbers: L467193-02, -03

Matrix: Water - mg/L  
EPA ID: TN00003  
Analytic Batch: WG488122  
Analyst: 498

#### Method Blank

Analyte	CAS	PQL	Qualifiers
Ethylbenzene	100-41-4	<0.0010	
m&p-Xylene	1330-20-7	<0.0030	
o-Xylene	1330-20-7	<0.0030	
Styrene	100-42-5	<0.0010	
Bromoform	75-25-2	<0.0010	J
Isopropylbenzene	98-82-8	<0.0010	
1,1,2,2-Tetrachloroethane	79-34-5	<0.0010	
1,3-Dichlorobenzene	541-73-1	<0.0010	
1,4-Dichlorobenzene	106-46-7	<0.0010	
1,2-Dichlorobenzene	95-50-1	<0.0010	
1,2-Dibromo-3-Chloropropane	96-12-8	<0.0050	
1,2,4-Trichlorobenzene	120-82-1	<0.0010	J
1,2,3-Trichlorobenzene	87-61-6	<0.0010	J
Methyl Acetate	79-20-9	<0.0200	R
Cyclohexane	110-82-7	<0.0010	R
Methyl Cyclohexane	108-87-2	<0.0010	R



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## Quality Control Summary

### SDG: L467193

### Stearns and Wheler

Test: Volatile Organic Compounds by Method 8260B  
Project No: 8612403  
Project: Roblin Steel  
Collection Date: 7/1/2010  
Analysis Date: 7/14/2010  
Instrument ID: VOCMS18  
Sample Numbers: L467193-01, -03

Matrix: Water - mg/L  
EPA ID: TN00003  
Analytic Batch: WG488348  
Analyst: 209

### Method Blank

Analyte	CAS	PQL	Qualifiers
Dichlorodifluoromethane	75-71-8	<0.0050	
Chloromethane	74-87-3	<0.0025	
Vinyl chloride	75-01-4	<0.0010	
Bromomethane	74-83-9	<0.0050	
Chloroethane	75-00-3	<0.0050	
Trichlorofluoromethane	75-69-4	<0.0050	
1,1-Dichloroethene	75-35-4	<0.0010	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	<0.0010	
Acetone	67-64-1	<0.0500	
Carbon disulfide	75-15-0	<0.0010	
Methylene Chloride	75-09-2	<0.0050	
trans-1,2-Dichloroethene	156-60-5	<0.0010	
Methyl tert-butyl ether	1634-04-4	<0.0010	
1,1-Dichloroethane	75-34-3	<0.0010	
cis-1,2-Dichloroethene	156-59-2	<0.0010	
2-Butanone (MEK)	78-93-3	<0.0100	
Bromochloromethane	74-97-5	<0.0010	
Chloroform	67-66-3	<0.0050	
1,1,1-Trichloroethane	71-55-6	<0.0010	
Carbon tetrachloride	56-23-5	<0.0010	
Benzene	71-43-2	<0.0010	
1,2-Dichloroethane	107-06-2	<0.0010	
Trichloroethene	79-01-6	<0.0010	
1,2-Dichloropropane	78-87-5	<0.0010	
Bromodichloromethane	75-27-4	<0.0010	
cis-1,3-Dichloropropene	10061-01-5	<0.0010	
4-Methyl-2-pentanone (MIBK)	108-10-1	<0.0100	
Toluene	108-88-3	<0.0050	
trans-1,3-Dichloropropene	10061-02-6	<0.0010	0.0074 J
1,1,2-Trichloroethane	79-00-5	<0.0010	
Tetrachloroethene	127-18-4	<0.0010	
2-Hexanone	591-78-6	<0.0100	
Chlorodibromomethane	124-48-1	<0.0010	
1,2-Dibromoethane	106-93-4	<0.0010	
Chlorobenzene	108-90-7	<0.0010	



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## Quality Control Summary

### SDG: L467193

### Stearns and Wheler

Test: Volatile Organic Compounds by Method 8260B  
Project No: 8612403  
Project: Roblin Steel  
Collection Date: 7/1/2010  
Analysis Date: 7/14/2010  
Instrument ID: VOCMS18  
Sample Numbers: L467193-01, -03

Matrix: Water - mg/L  
EPA ID: TN00003  
Analytic Batch: WG488348  
Analyst: 209

#### Method Blank

Analyte	CAS	PQL	Qualifiers
Ethylbenzene	100-41-4	<0.0010	
m&p-Xylene	1330-20-7	<0.0030	
o-Xylene	1330-20-7	<0.0030	
Styrene	100-42-5	<0.0010	
Bromoform	75-25-2	<0.0010	
Isopropylbenzene	98-82-8	<0.0010	
1,1,2,2-Tetrachloroethane	79-34-5	<0.0010	
1,3-Dichlorobenzene	541-73-1	<0.0010	
1,4-Dichlorobenzene	106-46-7	<0.0010	
1,2-Dichlorobenzene	95-50-1	<0.0010	
1,2-Dibromo-3-Chloropropane	96-12-8	<0.0050	
1,2,4-Trichlorobenzene	120-82-1	<0.0010	
1,2,3-Trichlorobenzene	87-61-6	<0.0010	
Methyl Acetate	79-20-9	<0.0200	R
Cyclohexane	110-82-7	<0.0010	R
Methyl Cyclohexane	108-87-2	<0.0010	R