Smurfit-Stone Container Corporation
51 Robinson Street North Tonawanda, New York 14120

Groundwater Monitoring Report for Schreck's Scrapyard Site

North Tonawanda, New York
Site No. 932099

July 2010

Report Prepared By:

Malcolm Pirnie, Inc.

50 Fountain Plaza
Suite 600
Buffalo New York 14202
716-667-0900

4320-055

Contents

Figures

Tables

Appendices

1. Introduction

1.1. Background

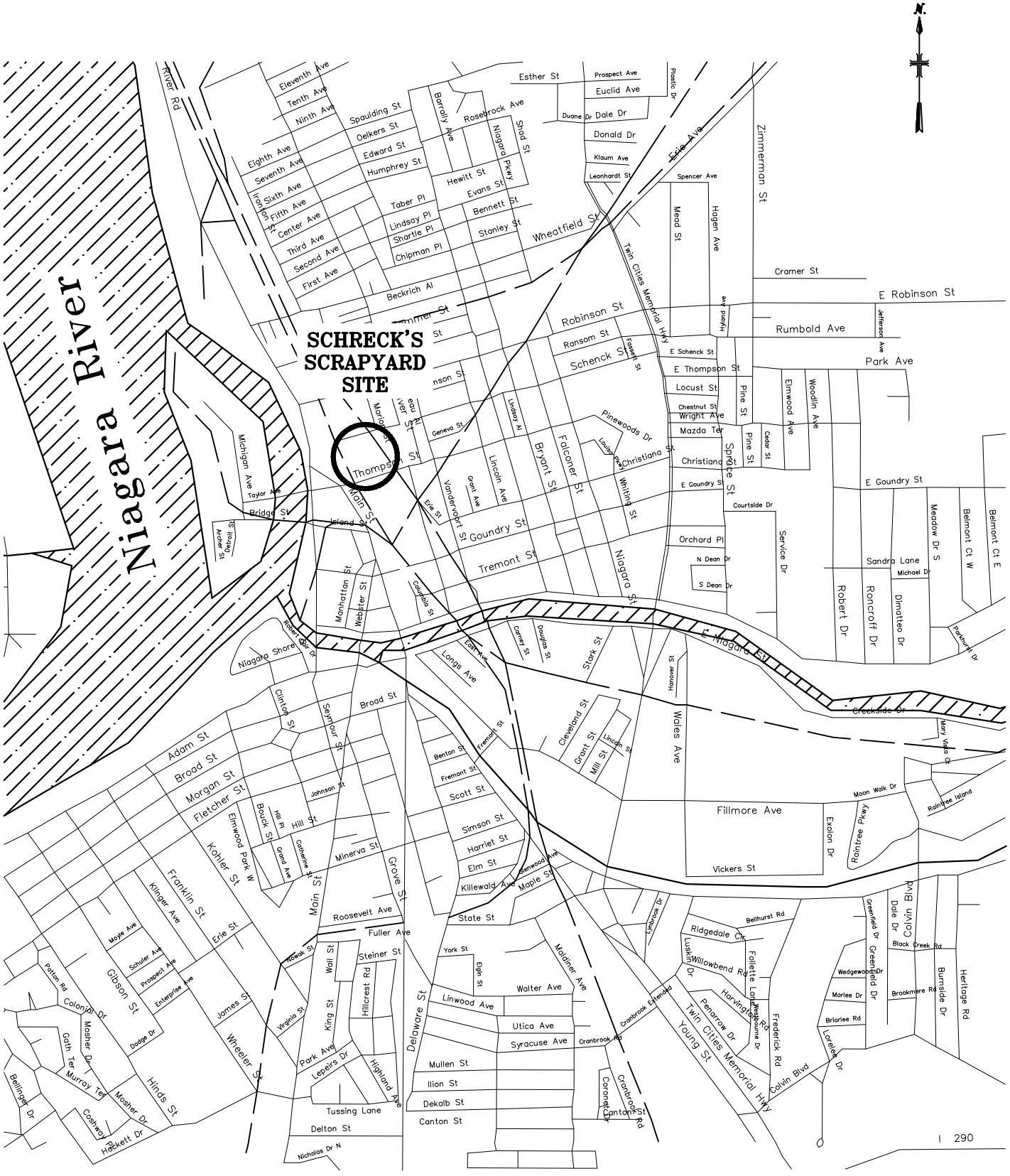
As shown on Figure 1-1, Smurfit Stone owns a parcel of land located east of Tonawanda Island and just north of the confluence of the Erie Canal and the Niagara River. The property is commonly referred to as the Schreck's Scrapyard Site (the Site) and is listed as a Class 4 site (Site Number 932099) in the registry of Former Hazardous Waste Disposal Sites by the New York State Department of Environmental Conservation (NYSDEC). Operational uses of the Scrapyard Site from 1951 to 1977 included a former metal and scrap iron business, disposal of drummed phenolic waste and salvage of electrical transformers.

Subsequent to termination of the disposal and salvaging operations, an environmental audit and remedial investigation were implemented to characterize potential impacts to soil and groundwater media. The results of these investigations determined that onsite soil materials and a press pit were contaminated with elevated concentrations of PCBs petroleum derivatives (fuel oil) and metals. Based on the Record of Decision completed in September 1990, the site was classified as a Class 2 Site. Remedial actions implemented at the Site in 1991 and 2000 resulted in the excavation and disposal of drums, liquids, soil materials, remediation of the press pit, and the demolition of selected buildings.

Based on the Post-Remediation Groundwater Monitoring Plan (Camp Dresser & McKee, November 1994) the NYSDEC collected groundwater samples from the Site monitoring well network during the period of time of 1995 until 2002. In May 2008, the NYSDEC issued the Reclassification Decision Report for the Site that recommended the site be reclassified as a Class 4 site requiring continued long term monitoring and an institutional control listing the Site in the registry of Former Hazardous Waste Disposal Sites.

1.2. Purpose

This report summarizes the results of a groundwater quality monitoring event completed for the Schreck's Scrapyard Site May 13, 2010. This report was prepared as an element of the requisite NYSDEC Periodic Review and provides a comparison of the May 2010 results with regulatory guidelines and historic monitoring results.



MALCOLM PIRNIE

SCHRECK'S SCRAPYARD SITE
PERIODIC GROUNDWATER MONITORING REPORT
MAY 2009

SITE LOCATION MAP

MALCOLM PIRNIE, INC.

FIGURE 1–1

User: dewyer Spec: PIRNIE STANDARD File: F:\Projects\4320031\CADD\4320FIG1-1.DWG Scale: 1:1 Date: 07/07/2009 Time: 16:08 Layout: Layout1

2. Monitoring Network and Requirements

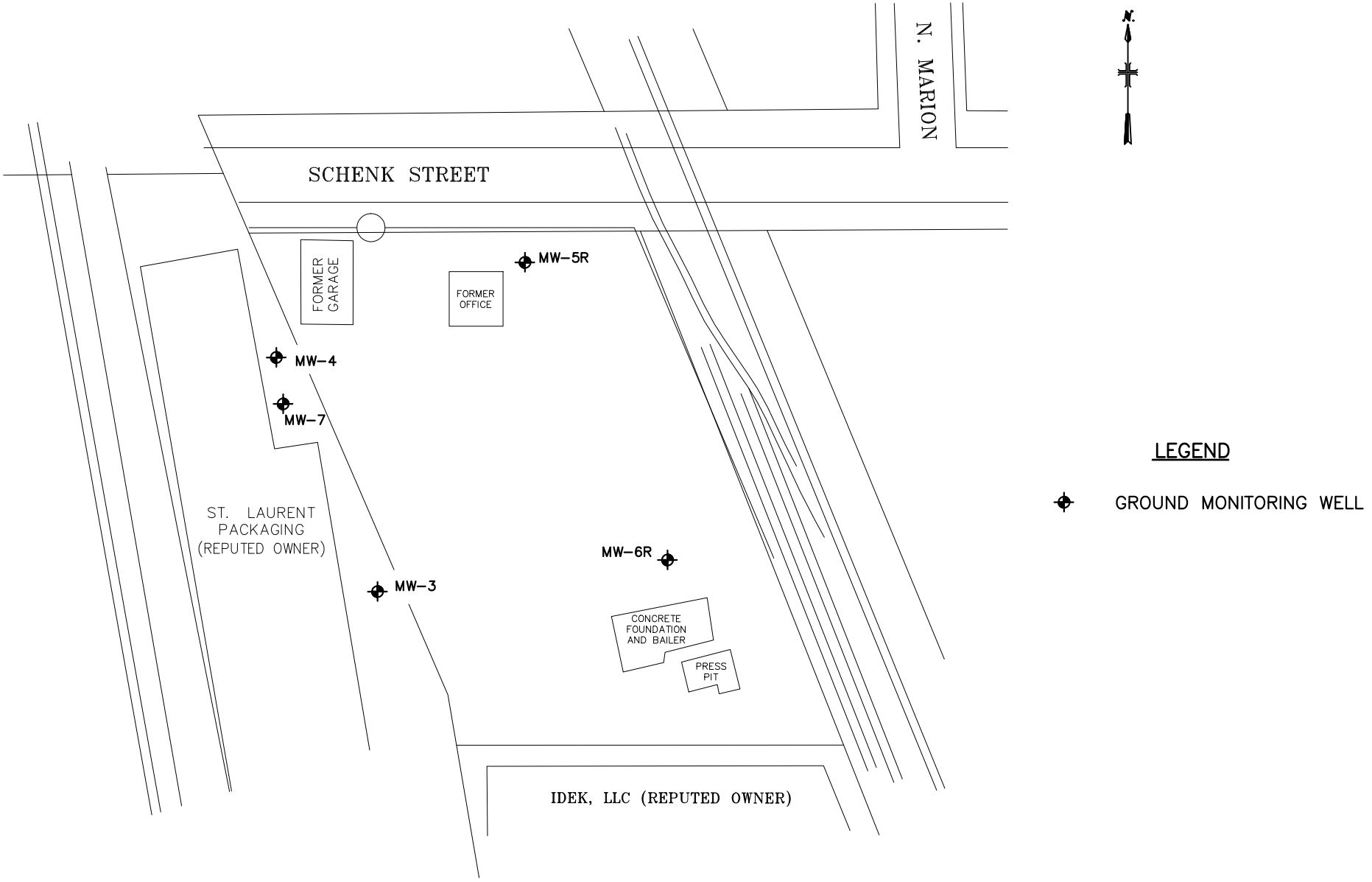
The groundwater monitoring network at the Schreck's Scrapyard Site consists of five monitoring wells designated: MW-3, MW-4, MW-5R, MW-6R and MW-7. Figure 2-1 illustrates the existing Scrapyard Site monitoring network.

The NYSDEC monitoring program requires the collection of groundwater samples from all five monitoring wells. The program also requires:

- Inspection of the physical integrity of each groundwater monitoring well;
- PID measurements to characterize presence of volatile organic vapors in monitoring well headspaces and;
- Procedural determination to check for presence of floating light non-aqueous phase liquid (LNAPL) product.

The well locations will be sampled for volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and Target Analyte List (TAL) metals.

User: dewyer Spec: PIRNIE STANDARD File: F:\Projects\4320031\CADD\4320FIG2-1.DWG Scale: 1:1 Date: 07/07/2009 Time: 15:01 Layout: Layout1



MALCOLM PIRNIE

SCHRECK'S SCRAPYARD SITE
PERIODIC GROUNDWATER MONITORING REPORT
MAY 2009

EXISTING GROUNDWATER MONITORING WELL LOCATIONS
NOT TO SCALE

MALCOLM PIRNIE, INC.
JULY 2009
FIGURE 2-1

3. Monitoring Methods

3.1. Post Remediation Inspection

The Post-Remediation Groundwater Monitoring Plan (Camp Dresser & McKee, 1994) stipulated that inspection and monitoring of the Scrapyard Site be performed on a quarterly basis during the first year (1995) and thereafter at the discretion of the NYSDEC. Accordingly, a long term inspection and monitoring program was implemented on a yearly basis for a period of seven years from 1996 to 2002. Groundwater sampling was not performed during calendar years 2003 to 2008 at the discretion of the NYSDEC. As documented in the Reclassification Decision Report (NYSDEC, May 2008) the long term inspection and monitoring program will be continued indefinitely on an annual basis beginning in 2009. The inspection includes an assessment of the monitoring well network integrity and measurement of organic vapors in the well headspace, and screening for floating LNAPL product. The integrity and functionality of the monitoring wells, and related infrastructure are addressed during the periodic inspection.

The most recent periodic inspection was performed concurrently with the groundwater sampling event on May 13, 2010. The Well Inspection Checklist is included as Table 3-1. During the May 13th site visit, well MW-5R was noted to be damaged. The above-ground steel protective casing appeared to have been struck by a vehicle and was bent. The casing was straightened and the well was able to be sampled.

3.2. Sampling Procedures

During the May 2010 monitoring event, field sampling personnel collected groundwater samples from each of the five monitoring wells identified in Section 2.0. Columbia Analytical Services (CAS) of Rochester, New York analyzed the samples collected for the analytical parameters listed in Table 3-2.

Groundwater was purged from all monitoring locations prior to sampling, and periodically measured for the field parameters identified in Table 3-3. A summary of field measurements is summarized in Table 3-3. The groundwater sampling field data sheets are included in Appendix A.

3.2.1. Monitoring Wells

Prior to purging, static water levels were measured in all of the monitoring wells. Table 3-4 is a compilation of water level data measured during the May 2010 sampling event.

MALCOLM PIRNIE

TABLE 3-1

MONITORING WELL INSPECTION CHECKLIST - May 13, 2010
Schreck's Scrapyard Site

LOCATION	INSPECTION DATE	Water Level Ft./ BTOR	Well Identification	Casing Lock	Protective Cover	PVC Well Cap	Well Obstruction(s)	Water in Protective Casing Annulus	Condition of Concrete Pad
MW-3	05/13/10	10.60	Good	Fair	Fair	Fair	None	No	Good
MW-4	05/13/10	11.03	Good	Cut Lock	Fair	Fair	None(1)	No	Good
MW-5R	05/13/10	10.68	Good	Fair	Good	Cracked (2)	Casing bent, bailer lodged in well (3)	No	Poor
MW-6R	05/13/10	11.40	Good	Fair	Good	Cracked (2)	None	No	Good
MW-7	05/13/10	8.43	Good	No Lock	Fair	Good	None	No	Good

Notes :

BTOR - Below top of Riser

(1) Bailer obstruction removed prior to sampling.

(2) Protective PVC well cap cracked, poor fitting.

(3) Straightened protective casing, removed bailer.

MALCOLM PIRNIE

TABLE 3-2

GROUNDWATER ANALYTICAL PARAMETERS
PERIODIC GROUNDWATER MONITORING EVENT- MAY 13, 2010
SCHRECK'S SCRAPYARD SITE

	Sampling Parameters
FIELD PARAMETERS[1]	
Water Level	x
Specific Conductance	x
Temperature	x
Turbidity	x
pH	x
Eh	x
Dissolved Oxygen	x
Floaters / Sinkers	x
Field Observations	x
TCL Volatile Organics[2]	x
PCBs	x
TAL METALS	x

Notes:

(1) All field parameters (i.e., pH, Eh, DO, Specific Conductance, Temperature, and Turbidity) measured in the field by the sampling team.

(2) Volatile organic compounds are those compounds Identified by Method 8260 .

MALCOLM PIRNIE

TABLE 3-3
SUMMARY OF FIELD MEASURMENTS[1]
Groundwater Monitoring Event - May 13, 2010
Schreck's Scrapyard Site

MONITORING WELL DESIGNATION	SAMPLING DATE	SAMPLING TIME	TEMP (°C)	pH (units)	Eh (mV)	CONDUCTANCE (umhos/cm)	TURBIDITY[3] (NTU)	DISSOLVED OXYGEN (mg/l)	LNAPL [2]	SAMPLE APPEARANCE[3]
MW-3	05/13/10	15:35	8.7	6.62	-3	1,370	0	0.0	NP	Clear
MW-4	05/13/10	15:00	9.5	7.11	1	263	10	0.0	NP	Clear
MW-5R	05/13/10	17:45	9.5	6.99	-40	1,320	10	0.0	NP	Clear
MW-6R	05/13/10	16:30	8.7	6.93	-143	1,590	2	0.0	NP	Clear, sulfur odor
MW-7	05/13/10	13:30	11.0	7.35	70	948	36	0.0	NP	Clear

Notes :

(1) Except where noted, all measurments are readings collected immediately prior to sampling.

(2) Light Non-aqueous Phase Liquid.

(3) Turbidity and Sample Appearance are based on last measurement interval prior to sampling.

NP=Not Present

The monitoring wells were then purged in accordance with the procedures specified in the Post-Remediation Groundwater Monitoring Plan (Reference 1). All wells exhibited rapid or continuous recovery after purging and were allowed to recharge prior to sampling. Groundwater samples were collected using dedicated disposable bailers in accordance with the protocols identified in Reference 1. Samples for laboratory analysis were stored in the appropriate plastic or glass bottles, pre-preserved by the lab and placed on ice in the field, and transported to the Columbia Analytical Services laboratory located in Rochester, New York.

3.3. QA/QC Procedures

Quality Assurance and Quality Control (QA/QC) measures taken to verify the reliability of the generated data were as follows:

- One trip blank sample was submitted with the field samples and analyzed for the TCL volatile organics.
- The analytical laboratory provided in-house QA/QC including method blank and laboratory control summary results. QA/QC documentation, including chain-of-custody forms, is provided in Appendix C with the analytical report prepared by CAS.

MALCOLM PIRNIE

TABLE 3-4

SUMMARY OF GROUNDWATER ELEVATION MEASUREMENTS

PERIODIC REVIEW REPORT

SCHRECK'S SCRAPYARD SITE

Location	PVC Riser Elevation (ft)	May-09		May-10									
		Depth [1] (ft)	Elevation (ft)	Depth [1] (ft)	Elevation (ft)	Depth [1] (ft)	Elevation (ft)	Depth [1] (ft)	Elevation (ft)	Depth [1] (ft)	Elevation (ft)	Depth [1] (ft)	Elevation (ft)
MW - 3	578.50	10.82	567.68	10.6	567.90								
MW - 4	578.47	10.80	567.67	11.03	567.44								
MW - 5R	578.50	10.85	567.65	10.68	567.82								
MW - 6R	580.11	11.60	568.51	11.4	568.71								
MW - 7	575.52	8.80	566.72	8.43	567.09								

Notes:

(1) All depths measured as feet below top of PVC riser.

4. Data Usability

4.1. Analytical Data Assessment

4.1.1. Introduction

The results reported by CAS for samples collected at the Schreck's Scrapyard Site during May 2010 are assessed in this section. The data were evaluated to determine conformance with the requirements specified in the Groundwater Monitoring Plan (Reference 1).

Evaluation of the data was based on information supplied by the field data sheets, chain-of-custody forms and duplicate data. In addition, the assessment of analytical data included a review of data consistency.

4.1.2. Data Usability

A discussion of laboratory quality control (QC) analytical results is presented in the case narrative of the laboratory analytical report. Based upon a review of laboratory and field QC data, the analytical results reported by the laboratory are usable for assessing groundwater quality at the Scrapyard site.

4.1.3. Sample Holding Times

Holding time criteria for each of the parameters monitored at the Scrapyard Site are outlined in protocols mandated by the NYSDEC. Comparison of the sample collection dates listed on the chain-of-custody form with the reported dates of analysis listed on the laboratory chronicle indicates that all samples were analyzed prior to expiration of their prescribed holding times.

4.1.4. Laboratory/Reagent Blank Analyses

Laboratory (method) blank analyses were performed to identify the existence and magnitude of sample contamination originating during sample preparation and/or analysis. Laboratory blanks were prepared from deionized water and were analyzed for inorganic parameters.

Since none of the organic compounds were detected in site samples, no qualifications of analytical data were made. All blank spike recoveries for inorganic elements were within QC limits.

5. Summary of 2010 Annual Monitoring Results

5.1. Water Quality Data

The groundwater water quality results for historical groundwater samples and the May 2010 monitoring event are presented in Tables 5-1, 5-2 and 5-3. The complete laboratory analytical report for the 2010 sampling event is attached in Appendix B. Examination of the tabulated data highlighted specific analyte concentrations detected above NYSDEC Groundwater Water Quality Standards / Guidance Values.

5.2. Evaluation of Monitoring Results

A comparison of the groundwater monitoring data to Class "GA" Groundwater Water Quality Standards/Guidance Values (GWQS) is presented in Tables 5-1, 5-2 and 5-3. Based on this information, a historical summary of analytical detections that exceed NYSDEC Class GA groundwater standards is presented below:

VOCs
Few VOCs have been detected sporadically above groundwater standards. These include methylene chloride, MTBE, and benzene. Benzene appears to be persistent at low concentrations in well MW-6R; however, benzene was not detected during the May 2010 sampling event. MTBE was detected in the groundwater samples collected at MW-5R during the May 2009 and 2010 monitoring events, MTBE was not analyzed for prior to the May 2009 sampling event.

Pesticides
Two pesticides (dieldren and endrin) have been detected at concentrations below 1 ug/l on one and two occasions respectively between 1995 and 1999. The class GA standard for these pesticides is non-detect. Because of the low and infrequent detections of pesticides, analysis for pesticides ceased prior to the May 2009 sampling event.

PCBs
Two wells, MW-3 and MW-4, have had historical pesticide detections in the groundwater samples. Three PCB aroclors (aroclor-1242, aroclor-1248, and aroclor-1254) have been detected at concentrations above the Class GA groundwater standard of 0.09 at well MW-3 during more than one historical sampling event. However, no PCBs were detected in the groundwater sample collected from MW-3 during the May 2010 sampling event.

MALCOLM PIRNIE

TABLE 5-1
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
SCHRECK'S SCRAPYARD SITE
Well MW-3

Analyte	Groundwater Standards*	5/10/95	9/5/95	12/19/95	8/1/96	4/16/97	6/17/98	4/21/99	5/31/00	5/16/01	6/11/02	5/28/09	5/13/10
Chloromethane	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromochloromethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Vinyl Chloride	2	U	U	U	U	U	U	U	U	NA	NA	U	U
Chloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Methylene Chloride	5	U	U	U	U	U	**9 BJ**	U	U	NA	NA	U	U
Acetone	50 G	U	U	U	U	U	3 BJ	U	2J	NA	NA	2.6 J	U
Carbon Disulfide	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1-Dichloroethene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1-Dichloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
1,2-Dichloroethene (total)	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Chloroform	7	U	U	U	U	U	U	U	U	NA	NA	U	U
1,2-Dichloroethane	0.6	U	U	U	U	U	U	U	U	NA	NA	U	U
2-Butanone	50 G	U	U	U	U	U	2 BJ	U	U	NA	NA	U	U
1,1,1-Trichloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Carbon Tetrachloride	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromodichloromethane	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
1,2-Dichloropropane	1	U	U	U	U	U	U	U	U	NA	NA	U	U
cis-1,3-dichloropropene	0.4	U	U	U	U	U	U	U	U	NA	NA	U	U
Trichloroethene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Dibromochloromethane	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1,2-Trichloroethane	1	U	U	U	U	U	U	U	U	NA	NA	U	U
Benzene	1	U	U	U	U	U	U	U	U	NA	NA	U	U
Trans-1,3-dichloropropene	0.4	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromoform	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
4-Methyl-2-Pentanone	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
2-Hexanone	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
Tetrachloroethene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1,2,2-Tetrachloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Toluene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Chlorobenzene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Ethylbenzene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Styrene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Total Xylenes	5	U	U	U	U	U	U	U	U	NA	NA	U	U

All concentrations in ug/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

G Guidance value.

B Analyte found in the associated blank as well as the sample.

J Estimated value. The indicated value is less than the sample quantification limit but greater than zero.

NA Not analyzed. Compound removed from long term monitoring in 2001 due to consistent non-detections.

NS No standard or guidance value available.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-1
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
SCHRECK'S SCRAPYARD SITE
Well MW-4

Analyte	Groundwater Standards*	5/10/95	9/5/95	12/19/95	8/1/96	6/23/97	6/18/98	4/21/99	5/31/00	5/16/01	6/11/02	5/29/09	5/13/10
Chloromethane	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromochloromethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Vinyl Chloride	2	U	U	U	U	U	U	U	U	NA	NA	U	U
Chloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Methylene Chloride	5	U	U	U	U	U	**8 BJ**	U	U	NA	NA	U	U
Acetone	50 G	U	U	U	U	U	3 BJ	U	U	NA	NA	U	U
Carbon Disulfide	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1-Dichloroethene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1-Dichloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
1,2-Dichloroethene (total)	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Chloroform	7	U	U	U	U	U	U	U	U	NA	NA	1.7	U
1,2-Dichloroethane	0.6	U	U	U	U	U	U	U	U	NA	NA	U	U
2-Butanone	50 G	U	U	U	U	U	2 BJ	U	U	NA	NA	U	U
1,1,1-Trichloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Carbon Tetrachloride	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromodichloromethane	50 G	U	U	U	U	U	U	U	U	NA	NA	0.66	U
1,2-Dichloropropane	1	U	U	U	U	U	U	U	U	NA	NA	U	U
cis-1,3-dichloropropene	0.4	U	U	U	U	U	U	U	U	NA	NA	U	U
Trichloroethene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Dibromochloromethane	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1,2-Trichloroethane	1	U	U	U	U	U	U	U	U	NA	NA	U	U
Benzene	1	U	U	U	U	U	U	U	U	NA	NA	U	U
Trans-1,3-dichloropropene	0.4	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromoform	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
4-Methyl-2-Pentanone	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
2-Hexanone	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
Tetrachloroethene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1,2,2-Tetrachloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Toluene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Chlorobenzene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Ethylbenzene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Styrene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Total Xylenes	5	U	U	U	U	U	U	U	U	NA	NA	U	U

All concentrations in ug/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

G Guidance value.

