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MEMORANDUM

TO:	Darlene Stringer, MDEQ Sara Pearson, MDEQ Matt Gamble, MDEQ	REF. NO.:	017360-T05
FROM:	Jeni Quigley/bw/57/Pwl.	DATE:	July 24, 2012
CC:	David Favero, RACER		
RE:	**Data Package** **2011 Site-Wide Investigation – Stage II** **Former Grand Rapids Metal Plant** **Wyoming, Michigan**		

Conestoga-Rovers & Associates (CRA), on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, conducted soil and groundwater investigation activities at the former Grand Rapids Metal Plant property located at 300 36th Street SW in Wyoming, Michigan (Site). The scope of work (SOW) implemented was presented in the memorandum entitled *Proposed Sample Locations, 2011 Site-Wide Investigation – Stage II, Former Grand Rapids Metal Plant, Wyoming Michigan*, submitted to the Michigan Department of Environmental Quality (MDEQ) on August 16, 2011. The protocols utilized during the implementation of the August 16, 2011 SOW were described in the Site-Wide Investigation Work Plan (Work Plan), submitted to the MDEQ on January 7, 2011. The samples were collected during the field investigation conducted between September 21, 2011 and October 19, 2011. At the approval of the MDEQ, the October 2011 Semi-Annual Groundwater Monitoring activities were completed in conjunction with Stage II of the Site-Wide Investigation. This memorandum (Memorandum) has been prepared to present the "Data Package" summarizing the data collected during Stage II of the Site-Wide Investigation field activities.

Soil and Groundwater Investigation Activities

Field activities included the advancement of soil borings and the collection of soil, groundwater, and borehole water samples. Table 1 presents a summary of groundwater elevation data collected during the Stage II Site-Wide Investigation. Figure 1 presents a groundwater contour map, based on groundwater elevations collected in September 2011. Plan 1 presents the sample locations. Stratigraphic soil boring logs and well construction details are included in Attachment A.

Analytical results for the soil and groundwater samples were evaluated against the Generic Residential and Non-Residential Cleanup Criteria and Screening Levels established in Part 7 of Administrative Rules, effective March 25, 2011, pursuant to Part 201, Environmental Remediation, 1994 PA 451, as amended. In addition, analytical results for polychlorinated biphenyls (PCBs) were evaluated against the High Occupancy Area Cleanup Level of 1 part per million (ppm) for bulk remediation waste (without further conditions) set forth in the Toxic Substances Control Act (TSCA). Table 2 presents a Sample Summary. Analytical results for soil and groundwater samples compared to the aforementioned criteria are presented in Tables 3 and 4, respectively. Plan 2 presents exceedances of the Part 201 Generic Residential and Non-Residential Cleanup Criteria in soil to date, including the data collected during the 2011 Site-Wide Investigation – Stage II, for the Site with the exception of the Bulk Unload Area. Exceedances of the Part 201

Generic Residential and Non-Residential Cleanup Criteria in soil to date, including the data collected during the 2011 Site-Wide Investigation – Stage II, for the Bulk Unload Area of the Site is presented on Plan 3. Plan 4 presents exceedances of the High Occupancy Area Cleanup Level of 1 ppm for bulk remediation waste (without further conditions) set forth in TSCA. Plan 5 presents exceedances of the Part 201 Generic Residential and Non-Residential Cleanup Criteria in groundwater from the data collected during the 2011 Site-Wide Investigation – Stage II.

Samples were not collected from several locations proposed in the Work Plan due to the presence of equipment/material obstacles, energized switches, and refusal during drilling. A brief list and description of variances from the Work Plan is provided below:

Location	Deviation
HP28-11/ MW28-11	Not installed at this time due to requirement for procurement of access agreements due to off-Site sample location (This will become MW32-12 when installed, due to the installation of MW28-12 in the former 3,000-gallon diesel and 8,000-gallon gasoline UST area
HP29-11/ MW29-11	Not installed at this time due to requirement for procurement of access agreements due to off-Site sample location
HP30-11/ MW30-11	Not installed at this time due to requirement for procurement of access agreements due to off-Site sample location
SB59-11	Not installed at this time due to equipment/demolition debris on ground surface
SB128-11	Not installed at this time due to operation of current Switch House (an alternative evaluation of the PCBs identified in concrete may be proposed)
SB129-11	Not installed at this time due to operation of current Switch House (an alternative evaluation of the PCBs identified in concrete may be proposed)
SB141-11/ MW31-11	Not installed at this time due to the similarity in scope to the off-Site locations, which will be performed at the same time in the interest of budget
Basement Substation Concrete Cores	Not conducted at this time due to the fact that RACER and the current property owner's consultant are partnering on this work; work to be performed by Soils and Materials Engineers (SME)

In addition to the SOW proposed in the August 16, 2011, 15 additional soil borings were proposed to the MDEQ via email on September 26, 2011. The 15 additional soil borings were proposed to further evaluate the extent of PCBs detected in soil at concentrations above the TSCA High Occupancy Area Cleanup Level of 1 ppm for bulk remediation waste (without further conditions) at soil boring locations SB61-11, SB100-11, and SB124-11. Soil borings were advanced to a depth of 10 feet bgs adjacent to each of the original boring locations and to the north, south, east, and west of the original borings on a 10-foot spacing grid. Soil samples were collected in 2-foot intervals, with the shallow (0 to 2-foot) intervals analyzed on an accelerated 1-week turnaround time, with the lower intervals held pending results for the upper intervals. If the 2-foot interval result was less than 1 ppm, the lower intervals were not analyzed. Soil boring advancement and soil sample collection and analysis were conducted in accordance with the Work Plan.