B Analyte found in the associated blank as well as the sample.

J Estimated value. The indicated value is less than the sample quantification limit but greater than zero.

NA Not analyzed. Compound removed from long term monitoring in 2001 due to consistent non-detections.

NS No standard or guidance value available.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-1
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
SCHRECK'S SCRAPYARD SITE
Well MW-5R

Analyte	Groundwater Standards*	5/10/95	9/5/95	12/19/95	8/1/96	4/16/97	6/18/98	4/21/99	5/31/00	5/16/01	6/11/02	5/28/09	5/13/10
Chloromethane	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromochloromethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Vinyl Chloride	2	U	U	U	U	U	U	U	U	NA	NA	U	U
Chloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Methylene Chloride	5	U	U	U	U	U	**9 BJ**	U	U	NA	NA	U	U
Methyl tert-Butyl Ether	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**11**	**12**
Acetone	51 G	U	U	U	U	U	U	U	U	NA	NA	2.4	U
Carbon Disulfide	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1-Dichloroethene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1-Dichloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
1,2-Dichloroethene (total)	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Chloroform	7	U	U	U	U	U	U	U	U	NA	NA	U	U
1,2-Dichloroethane	0.6	U	U	U	U	U	U	U	U	NA	NA	U	U
2-Butanone	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1,1-Trichloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Carbon Tetrachloride	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromodichloromethane	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
1,2-Dichloropropane	1	U	U	U	U	U	U	U	U	NA	NA	U	U
cis-1,3-dichloropropene	0.4	U	U	U	U	U	U	U	U	NA	NA	U	U
Trichloroethene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Dibromochloromethane	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1,2-Trichloroethane	1	U	U	U	U	U	U	U	U	NA	NA	U	U
Benzene	1	U	U	U	U	U	U	U	U	NA	NA	U	U
Trans-1,3-dichloropropene	0.4	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromoform	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
4-Methyl-2-Pentanone	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
2-Hexanone	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
Tetrachloroethene	5	U	1 J	U	U	U	U	U	U	NA	NA	U	U
1,1,2,2-Tetrachloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Toluene	5	U	U	U	2 J	U	U	U	U	NA	NA	U	U
Chlorobenzene	5	2 J	0.5 J	U	U	U	U	U	U	NA	NA	U	U
Ethylbenzene	5	2 J	U	U	U	U	U	U	U	NA	NA	U	U
Styrene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Total Xylenes	5	4 J	U	U	U	U	U	U	U	NA	NA	U	U

All concentrations in ug/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

G Guidance value.

B Analyte found in the associated blank as well as the sample.

J Estimated value. The indicated value is less than the sample quantification limit but greater than zero.

NA Not analyzed. Compound removed from long term monitoring in 2001 due to consistent non-detections.

NS No standard or guidance value available.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-1
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
SCHRECK'S SCRAPYARD SITE
Well MW-6R

Analyte	Groundwater Standards*	5/10/95	9/5/95	12/19/95	8/1/96	4/16/97	6/17/98	4/21/99	5/31/00	5/16/01	6/11/02	5/28/09	5/13/10
Chloromethane	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromochloromethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Vinyl Chloride	2	U	U	U	U	U	U	U	U	NA	NA	U	U
Chloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Methylene Chloride	5	U	U	U	U	U	**9 BJ**	U	U	NA	NA	U	U
Acetone	50 G	U	U	U	U	U	U	U	3J	NA	NA	2.2 J	U
Carbon Disulfide	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1-Dichloroethene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1-Dichloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
1,2-Dichloroethene (total)	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Chloroform	7	U	U	U	U	U	U	U	U	NA	NA	U	U
1,2-Dichloroethane	0.6	U	U	U	U	U	U	U	U	NA	NA	U	U
2-Butanone	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1,1-Trichloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Carbon Tetrachloride	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromodichloromethane	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
1,2-Dichloropropane	1	U	U	U	U	U	U	U	U	NA	NA	U	U
cis-1,3-dichloropropene	0.4	U	U	U	U	U	U	U	U	NA	NA	U	U
Trichloroethene	5	U	0.8 BJ	U	U	U	U	U	U	NA	NA	U	U
Dibromochloromethane	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1,2-Trichloroethane	1	U	U	U	U	U	U	U	U	NA	NA	U	U
1,4-Dichlorobenzene	3											0.45 J	U
Benzene	1	20	13	U	8 J	6 J	U	2 J	27	NA	16	0.40 J	U
Trans-1,3-dichloropropene	0.4	U	U	U	U	U	U	U	U	NA	NA	U	U
Bromoform	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
4-Methyl-2-Pentanone	NS	U	U	U	U	U	U	U	U	NA	NA	U	U
2-Hexanone	50 G	U	U	U	U	U	U	U	U	NA	NA	U	U
Tetrachloroethene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
1,1,2,2-Tetrachloroethane	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Toluene	5	0.5 J	U	U	2 J	2 J	U	U	U	NA	U	U	U
Chlorobenzene	5	3 J	U	U	U	U	U	1 J	4 J	NA	NA	3.9	U
Ethylbenzene	5	U	U	U	U	U	U	U	U	NA	U	U	U
Styrene	5	U	U	U	U	U	U	U	U	NA	NA	U	U
Total Xylenes	5	U	U	U	U	U	U	U	U	NA	U	U	U

All concentrations in ug/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

G Guidance value.

B Analyte found in the associated blank as well as the sample.

J Estimated value. The indicated value is less than the sample quantification limit but greater than zero.

NA Not analyzed. Compound removed from long term monitoring in 2001 due to consistent non-detections. 8021 STARS ran on 6/11/02.

NS No standard or guidance value available.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-1
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
SCHRECK'S SCRAPYARD SITE
Well MW-7

Analyte	Groundwater Standards*	5/10/95	9/5/95	12/19/95	8/1/96	4/16/97	6/17/98	4/21/99	5/31/00	5/16/01	6/11/02	5/28/09	5/13/10
Chloromethane	NS					U	U	U	U	NA	NA	U	U
Bromochloromethane	5					U	U	U	U	NA	NA	U	U
Vinyl Chloride	2					U	U	U	U	NA	NA	U	U
Chloroethane	5					U	U	U	U	NA	NA	U	U
Methylene Chloride	5					U	**10 BJ**	U	U	NA	NA	U	U
Acetone	50 G					U	U	U	U	NA	NA	U	U
Carbon Disulfide	NS					U	U	U	U	NA	NA	U	U
1,1-Dichloroethene	5					U	U	U	U	NA	NA	U	U
1,1-Dichloroethane	5					U	U	U	U	NA	NA	U	U
1,2-Dichloroethene (total)	5					U	U	U	U	NA	NA	U	U
Chloroform	7					U	U	U	U	NA	NA	U	U
1,2-Dichloroethane	0.6					U	U	U	U	NA	NA	U	U
2-Butanone	50 G					U	U	U	U	NA	NA	U	U
1,1,1-Trichloroethane	5					U	U	U	U	NA	NA	U	U
Carbon Tetrachloride	5					U	U	U	U	NA	NA	U	U
Bromodichloromethane	50 G					U	U	U	U	NA	NA	U	U
1,2-Dichloropropane	1					U	U	U	U	NA	NA	U	U
cis-1,3-dichloropropene	0.4					U	U	U	U	NA	NA	U	U
Trichloroethene	5					U	U	U	U	NA	NA	U	U
Dibromochloromethane	50 G					U	U	U	U	NA	NA	U	U
1,1,2-Trichloroethane	1					U	U	U	U	NA	NA	U	U
Benzene	1					U	U	U	U	NA	NA	U	U
Trans-1,3-dichloropropene	0.4					U	U	U	U	NA	NA	U	U
Bromoform	50 G					U	U	U	U	NA	NA	U	U
4-Methyl-2-Pentanone	NS					U	U	U	U	NA	NA	U	U
2-Hexanone	50 G					U	U	U	U	NA	NA	U	U
Tetrachloroethene	5					U	U	U	U	NA	NA	U	U
1,1,2,2-Tetrachloroethane	5					U	U	U	U	NA	NA	U	U
Toluene	5					U	U	U	U	NA	NA	U	U
Chlorobenzene	5					U	U	U	U	NA	NA	U	U
Ethylbenzene	5					U	U	U	U	NA	NA	U	U
Styrene	5					U	U	U	U	NA	NA	U	U
Total Xylenes	5					U	U	U	U	NA	NA	U	U

All concentrations in ug/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

G Guidance value.

B Analyte found in the associated blank as well as the sample.

J Estimated value. The indicated value is less than the sample quantification limit but greater than zero.

NA Not analyzed. Compound removed from long term monitoring in 2001 due to consistent non-detections.

NS No standard or guidance value available.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-2
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF PESTICIDES/PCB RESULTS
SCHRECK'S SCRAPYARD SITE
Well MW-3

Date Sampled	Groundwater Standard*	5/10/95	9/5/95	12/19/95	8/1/96	4/16/97	6/17/98	4/21/99	5/31/00	5/16/01	6/11/02	5/28/09	5/13/10
alpha-BHC	0.01	U	U	U	U	U	U	U	U	U	U	NA	NA
beta-BHC	0.04	U	U	U	U	U	U	U	U	U	U	NA	NA
delta-BHC	0.04	U	U	U	U	U	U	U	U	U	U	NA	NA
gamma-BHC (Lindane)	0.05	0.029 JP	U	U	U	U	U	U	U	U	U	NA	NA
Heptachlor	0.04	U	U	U	U	0.0034 JP	U	U	U	U	U	NA	NA
Aldrin	ND	U	U	U	U	U	U	U	U	U	U	NA	NA
Heptachlor epoxide	0.03	U	U	U	U	0.010 JP	U	U	U	U	U	NA	NA
Endosulfan I	NS	U	U	U	U	0.0086 JP	U	U	U	U	U	NA	NA
Dieldrin	0.004	U	U	U	U	**0.012 J**	U	U	U	U	U	NA	NA
4,4'-DDE	0.2	U	0.016 JP	U	U	0.0070 JP	U	U	U	U	U	NA	NA
Endrin	ND	U	U	U	U	U	U	U	U	U	U	NA	NA
Endosulfan II	NS	U	U	U	U	U	U	U	U	U	U	NA	NA
4,4' - DDD	0.3	U	U	U	U	U	U	U	U	U	U	NA	NA
Endosulfan sulfate	NS	U	U	U	U	U	U	U	0.10 P	U	U	NA	NA
4,4'-DDT	0.2	U	U	U	U	U	U	U	U	U	U	NA	NA
Methoxychlor	35	U	U	U	U	U	U	U	0.34 JP	U	U	NA	NA
Endrin ketone	5	U	U	U	U	U	U	U	U	U	U	NA	NA
Endrin aldehyde	5	U	U	U	U	U	U	U	U	U	U	NA	NA
alpha-Chlordane	0.05	U	U	U	U	U	U	U	U	U	U	NA	NA
gamma -Chlordane	0.05	U	U	U	U	U	U	U	U	U	U	NA	NA
Toxaphene	0.06	U	U	U	U	U	U	U	U	NA	U	NA	NA
Aroclor-1016	0.09	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor-1221	0.09	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor-1232	0.09	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor-1242	0.09	**0.48 JP**	**1.2**	**0.31 JP**	U	U	U	**1.0 PX**	U	U	U	U	U
Aroclor-1248	0.09	U	U	U	U	U	U	U	**4.1**	U	U	**0.46**	U
Aroclor-1254	0.09	U	U	U	U	U	U	**0.59 JPX**	U	U	U	U	U
Aroclor-1260	0.09	U	U	U	U	U	U	U	U	U	U	U	U

All concentrations in ug/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

J Estimated value. The indicated value is less than the sample quantification limit but greater than zero.

NA Not analyzed.

ND No detection standard established.

NS No standard or guidance value available.

P >25% difference between the analytical results on two GC columns. The lower value is reported.

X Manually integrated and calculated.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-2
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF PESTICIDES/PCB RESULTS
SCHRECK'S SCRAPYARD SITE
Well MW-4

Date Sampled	Groundwater Standard*	5/10/95	9/5/95	12/19/95	8/1/96	6/23/97	6/18/98	4/21/99	5/31/00	5/16/01	6/11/02	5/28/09	5/13/10
alpha-BHC	0.01	U	U	U	U	0.0072 J	U	U	U	U	U	NA	NA
beta-BHC	0.04	U	U	U	U	0.0090 JP	U	U	U	U	U	NA	NA
delta-BHC	0.04	U	U	U	U	0.0067 J	U	U	U	U	U	NA	NA
gamma-BHC (Lindane)	0.05	U	U	U	U	U	U	U	U	U	U	NA	NA
Heptachlor	0.04	U	U	U	U	0.0054 JP	U	U	U	U	U	NA	NA
Aldrin	ND	U	U	U	U	U	U	U	U	U	U	NA	NA
Heptachlor epoxide	0.03	U	U	U	U	U	U	U	U	U	U	NA	NA
Endosulfan I	NS	U	U	U	U	U	U	U	U	U	U	NA	NA
Dieldrin	0.004	U	U	U	U	U	U	U	U	U	U	NA	NA
4,4'-DDE	0.2	U	U	U	U	U	U	U	U	U	U	NA	NA
Endrin	ND	U	U	U	U	U	U	U	U	U	U	NA	NA
Endosulfan II	NS	U	U	U	U	U	U	U	U	U	U	NA	NA
4,4' - DDD	0.3	U	U	U	U	U	U	U	U	U	U	NA	NA
Endosulfan sulfate	NS	U	U	U	U	U	U	U	U	U	U	NA	NA
4,4'-DDT	0.2	U	U	U	U	U	U	U	U	U	U	NA	NA
Methoxychlor	35	U	U	U	U	U	U	U	U	U	U	NA	NA
Endrin ketone	5	U	U	U	U	U	U	U	U	U	U	NA	NA
Endrin aldehyde	5	U	U	U	U	U	U	U	U	U	U	NA	NA
alpha-Chlordane	0.05	U	U	U	U	U	U	U	U	U	U	NA	NA
gamma -Chlordane	0.05	U	U	U	U	U	U	U	U	U	U	NA	NA
Toxaphene	0.06	U	U	U	U	U	U	U	U	NA	U	NA	NA
Aroclor-1016	0.09	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor-1221	0.09	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor-1232	0.09	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor-1242	0.09	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor-1248	0.09	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor-1254	0.09	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor-1260	0.09	U	**0.14 JP**	**0.57 JP**	U	**0.18 JP**	U	**0.69 JPX**	**1.1 P**	U	**0.39 JP**	U	U

All concentrations in ug/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

J Estimated value. The indicated value is less than the sample quantification limit but greater than zero.

NA Not analyzed.

ND No detection standard established.

NS No standard or guidance value available.

P >25% difference between the analytical results on two GC columns. The lower value is reported.

X Manually integrated and calculated.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-2
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF PESTICIDES/PCB RESULTS
SCHRECK'S SCRAPYARD SITE

Well MW-5R

Date Sampled	Groundwater Standard*	5/10/95	9/5/95	12/19/95	8/1/96	4/16/97	6/18/98	4/21/99	5/31/00	5/16/01	6/11/02	5/28/09	5/13/10
alpha-BHC	0.01	U	U	U	U	U	U	U	U	U	NA	NA	NA
beta-BHC	0.04	U	U	U	U	U	U	U	U	U	NA	NA	NA
delta-BHC	0.04	U	U	U	U	U	U	U	U	U	NA	NA	NA
gamma-BHC (Lindane)	0.05	U	U	U	U	U	U	U	U	U	NA	NA	NA
Heptachlor	0.04	U	U	U	U	U	U	U	U	U	NA	NA	NA
Aldrin	ND	U	U	U	U	U	U	U	U	U	NA	NA	NA
Heptachlor epoxide	0.03	U	U	U	U	U	U	U	U	U	NA	NA	NA
Endosulfan I	NS	U	U	U	U	U	U	U	U	U	NA	NA	NA
Dieldrin	0.004	U	U	U	U	U	U	U	U	U	NA	NA	NA
4,4'-DDE	0.2	U	U	U	U	U	U	U	U	U	NA	NA	NA
Endrin	ND	U	U	U	U	U	U	U	U	U	NA	NA	NA
Endosulfan II	NS	U	U	U	U	U	U	U	U	U	NA	NA	NA
4,4' - DDD	0.3	U	U	U	U	U	U	U	U	U	NA	NA	NA
Endosulfan sulfate	NS	U	U	U	U	U	U	U	U	U	NA	NA	NA
4,4'-DDT	0.2	U	U	U	U	U	U	U	U	U	NA	NA	NA
Methoxychlor	35	U	U	U	U	U	U	U	U	U	NA	NA	NA
Endrin ketone	5	U	U	U	U	U	U	U	U	U	NA	NA	NA
Endrin aldehyde	5	U	U	U	U	U	U	U	U	U	NA	NA	NA
alpha-Chlordane	0.05	U	U	U	U	U	U	U	U	U	NA	NA	NA
gamma -Chlordane	0.05	U	U	U	U	U	U	U	U	U	NA	NA	NA
Toxaphene	0.06	U	U	U	U	U	U	U	U	NA	NA	NA	NA
Aroclor-1016	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1221	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1232	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1242	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1248	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1254	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1260	0.09	U	U	U	U	U	U	U	U	U	NA	U	U

All concentrations in ug/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

J Estimated value. The indicated value is less than the sample quantification limit but greater than zero.

NA Not analyzed.

ND No detection standard established.

NS No standard or guidance value available.

P >25% difference between the analytical results on two GC columns. The lower value is reported.

X Manually integrated and calculated.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-2
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF PESTICIDES/PCB RESULTS
SCHRECK'S SCRAPYARD SITE
Well MW-6R

Date Sampled	Groundwater Standard*	5/10/95	9/5/95	12/19/95	8/1/96	4/16/97	6/17/98	4/21/99	5/31/00	5/16/01	6/11/02	11/2/06	5/13/10
alpha-BHC	0.01	U	U	U	U	U	U	U	U	U	NA	NA	NA
beta-BHC	0.04	0.019 JP	0.020 JP	U	U	U	U	U	U	U	NA	NA	NA
delta-BHC	0.04	U	U	U	U	U	U	U	U	U	NA	NA	NA
gamma-BHC (Lindane)	0.05	U	U	U	U	0.018 JP	U	U	U	U	NA	NA	NA
Heptachlor	0.04	U	U	U	U	U	U	U	0.011 JP	U	NA	NA	NA
Aldrin	ND	U	U	U	U	U	U	U	U	U	NA	NA	NA
Heptachlor epoxide	0.03	U	U	U	U	U	U	U	U	U	NA	NA	NA
Endosulfan I	NS	U	U	U	U	U	U	U	U	U	NA	NA	NA
Dieldrin	0.004	U	U	U	U	U	U	U	U	U	NA	NA	NA
4,4'-DDE	0.2	U	U	U	U	U	U	U	U	U	NA	NA	NA
Endrin	ND	U	U	U	U	U	U	**0.14**	U	U	NA	NA	NA
Endosulfan II	NS	U	U	U	U	U	U	U	U	U	NA	NA	NA
4,4' - DDD	0.3	U	U	U	U	U	U	U	U	U	NA	NA	NA
Endosulfan sulfate	NS	U	U	U	U	U	U	U	U	U	NA	NA	NA
4,4'-DDT	0.2	U	U	U	U	U	U	U	U	U	NA	NA	NA
Methoxychlor	35	U	U	U	U	U	U	U	U	U	NA	NA	NA
Endrin ketone	5	U	U	U	U	U	U	U	U	U	NA	NA	NA
Endrin aldehyde	5	U	U	U	U	U	U	U	U	U	NA	NA	NA
alpha-Chlordane	0.05	U	U	U	U	U	U	U	U	U	NA	NA	NA
gamma -Chlordane	0.05	U	U	U	U	U	U	U	U	U	NA	NA	NA
Toxaphene	0.06	U	U	U	U	U	U	U	U	NA	NA	NA	NA
Aroclor-1016	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1221	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1232	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1242	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1248	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1254	0.09	U	U	U	U	U	U	U	U	U	NA	U	U
Aroclor-1260	0.09	U	U	U	U	U	U	U	U	U	NA	U	U

All concentrations in ug/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

J Estimated value. The indicated value is less than the sample quantification limit but greater than zero.

NA Not analyzed.

ND No detection standard established.

NS No standard or guidance value available.

P >25% difference between the analytical results on two GC columns. The lower value is reported.

X Manually integrated and calculated.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-2
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF PESTICIDES/PCB RESULTS
SCHRECK'S SCRAPYARD SITE
Well MW-7

Date Sampled	Groundwater Standard*	5/10/95	9/5/95	12/19/95	8/1/96	6/23/97	6/18/98	4/21/99	5/31/00	5/16/01	6/11/02	5/28/09	5/13/10
alpha-BHC	0.01					U	U	U	U	U	NA	NA	NA
beta-BHC	0.04					U	U	U	U	U	NA	NA	NA
delta-BHC	0.04					0.0069 JP	U	U	U	U	NA	NA	NA
gamma-BHC (Lindane)	0.05					U	U	U	U	U	NA	NA	NA
Heptachlor	0.04					U	U	U	U	U	NA	NA	NA
Aldrin	ND					U	U	U	U	U	NA	NA	NA
Heptachlor epoxide	0.03					U	U	U	U	U	NA	NA	NA
Endosulfan I	NS					U	U	U	U	U	NA	NA	NA
Dieldrin	0.004					U	U	U	U	U	NA	NA	NA
4,4'-DDE	0.2					0.011 JP	U	U	U	U	NA	NA	NA
Endrin	ND					U	U	**0.073 J**	U	U	NA	NA	NA
Endosulfan II	NS					U	U	U	U	U	NA	NA	NA
4,4' - DDD	0.3					U	U	U	U	U	NA	NA	NA
Endosulfan sulfate	NS					U	U	U	U	U	NA	NA	NA
4,4'-DDT	0.2					U	U	U	U	U	NA	NA	NA
Methoxychlor	35					U	U	U	U	U	NA	NA	NA
Endrin ketone	5					U	U	U	U	U	NA	NA	NA
Endrin aldehyde	5					U	U	U	U	U	NA	NA	NA
alpha-Chlordane	0.05					U	U	U	U	U	NA	NA	NA
gamma -Chlordane	0.05					U	U	U	U	U	NA	NA	NA
Toxaphene	0.06					U	U	U	U	NA	NA	NA	NA
Aroclor-1016	0.09					U	U	U	U	U	NA	U	U
Aroclor-1221	0.09					U	U	U	U	U	NA	U	U
Aroclor-1232	0.09					U	U	U	U	U	NA	U	U
Aroclor-1242	0.09					U	U	U	U	U	NA	U	U
Aroclor-1248	0.09					U	U	U	U	U	NA	U	U
Aroclor-1254	0.09					U	U	U	U	U	NA	U	U
Aroclor-1260	0.09					U	U	U	U	U	NA	U	U

All concentrations in ug/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

J Estimated value. The indicated value is less than the sample quantification limit but greater than zero.

NA Not analyzed.

ND No detection standard established.

NS No standard or guidance value available.

P >25% difference between the analytical results on two GC columns. The lower value is reported.

X Manually integrated and calculated.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-3
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF INORGANIC RESULTS
SCHRECK'S SCRAPYARD SITE

Well MW-3

Date Sampled	Groundwater Standards*	5/10/95	9/5/95	12/19/95	8/1/96	4/16/97	6/17/98	4/21/99	5/31/00	5/16/01	6/11/02	Dissolved 5/28/09	Total 5/28/09	Total 5/13/10
Aluminum	NS	736	39,600	399	13,500	7,880	5,810	6,160	2,490	NA	1,700	U	U	U
Antimony	3	**3.5 B**	U	**5.3 B**	U	U	U	U	U	NA	U	U	U	U
Arsenic	25	4.0 B	16.7	U	5.1 B	U	4.6 B	11.7	9.5 B	NA	U	U	U	U
Barium	1,000	104 B	345	96.0 B	164 B	152 B	112 B	142 B	128 B	NA	101 B	134	138	115
Beryllium	3 G	U	U	U	0.64 B	U	U	U	U	NA	0.30 B	U	U	U
Cadmium	5	U	U	U	U	U	0.64 B	U	U	NA	0.30 B	U	U	U
Calcium	NS	146,000	206,000	154,000	156,000	158,000	139,000	143,000	163,000	NA	148,000	203,000	207,000	184,000
Chromium	50	1.2 B	54.6	1.7 B	19.6	11.3	9.7 B	12.7	8.8 B	NA	4.8 B	U	U	U
Cobalt	NS	U	20.5 B	U	8.8 B	5.4 B	3.3 B	4.4 B	1.9 B	NA	1.9 B	U	U	U
Copper	200	4.4 B	65.5	8.2 B	27.7	14.8 B	16.3 B	20.0 B	14.4 B	NA	7.6 B	U	U	U
Iron	500	**5,780**	**55,100**	**2,650**	**20,300**	**11,300**	**17,200**	**26,300**	**19,000**	NA	**3,800**	**534**	**1,970**	370
Lead	25	2.0 B	**36.7**	U	17.1	7.2	7.6	12.4	10.2	NA	3.7	U	U	U
Magnesium	35,000 G	25,000	**46,800**	26,400	31,000	28,300	26,000	27,500	30,500	NA	27,100	29,400	28,800	24,800
Manganese	300	**937**	**1,360**	**352**	**1,510**	**790**	**982**	**1,050**	**568**	NA	**729**	275	**323**	179
Mercury	0.7	0.24	U	U	U	0.2	0.1	U	U	NA	U	U	U	U
Nickel	100	2.8 B	50.3	3.5	18.4 B	12.1 B	9.8 B	10.1 B	7.4 B	NA	6.1 B	11.9	14.2	U
Potassium	NS	U	17,400	1,630 B	5,670	5,480	3,350	3,630 B	3,670 B	NA	3,220 B	4,220	4,060	3,800
Selenium	10	U	U	U	U	4.0 B	U	U	U	NA	U	U	U	11
Silver	50	U	U	U	U	U	U	2.1	U	NA	U	U	U	U
Sodium	20,000	**20,000**	**22,100**	**21,300**	18,000	19,500	15,600	11,000	12,700	NA	8,690	**22,400**	**21,900**	**29,900**
Thallium	0.5 G	U	**5.6 B**	U	U	U	U	U	U	NA	U	U	U	U
Vanadium	NS	U	74.6	U	25.3	16.9	12.0 B	26.3 B	8.0 B	NA	3.6 B	U	U	U
Zinc	2,000	49.6	243	9.3 B	55.6	76.6	32.5	59.6	44.9	NA	12.0 B	30.9	10.7	U

All concentrations in µg/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

G Guidance value.

B Value greater than or equal to the instrument detection limit, but less than the contract required detection limit.

NA Compound not analyzed.

NS No standard or guidance value available.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-3
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF INORGANIC RESULTS
SCHRECK'S SCRAPYARD SITE

Well MW-4

Date Sampled	Groundwater Standards*	5/10/95	9/5/95	12/19/95	8/1/96	6/23/97	6/18/98	4/21/99	5/31/00	5/16/01	6/11/02	Dissolved 5/29/09	Total 5/29/09	Total 5/13/10
Aluminum	NS	211	1,300	1,080	102 B	21,900	208	111,000	31,500	NA	31,700	U	2,650	740
Antimony	3	2.8 B	U	U	U	U	U	U	**14.1 B**	NA	U	U	U	U
Arsenic	25	U	9.7 B	U	U	19.3	U	9.9 B	23	NA	21.9	U	U	U
Barium	1,000	29.2 B	106 B	48.9 B	31.5 B	190 B	25.5 B	93.3 B	229	NA	245	224	37.9	35
Beryllium	3 G	U	U	U	U	1.5 B	U	U	1.6 B	NA	1.9 B	U	U	U
Cadmium	5	U	U	2.0 B	0.38 B	U	1.3 B	1.3 B	2.8 B	NA	2.0 B	U	U	U
Calcium	NS	36,100	86,700	49,200	39,100	80,800	36,700	38,000	60,400	NA	73,900	35,200	35,200	44,300
Chromium	50	1.6 B	U	3.7 B	2.1 B	49.9	2.2 B	39.3 B	**92.8**	NA	**72.9**	U	6	U
Cobalt	NS	U	U	U	U	12.4 B	U	5.9 B	16.8 B	NA	18.8 B	U	U	U
Copper	200	4.9 B	28.9	16.8 B	5.6 B	82.7	7.9 B	52.9	151	NA	116	U	U	U
Iron	500	347	**2,440**	**2,010**	162	**34,200**	360	**16,900**	**50,600**	NA	**50,000**	U	**2,660**	**660**
Lead	25	U	**27.9**	13.4	U	**79.8**	U	**59.1**	**225**	N A	**122**	U	11.6	U
Magnesium	35,000 G	5,230	17,700	10,000	6,050	26,300	5,290	11,700	24,200	NA	29,100	4,310	5,100	5,800
Manganese	300	11.4 B	186	78.1	4.9 B	**537**	8.6 B	256	**622**	N A	**674**	19.8	63.7	U
Mercury	0.7	0.24	**1.3**	0.64	U	**3.6**	U	U	**9.9**	NA	**6**	U	U	U
Nickel	100	1.9 B	16.3	6.7 B	U	46.7	U	26.2 B	77.2	NA	66.7	U	U	U
Potassium	NS	2,430 B	7,580	1,850 B	1,680 B	6,490	1,320 B	3,910 B	8,780	NA	8,760	1,300	2,080	2,500
Selenium	10	U	U	7.4	U	U	U	U	7.4	NA	7.6	U	U	U
Silver	50	U	U	U	U	U	U	U	U	NA	U	U	U	U
Sodium	20,000	3,450 B	5,210	4,120 B	3,060 B	7,600	907 B	4,050 B	5,550	NA	1,650 B	3,000	3,200	11,700
Thallium	0.5 G	U	**6.4 B**	U	U	U	U	U	U	NA	U	U	U	U
Vanadium	NS	U	U	3.3 B	1.2 B	43.6 B	U	23.1 B	62.6	NA	57.3	U	U	U
Zinc	2,000	253	1,230	649	189	**2,790**	229	1,730	**5,320**	NA	**3,700**	30.9	266	61

All concentrations in µg/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

G Guidance value.

B Value greater than or equal to the instrument detection limit, but less than the contract required detection limit.

NA Compound not analyzed.

NS No standard or guidance value available.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-3
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF INORGANIC RESULTS
SCHRECK'S SCRAPYARD SITE

Well MW-5R

Date Sampled	Groundwater Standards*	5/10/95	9/5/95	12/19/95	8/1/96	4/16/97	6/18/98	4/21/99	5/31/00	5/16/01	6/11/02	Dissolved 5/28/09	Total 5/28/09	Total 5/13/10
Aluminum	NS	1,550	5,170	3,570	1,310	1,550	577	1,240	9,320	NA	523	U	U	U
Antimony	3	**15.6 B**	U	U	U	U	U	U	U	NA	U	U	U	U
Arsenic	25	9.0 B	8.1 B	6.7 B	5.0 B	5.4 B	U	7.7 B	15.8	NA	U	U	U	U
Barium	1,000	59.2 B	115. B	95.5 B	62.8 B	63.1 B	46.7 B	63.7 B	122 B	NA	49.9 B	29.1	31.4	32
Beryllium	3 G	U	U	0.24 B	U	U	U	U	U	NA	0.30 B	U	U	U
Cadmium	5	U	U	U	2.5 B	1.7 B	1.7 B	2.1 B	2.8 B	NA	**7**	U	U	U
Calcium	NS	138,000	271,000	163,000	113,000	124,000	120,000	132,000	152,000	NA	126,000	106,000	111,000	113,000
Chromium	50	6.2 B	U	6.7 B	7.1 B	8.8 B	4.4 B	10.2	17	NA	**59**	U	U	U
Cobalt	NS	7.2 B	15.6 B	8.0 B	2.1 B	U	1.5	2.3 B	7 B	NA	1.4 B	U	U	U
Copper	200	10 B	11.9 B	16.6 B	6.9 B	11.0 B	13.7 B	12.9 B	16.1 B	NA	4.3 B	U	U	4
Iron	500	**3,980**	**14,400**	**9,230**	**1,820**	**2,330**	**935**	**1,740**	**13,000**	NA	**1,320**	225	380	420
Lead	25	4	19.5	9.9	1.3 B	U	U	U	9.4	NA	2.4 B	U	U	U
Magnesium	35,000 G	**56,600**	**75,300**	**64,700**	**50,200**	**55,300**	**52,600**	**54,700**	**62,600**	NA	**57,300**	**50,500**	**51,300**	**48,700**
Manganese	300	**569**	**1,330**	**598**	261	246	130	189	**448**	NA	180	114	130	113
Mercury	0.7	0.57	0.41	0.27	U	U	U	U	0.3	NA	U	U	U	U
Nickel	100	82.1	63	29.3 B	17.9 B	20.2 B	14.9 B	18.8 B	24.8 B	NA	37.8 B	U	U	U
Potassium	NS	5,950	8,180	3,390 B	2,730 B	3,350 B	2,250 B	2,520 B	5,060	NA	2,270 B	1,430	1,510	U
Selenium	10	U	U	U	U	U	U	U	U	NA	U	U	U	**14**
Silver	50	U	U	U	U	U	U	U	U	NA	U	U	U	U
Sodium	20,000	**67,200**	**60,500**	**64,300**	**58,300**	**61,000**	**56,300**	**67,100**	**68,500**	NA	**69,600**	**56,800**	**58,800**	**59,400**
Thallium	0.5 G	U	U	U	U	U	U	U	U	NA	U	U	U	U
Vanadium	NS	U	14.2 B	8.4 B	2.5 B	3.3 B	U	6.4 B	17.5 B	NA	1.8 B	U	U	U
Zinc	2,000	52.5	102	50.6	15.7 B	34.1	22.4	50.7	67.6	NA	11.3 B	U	U	U

All concentrations in µg/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

G Guidance value.

B Value greater than or equal to the instrument detection limit, but less than the contract required detection limit.

NA Compound not analyzed.

NS No standard or guidance value available.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-3
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF INORGANIC RESULTS
SCHRECK'S SCRAPYARD SITE

Well MW-6R

Date Sampled	Groundwater Standards*	5/10/95	9/5/95	12/19/95	8/1/96	4/16/97	6/17/98	4/21/99	5/31/00	5/16/01	6/11/02	Dissolved 5/28/09	Total 5/28/09	Total 5/13/10
Aluminum	NS	7,640	1,330	3,050	47,400	19,100	3,630	13,900	7,990	NA	19,900	U	8,650	190
Antimony	3	**11.2 B**	U	U	**6.1 B**	U	U	U	U	NA	U	U	U	U
Arsenic	25	5.9 B	5.0 B	U	14	6.8 B	U	13.8	U	NA	8.9 B	U	U	U
Barium	1,000	111 B	296	240	539	375	212	185 B	299	NA	282	167	213	185
Beryllium	3 G	U	U	0.21 B	2.1 B	1.2 B	U	U	U	NA	1.0 B	U	U	U
Cadmium	5	U	U	0.62 B	U	U	1.1 B	U	U	NA	1.4 B	U	U	U
Calcium	NS	262,000	277,000	159,000	255,000	194,000	112,000	252,000	163,000	NA	179,000	172,000	184,000	182,000
Chromium	50	15.9	U	6.4 B	**68.9**	31.3	22.1	24.6	13.7	NA	37.4	U	**135**	U
Cobalt	NS	12.0 B	U	4.8 B	37.1 B	18.8 B	2.6 B	11.2 B	6.6 B	NA	18.5 B	U	9.7	U
Copper	200	8.3 B	U	4.0 B	88	35.9	11.3 B	30.1	12.4 B	NA	43.2	U	12.5	U
Iron	500	**20,800**	**6,290**	**7,510**	**75,600**	**29,900**	**5,670**	**22,600**	**10,700**	NA	**31,100**	314	**11,300**	380
Lead	25	14	U	6.5	**41.9**	14.9	4.8	11.8	9.7	NA	18.9	U	5.2	U
Magnesium	35,000 G	**43,400**	**42,600**	27,700	**57,100**	**35,800**	21,100	**37,600**	31,000	NA	**38,800**	32,100	**35,400**	31,400
Manganese	300	**1,380**	**1,410**	**592**	**1,850**	**793**	263	**554**	**392**	NA	**852**	294	**505**	283
Mercury	0.7	0.36	U	U	U	U	U	U	U	NA	U	U	U	U
Nickel	100	30.0 B	24.9 B	12.7 B	76.6	37.7 B	12.8 B	35.5 B	15.3 B	NA	**198**	U	**163**	U
Potassium	NS	10,300	13,100	11,400	21,400	16,800	8,980	11,000	12,600	NA	14,400 B	6,300	9030	5,900
Selenium	10	U	U	U	U	U	U	7.5	U	NA	U	U	U	14
Silver	50	U	U	U	U	U	U	U	U	NA	U	U	U	U
Sodium	20,000	**92,600**	**85,300**	**98,200**	**79,400**	**84,300**	**74,200**	**92,800**	**140,000**	NA	**97,400**	**73,800**	**72,000**	**87,900**
Thallium	0.5 G	U	**5.5 B**	U	**6.7 B**	**5.1 B**	U	U	U	NA	U	U	U	U
Vanadium	NS	23.7 B	U	9.2 B	94.6	45.1 B	9.3 B	34.3 B	17.5 B	NA	40.4 B	U	18.4	U
Zinc	2,000	136	48.3	45.7	272	209	21.5	113	46.8	NA	107	U	33.2	U

All concentrations in µg/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

G Guidance value.

B Value greater than or equal to the instrument detection limit, but less than the contract required detection limit.

NA Compound not analyzed.

NS No standard or guidance value available.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

MALCOLM PIRNIE

TABLE 5-3
PERIODIC REVIEW GROUNDWATER MONITORING REPORT
SUMMARY OF INORGANIC RESULTS
SCHRECK'S SCRAPYARD SITE

Well MW-7

Date Sampled	Groundwater Standards*	5/10/95	9/5/95	12/19/95	8/1/96	6/23/97	6/18/98	4/21/99	5/31/00	5/16/01	6/11/02	Dissolved 5/28/09	Total 5/28/09	Dissolved 5/13/10	Total 5/13/10
Aluminum	NS					276,000	45,700	17,200	49,200	NA	31,600	U	592	U	3,680
Antimony	3					U	U	U	U	NA	U	U	U	U	U
Arsenic	25					**151**	19.5	9.0 B	22.4	NA	14.3	U	U	U	U
Barium	1,000					**2,080**	347	137 B	370	NA	202	15	16.2	U	37
Beryllium	3 G					**12.5**	2.3 B	U	1.9 B	NA	1.6 B	U	U	U	U
Cadmium	5					U	U	U	1.9 B	NA	0.79 B	U	U	U	U
Calcium	NS					1,190,000	232,000	141,000	242,000	NA	167,000	112,000	106,000	110,000	105,000
Chromium	50					**403**	**67.3**	24.4	**71.9**	NA	45.6	U	U	U	U
Cobalt	NS					224	34.6 B	12.2 B	41.9 B	NA	25.3 B	U	U	U	U
Copper	200					**653**	74.8	34.5	67	NA	40.7	U	U	U	U
Iron	500					**486,000**	**78,400**	**24,700**	**80,400**	NA	**51,700**	U	**519**	**U**	**3,150**
Lead	25					**281**	**37.1**	10.8	**42**	NA	24.7	U	U	U	U
Magnesium	35,000 G					**333,000**	**86,800**	**59,100**	**91,500**	NA	**69,600**	**52,100**	**48,400**	**48,400**	**47,100**
Manganese	300					**9,470**	**1,570**	**486**	**1,810**	NA	**1,250**	8	35	19	71
Mercury	0.7					0.69	U	U	U	NA	U	U	U	U	U
Nickel	100					**500**	79.8	25.1 B	84.2	NA	51.6	U	U	U	U
Potassium	NS					46,000	12,500	7,200	13,200	NA	9,640	1,600	1,500	U	2,900
Selenium	10					**47.1**	U	5.2	5.6	NA	4.4 B	U	U	**12**	**14**
Silver	50					U	U	U	U	NA	U	U	U	U	U
Sodium	20,000					**71,800**	**61,400**	**73,100**	**79,800**	NA	**73,200**	**73,500**	**69,700**	**75,900**	**70,100**
Thallium	0.5 G					**30.1**	U	U	U	NA	U	U	U	U	U
Vanadium	NS					516	83.5	36.8 B	87.8	NA	57.6	U	U	U	U
Zinc	2,000					1,660	225	93.9	278	NA	131	32	U	U	U

All concentrations in µg/l.

* NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998.

G Guidance value.

B Value greater than or equal to the instrument detection limit, but less than the contract required detection limit.

NA Compound not analyzed.

NS No standard or guidance value available.

U Indicates that the compound was not detected.

Shaded values equal or exceed groundwater standards or guidance values.

Well MW-4 detected the PCB aroclor-1260 on six occasions at concentrations as high as 1.1 ug/l. No PCBs were present in this well or in wells MW-5R, MW-6R, or MW-7 during the May 2010 monitoring event.

Metals / Inorganics
Several metals have been detected in each monitoring well at concentrations above class GA standards since sampling began in 1995. Of these metals, three are essential nutrients and are commonly found naturally occurring at such levels in local groundwater, these include iron, magnesium, and sodium. Other metals detected at elevated concentrations include: antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, manganese, nickel, selenium, thallium, and zinc.

With the exception of the common essential nutrients mentioned above, few metals were present at concentrations above standards during the May 2010 monitoring event. Selenium was present in monitoring wells MW-5R and MW-7 at concentrations greater than the Class GA groundwater standard.

Although elevated concentrations of iron, magnesium and sodium were routinely detected in groundwater samples, it is important to recognize that these common and naturally occurring elements are necessary for human health and development. As summarized in Tables 5-1, 5-2 and 5-3, results of the May 2010 sampling event are generally consistent with those reported for historic groundwater samples collected during the initial quarterly Post-Remediation sampling events (1995) as well as subsequent annual monitoring events (1996 – 2002).

5.3. Evaluation of Groundwater

To assess the existing groundwater quality at the Schreck's Scrapyard Site, analytical data determined to be historically persistent with regards to groundwater impacts, were graphed and evaluated for observable concentration trends. Based on concentrations and frequency of detection, manganese was selected for evaluation as a Constituent of Interest (COI) in each of the five monitoring wells. Total lead and total chromium were also selected as COIs for wells MW-4, MW-7 and MW-6R. Benzene was selected as a COI for well MW-6R, and total PCBs were selected as COI for wells MW-3 and MW-4.

Analytical data presented in Tables 5-1, 5-2 and 5-3 was used to establish graphs of concentration(s) vs. time for the above-cited COIs during the period of time from May 1995 through May 2010.

The development of a groundwater monitoring database over a period of several years may reveal seasonal and/or water chemistry influences on contaminant concentrations. DEC may be petitioned in the future to reduce the number of sample parameters tested

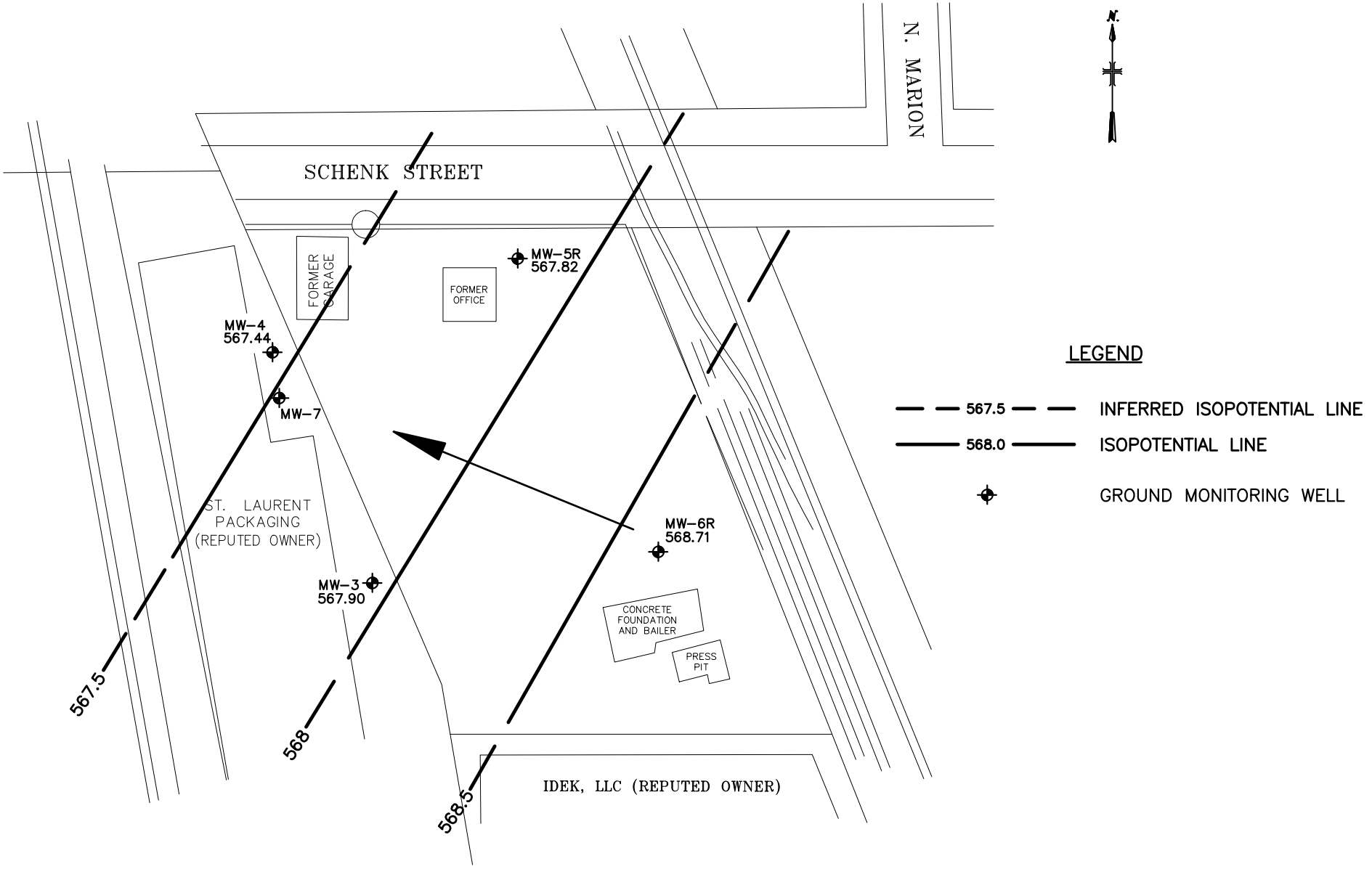
based on the constituent trend data. Concentration vs. time graphs for the selected COIs are presented in Appendix C.

6. Summary of Groundwater Elevation Data

Prior to collection of groundwater samples at the Schreck's Scrapyard Site, depth to groundwater measurements were recorded at each on-site shallow overburden monitoring well to establish water table elevations. A tabulated summary of water level data is presented in Table 3-4. Groundwater elevation data collected during the May 2010 sampling event generally indicate normal water table conditions when compared with historical isopotential data. Due to the relative depth of the screened interval at well MW-7 (deeper when compared to other network wells), the water elevation determined for MW-7 was not used to prepare the isopotential map.

The general direction of overburden groundwater flow for the Schreck's Scrapyard Site on May 13, 2010 is shown on the shallow groundwater isopotential map (Figure 6-1). This map shows an overburden groundwater flow direction from southeast to northwest toward the Niagara River.

User: DEWYER Spec: PIRNIE STANDARD File: F:\Projects\4320031\CADD\4320FIG6-1.DWG Scale: 1:1 Date: 07/15/2010 Time: 15:22 Layout: Layout1



MALCOLM PIRNIE

SCHRECK'S SCRAPYARD SITE
PERIODIC GROUNDWATER
MONITORING REPORT
MAY 2010

GROUNDWATER
ISOPOTENTIAL MAP
NOT TO SCALE

MALCOLM PIRNIE, INC.
JULY 2010
FIGURE 6-1

7. Post-Closure Inspection Results

A review of the Post Remediation monitoring well inspection results conducted May 13, 2010 generally indicate that the monitoring network is performing as designed. Free product LNAPL was not observed, institutional controls remain in place as the site is currently listed in the Hazardous Waste Site Registry, and long term groundwater monitoring has resumed. Depressions in the Site land surface caused by truck traffic were filled with clean crushed stone to return these areas to level grade. Appendix D provides a copy of the Institutional and Engineering Controls Certification form signed by the Site Owner.

As shown on Table 3-1 the only physical elements that require resolution are: 1) well identification and well caps at MW-5R and 6R; 2) protecting well MW-5R from being damaged further from vehicular traffic or made flush-mount.

8. References

Camp Dresser & McKee. November 1994. *Post-Remediation Groundwater Monitoring Plan for the Schreck's Scrapyard*.

Department of Environmental Conservation. May 2008. *Reclassification Decision Report, Schreck's Scrapyard Site, Site No. 932099, City of North Tonawanda, Niagara County, New York.*

New York State Department of Environmental Conservation
Schreck's Scrapyard
Groundwater Monitoring Report

Appendix A

Field Data Sheets

MALCOLM PIRNIE

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Shreeks Ship Yard PROJECT NUMBER: 4320-045

DATE OF INSPECTION: 5/13/10 INSPECTOR: D. Symonds

WELL DESIGNATION: MW-3

WELL LOCATION: N. Tonawanda NY

Outward Appearance

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

Inner Appearance

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

Downhole

Odor	Yes [ ]	No [✓] Describe:	
PID Reading	0.4 ppm		
Depth to Water (to top of casing)	10.60 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	14.30 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Hard		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Shweiki's Scrap Yard PROJECT NUMBER: 4320-045

DATE OF INSPECTION: 5/13/10 INSPECTOR: D. Symonds

WELL DESIGNATION: MW-4

WELL LOCATION: N. Tonawanda NY

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]	
Approximate Stickup Height	4 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good cond. / Rust		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓] Other ____
Integrity of Surface Seal/Apron	Describe: some erosional sink hole around well.		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [✓]	
Bollards Present?	Yes [ ]	No [✓] Describe:	
Well ID. Visible?	Yes [✓]	No [ ] Describe:	MW-4 marked w/paint on cid.
Lock Present and Functional?	Yes [ ]	No [✓] Describe:	lock cut
Photograph Taken? Photo #	Yes [✓]	No [ ] Describe:	

Inner Appearance

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

Downhole

Odor	Yes [ ]	No [✓] Describe:	
PID Reading	0.4 ppm		
Depth to Water (to top of casing)	11.03 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [✓]
Total Well Depth (to top of casing)	13.60 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Hard - some sediment on bottom		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Shrock's shipYard PROJECT NUMBER: 4320-045

DATE OF INSPECTION: 5/13/10 INSPECTOR: _____

WELL DESIGNATION: MW-5R

WELL LOCATION: N. Tonawanda NY

Outward Appearance

Flushmount Diameter	___ inches	N/A [ ]	
Approximate Stickup Height	3.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Poor - was run into by a truck - casing @ 25° from pad		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	6 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Poor -		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [✓]	
Bollards Present?	Yes [ ]	No [✓] Describe:	
Well ID. Visible?	Yes [✓]	No [ ] Describe:	MW-5R written on Lid
Lock Present and Functional?	Yes [✓]	No [ ] Describe:	
Photograph Taken? Photo #	Yes [✓]	No [ ] Describe:	

Inner Appearance

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

Downhole

Odor	Yes [ ]	No [✓] Describe:	
PID Reading	0.5 ppm		
Depth to Water (to top of casing)	10.68 feet (nearest 0.01)	Depth to LNAPL	___ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	18.90 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe:		

Additional Comments: Hand bailer stuck in well - due to damage from collision w/ vehicle -
- used truck to straighten MW-5R pre-Casing -
- Bailer removed from well
- photos taken before & after
- well needs protection from traffic - or needs to be converted into a flushmount.