Residential Property Owner Concern – 3547 Hillcroft Avenue SW

A Notice of Migration (NOM) of Contamination was submitted to MDEQ and all known or suspected impacted property owners pursuant to Part 201, Environmental Remediation, of the Natural Resources and

Environmental Protection Act, 1994 Public Act 451, as amended, and the Part 201 Administrative Rules promulgated thereunder on August 18, 2011.

Subsequent to distribution of the NOM, RACER Trust received a phone call from the property owner at 3547 Hillcroft Avenue SW (, Mr. Donald Bradley, on August 23, 2011. Mr. Bradley expressed concern to RACER Trust regarding what he described as "surface oil on bare ground" adjacent to the south of his property along the fence line on the former Grand Rapids Metal Plant property. Mr. Bradley indicated that he acquired the property in the winter of 2011 and this area was covered with snow at the time.

As described in the memorandum entitled *Resident Concern, 3547 Hillcroft Avenue SW, Wyoming, Michigan*, submitted to the MDEQ under separate cover on December 20, 2011, a visual inspection of the area in question was conducted on August 25, 2011. Based on the visual inspection, a definitive source of the staining could not be ascertained from the visual inspection. Subsequently, on October 6, 2011 CRA mobilized to the Site to remove the visually impacted soil. Approximately 2.7 cubic feet of visually impacted soil was removed from the oil-stained area. This area was backfilled with sand and covered with topsoil. The impacted soil was transported to the Site and placed into 55-gallon drums that contained soil cuttings from the Site-wide investigation drilling activities for future characterization and off-Site disposal. A composite soil sample was collected from the excavated material and the investigation-derived waste generated during the Site-wide investigation activities for waste characterization purposes. Based on the analytical results, the waste was non-hazardous was disposed off-Site.

Basement Floor Drains

In November 2011, during decommissioning activities, free phase oil and water were observed by MCM Management Corporation (MCM), the decommissioning/demolition contractor for the current property owner, the Wyoming Brownfield Redevelopment Authority (WBRA), and Soils and Materials Engineers, Inc. (SME), the environmental consultant for MCM, in the northern portion of the basement from an unknown source, which may include a source below the basement floor or existing floor drains and/or sumps. The free phase liquid and water were observed to be emanating from floor drains in the irregularly shaped basement area approximately bound by former Columns B to K and former Rows 7 to 17. Review of historical drawings indicates that these floor drains connected to press pit sumps in the basement, which were identified during the Current Conditions Report development by Site personnel to discharge to the former on-Site Wastewater Treatment Plant (WWTP). Subsequently, it was determined that as part of the decommissioning/demolition activities, MCM would plug identifiable and accessible floor drains north of former Row 20 and any other drains and sumps from which oil was observed or suspected to emanate. Residual water and oil were removed, to the extent possible, from the floor drain piping and sumps immediately before plugging the drains and/or sumps, which were plugged with a solid, cementicious material. After the drains and/or sumps were plugged, the floor areas were decontaminated. It was also determined that the basement floor slab would not be cracked north of Row 20 (or 40 feet south of the southernmost drain and/or sump in which the oil was observed), whichever was farther south. It is planned that the basements will be backfilled during the demolition activities, in accordance with the original plans.

Former Underground Storage Tanks (USTs)(AOI 8.2)

One 8,000 gallon gasoline underground storage tank (UST) and one 3,000 gallon diesel UST were removed from the Site on behalf of the WBRA on November 30, 2011. CRA and MDEQ staff were present to observe the tank removal. No visual or olfactory indication of impact to soils was observed after both tanks were removed; therefore, CRA did not collect soil samples for analysis at that time. Photographs taken during

UST removal activities are included in Attachment B. Analytical results for Site Assessment floor samples collected by SME on behalf of the WBRA identified the presence of various PNAs above the required Part 213 detection limits. Additionally, naphthalene was identified at a concentration above the Part 213 Groundwater Surface Water Protection Risk-Based Screening Level (RBSL) in the southern floor sample taken from beneath the diesel UST. Based on the detections and exceedance, SME submitted a confirmed release (No. C-0193-11) report to the MDEQ on December 9, 2011.