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Shrecks shipYard PROJECT NUMBER: 4320-045

DATE OF INSPECTION: 5/13/10 INSPECTOR: D. Symonds

WELL DESIGNATION: MW-6R

WELL LOCATION: N. Tonawanda NY

Outward Appearance

Flushmount Diameter	— inches	N/A [ ]	
Approximate Stickup Height	3.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other
Protective Casing Width or Dia.	6 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ] Other
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [✓]	
Bollards Present?	Yes [ ]	No [✓] Describe:	
Well ID. Visible?	Yes [✓]	No [ ] Describe:	MW-6R - unitha on Lid
Lock Present and Functional?	Yes [✓]	No [ ] Describe:	
Photograph Taken? Photo #	Yes [✓]	No [ ] Describe:	

Inner Appearance

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

Downhole

Odor	Yes [✓]	[redacted] Describe:	Sulfur odor
PID Reading	0.5 ppm		
Depth to Water (to top of casing)	11.40 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	18.30 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft bottom		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Shrecks Ship Yard PROJECT NUMBER: 4320-045

DATE OF INSPECTION: 5/13/10 INSPECTOR: D. Symonds

WELL DESIGNATION: MW-7

WELL LOCATION: N. Tonawanda NY

Outward Appearance

Flushmount Diameter: 8 inches N/A [ ]

Approximate Stickup Height: — feet N/A [ ]

Integrity of Protective Casing: Describe: Good

Protective Casing Material: Steel [✓] Stainless Steel [ ] Other

Protective Casing Width or Dia.: ____ inches

Weep Hole in Protective Casing: Yes [ ] No [✓]

Surface Seal/Apron Material: Cement [✓] Bentonite [ ] Not apparent [ ] Other

Integrity of Surface Seal/Apron: Describe: Good

Surface Drainage: Away from Wellhead [✓] Toward Wellhead [ ]

Bollards Present? Yes [ ] No [✓] Describe:

Well ID. Visible? Yes [✓] No [ ] Describe: MW-7 on flushmount

Lock Present and Functional? Yes [ ] No [✓] Describe: No lock

Photograph Taken? Photo # Yes [✓] No [ ] Describe:

Inner Appearance

Integrity of Well Casing: Describe: Good

Integrity of Cap Seal: Describe: Good

Surface Water in Casing? Yes [ ] No [✓] Describe:

Well Casing Diameter: 2 inches

Well Casing Material: PVC [ ] Steel [ ] Stainless Steel [✓]

Inner Cap: Threaded [ ] Slip [ ] Expansion Plug [✓] None [ ]

Reference/Measuring Point: Groove [ ] Indelible Mark [✓] None [ ]

Evidence of Double Casing? Yes [ ] No [✓] Describe:

Downhole

Odor: Yes [ ] No [✓] Describe:

PID Reading: 0.4 ppm

Depth to Water (to top of casing): 8.43 feet (nearest 0.01) Depth to LNAPL ____ feet (nearest 0.01) N/A [ ]

Total Well Depth (to top of casing): 23.75 feet (nearest 0.1)

Sediment (Hard/Soft Bottom): Describe: Soft bottom

Additional Comments:

MALCOLM PIRNIE

WELL PURGING AND SAMPLING LOG

WELL NO.: MW-3

PROJECT TITLE: Shreck's Scrap Yard

PROJECT NO.: 4320-045

DATE: 5/13/10 STAFF: D. Symundi

PURGE METHOD: peristaltic

SAMPLE METHOD: Hand bailer TIME COLLECTED: 1545

PURGING and SAMPLING DATA:

1. Total Casing and Sceen Length (ft.) 14.30'
2. Casing Internal Diameter (in.) 2"
3. Water Level Below Top of Casing (ft.) 10.60'
4. Volume of Water in Casing (gal.) 0.629gal x 3 = 1.887gals
5. Photoionization Detector at Wellhaed (ppm) 0.4ppm

3.7' of water in well
0.629 gals

(Vol = 0.0408 [(2)² x { (1) - (3) }])

Constants for Calculating Borehole and Well Water Volumes							
Well Diam.	1"	2"	3"	4"	5"	6"	8"
Vol. (gal/ft)	0.04	0.17	0.38	0.66	1.04	1.50	2.60

Low Flow Stabilization Criteria	
pH	+/- 0.1
Cond.	3%
Turb.	10% if > 1 NTU
DO	10%
Temp.	3%
Eh	+/- 10 mV

PARAMETER	71 ACCUMULATED VOLUME PURGED											
Gallons	Initial	2.5	4.5	5.5	6.0							
Time (24 hr. clock)	1505	1515	1520	1530	1535							
pH (s.u.)	6.63	6.60	6.61	6.62	6.62							
Conductivity (mS/cm)	1.41	1.41	1.39	1.37	1.37							
Turbidity (NTUs)	73.4	5.3	4.0	0.0	0.0							
Dissolved Oxygen (mg/l)	0.00	0.00	0.00	0.00	0.00							
Temperature (°C)	8.70	8.67	8.68	8.68	8.68							
Eh (mV)	15	3	-4	-3	-3							
Depth to Water (ft.)	10.60	10.90	10.90	10.90	10.90							
Purge (Flow) Rate												
Appearance	Turb - orange											

Notes: - collected Sample @ 1545

- Turb - Low - didn't filter Samples -

MALCOLM PIRNIE

WELL PURGING AND SAMPLING LOG

WELL NO.: MW-4

PROJECT TITLE: Shreeks Scrap Yard
PROJECT NO.: 4320-045
DATE: 5/13/10 STAFF: D. Symonds
PURGE METHOD: Peristaltic
SAMPLE METHOD: Hand bailer TIME COLLECTED: 1500

PURGING and SAMPLING DATA:

1. Total Casing and Sceen Length (ft.) 13.60'
2. Casing Internal Diameter (in.) 2"
3. Water Level Below Top of Casing (ft.) 11.03
4. Volume of Water in Casing (gal.) 0.4369 gals
5. Photoionization Detector at Wellhaed (ppm) 0.4ppm

2.57' of water in well
0.4369 gals
x 3
1.31 gals

(Vol = 0.0408 [(2)² x { (1) - (3) }])

Constants for Calculating Borehole and Well Water Volumes							
Well Diam.	1"	2"	3"	4"	5"	6"	8"
Vol. (gal/ft)	0.04	0.17	0.38	0.66	1.04	1.50	2.60

Low Flow Stabilization Criteria	
pH	+/- 0.1
Cond.	3%
Turb.	10% if > 1 NTU
DO	10%
Temp.	3%
Eh	+/- 10 mV

PARAMETER	0 ACCUMULATED VOLUME PURGED										
Gallons	Initial	1	3	4.5	5.5	6.5					
Time (24 hr. clock)	1410	1421	1426	1436	1446	1456					
pH (s.u.)	7.09	7.10	7.09	7.10	7.11	7.11					
Conductivity (mS/cm)	0.234	0.247	0.253	0.255	0.263	0.263					
Turbidity (NTUs)	434.0	68.7	33.3	32.3	10.8	10.0					
Dissolved Oxygen (mg/l)	2.70	4.69	0.08	4.91	0.00	0.00					
Temperature (°C)	9.49	9.54	9.50	9.59	9.55	9.54					
Eh (mV)	-45	-25	-22	-39	-9	1					
Depth to Water (ft.)	11.03	12.00	12.60	12.60	12.60	12.40					
Purge (Flow) Rate											
Appearance											

Notes: 1500 - collected sample
low turb. did not filter in field.

MALCOLM PIRNIE

WELL PURGING AND SAMPLING LOG

WELL NO.: MW-5R

PROJECT TITLE: Shredds Ship Yard
PROJECT NO.: 4320-045
DATE: 5/13/10 STAFF: D. Symonds
PURGE METHOD: Davis Baltz
SAMPLE METHOD: Hand bailer TIME COLLECTED:

PURGING and SAMPLING DATA:

1. Total Casing and Sceen Length (ft.) 19.00'
2. Casing Internal Diameter (in.) 2"
3. Water Level Below Top of Casing (ft.) 10.60
4. Volume of Water in Casing (gal.) 1.428 gal
5. Photoionization Detector at Wellhaed (ppm) 0.4ppm

8.4' of water in well
1.428 gal x 3
4.284 gals

(Vol = 0.0408 [(2)² x { (1) - (3) }])

Constants for Calculating Borehole and Well Water Volumes							
Well Diam.	1"	2"	3"	4"	5"	6"	8"
Vol. (gal/ft)	0.04	0.17	0.38	0.66	1.04	1.50	2.60

Low Flow Stabilization Criteria	
pH	+/- 0.1
Cond.	3%
Turb.	10% if > 1 NTU
DO	10%
Temp.	3%
Eh	+/- 10 mV

PARAMETER	ACCUMULATED VOLUME PURGED										
Gallons	*Initial*	>1	2.5	4	5						
Time (24 hr. clock)	1705	1710	1720	1730	1740						
pH (s.u.)	6.97	6.98	6.99	6.99	6.99						
Conductivity (mS/cm)	1.43	1.40	1.37	1.33	1.32						
Turbidity (NTUs)	11.1	12.4	10.4	13.2	10.2						
Dissolved Oxygen (mg/l)	0.00	0.00	0.00	0.00	0.00						
Temperature (°C)	9.48	9.49	9.48	9.52	9.52						
Eh (mV)	-97	-86	-82	-52	-40						
Depth to Water (ft.)	10.60	13.10	14.00	16.55	16.75						
Purge (Flow) Rate											
Appearance	clear →										

Notes: collect sample @ 1745
samples not filtered.

MALCOLM PIRNIE

WELL PURGING AND SAMPLING LOG

WELL NO.: MW-6R

PROJECT TITLE: Shreck's Scrap Yard
PROJECT NO.: 4320-045
DATE: 5/13/10 STAFF: D. Symonds
PURGE METHOD: Peristaltic
SAMPLE METHOD: Hand bailer TIME COLLECTED: 1630

PURGING and SAMPLING DATA:

1. Total Casing and Sceen Length (ft.) 18.30'
2. Casing Internal Diameter (in.) 2"
3. Water Level Below Top of Casing (ft.) 11.40'
4. Volume of Water in Casing (gal.) 1.173 gal x 3
5. Photoionization Detector at Wellhaed (ppm) 0.5 ppm

6.9' drawdown in well
1.173
3.5 gals purged

(Vol = 0.0408 [(2)^2 x { (1) - (3) }])

Constants for Calculating Borehole and Well Water Volumes							
Well Diam.	1"	2"	3"	4"	5"	6"	8"
Vol. (gal/ft)	0.04	0.17	0.38	0.66	1.04	1.50	2.60

Low Flow Stabilization Criteria	
pH	+/- 0.1
Cond.	3%
Turb.	10% if > 1 NTU
DO	10%
Temp.	3%
Eh	+/- 10 mV

PARAMETER	0	ACCUMULATED VOLUME PURGED										
Gallons	*Initial*	~4	~6	~10								
Time (24 hr. clock)	1550	1600	1610	1620								
pH (s.u.)	6.96	6.89	6.92	6.93								
Conductivity (mS/cm)	0.757	1.43	1.55	1.59								
Turbidity (NTUs)	14.1	4.3	2.9	1.6								
Dissolved Oxygen (mg/l)	5.22	0.00	0.00	0.00								
Temperature (°C)	8.84	8.78	8.76	8.74								
Eh (mV)	29	-101	-127	-143								
Depth to Water (ft.)	11.40	12.20	12.30	12.30								
Purge (Flow) Rate												
Appearance	clear	clear	clear	clear								

Notes: Sulfur odor.
1630 collected sample - didn't filter sample

MALCOLM PIRNIE

WELL PURGING AND SAMPLING LOG

WELL NO.: MW-7

PROJECT TITLE: Shrecks Scrap Yard
PROJECT NO.: 4320-045
DATE: 5/13/10 STAFF: D. Symonds
PURGE METHOD: peristaltic pump
SAMPLE METHOD: Hand bailer TIME COLLECTED:

PURGING and SAMPLING DATA:

1. Total Casing and Sceen Length (ft.) 23.75'
2. Casing Internal Diameter (in.) 2"
3. Water Level Below Top of Casing (ft.) 8.43'
4. Volume of Water in Casing (gal.) 2.60gal
5. Photoionization Detector at Wellhaed (ppm) 0.4ppm

15.32' of water
2.60 gals
x 3
7.81 gals

(Vol = 0.0408 [(2)² x { (1) - (3) }])

Constants for Calculating Borehole and Well Water Volumes							
Well Diam.	1"	2"	3"	4"	5"	6"	8"
Vol. (gal/ft)	0.04	0.17	0.38	0.66	1.04	1.50	2.60

Low Flow Stabilization Criteria	
pH	+/- 0.1
Cond.	3%
Turb.	10% if > 1 NTU
DO	10%
Temp.	3%
Eh	+/- 10 mV

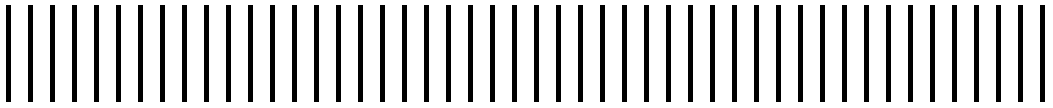
PARAMETER	ACCUMULATED VOLUME PURGED										
Gallons	Initial	>2	~2.5	~3	~4	~4.5	~5.5	~6.0	~6.5		
Time (24 hr. clock)	1208	1219	1235	1245	1255	1309	1320	1323	1330		
pH (s.u.)	6.74	7.10	7.20	7.23	7.26	7.28	7.34	7.35	7.35		
Conductivity (mS/cm)	1.32	1.25	1.26	1.26	1.28	0.946	0.949	0.949	0.948		
Turbidity (NTUs)	91.4	73.0	63.7	54.2	48.3	30.8	39.8	30.8	35.8		
Dissolved Oxygen (mg/l)	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Temperature (°C)	9.59	10.10	10.25	10.46	10.86	11.52	10.98	10.96	10.98		
Eh (mV)	117	91	86	77	70	70	69	69	70		
Depth to Water (ft.)	8.43'	15.00	18.00'	18.50'	19.00'	19.00'	19.50	19.50	19.50		
Purge (Flow) Rate	—	slowed	slowed	—	slowed	—	—	—	—		
Appearance	clear		clear			clear					

Notes: Photo taken of Bailer | No Sheen @ water interface.
1330- collected samples

New York State Department of Environmental Conservation
Schreck's Scrapyard
Groundwater Monitoring Report

Appendix B

Groundwater Analytical Report (Columbia Analytical Services)



4320-055 / BUF

MALCOLM PIRNIE

Columbia Analytical Services™ 1 Mustard Street, Suite 250 | Rochester, NY 14609 | 585-288-5380 | 585-288-8475 fax | www.caslab.com

June 01, 2010

Service Request No: R1002634

Mr. James Richert
Malcolm Pirnie, Incorporated
50 Fountain Plaza
Suite 600
Buffalo, NY 14202

Laboratory Results for: Shrecks Ship Yard/4320-045

Dear Mr. Richert:

Enclosed are the results of the sample(s) submitted to our laboratory on May 14, 2010. For your reference, these analyses have been assigned our service request number **R1002634**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 135. You may also contact me via email at JJaeger@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Janice Jaeger
Client Services Manager

CASE NARRATIVE

COMPANY: Malcolm Pirnie
Shreck's Ship Yard Project #4320-045
SERVICE REQUEST #: R1002634

Malcolm Pirnie samples were collected on 05/13/10 and received at CAS on 05/14/10 in good condition. All Dissolved samples were filtered in the field.

INORGANICS

Five water samples were analyzed for a site specific list of Total Metals. One of these samples was also analyzed for the same list of Metals but on a filtered sample. Please see attached data pages for method numbers.

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits.

The Laboratory blanks associated with these analyses were free of contamination.

No other analytical or QC problems were encountered.

VOLATILE ORGANICS

Six water samples were analyzed for a site specific list of Volatiles by Methods 8260B from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within limits.

Site specific QC was not requested on these samples. All Reference spike recoveries were within limits.

MW-3 and MW-6R were analyzed at a 1:10 dilution due to the foaminess of the samples.

The Laboratory blanks associated with these samples were free of contamination.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

PCB's

Five water samples were analyzed for Total PCB's by method 8082 from SW-846. One of these samples was also analyzed on a filtered portion.

All initial and continuing calibration criteria were met.

All surrogate standard recoveries were within limits.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate and RPD's were within limits.

The Laboratory Blanks associated with these samples were free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1002634

Lab ID	Client ID
R1002634-001	MW-7
R1002634-002	MW-7 DISSOLVED
R1002634-003	MW-4
R1002634-004	MW-3
R1002634-005	MW-6R
R1002634-006	MW-5R
R1002634-007	TRIP BLANK

Columbia Analytical Services

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Pesticide/Aroclors: Concentration >40% (25% for CLP) difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester Lab ID # for State Certifications[1]

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Nebraska Accredited
Navy Facilities Engineering Service Center Approved
Nevada ID # NY-00032
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania ID# 68-786
Rhode Island ID # 158
West Virginia ID # 292

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at www.caslab.com.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1330
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-7		
Lab Code:	R1002634-001	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Aluminum, Total	6010B	**3680**		µg/L	100	1	5/18/10	5/19/10 19:08
Antimony, Total	6010B	60	U	µg/L	60	1	5/18/10	5/19/10 19:08
Arsenic, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:08
Barium, Total	6010B	**37**		µg/L	20	1	5/18/10	5/19/10 19:08
Beryllium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:08
Cadmium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:08
Calcium, Total	6010B	**105000**		µg/L	1000	1	5/18/10	5/20/10 13:04
Chromium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:08
Cobalt, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:08
Copper, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:08
Iron, Total	6010B	**3150**		µg/L	100	1	5/18/10	5/19/10 19:08
Lead, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:08
Magnesium, Total	6010B	**47100**		µg/L	1000	1	5/18/10	5/19/10 19:08
Manganese, Total	6010B	**71**		µg/L	10	1	5/18/10	5/19/10 19:08
Mercury, Total	7470A	0.30	U	µg/L	0.30	1	5/19/10	5/19/10 14:42
Nickel, Total	6010B	40	U	µg/L	40	1	5/18/10	5/19/10 19:08
Potassium, Total	6010B	**2900**		µg/L	2000	1	5/18/10	5/20/10 13:04
Selenium, Total	6010B	**14**		µg/L	10	1	5/18/10	5/21/10 13:53
Silver, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:08
Sodium, Total	6010B	**70100**		µg/L	1000	1	5/18/10	5/20/10 13:04
Thallium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:08
Vanadium, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:08
Zinc, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:08

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1330
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-7	**Units:**	µg/L
Lab Code:	R1002634-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1-Trichloroethane (TCA)	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,1,2-Trichloroethane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,2,4-Trichlorobenzene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,2-Dibromo-3-chloropropane (DBCP)	2.0	U	2.0	1	NA	5/26/10 14:16		202233	
1,2-Dibromoethane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,2-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,2-Dichloroethane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,2-Dichloropropane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,3-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
1,4-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
2-Butanone (MEK)	5.0	U	5.0	1	NA	5/26/10 14:16		202233	
2-Hexanone	5.0	U	5.0	1	NA	5/26/10 14:16		202233	
4-Methyl-2-pentanone	5.0	U	5.0	1	NA	5/26/10 14:16		202233	
Acetone	5.0	U	5.0	1	NA	5/26/10 14:16		202233	
Benzene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Bromodichloromethane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Bromoform	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Bromomethane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Carbon Disulfide	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Carbon Tetrachloride	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Chlorobenzene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Chloroethane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Chloroform	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Chloromethane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Cyclohexane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Dibromochloromethane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Dichlorodifluoromethane (CFC 12)	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Dichloromethane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Ethylbenzene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	

Comments

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1330
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-7	**Units:**	µg/L
Lab Code:	R1002634-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Isopropylbenzene (Cumene)	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Methyl Acetate	2.0	U	2.0	1	NA	5/26/10 14:16		202233	
Methyl tert-Butyl Ether	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Methylcyclohexane	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Styrene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Tetrachloroethene (PCE)	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Toluene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Trichloroethene (TCE)	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Trichlorofluoromethane (CFC 11)	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
Vinyl Chloride	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
cis-1,2-Dichloroethene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
cis-1,3-Dichloropropene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
m,p-Xylenes	2.0	U	2.0	1	NA	5/26/10 14:16		202233	
o-Xylene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
trans-1,2-Dichloroethene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	
trans-1,3-Dichloropropene	1.0	U	1.0	1	NA	5/26/10 14:16		202233	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	94	85-122	5/26/10 14:16		
Dibromofluoromethane	102	89-119	5/26/10 14:16		
Toluene-d8	101	87-121	5/26/10 14:16		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1330
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-7	**Units:**	µg/L
Lab Code:	R1002634-001	**Basis:**	NA

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Aroclor 1016	0.94	U	0.94	1	5/17/10	5/21/10 13:59	111532	201884	
Aroclor 1221	1.9	U	1.9	1	5/17/10	5/21/10 13:59	111532	201884	
Aroclor 1232	0.94	U	0.94	1	5/17/10	5/21/10 13:59	111532	201884	
Aroclor 1242	0.94	U	0.94	1	5/17/10	5/21/10 13:59	111532	201884	
Aroclor 1248	0.94	U	0.94	1	5/17/10	5/21/10 13:59	111532	201884	
Aroclor 1254	0.94	U	0.94	1	5/17/10	5/21/10 13:59	111532	201884	
Aroclor 1260	0.94	U	0.94	1	5/17/10	5/21/10 13:59	111532	201884	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	57	10-136	5/21/10 13:59		
Tetrachloro-m-xylene	78	28-117	5/21/10 13:59		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Malcolm Pirnie, Incorporated
Project: Shrecks Ship Yard/4320-045
Sample Matrix: Water

Service Request: R1002634
Date Collected: 5/13/10 1330
Date Received: 5/14/10

Sample Name: MW-7 DISSOLVED
Lab Code: R1002634-002

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Aluminum, Dissolved	6010B	100	U	µg/L	100	1	5/18/10	5/19/10 19:14
Antimony, Dissolved	6010B	60	U	µg/L	60	1	5/18/10	5/19/10 19:14
Arsenic, Dissolved	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:14
Barium, Dissolved	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:14
Beryllium, Dissolved	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:14
Cadmium, Dissolved	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:14
Calcium, Dissolved	6010B	**110000**		µg/L	1000	1	5/18/10	5/20/10 13:10
Chromium, Dissolved	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:14
Cobalt, Dissolved	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:14
Copper, Dissolved	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:14
Iron, Dissolved	6010B	100	U	µg/L	100	1	5/18/10	5/19/10 19:14
Lead, Dissolved	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:14
Magnesium, Dissolved	6010B	**48400**		µg/L	1000	1	5/18/10	5/19/10 19:14
Manganese, Dissolved	6010B	**19**		µg/L	10	1	5/18/10	5/19/10 19:14
Mercury, Dissolved	7470A	0.30	U	µg/L	0.30	1	5/19/10	5/19/10 14:43
Nickel, Dissolved	6010B	40	U	µg/L	40	1	5/18/10	5/19/10 19:14
Potassium, Dissolved	6010B	2000	U	µg/L	2000	1	5/18/10	5/20/10 13:10
Selenium, Dissolved	6010B	**12**		µg/L	10	1	5/18/10	5/20/10 16:41
Silver, Dissolved	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:14
Sodium, Dissolved	6010B	**75900**		µg/L	1000	1	5/18/10	5/20/10 13:10
Thallium, Dissolved	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:14
Vanadium, Dissolved	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:14
Zinc, Dissolved	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:14

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1330
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-7 DISSOLVED	**Units:**	µg/L
Lab Code:	R1002634-002	**Basis:**	NA

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Aroclor 1016	1.0	U	1.0	1	5/17/10	5/21/10 14:29	111532	201884	
Aroclor 1221	2.0	U	2.0	1	5/17/10	5/21/10 14:29	111532	201884	
Aroclor 1232	1.0	U	1.0	1	5/17/10	5/21/10 14:29	111532	201884	
Aroclor 1242	1.0	U	1.0	1	5/17/10	5/21/10 14:29	111532	201884	
Aroclor 1248	1.0	U	1.0	1	5/17/10	5/21/10 14:29	111532	201884	
Aroclor 1254	1.0	U	1.0	1	5/17/10	5/21/10 14:29	111532	201884	
Aroclor 1260	1.0	U	1.0	1	5/17/10	5/21/10 14:29	111532	201884	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	105	10-136	5/21/10 14:29		
Tetrachloro-m-xylene	76	28-117	5/21/10 14:29		

Comments:

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1500
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-4		
Lab Code:	R1002634-003	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Aluminum, Total	6010B	**740**		µg/L	100	1	5/18/10	5/19/10 19:20
Antimony, Total	6010B	60	U	µg/L	60	1	5/18/10	5/19/10 19:20
Arsenic, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:20
Barium, Total	6010B	**35**		µg/L	20	1	5/18/10	5/19/10 19:20
Beryllium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:20
Cadmium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:20
Calcium, Total	6010B	**44300**		µg/L	1000	1	5/18/10	5/20/10 13:16
Chromium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:20
Cobalt, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:20
Copper, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:20
Iron, Total	6010B	**660**		µg/L	100	1	5/18/10	5/19/10 19:20
Lead, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:20
Magnesium, Total	6010B	**5800**		µg/L	1000	1	5/18/10	5/19/10 19:20
Manganese, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:20
Mercury, Total	7470A	0.30	U	µg/L	0.30	1	5/19/10	5/19/10 14:49
Nickel, Total	6010B	40	U	µg/L	40	1	5/18/10	5/19/10 19:20
Potassium, Total	6010B	**2500**		µg/L	2000	1	5/18/10	5/20/10 13:16
Selenium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/20/10 16:47
Silver, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:20
Sodium, Total	6010B	**11700**		µg/L	1000	1	5/18/10	5/20/10 13:16
Thallium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:20
Vanadium, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:20
Zinc, Total	6010B	**61**		µg/L	20	1	5/18/10	5/19/10 19:20

Comments

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1500
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-4	**Units:**	µg/L
Lab Code:	R1002634-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1-Trichloroethane (TCA)	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,1,2-Trichloroethane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,2,4-Trichlorobenzene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,2-Dibromo-3-chloropropane (DBCP)	2.0	U	2.0	1	NA	5/26/10 14:47		202233	
1,2-Dibromoethane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,2-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,2-Dichloroethane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,2-Dichloropropane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,3-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
1,4-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
2-Butanone (MEK)	5.0	U	5.0	1	NA	5/26/10 14:47		202233	
2-Hexanone	5.0	U	5.0	1	NA	5/26/10 14:47		202233	
4-Methyl-2-pentanone	5.0	U	5.0	1	NA	5/26/10 14:47		202233	
Acetone	5.0	U	5.0	1	NA	5/26/10 14:47		202233	
Benzene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Bromodichloromethane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Bromoform	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Bromomethane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Carbon Disulfide	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Carbon Tetrachloride	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Chlorobenzene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Chloroethane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Chloroform	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Chloromethane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Cyclohexane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Dibromochloromethane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Dichlorodifluoromethane (CFC 12)	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Dichloromethane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Ethylbenzene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	

Comments

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1500
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-4	**Units:**	µg/L
Lab Code:	R1002634-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Isopropylbenzene (Cumene)	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Methyl Acetate	2.0	U	2.0	1	NA	5/26/10 14:47		202233	
Methyl tert-Butyl Ether	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Methylcyclohexane	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Styrene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Tetrachloroethene (PCE)	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Toluene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Trichloroethene (TCE)	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Trichlorofluoromethane (CFC 11)	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
Vinyl Chloride	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
cis-1,2-Dichloroethene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
cis-1,3-Dichloropropene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
m,p-Xylenes	2.0	U	2.0	1	NA	5/26/10 14:47		202233	
o-Xylene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
trans-1,2-Dichloroethene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	
trans-1,3-Dichloropropene	1.0	U	1.0	1	NA	5/26/10 14:47		202233	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	92	85-122	5/26/10 14:47		
Dibromofluoromethane	103	89-119	5/26/10 14:47		
Toluene-d8	102	87-121	5/26/10 14:47		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1500
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-4	**Units:**	µg/L
Lab Code:	R1002634-003	**Basis:**	NA

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Aroclor 1016	0.94	U	0.94	1	5/17/10	5/21/10 17:00	111532	201884	
Aroclor 1221	1.9	U	1.9	1	5/17/10	5/21/10 17:00	111532	201884	
Aroclor 1232	0.94	U	0.94	1	5/17/10	5/21/10 17:00	111532	201884	
Aroclor 1242	0.94	U	0.94	1	5/17/10	5/21/10 17:00	111532	201884	
Aroclor 1248	0.94	U	0.94	1	5/17/10	5/21/10 17:00	111532	201884	
Aroclor 1254	0.94	U	0.94	1	5/17/10	5/21/10 17:00	111532	201884	
Aroclor 1260	0.94	U	0.94	1	5/17/10	5/21/10 17:00	111532	201884	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	80	10-136	5/21/10 17:00		
Tetrachloro-m-xylene	77	28-117	5/21/10 17:00		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1545
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-3		
Lab Code:	R1002634-004	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Aluminum, Total	6010B	100	U	µg/L	100	1	5/18/10	5/19/10 19:26
Antimony, Total	6010B	60	U	µg/L	60	1	5/18/10	5/19/10 19:26
Arsenic, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:26
Barium, Total	6010B	**115**		µg/L	20	1	5/18/10	5/19/10 19:26
Beryllium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:26
Cadmium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:26
Calcium, Total	6010B	**184000**		µg/L	1000	1	5/18/10	5/20/10 13:23
Chromium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:26
Cobalt, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:26
Copper, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:26
Iron, Total	6010B	**370**		µg/L	100	1	5/18/10	5/19/10 19:26
Lead, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:26
Magnesium, Total	6010B	**24800**		µg/L	1000	1	5/18/10	5/19/10 19:26
Manganese, Total	6010B	**179**		µg/L	10	1	5/18/10	5/19/10 19:26
Mercury, Total	7470A	0.30	U	µg/L	0.30	1	5/19/10	5/19/10 14:51
Nickel, Total	6010B	40	U	µg/L	40	1	5/18/10	5/19/10 19:26
Potassium, Total	6010B	**3800**		µg/L	2000	1	5/18/10	5/20/10 13:23
Selenium, Total	6010B	**11**		µg/L	10	1	5/18/10	5/20/10 16:53
Silver, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:26
Sodium, Total	6010B	**29900**		µg/L	1000	1	5/18/10	5/20/10 13:23
Thallium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:26
Vanadium, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:26
Zinc, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:26

Comments:

Client: Malcolm Pirnie, Incorporated
Project: Shrecks Ship Yard/4320-045
Sample Matrix: Water

Sample Name: MW-3
Lab Code: R1002634-004

Service Request: R1002634
Date Collected: 5/13/10 1545
Date Received: 5/14/10

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1-Trichloroethane (TCA)	10	U	10	10	NA	5/26/10 15:18		202233	
1,1,2,2-Tetrachloroethane	10	U	10	10	NA	5/26/10 15:18		202233	
1,1,2-Trichloroethane	10	U	10	10	NA	5/26/10 15:18		202233	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	10	10	NA	5/26/10 15:18		202233	
1,1-Dichloroethane (1,1-DCA)	10	U	10	10	NA	5/26/10 15:18		202233	
1,1-Dichloroethene (1,1-DCE)	10	U	10	10	NA	5/26/10 15:18		202233	
1,2,4-Trichlorobenzene	10	U	10	10	NA	5/26/10 15:18		202233	
1,2-Dibromo-3-chloropropane (DBCP)	20	U	20	10	NA	5/26/10 15:18		202233	
1,2-Dibromoethane	10	U	10	10	NA	5/26/10 15:18		202233	
1,2-Dichlorobenzene	10	U	10	10	NA	5/26/10 15:18		202233	
1,2-Dichloroethane	10	U	10	10	NA	5/26/10 15:18		202233	
1,2-Dichloropropane	10	U	10	10	NA	5/26/10 15:18		202233	
1,3-Dichlorobenzene	10	U	10	10	NA	5/26/10 15:18		202233	
1,4-Dichlorobenzene	10	U	10	10	NA	5/26/10 15:18		202233	
2-Butanone (MEK)	50	U	50	10	NA	5/26/10 15:18		202233	
2-Hexanone	50	U	50	10	NA	5/26/10 15:18		202233	
4-Methyl-2-pentanone	50	U	50	10	NA	5/26/10 15:18		202233	
Acetone	50	U	50	10	NA	5/26/10 15:18		202233	
Benzene	10	U	10	10	NA	5/26/10 15:18		202233	
Bromodichloromethane	10	U	10	10	NA	5/26/10 15:18		202233	
Bromoform	10	U	10	10	NA	5/26/10 15:18		202233	
Bromomethane	10	U	10	10	NA	5/26/10 15:18		202233	
Carbon Disulfide	10	U	10	10	NA	5/26/10 15:18		202233	
Carbon Tetrachloride	10	U	10	10	NA	5/26/10 15:18		202233	
Chlorobenzene	10	U	10	10	NA	5/26/10 15:18		202233	
Chloroethane	10	U	10	10	NA	5/26/10 15:18		202233	
Chloroform	10	U	10	10	NA	5/26/10 15:18		202233	
Chloromethane	10	U	10	10	NA	5/26/10 15:18		202233	
Cyclohexane	10	U	10	10	NA	5/26/10 15:18		202233	
Dibromochloromethane	10	U	10	10	NA	5/26/10 15:18		202233	
Dichlorodifluoromethane (CFC 12)	10	U	10	10	NA	5/26/10 15:18		202233	
Dichloromethane	10	U	10	10	NA	5/26/10 15:18		202233	
Ethylbenzene	10	U	10	10	NA	5/26/10 15:18		202233	

Comments:

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1545
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-3	**Units:**	µg/L
Lab Code:	R1002634-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Isopropylbenzene (Cumene)	10	U	10	10	NA	5/26/10 15:18		202233	
Methyl Acetate	20	U	20	10	NA	5/26/10 15:18		202233	
Methyl tert-Butyl Ether	10	U	10	10	NA	5/26/10 15:18		202233	
Methylcyclohexane	10	U	10	10	NA	5/26/10 15:18		202233	
Styrene	10	U	10	10	NA	5/26/10 15:18		202233	
Tetrachloroethene (PCE)	10	U	10	10	NA	5/26/10 15:18		202233	
Toluene	10	U	10	10	NA	5/26/10 15:18		202233	
Trichloroethene (TCE)	10	U	10	10	NA	5/26/10 15:18		202233	
Trichlorofluoromethane (CFC 11)	10	U	10	10	NA	5/26/10 15:18		202233	
Vinyl Chloride	10	U	10	10	NA	5/26/10 15:18		202233	
cis-1,2-Dichloroethene	10	U	10	10	NA	5/26/10 15:18		202233	
cis-1,3-Dichloropropene	10	U	10	10	NA	5/26/10 15:18		202233	
m,p-Xylenes	20	U	20	10	NA	5/26/10 15:18		202233	
o-Xylene	10	U	10	10	NA	5/26/10 15:18		202233	
trans-1,2-Dichloroethene	10	U	10	10	NA	5/26/10 15:18		202233	
trans-1,3-Dichloropropene	10	U	10	10	NA	5/26/10 15:18		202233	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	95	85-122	5/26/10 15:18		
Dibromofluoromethane	102	89-119	5/26/10 15:18		
Toluene-d8	102	87-121	5/26/10 15:18		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1545
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-3	**Units:**	µg/L
Lab Code:	R1002634-004	**Basis:**	NA

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Aroclor 1016	0.94	U	0.94	1	5/17/10	5/21/10 17:30	111532	201884	
Aroclor 1221	1.9	U	1.9	1	5/17/10	5/21/10 17:30	111532	201884	
Aroclor 1232	0.94	U	0.94	1	5/17/10	5/21/10 17:30	111532	201884	
Aroclor 1242	0.94	U	0.94	1	5/17/10	5/21/10 17:30	111532	201884	
Aroclor 1248	0.94	U	0.94	1	5/17/10	5/21/10 17:30	111532	201884	
Aroclor 1254	0.94	U	0.94	1	5/17/10	5/21/10 17:30	111532	201884	
Aroclor 1260	0.94	U	0.94	1	5/17/10	5/21/10 17:30	111532	201884	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	93	10-136	5/21/10 17:30		
Tetrachloro-m-xylene	83	28-117	5/21/10 17:30		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Malcolm Pirnie, Incorporated
Project: Shrecks Ship Yard/4320-045
Sample Matrix: Water

Service Request: R1002634
Date Collected: 5/13/10 1630
Date Received: 5/14/10

Sample Name: MW-6R
Lab Code: R1002634-005

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Aluminum, Total	6010B	**190**		µg/L	100	1	5/18/10	5/19/10 19:32
Antimony, Total	6010B	60	U	µg/L	60	1	5/18/10	5/19/10 19:32
Arsenic, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:32
Barium, Total	6010B	**185**		µg/L	20	1	5/18/10	5/19/10 19:32
Beryllium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:32
Cadmium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:32
Calcium, Total	6010B	**182000**		µg/L	1000	1	5/18/10	5/20/10 13:29
Chromium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:32
Cobalt, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:32
Copper, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:32
Iron, Total	6010B	**380**		µg/L	100	1	5/18/10	5/19/10 19:32
Lead, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:32
Magnesium, Total	6010B	**31400**		µg/L	1000	1	5/18/10	5/19/10 19:32
Manganese, Total	6010B	**283**		µg/L	10	1	5/18/10	5/19/10 19:32
Mercury, Total	7470A	0.30	U	µg/L	0.30	1	5/19/10	5/19/10 14:52
Nickel, Total	6010B	40	U	µg/L	40	1	5/18/10	5/19/10 19:32
Potassium, Total	6010B	**5900**		µg/L	2000	1	5/18/10	5/20/10 13:29
Selenium, Total	6010B	**14**		µg/L	10	1	5/18/10	5/20/10 16:59
Silver, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:32
Sodium, Total	6010B	**87900**		µg/L	1000	1	5/18/10	5/20/10 13:29
Thallium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:32
Vanadium, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:32
Zinc, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:32

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1630
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-6R	**Units:**	µg/L
Lab Code:	R1002634-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1-Trichloroethane (TCA)	10	U	10	10	NA	5/26/10 15:49		202233	
1,1,2,2-Tetrachloroethane	10	U	10	10	NA	5/26/10 15:49		202233	
1,1,2-Trichloroethane	10	U	10	10	NA	5/26/10 15:49		202233	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	10	10	NA	5/26/10 15:49		202233	
1,1-Dichloroethane (1,1-DCA)	10	U	10	10	NA	5/26/10 15:49		202233	
1,1-Dichloroethene (1,1-DCE)	10	U	10	10	NA	5/26/10 15:49		202233	
1,2,4-Trichlorobenzene	10	U	10	10	NA	5/26/10 15:49		202233	
1,2-Dibromo-3-chloropropane (DBCP)	20	U	20	10	NA	5/26/10 15:49		202233	
1,2-Dibromoethane	10	U	10	10	NA	5/26/10 15:49		202233	
1,2-Dichlorobenzene	10	U	10	10	NA	5/26/10 15:49		202233	
1,2-Dichloroethane	10	U	10	10	NA	5/26/10 15:49		202233	
1,2-Dichloropropane	10	U	10	10	NA	5/26/10 15:49		202233	
1,3-Dichlorobenzene	10	U	10	10	NA	5/26/10 15:49		202233	
1,4-Dichlorobenzene	10	U	10	10	NA	5/26/10 15:49		202233	
2-Butanone (MEK)	50	U	50	10	NA	5/26/10 15:49		202233	
2-Hexanone	50	U	50	10	NA	5/26/10 15:49		202233	
4-Methyl-2-pentanone	50	U	50	10	NA	5/26/10 15:49		202233	
Acetone	50	U	50	10	NA	5/26/10 15:49		202233	
Benzene	10	U	10	10	NA	5/26/10 15:49		202233	
Bromodichloromethane	10	U	10	10	NA	5/26/10 15:49		202233	
Bromoform	10	U	10	10	NA	5/26/10 15:49		202233	
Bromomethane	10	U	10	10	NA	5/26/10 15:49		202233	
Carbon Disulfide	10	U	10	10	NA	5/26/10 15:49		202233	
Carbon Tetrachloride	10	U	10	10	NA	5/26/10 15:49		202233	
Chlorobenzene	10	U	10	10	NA	5/26/10 15:49		202233	
Chloroethane	10	U	10	10	NA	5/26/10 15:49		202233	
Chloroform	10	U	10	10	NA	5/26/10 15:49		202233	
Chloromethane	10	U	10	10	NA	5/26/10 15:49		202233	
Cyclohexane	10	U	10	10	NA	5/26/10 15:49		202233	
Dibromochloromethane	10	U	10	10	NA	5/26/10 15:49		202233	
Dichlorodifluoromethane (CFC 12)	10	U	10	10	NA	5/26/10 15:49		202233	
Dichloromethane	10	U	10	10	NA	5/26/10 15:49		202233	
Ethylbenzene	10	U	10	10	NA	5/26/10 15:49		202233	

Comments:

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1630
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-6R	**Units:**	µg/L
Lab Code:	R1002634-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Isopropylbenzene (Cumene)	10	U	10	10	NA	5/26/10 15:49		202233	
Methyl Acetate	20	U	20	10	NA	5/26/10 15:49		202233	
Methyl tert-Butyl Ether	10	U	10	10	NA	5/26/10 15:49		202233	
Methylcyclohexane	10	U	10	10	NA	5/26/10 15:49		202233	
Styrene	10	U	10	10	NA	5/26/10 15:49		202233	
Tetrachloroethene (PCE)	10	U	10	10	NA	5/26/10 15:49		202233	
Toluene	10	U	10	10	NA	5/26/10 15:49		202233	
Trichloroethene (TCE)	10	U	10	10	NA	5/26/10 15:49		202233	
Trichlorofluoromethane (CFC 11)	10	U	10	10	NA	5/26/10 15:49		202233	
Vinyl Chloride	10	U	10	10	NA	5/26/10 15:49		202233	
cis-1,2-Dichloroethene	10	U	10	10	NA	5/26/10 15:49		202233	
cis-1,3-Dichloropropene	10	U	10	10	NA	5/26/10 15:49		202233	
m,p-Xylenes	20	U	20	10	NA	5/26/10 15:49		202233	
o-Xylene	10	U	10	10	NA	5/26/10 15:49		202233	
trans-1,2-Dichloroethene	10	U	10	10	NA	5/26/10 15:49		202233	
trans-1,3-Dichloropropene	10	U	10	10	NA	5/26/10 15:49		202233	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	94	85-122	5/26/10 15:49		
Dibromofluoromethane	103	89-119	5/26/10 15:49		
Toluene-d8	103	87-121	5/26/10 15:49		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 1630
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-6R	**Units:**	µg/L
Lab Code:	R1002634-005	**Basis:**	NA

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Aroclor 1016	0.94	U	0.94	1	5/17/10	5/21/10 18:00	111532	201884	
Aroclor 1221	1.9	U	1.9	1	5/17/10	5/21/10 18:00	111532	201884	
Aroclor 1232	0.94	U	0.94	1	5/17/10	5/21/10 18:00	111532	201884	
Aroclor 1242	0.94	U	0.94	1	5/17/10	5/21/10 18:00	111532	201884	
Aroclor 1248	0.94	U	0.94	1	5/17/10	5/21/10 18:00	111532	201884	
Aroclor 1254	0.94	U	0.94	1	5/17/10	5/21/10 18:00	111532	201884	
Aroclor 1260	0.94	U	0.94	1	5/17/10	5/21/10 18:00	111532	201884	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	87	10-136	5/21/10 18:00		
Tetrachloro-m-xylene	78	28-117	5/21/10 18:00		

Comments

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 0000
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-5R		
Lab Code:	R1002634-006	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Aluminum, Total	6010B	100	U	µg/L	100	1	5/18/10	5/19/10 19:38
Antimony, Total	6010B	60	U	µg/L	60	1	5/18/10	5/19/10 19:38
Arsenic, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:38
Barium, Total	6010B	**32**		µg/L	20	1	5/18/10	5/19/10 19:38
Beryllium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:38
Cadmium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:38
Calcium, Total	6010B	**113000**		µg/L	1000	1	5/18/10	5/20/10 13:35
Chromium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:38
Cobalt, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:38
Copper, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:38
Iron, Total	6010B	**420**		µg/L	100	1	5/18/10	5/19/10 19:38
Lead, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 19:38
Magnesium, Total	6010B	**48700**		µg/L	1000	1	5/18/10	5/19/10 19:38
Manganese, Total	6010B	**113**		µg/L	10	1	5/18/10	5/19/10 19:38
Mercury, Total	7470A	0.30	U	µg/L	0.30	1	5/19/10	5/19/10 14:54
Nickel, Total	6010B	40	U	µg/L	40	1	5/18/10	5/19/10 19:38
Potassium, Total	6010B	2000	U	µg/L	2000	1	5/18/10	5/20/10 13:35
Selenium, Total	6010B	**14**		µg/L	10	1	5/18/10	5/20/10 17:04
Silver, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:38
Sodium, Total	6010B	**59400**		µg/L	1000	1	5/18/10	5/20/10 13:35
Thallium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 19:38
Vanadium, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 19:38
Zinc, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 19:38

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 0000
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-5R	**Units:**	µg/L
Lab Code:	R1002634-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1-Trichloroethane (TCA)	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,1,2-Trichloroethane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,2,4-Trichlorobenzene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,2-Dibromo-3-chloropropane (DBCP)	2.0	U	2.0	1	NA	5/26/10 16:20		202233	
1,2-Dibromoethane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,2-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,2-Dichloroethane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,2-Dichloropropane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,3-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
1,4-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
2-Butanone (MEK)	5.0	U	5.0	1	NA	5/26/10 16:20		202233	
2-Hexanone	5.0	U	5.0	1	NA	5/26/10 16:20		202233	
4-Methyl-2-pentanone	5.0	U	5.0	1	NA	5/26/10 16:20		202233	
Acetone	5.0	U	5.0	1	NA	5/26/10 16:20		202233	
Benzene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Bromodichloromethane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Bromoform	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Bromomethane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Carbon Disulfide	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Carbon Tetrachloride	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Chlorobenzene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Chloroethane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Chloroform	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Chloromethane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Cyclohexane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Dibromochloromethane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Dichlorodifluoromethane (CFC 12)	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Dichloromethane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Ethylbenzene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 0000
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-5R	**Units:**	µg/L
Lab Code:	R1002634-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Isopropylbenzene (Cumene)	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Methyl Acetate	2.0	U	2.0	1	NA	5/26/10 16:20		202233	
Methyl tert-Butyl Ether	12		1.0	1	NA	5/26/10 16:20		202233	
Methylcyclohexane	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Styrene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Tetrachloroethene (PCE)	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Toluene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Trichloroethene (TCE)	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Trichlorofluoromethane (CFC 11)	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
Vinyl Chloride	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
cis-1,2-Dichloroethene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
cis-1,3-Dichloropropene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
m,p-Xylenes	2.0	U	2.0	1	NA	5/26/10 16:20		202233	
o-Xylene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
trans-1,2-Dichloroethene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	
trans-1,3-Dichloropropene	1.0	U	1.0	1	NA	5/26/10 16:20		202233	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	95	85-122	5/26/10 16:20		
Dibromofluoromethane	103	89-119	5/26/10 16:20		
Toluene-d8	102	87-121	5/26/10 16:20		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10 0000
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	MW-5R	**Units:**	µg/L
Lab Code:	R1002634-006	**Basis:**	NA

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Aroclor 1016	0.97	U	0.97	1	5/17/10	5/21/10 18:31	111532	201884	
Aroclor 1221	1.9	U	1.9	1	5/17/10	5/21/10 18:31	111532	201884	
Aroclor 1232	0.97	U	0.97	1	5/17/10	5/21/10 18:31	111532	201884	
Aroclor 1242	0.97	U	0.97	1	5/17/10	5/21/10 18:31	111532	201884	
Aroclor 1248	0.97	U	0.97	1	5/17/10	5/21/10 18:31	111532	201884	
Aroclor 1254	0.97	U	0.97	1	5/17/10	5/21/10 18:31	111532	201884	
Aroclor 1260	0.97	U	0.97	1	5/17/10	5/21/10 18:31	111532	201884	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	86	10-136	5/21/10 18:31		
Tetrachloro-m-xylene	75	28-117	5/21/10 18:31		

Comments

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	TRIP BLANK	**Units:**	µg/L
Lab Code:	R1002634-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1-Trichloroethane (TCA)	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,1,2-Trichloroethane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,2,4-Trichlorobenzene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,2-Dibromo-3-chloropropane (DBCP)	2.0	U	2.0	1	NA	5/26/10 16:51		202233	
1,2-Dibromoethane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,2-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,2-Dichloroethane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,2-Dichloropropane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,3-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
1,4-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
2-Butanone (MEK)	5.0	U	5.0	1	NA	5/26/10 16:51		202233	
2-Hexanone	5.0	U	5.0	1	NA	5/26/10 16:51		202233	
4-Methyl-2-pentanone	5.0	U	5.0	1	NA	5/26/10 16:51		202233	
Acetone	5.0	U	5.0	1	NA	5/26/10 16:51		202233	
Benzene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Bromodichloromethane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Bromoform	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Bromomethane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Carbon Disulfide	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Carbon Tetrachloride	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Chlorobenzene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Chloroethane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Chloroform	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Chloromethane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Cyclohexane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Dibromochloromethane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Dichlorodifluoromethane (CFC 12)	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Dichloromethane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Ethylbenzene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	

Comments

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	5/13/10
Sample Matrix:	Water	**Date Received:**	5/14/10
Sample Name:	TRIP BLANK	**Units:**	µg/L
Lab Code:	R1002634-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Isopropylbenzene (Cumene)	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Methyl Acetate	2.0	U	2.0	1	NA	5/26/10 16:51		202233	
Methyl tert-Butyl Ether	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Methylcyclohexane	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Styrene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Tetrachloroethene (PCE)	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Toluene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Trichloroethene (TCE)	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Trichlorofluoromethane (CFC 11)	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
Vinyl Chloride	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
cis-1,2-Dichloroethene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
cis-1,3-Dichloropropene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
m,p-Xylenes	2.0	U	2.0	1	NA	5/26/10 16:51		202233	
o-Xylene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
trans-1,2-Dichloroethene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	
trans-1,3-Dichloropropene	1.0	U	1.0	1	NA	5/26/10 16:51		202233	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	93	85-122	5/26/10 16:51		
Dibromofluoromethane	104	89-119	5/26/10 16:51		
Toluene-d8	102	87-121	5/26/10 16:51		

Comments

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Malcolm Pirnie, Incorporated
Project: Shrecks Ship Yard/4320-045
Sample Matrix: Water

Service Request: R1002634
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: R1002634-MB

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Aluminum, Dissolved	6010B	100	U	µg/L	100	1	5/18/10	5/19/10 16:43
Aluminum, Total	6010B	100	U	µg/L	100	1	5/18/10	5/19/10 16:43
Antimony, Dissolved	6010B	60	U	µg/L	60	1	5/18/10	5/19/10 16:43
Antimony, Total	6010B	60	U	µg/L	60	1	5/18/10	5/19/10 16:43
Arsenic, Dissolved	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 16:43
Arsenic, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 16:43
Barium, Dissolved	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 16:43
Barium, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 16:43
Beryllium, Dissolved	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 16:43
Beryllium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 16:43
Cadmium, Dissolved	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 16:43
Cadmium, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 16:43
Calcium, Dissolved	6010B	1000	U	µg/L	1000	1	5/18/10	5/20/10 10:20
Calcium, Total	6010B	1000	U	µg/L	1000	1	5/18/10	5/20/10 10:20
Chromium, Dissolved	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 16:43
Chromium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 16:43
Cobalt, Dissolved	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 16:43
Cobalt, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 16:43
Copper, Dissolved	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 16:43
Copper, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 16:43
Iron, Dissolved	6010B	100	U	µg/L	100	1	5/18/10	5/19/10 16:43
Iron, Total	6010B	100	U	µg/L	100	1	5/18/10	5/19/10 16:43
Lead, Dissolved	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 16:43
Lead, Total	6010B	5.0	U	µg/L	5.0	1	5/18/10	5/19/10 16:43
Magnesium, Dissolved	6010B	1000	U	µg/L	1000	1	5/18/10	5/19/10 16:43
Magnesium, Total	6010B	1000	U	µg/L	1000	1	5/18/10	5/19/10 16:43
Manganese, Dissolved	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 16:43
Manganese, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 16:43
Mercury, Dissolved	7470A	0.30	U	µg/L	0.30	1	5/19/10	5/19/10 14:28
Mercury, Total	7470A	0.30	U	µg/L	0.30	1	5/19/10	5/19/10 14:28
Nickel, Dissolved	6010B	40	U	µg/L	40	1	5/18/10	5/19/10 16:43
Nickel, Total	6010B	40	U	µg/L	40	1	5/18/10	5/19/10 16:43
Potassium, Dissolved	6010B	2000	U	µg/L	2000	1	5/18/10	5/20/10 10:20
Potassium, Total	6010B	2000	U	µg/L	2000	1	5/18/10	5/20/10 10:20
Selenium, Dissolved	6010B	10	U	µg/L	10	1	5/18/10	5/20/10 09:54
Selenium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/20/10 09:54

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1002634-MB	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Silver, Dissolved	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 16:43
Silver, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 16:43
Sodium, Dissolved	6010B	1000	U	µg/L	1000	1	5/18/10	5/20/10 10:20
Sodium, Total	6010B	1000	U	µg/L	1000	1	5/18/10	5/20/10 10:20
Thallium, Dissolved	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 16:43
Thallium, Total	6010B	10	U	µg/L	10	1	5/18/10	5/19/10 16:43
Vanadium, Dissolved	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 16:43
Vanadium, Total	6010B	50	U	µg/L	50	1	5/18/10	5/19/10 16:43
Zinc, Dissolved	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 16:43
Zinc, Total	6010B	20	U	µg/L	20	1	5/18/10	5/19/10 16:43

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1004122-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1-Trichloroethane (TCA)	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,1,2-Trichloroethane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,2,4-Trichlorobenzene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,2-Dibromo-3-chloropropane (DBCP)	2.0	U	2.0	1	NA	5/26/10 11:09		202233	
1,2-Dibromoethane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,2-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,2-Dichloroethane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,2-Dichloropropane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,3-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
1,4-Dichlorobenzene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
2-Butanone (MEK)	5.0	U	5.0	1	NA	5/26/10 11:09		202233	
2-Hexanone	5.0	U	5.0	1	NA	5/26/10 11:09		202233	
4-Methyl-2-pentanone	5.0	U	5.0	1	NA	5/26/10 11:09		202233	
Acetone	5.0	U	5.0	1	NA	5/26/10 11:09		202233	
Benzene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Bromodichloromethane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Bromoform	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Bromomethane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Carbon Disulfide	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Carbon Tetrachloride	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Chlorobenzene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Chloroethane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Chloroform	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Chloromethane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Cyclohexane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Dibromochloromethane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Dichlorodifluoromethane (CFC 12)	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Dichloromethane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Ethylbenzene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1004122-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Isopropylbenzene (Cumene)	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Methyl Acetate	2.0	U	2.0	1	NA	5/26/10 11:09		202233	
Methyl tert-Butyl Ether	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Methylcyclohexane	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Styrene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Tetrachloroethene (PCE)	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Toluene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Trichloroethene (TCE)	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Trichlorofluoromethane (CFC 11)	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
Vinyl Chloride	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
cis-1,2-Dichloroethene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
cis-1,3-Dichloropropene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
m,p-Xylenes	2.0	U	2.0	1	NA	5/26/10 11:09		202233	
o-Xylene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
trans-1,2-Dichloroethene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	
trans-1,3-Dichloropropene	1.0	U	1.0	1	NA	5/26/10 11:09		202233	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	94	85-122	5/26/10 11:09		
Dibromofluoromethane	103	89-119	5/26/10 11:09		
Toluene-d8	100	87-121	5/26/10 11:09		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Malcolm Pirnie, Incorporated	**Service Request:**	R1002634
Project:	Shrecks Ship Yard/4320-045	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1003767-01	**Basis:**	NA

Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Aroclor 1016	1.0	U	1.0	1	5/17/10	5/21/10 10:58	111532	201884	
Aroclor 1221	2.0	U	2.0	1	5/17/10	5/21/10 10:58	111532	201884	
Aroclor 1232	1.0	U	1.0	1	5/17/10	5/21/10 10:58	111532	201884	
Aroclor 1242	1.0	U	1.0	1	5/17/10	5/21/10 10:58	111532	201884	
Aroclor 1248	1.0	U	1.0	1	5/17/10	5/21/10 10:58	111532	201884	
Aroclor 1254	1.0	U	1.0	1	5/17/10	5/21/10 10:58	111532	201884	
Aroclor 1260	1.0	U	1.0	1	5/17/10	5/21/10 10:58	111532	201884	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	97	10-136	5/21/10 10:58		
Tetrachloro-m-xylene	79	28-117	5/21/10 10:58		

Comments

Client: Malcolm Pirnie, Incorporated
Project: Shrecks Ship Yard/4320-045
Sample Matrix: Water

Service Request: R1002634
Date Analyzed: 5/19/10 - 5/20/10

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1002634-LCS Result	Expected	% Rec	% Rec Limits
Aluminum, Dissolved	6010B	**1850**	2000	92	80 - 120
Aluminum, Total	6010B	**1850**	2000	92	80 - 120
Antimony, Dissolved	6010B	**467**	500	93	80 - 120
Antimony, Total	6010B	**467**	500	93	80 - 120
Arsenic, Dissolved	6010B	**38.2**	40	95	80 - 120
Arsenic, Total	6010B	**38.2**	40	95	80 - 120
Barium, Dissolved	6010B	**1940**	2000	97	80 - 120
Barium, Total	6010B	**1940**	2000	97	80 - 120
Beryllium, Dissolved	6010B	**47.2**	50.0	94	80 - 120
Beryllium, Total	6010B	**47.2**	50.0	94	80 - 120
Cadmium, Dissolved	6010B	**49.2**	50.0	98	80 - 120
Cadmium, Total	6010B	**49.2**	50.0	98	80 - 120
Calcium, Dissolved	6010B	**2130**	2000	107	80 - 120
Calcium, Total	6010B	**2130**	2000	107	80 - 120
Chromium, Dissolved	6010B	**199**	200	99	80 - 120
Chromium, Total	6010B	**199**	200	99	80 - 120
Cobalt, Dissolved	6010B	**499**	500	100	80 - 120
Cobalt, Total	6010B	**499**	500	100	80 - 120
Copper, Dissolved	6010B	**249**	250	100	80 - 120
Copper, Total	6010B	**249**	250	100	80 - 120
Iron, Dissolved	6010B	**994**	1000	99	80 - 120
Iron, Total	6010B	**994**	1000	99	80 - 120
Lead, Dissolved	6010B	**502**	500	100	80 - 120
Lead, Total	6010B	**502**	500	100	80 - 120
Magnesium, Dissolved	6010B	**1990**	2000	99	80 - 120
Magnesium, Total	6010B	**1990**	2000	99	80 - 120
Manganese, Dissolved	6010B	**489**	500	98	80 - 120
Manganese, Total	6010B	**489**	500	98	80 - 120
Mercury, Dissolved	7470A	**1.04**	1.00	104	80 - 120
Mercury, Total	7470A	**1.04**	1.00	104	80 - 120
Nickel, Dissolved	6010B	**509**	500	102	80 - 120
Nickel, Total	6010B	**509**	500	102	80 - 120
Potassium, Dissolved	6010B	**20400**	20000	102	80 - 120
Potassium, Total	6010B	**20400**	20000	102	80 - 120
Selenium, Dissolved	6010B	**936**	1010	93	80 - 120
Selenium, Total	6010B	**936**	1010	93	80 - 120
Silver, Dissolved	6010B	**49.3**	50	99	80 - 120
Silver, Total	6010B	**49.3**	50	99	80 - 120
Sodium, Dissolved	6010B	**20500**	20000	102	80 - 120

Comments

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Malcolm Pirnie, Incorporated
Project: Shrecks Ship Yard/4320-045
Sample Matrix: Water

Service Request: R1002634
Date Analyzed: 5/19/10 - 5/20/10

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1002634-LCS Result	Expected	% Rec	% Rec Limits
Sodium, Total	6010B	**20500**	20000	102	80 - 120
Thallium, Dissolved	6010B	**1860**	2000	93	80 - 120
Thallium, Total	6010B	**1860**	2000	93	80 - 120
Vanadium, Dissolved	6010B	**489**	500	98	80 - 120
Vanadium, Total	6010B	**489**	500	98	80 - 120
Zinc, Dissolved	6010B	**509**	500	102	80 - 120
Zinc, Total	6010B	**509**	500	102	80 - 120

Comments

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Malcolm Pirnie, Incorporated
Project: Shrecks Ship Yard/4320-045
Sample Matrix: Water

Service Request: R1002634
Date Analyzed: 5/26/10

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L
Basis: NA

Analysis Lot: 202233

Analyte Name	Lab Control Sample RQ1004122-02 Result	Expected	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	**20.9**	20.0	105	72 - 128
1,1,2,2-Tetrachloroethane	**21.1**	20.0	106	72 - 131
1,1,2-Trichloroethane	**20.5**	20.0	102	80 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	**22.3**	20.0	112	71 - 134
1,1-Dichloroethane (1,1-DCA)	**19.5**	20.0	98	76 - 122
1,1-Dichloroethene (1,1-DCE)	**21.6**	20.0	108	72 - 129
1,2,4-Trichlorobenzene	**19.3**	20.0	96	70 - 133
1,2-Dibromo-3-chloropropane (DBCP)	**23.4**	20.0	117	62 - 131
1,2-Dibromoethane	**20.9**	20.0	105	78 - 125
1,2-Dichlorobenzene	**19.4**	20.0	97	79 - 124
1,2-Dichloroethane	**20.7**	20.0	104	78 - 126
1,2-Dichloropropane	**19.4**	20.0	97	80 - 123
1,3-Dichlorobenzene	**19.2**	20.0	96	78 - 124
1,4-Dichlorobenzene	**18.5**	20.0	93	78 - 123
2-Butanone (MEK)	**19.3**	20.0	96	60 - 133
2-Hexanone	**21.0**	20.0	105	61 - 131
4-Methyl-2-pentanone	**21.7**	20.0	109	61 - 132
Acetone	**24.6**	20.0	123	59 - 140
Benzene	**19.5**	20.0	98	78 - 121
Bromodichloromethane	**21.0**	20.0	105	80 - 125
Bromoform	**23.8**	20.0	119	73 - 132
Bromomethane	**25.4**	20.0	127	57 - 144
Carbon Disulfide	**14.2**	20.0	71	59 - 138
Carbon Tetrachloride	**22.9**	20.0	115	69 - 135
Chlorobenzene	**19.0**	20.0	95	80 - 121
Chloroethane	**21.9**	20.0	109	71 - 130
Chloroform	**20.1**	20.0	100	78 - 125
Chloromethane	**18.8**	20.0	94	62 - 133
Cyclohexane	**16.8**	20.0	84	67 - 127
Dibromochloromethane	**25.1**	20.0	126	78 - 133
Dichlorodifluoromethane (CFC 12)	**19.0**	20.0	95	53 - 143
Dichloromethane	**19.3**	20.0	97	75 - 125
Ethylbenzene	**19.5**	20.0	98	78 - 123
Isopropylbenzene (Cumene)	**20.4**	20.0	102	73 - 133
Methyl Acetate	**27.6**	20.0	138	57 - 157
Methyl tert-Butyl Ether	**20.6**	20.0	103	75 - 126
Methylcyclohexane	**16.7**	20.0	84	64 - 133

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Malcolm Pirnie, Incorporated
Project: Shrecks Ship Yard/4320-045
Sample Matrix: Water

Service Request: R1002634
Date Analyzed: 5/26/10

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L
Basis: NA

Analysis Lot: 202233

Analyte Name	Lab Control Sample RQ1004122-02 Result	Expected	% Rec	% Rec Limits
Styrene	**18.8**	20.0	94	80 - 132
Tetrachloroethene (PCE)	**20.6**	20.0	103	72 - 131
Toluene	**19.7**	20.0	98	78 - 122
Trichloroethene (TCE)	**19.8**	20.0	99	74 - 127
Trichlorofluoromethane (CFC 11)	**23.1**	20.0	116	71 - 139
Vinyl Chloride	**20.4**	20.0	102	71 - 136
cis-1,2-Dichloroethene	**19.6**	20.0	98	78 - 122
cis-1,3-Dichloropropene	**20.6**	20.0	103	77 - 125
m,p-Xylenes	**39.3**	40.0	98	79 - 126
o-Xylene	**18.9**	20.0	94	79 - 126
trans-1,2-Dichloroethene	**19.4**	20.0	97	75 - 121
trans-1,3-Dichloropropene	**22.5**	20.0	113	69 - 127

Comments

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Malcolm Pirnie, Incorporated
Project: Shrecks Ship Yard/4320-045
Sample Matrix: Water

Service Request: R1002634
Date Analyzed: 5/21/10

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 111532

Analyte Name	Lab Control Sample RQ1003767-02 Result	Expected	% Rec	Duplicate Lab Control Sample RQ1003767-03 Result	Expected	% Rec	% Rec Limits	RPD	RPD Limit
Aroclor 1260	**4.71**	5.00	94	**5.00**	5.00	100	51 - 123	6	30

Comments

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Malcolm Pirnie, Incorporated
Project: Smurfit-Stone N. Tonawanda/4330-045
Sample Matrix: Water

Service Request: R1002634
Date Analyzed: 5/21/10

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Analytical Method: 8082
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 111532

Analyte Name	Lab Control Sample RQ1003767-02 Result	Expected	% Rec	Duplicate Lab Control Sample RQ1003767-03 Result	Expected	% Rec	% Rec Limits	RPD	RPD Limit
Aroclor 1260	**4.71**	5.00	94	**5.00**	5.00	100	51 - 123	6	30

Comments:

Columbia Analytical Services™ CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

SR #

CAS Contact

Project Name: Shreeks Ship Yard	Project Number: 4320-045
Project Manager: Jim Richert	Report CC:
Company/Address: Malcolm Pirnie Inc 50 Fountain Plaza suite 600 Buffalo NY 14202	
Phone #: 716.667.0900	FAX#:
Sampler's Signature: D Symonds	Sampler's Printed Name: Dwight Symonds

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
MW-7		5/13/10	1330	GW	9	3				4	1	1		
MW-4			1500		6	3				2	1			
MW-3			1545		6	3				2	1			
MW-6R			1630		6	3				2	1			
MW-5R					6	3				2	1			
Trip blank														

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

Per Jim Richert. Diss Parameters were field filted.

Per Jim Richert, this check for 8081 is an error. The extra volume 5/14/10 is for diss 8082.

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 24 hr _____ 48 hr _____ 5 day
_____ STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report wil
_____ V. Specialized Forms / Custo
Edata _____ Yes _____

INVOICE INFORMATION
PO#
BILL TO:

R1002634
Malcolm Pirnie, Incorporated
Smurfit-Stone N. Tonawanda

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: D Symonds	Signature: Jim Richert	Signature: Jim Richert	Signature:	Signature:	Signature:
Printed Name: Dwight Symonds	Printed Name: Jim Richert	Printed Name: Jim Richert	Printed Name: Pat Bennett	Printed Name: Pat Bennett	Printed Name: Matthew Curran
Firm	Firm: Pirnie	Firm: Pirnie	Firm: CAS	Firm: CAS	Firm: CAS
Date/Time	Date/Time: 5-13-10	Date/Time: 5-14-10 1040	Date/Time: 5/14/10 1040	Date/Time: 5/14/10 1355	Date/Time: 5/14/10 1355

Distribution: White - Return to Originator; Yellow - Lab Copy

SCOC Rev. 3/10

Cooler Receipt And Preservation Check Form

Project/Client Malcom Pirnie Submission Number ~~R10-26~~ R10-2634 5/14/10 DW

Cooler received on 5/14/10 by: MC **COURIER:** (CAS) UPS FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	YES	(NO)			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did any VOA vials have significant* air bubbles?	YES	(NO)	N/A		
5.	Were **Ice or Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	(CAS/ROC)	CLIENT			
7.	Temperature of cooler(s) upon receipt:	9°	4°			
	Is the temperature within 0° - 6° C?:	Yes	(Yes)	Yes	Yes	Yes
	If No, Explain Below	(No)	No	No	No	No

Date/Time Temperatures Taken: 5/14/10 1407 Ice melted

Thermometer ID: (IR GUN#3) IR GUN#4 Reading From: (Temp Blank) Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: OK to test & call to Jim Richart.

PC Secondary Review: CS 5/14/10 DW 5/14/10

Cooler Breakdown: Date: 5/14/10 by: DW

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated		(N/A)

Explain any discrepancies:

pH	Reagent	YES	NO	Lot Received	Exp
≥12	NaOH				
≤2	HNO_3	✓		BDB26102D	5/11
≤2	H_2SO_4				
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid	
	$Na_2S_2O_3$	-	-		
	Zn Aceta	-	-		
	HCl	*	*	41/9100	4/11

Sample ID	Vol. Added	Lot Added	Final pH

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust:

Bottle lot numbers: 9-356-001, 041210-20, 032210-12, BDB26100E.

Other Comments:

We received 3 empty 250 metals bottles, 2 empty 250 plastic unp. and 1 empty 8260 VOA vial.

PC Secondary Review: JWS 5/20/10

*significant air bubbles are greater than 5-6 mm

H:\SMODOCS\Cooler Receipt 2.doc

Appendix C

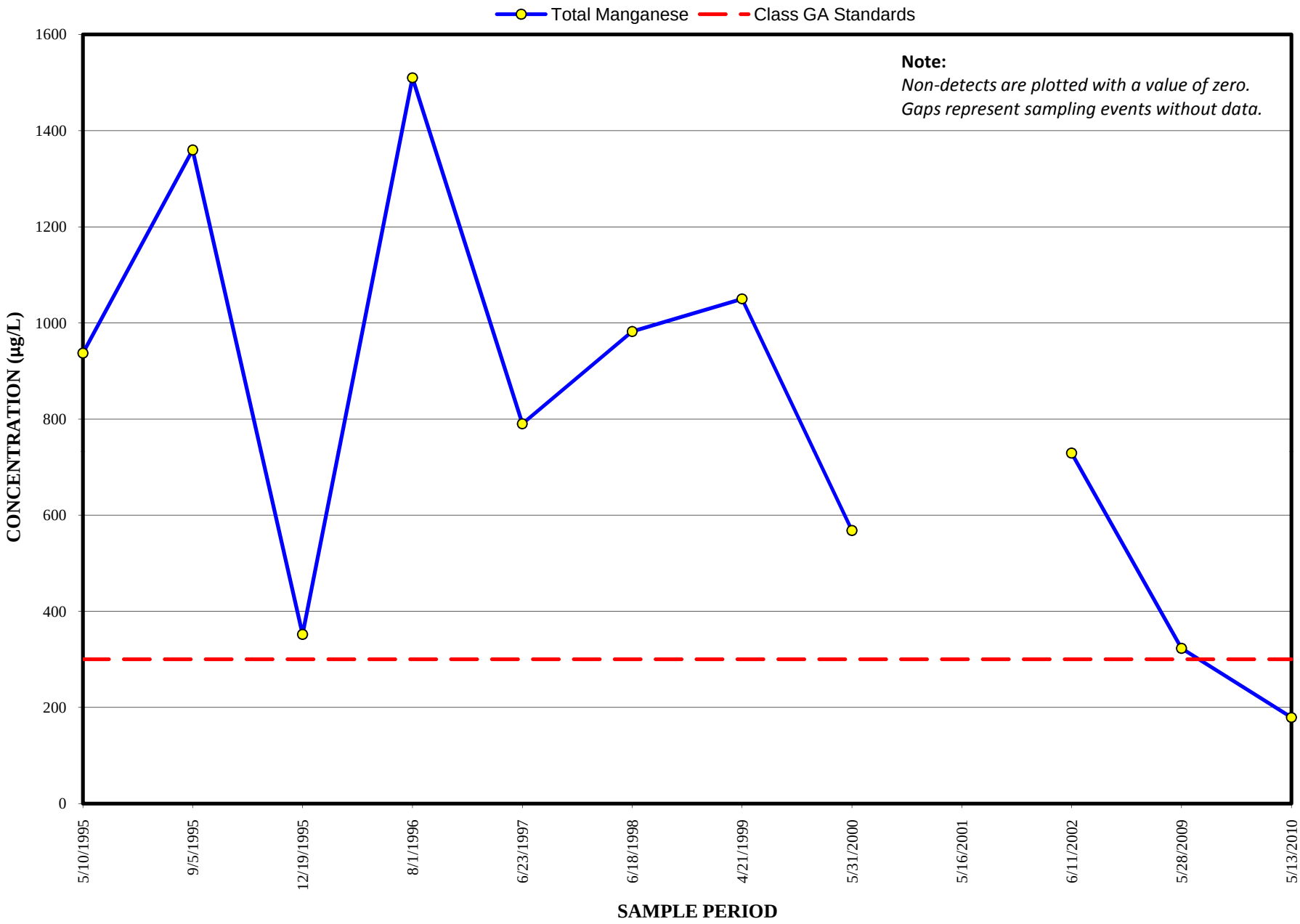
Selected Historical Analyte Concentration Trends

- **Manganese**
  (MW-3, MW-4, MW-5R, MW-6R, MW-7)
- **Total Lead**
  (MW-4, MW-6R, MW-7)
- **Total PCBs**
  (MW-3, MW-4)
- **Total Chromium**
  (MW-4, MW-6R, MW-7)
- **Benzene**
  (MW-6R)

MALCOLM PIRNIE

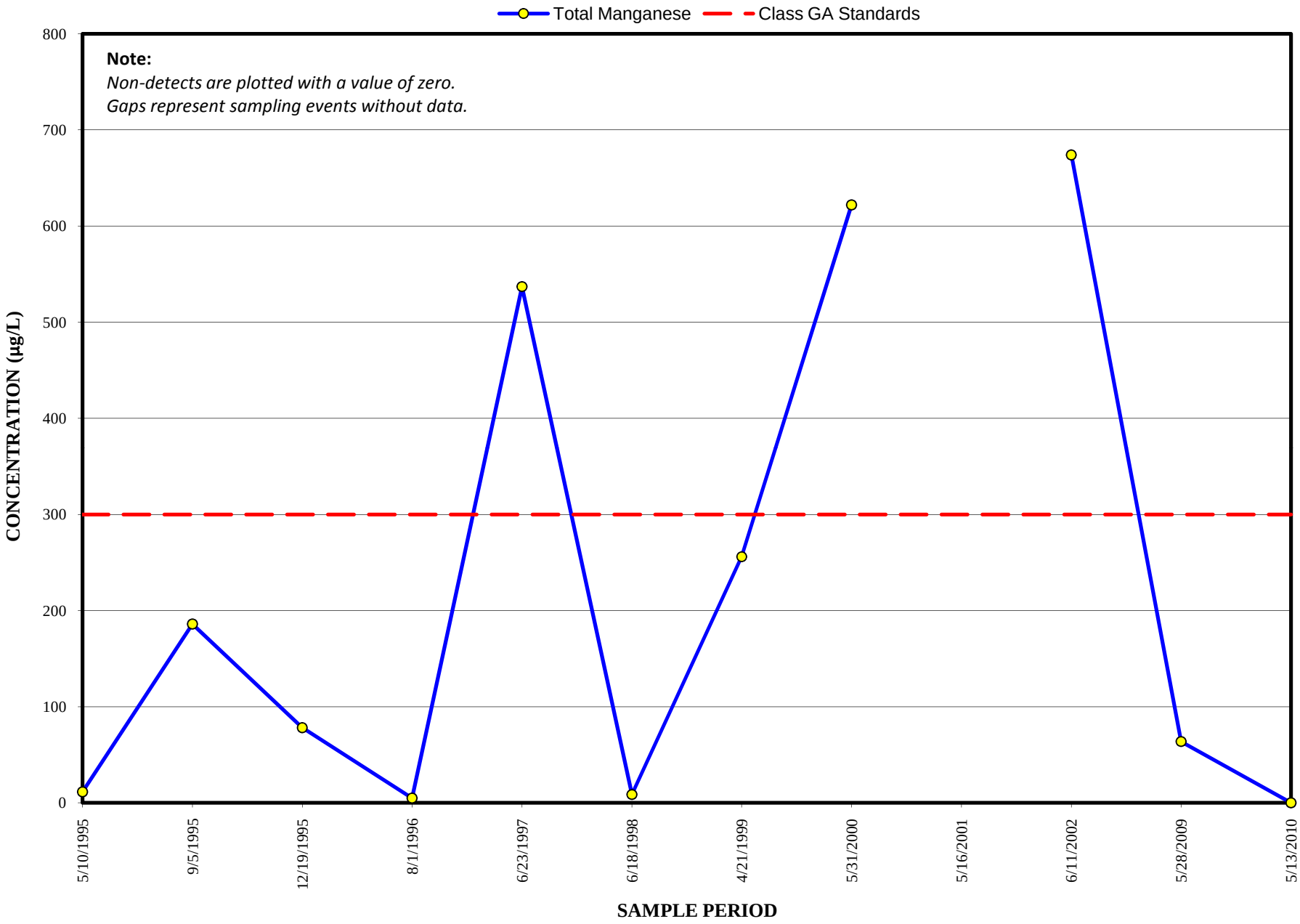
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-3
TOTAL MANGANESE



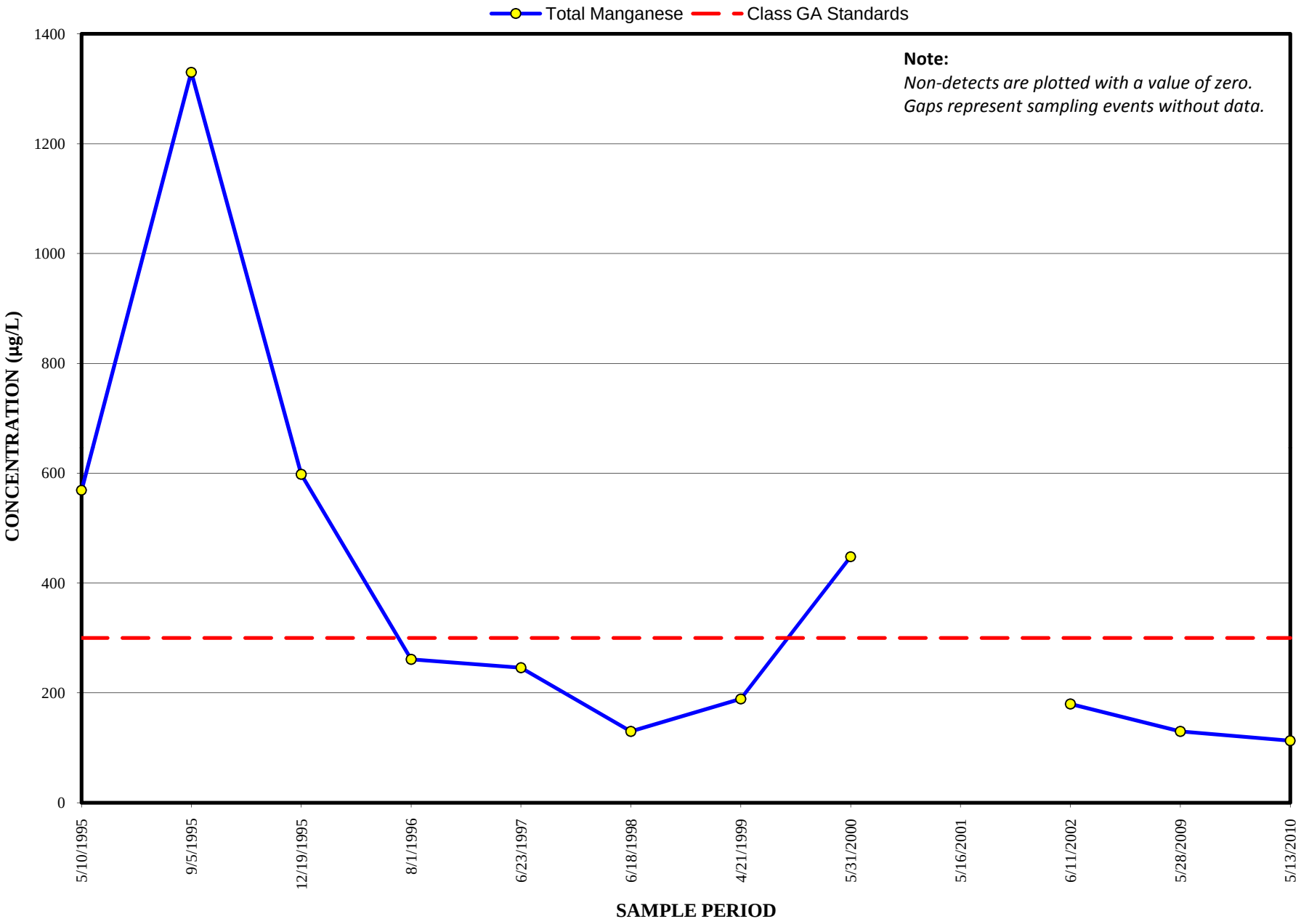
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-4
TOTAL MANGANESE



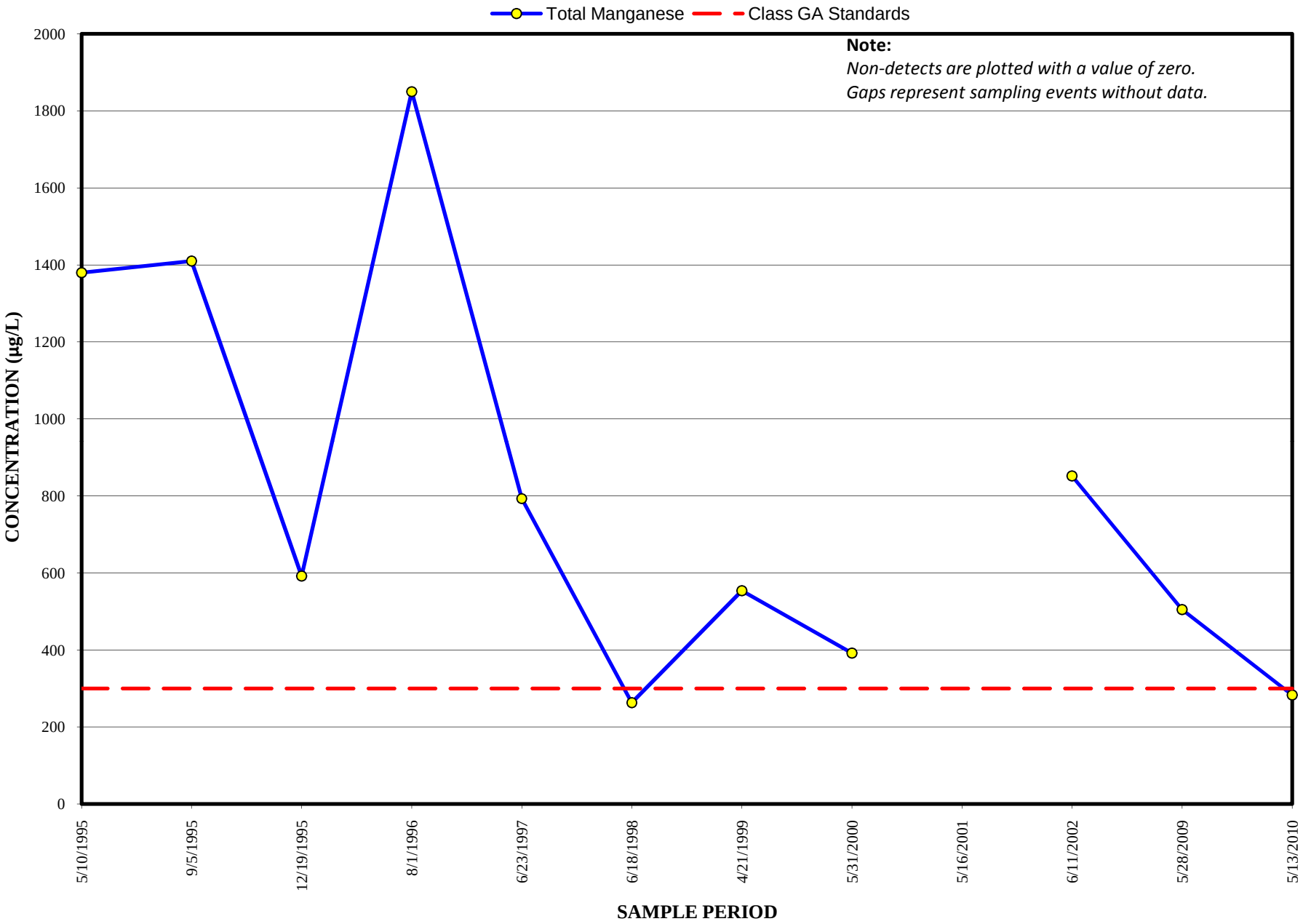
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-5R
TOTAL MANGANESE



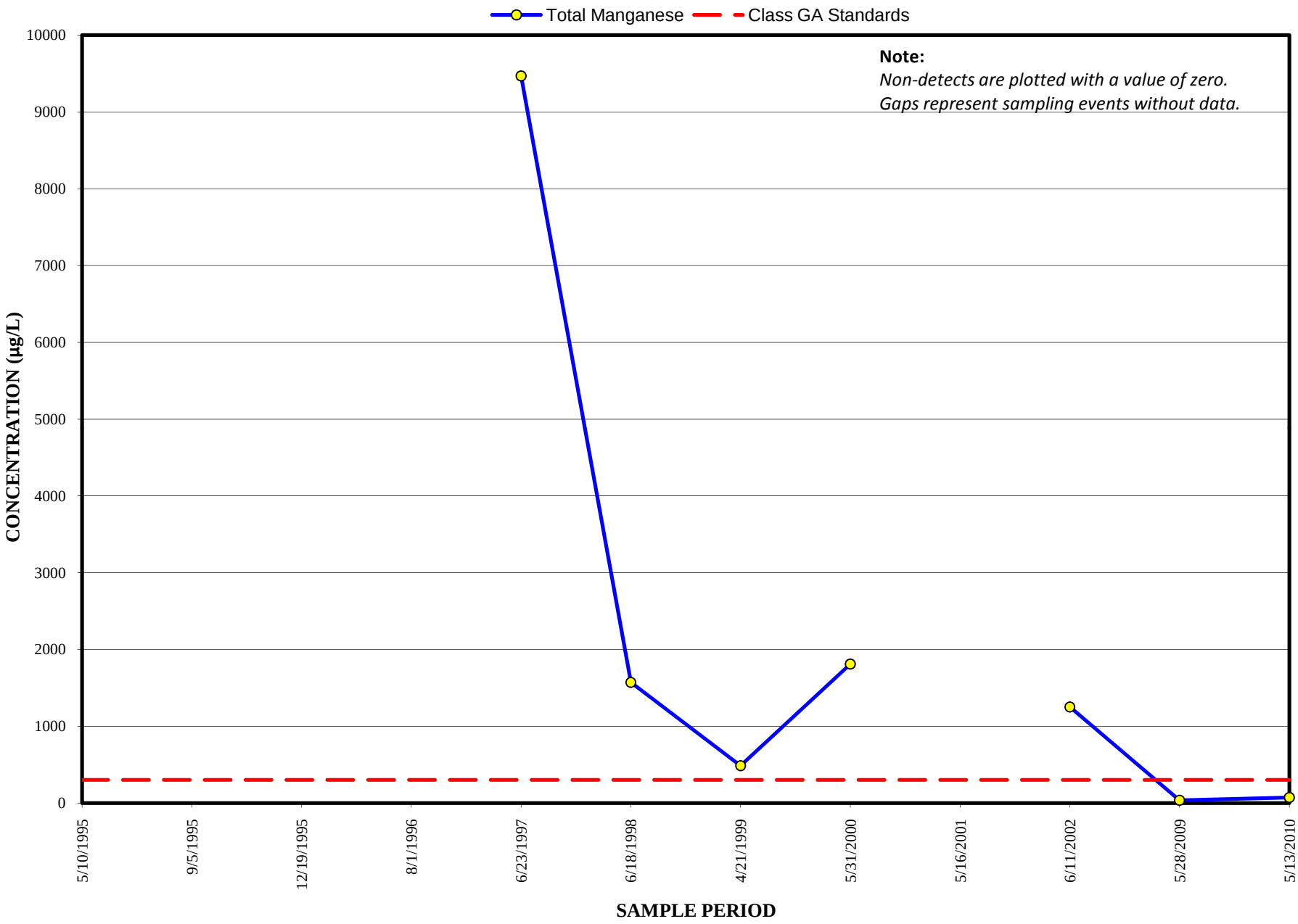
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-6R
TOTAL MANGANESE



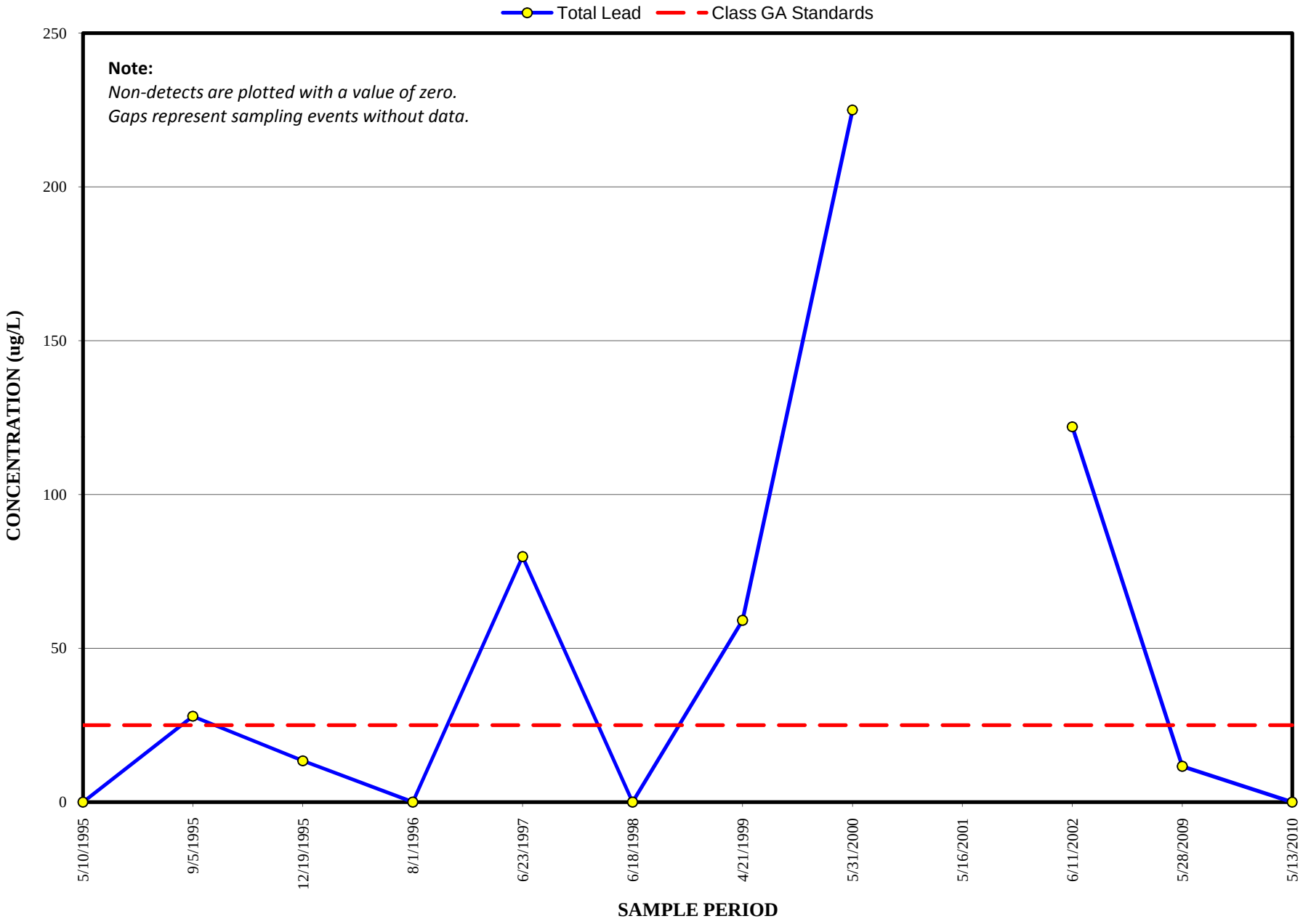
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-7
TOTAL MANGANESE



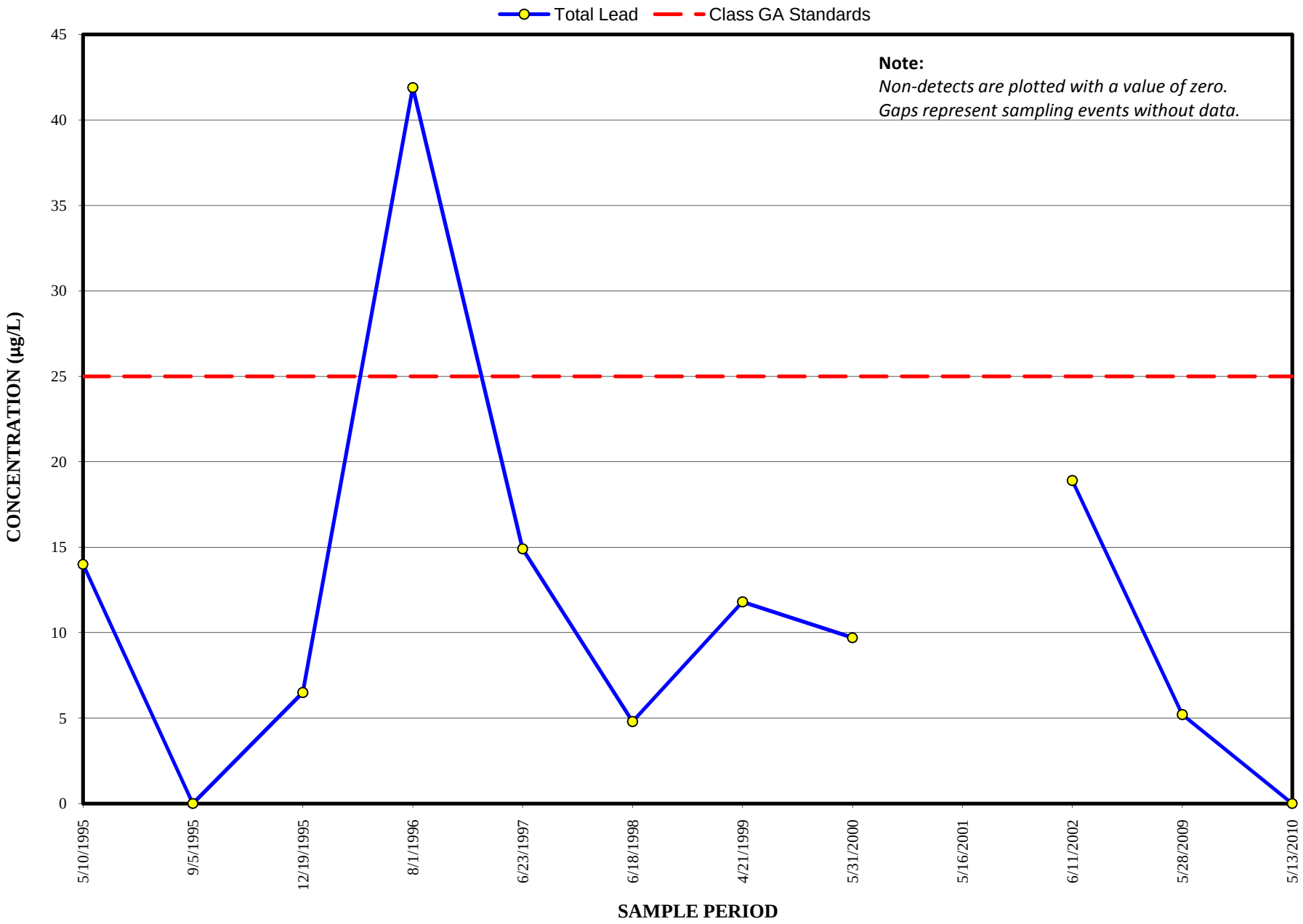
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-4
TOTAL LEAD



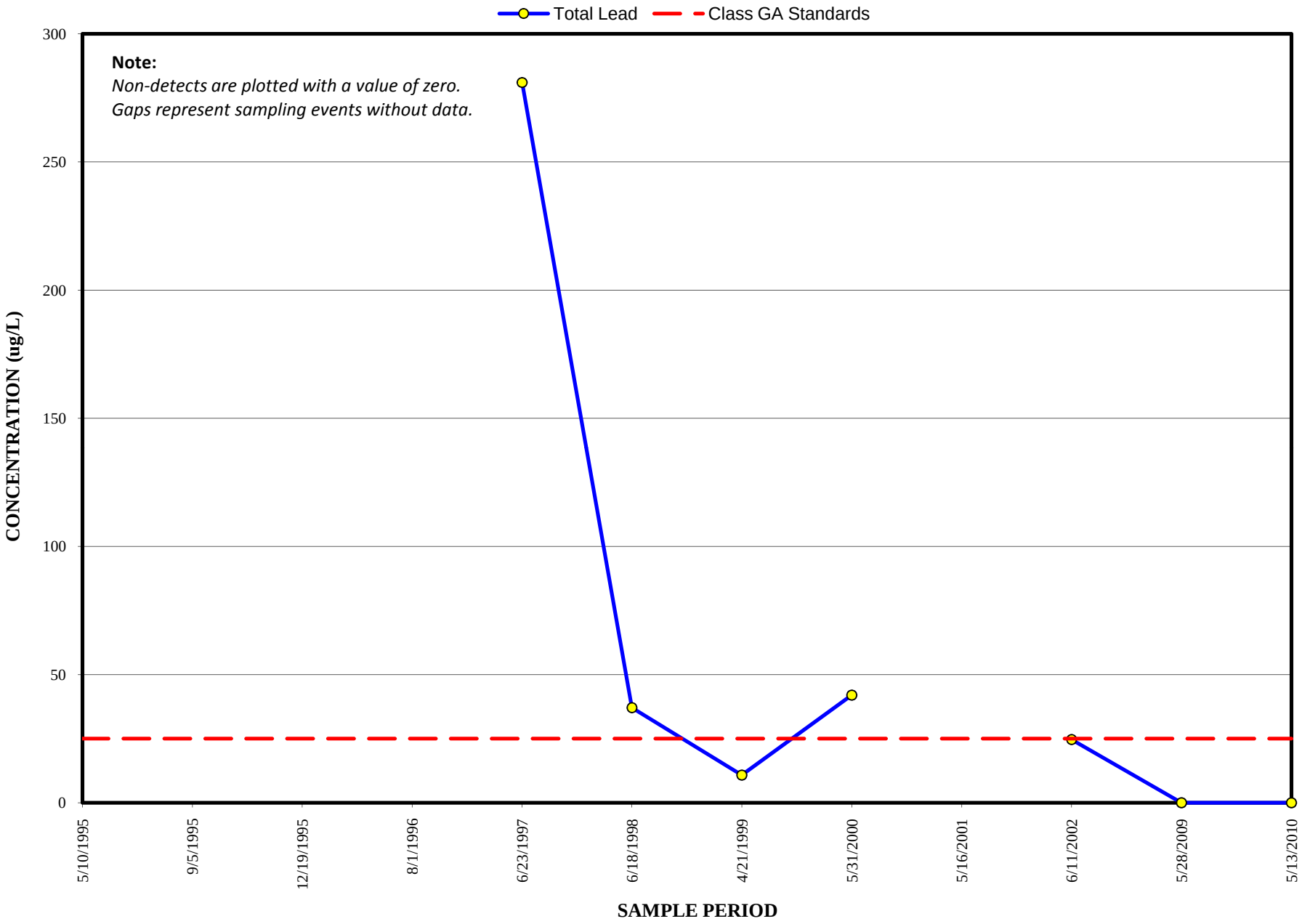
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-6R
TOTAL LEAD



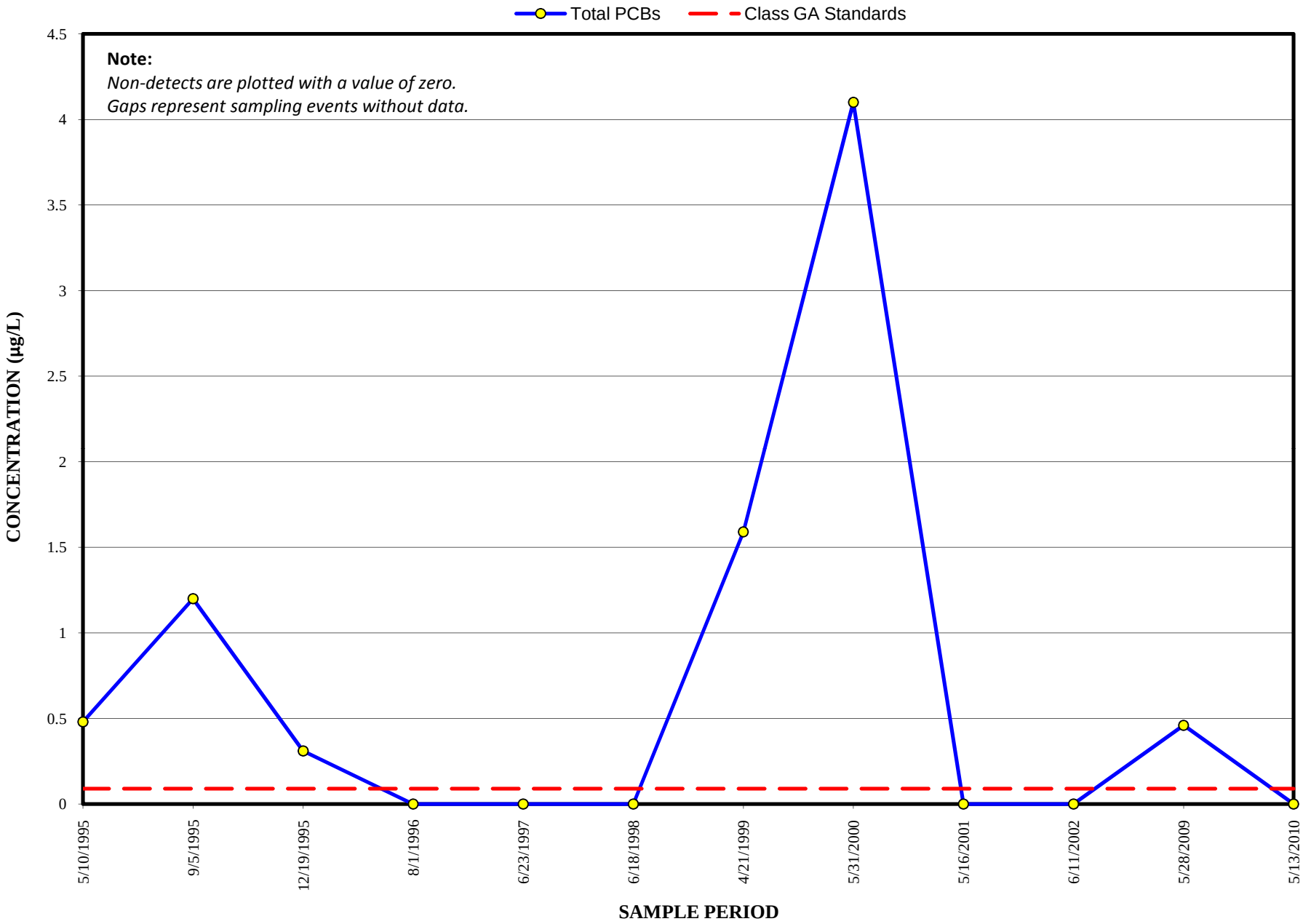
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-7
TOTAL LEAD



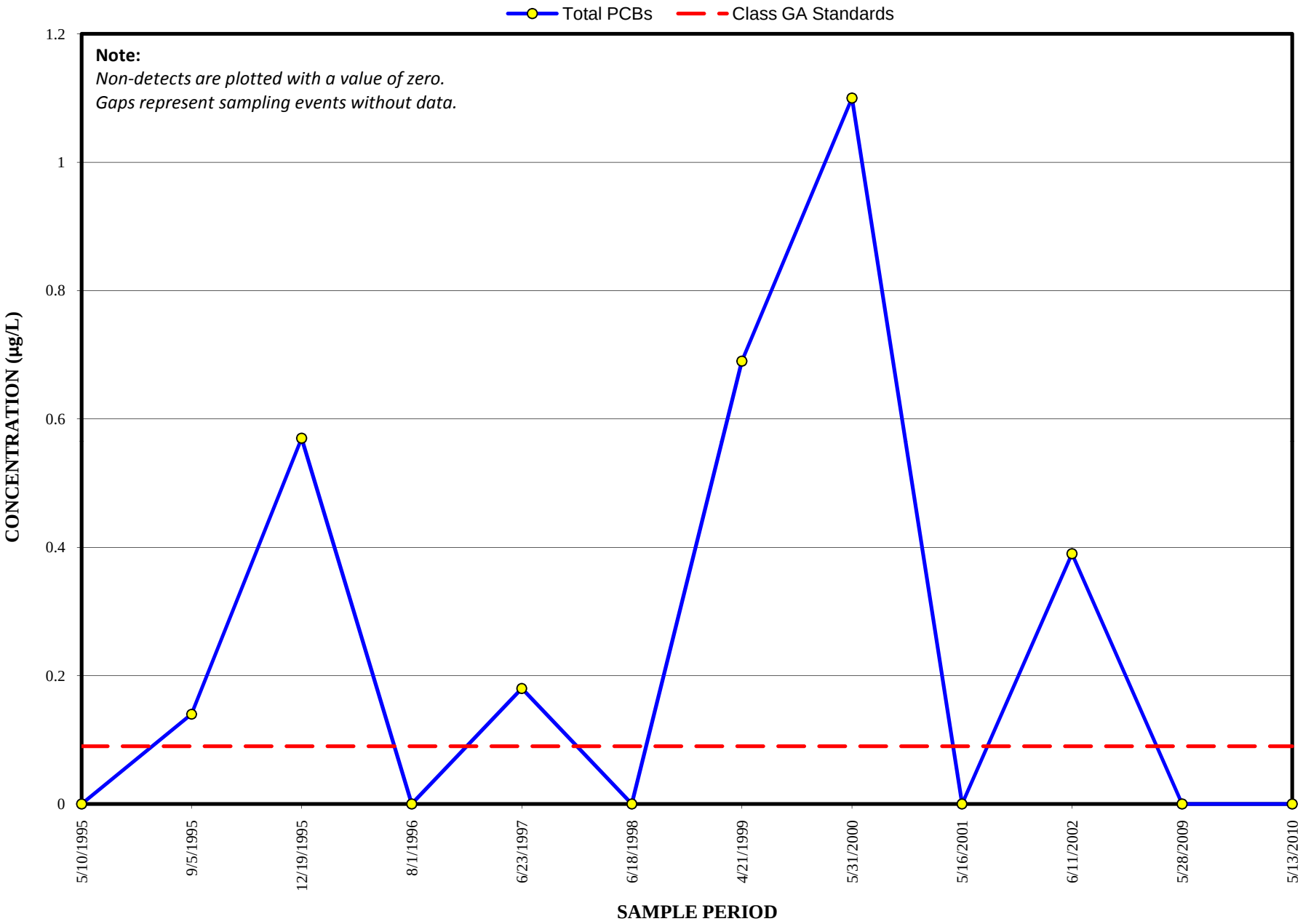
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-3
TOTAL PCBs



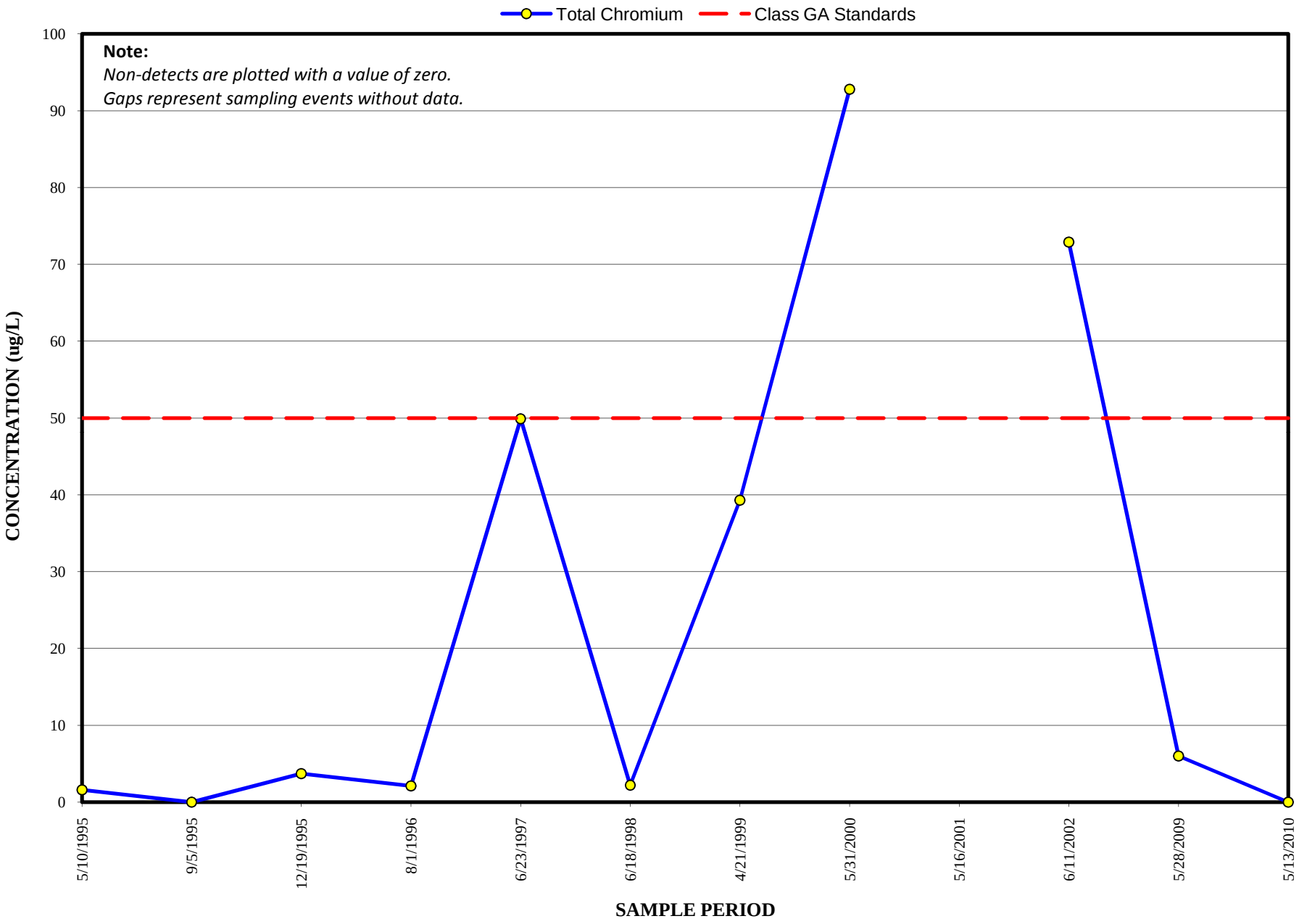
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-4
TOTAL PCBs



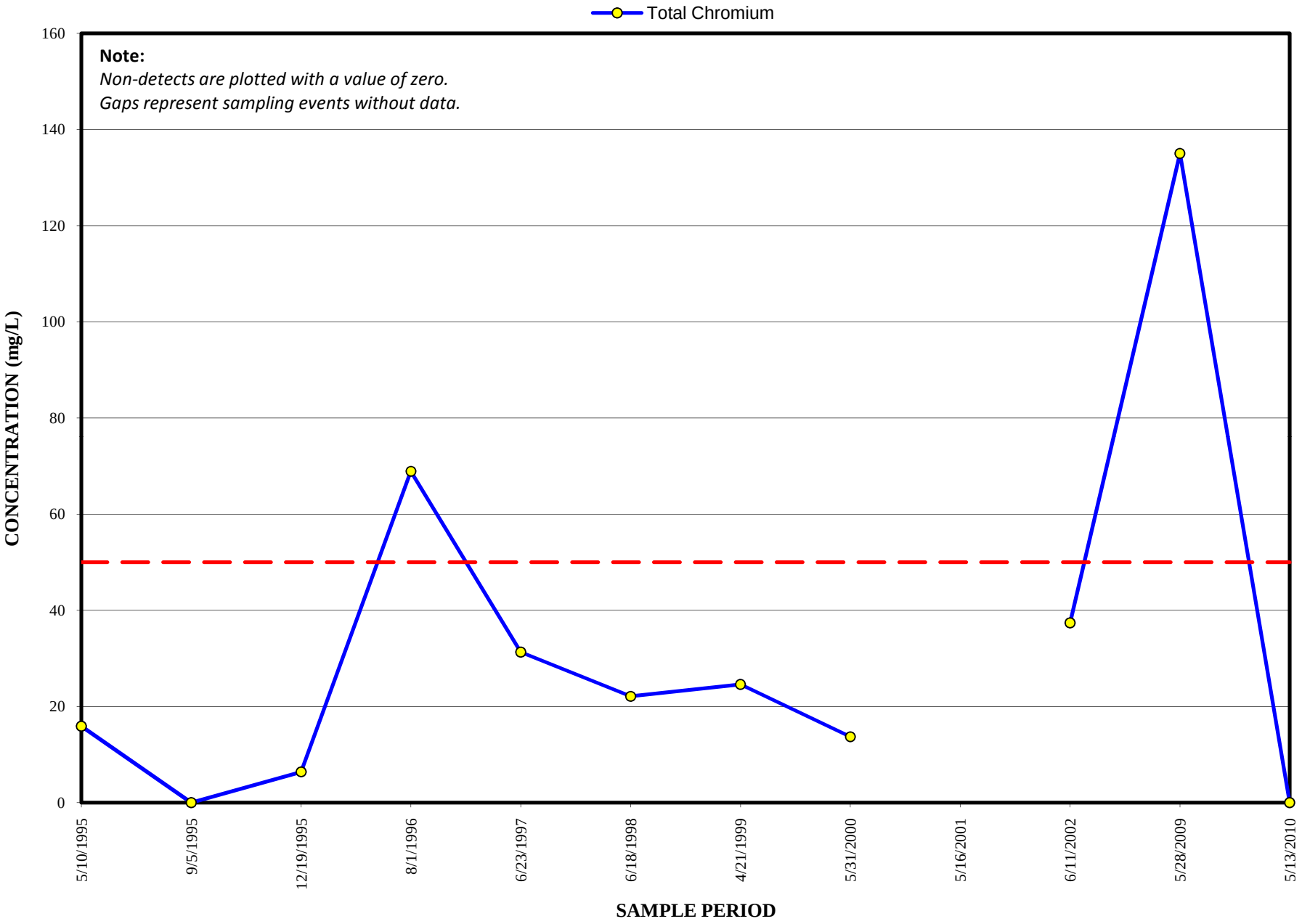
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-4
TOTAL CHROMIUM



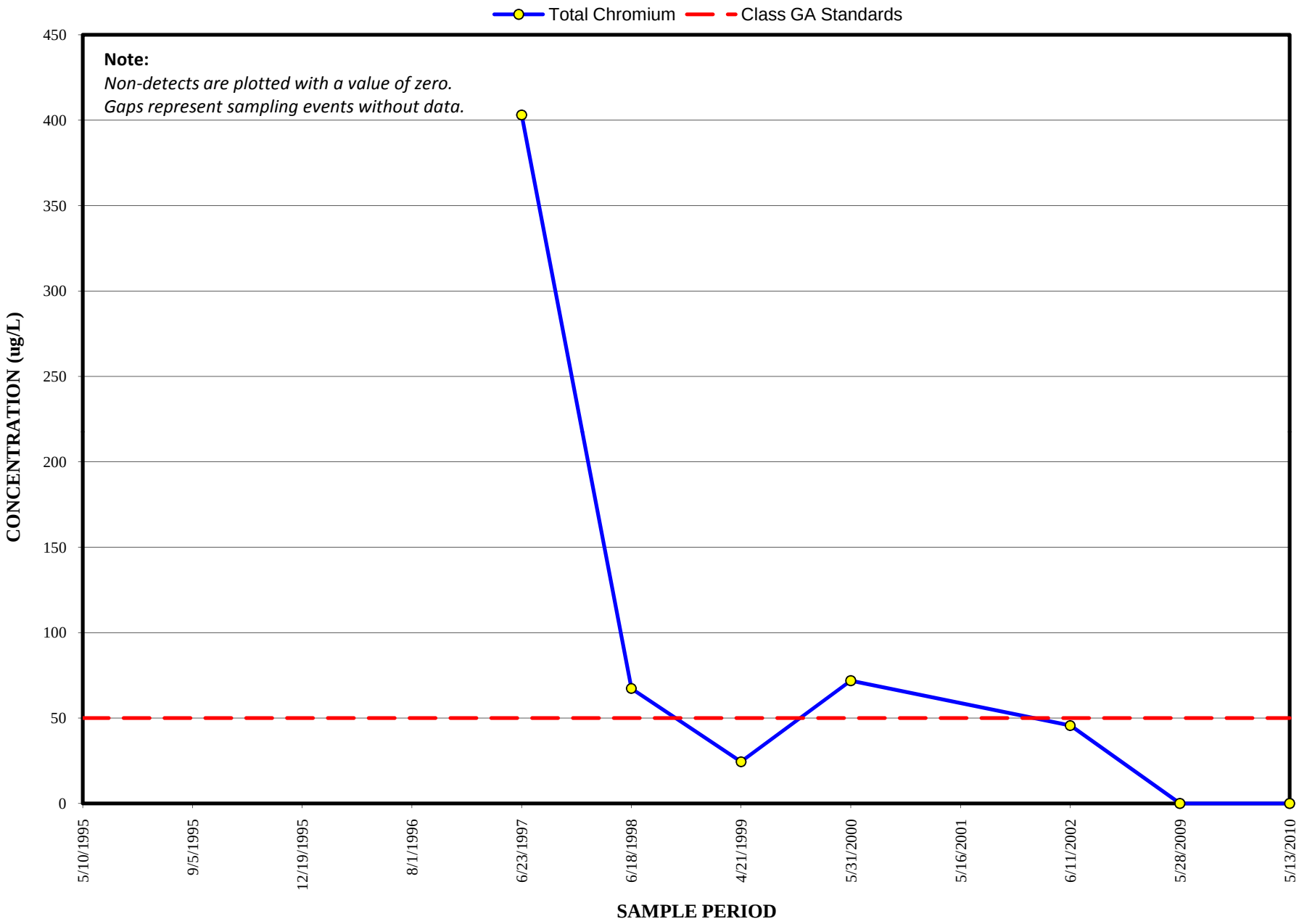
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-6R
TOTAL CHROMIUM



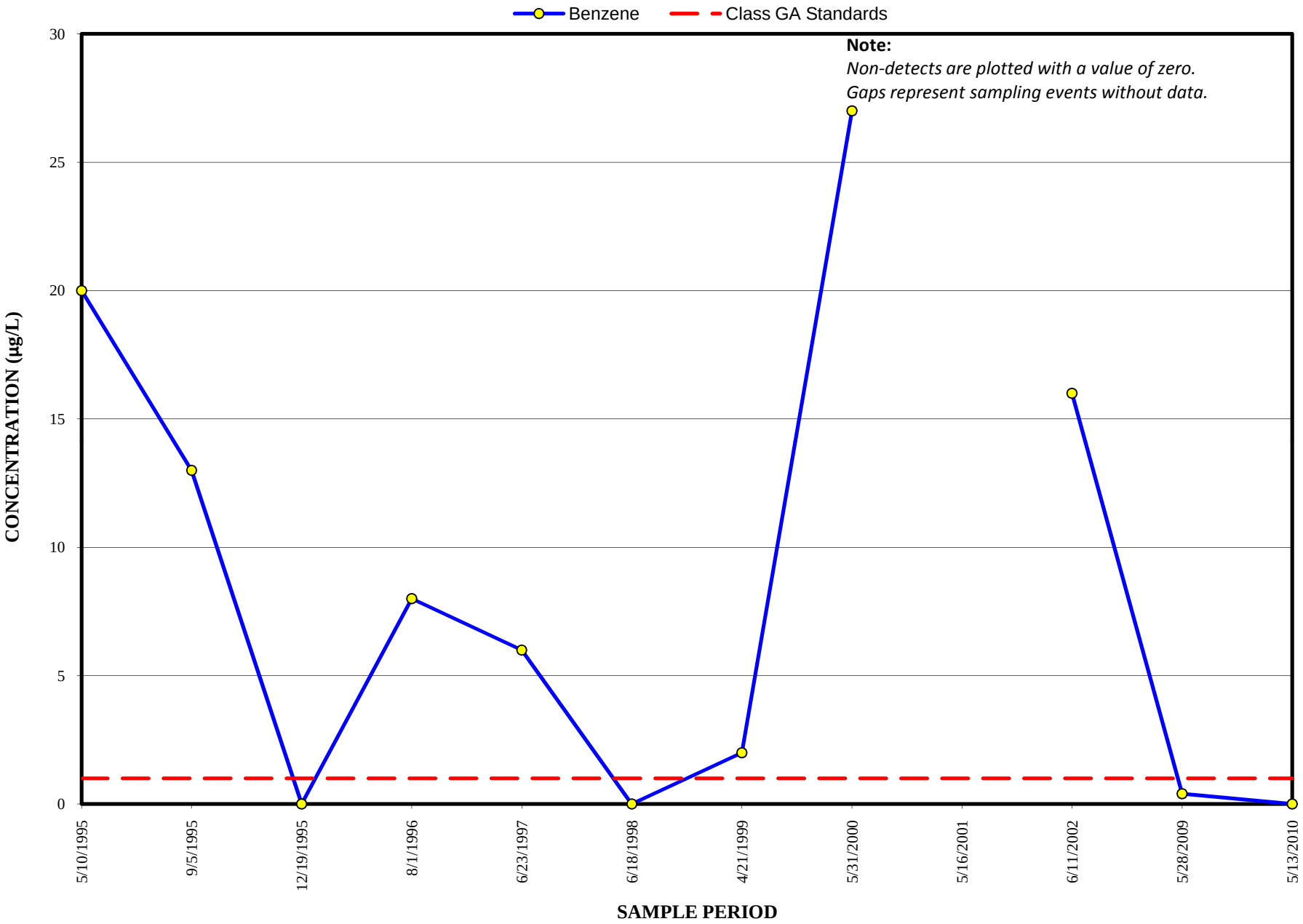
MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-7
TOTAL CHROMIUM



MALCOLM PIRNIE

SHRECK'S SCRAPYARD SITE
MW-6R
BENZENE



New York State Department of Environmental Conservation
Schreck's Scrapyard
Groundwater Monitoring Report

Appendix D

Institutional Control/Engineering Control Certification Form

MALCOLM PIRNIE

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. 932099

Site Name Schreck's Scrapyard

Site Address: 55 Schenck Street Zip Code: 14120

City/Town: North Tonawanda

County: Niagara

Allowable Use(s) (if applicable, does not address local zoning):

Site Acreage: 2.0

Verification of Site Details **Box 2**

	YES	NO
1. Are the Site Details above, correct?	☑	☐
If NO, are changes handwritten above or included on a separate sheet?	☐	☐
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last certification?	☐	☑
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	☐
3. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property since the initial/last certification?	☐	☑
If YES, is documentation (or evidence that documentation has been previously submitted) included with this certification?	☐	☐
4. If use of the site is restricted, is the curent use of the site consistent with those restrictions?	☑	☐
If NO, is an explanation included with this certification?	☐	☐
5. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	NA	
If YES, is the new information or evidence that new information has been previously submitted included with this Certification?		
6. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), are the assumptions in the Qualitative Exposure Assessment still valid (must be certified every five years)?	NA	
If NO, are changes in the assessment included with this certification?		

SITE NO. 932099

Box 3

Description of Institutional Controls

Parcel	Institutional Control
S_B_L Image: 185.05-1-14	Decision Document

Box 4

Description of Engineering Controls

None Required

Attach documentation if IC/ECs cannot be certified or why IC/ECs are no longer applicable. (See instructions)

Control Description for Site No. 932099

Parcel: 185.05-1-14

In September 1990, a Record of Decision (ROD) was issued for this site. Remediation was completed in 1994. Post-closure groundwater monitoring is required to ensure long term effectiveness of the remedy. The ROD did not require the filing of a Deed Restriction at this site.

Box 5

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 compete.

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
	N A

3. If this site has an Operation and Maintenance (O&M) Plan (or equivalent as required in the Decision Document);

   I certify by checking "YES" below that the O&M Plan Requirements (or equivalent as required in the Decision Document) are being met.

YES	NO
	N A

4. If this site has a Monitoring Plan (or equivalent as required in the remedy selection document);

   I certify by checking "YES" below that the requirements of the Monitoring Plan (or equivalent as required in the Decision Document) is being met.

YES	NO
☑	☐

IC CERTIFICATIONS
SITE NO. 932099

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 MIKE McGUGAN (print name) at 51 ROBINSON ST., N. TONAWANDA, NY (print business address)

am certifying as "OWNER" (Owner or Remedial Party)

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

Signature of Owner or Remedial Party Rendering Certification — Date: 7/19/2010

IC/EC CERTIFICATIONS

NA

Box 7

QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) 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 _____ (print name) at _____ (print business address)

am certifying as a Qualified Environmental Professional for the _____

(Owner or Remedial Party) for the Site named in the Site Details Section of this form.

Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification — Stamp (if Required) — Date