Initial Assessment Report (IAR) field activities were conducted in February 2012 by CRA on behalf of RACER. The results of the investigation are summarized in the IAR, submitted to the MDEQ under separate cover on April 9, 2012. Based on the results, no further exceedances of the Part 213 RBSLs were identified, including no Part 213 GSI RBSL exceedances in a groundwater sample collected from a permanent monitoring well adjacent to the original floor sample location. Based on discussions with MDEQ staff on April 12, 2012, the IAR will be resubmitted as a Closure Report.

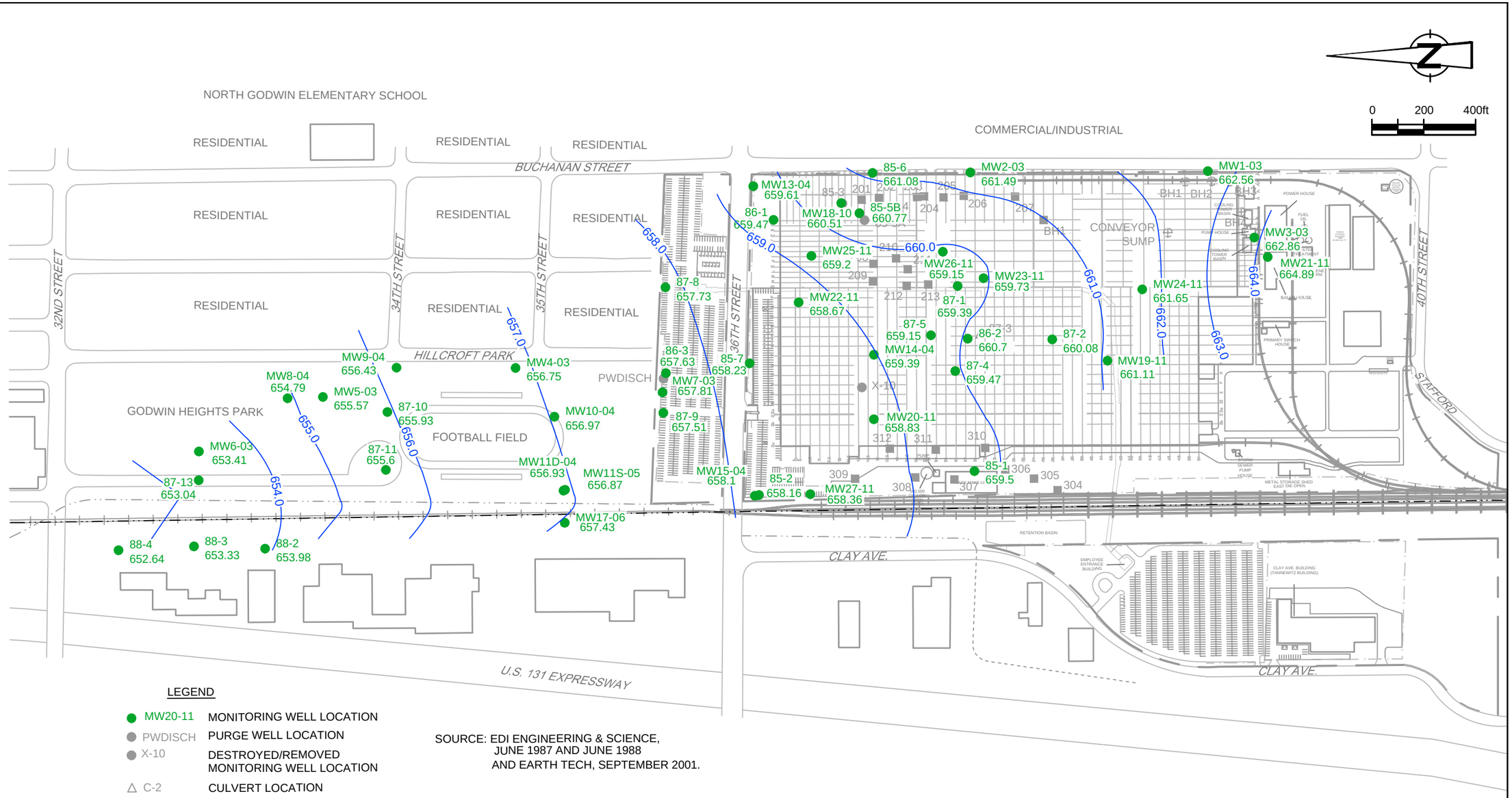
Former Hydraulic Elevator Pits (AOI Nos. 30.1, 30.2, and 30.3)

A passenger elevator was located near the former office area of the plant, near Column Zb, Row 5 (AOI 30.1). Upon removal of the belowgrade piston associated with the elevator, CRA observed the condition of the pit on March 7, 2012 to document conditions. No significant staining was noted on the concrete surface of the former elevator pit. No sump was observed to be present in the elevator pit; however, the presence of minor amounts of demolition debris limited a complete observation of the area. Based on the observations made by CRA on March 7, 2012, no further evaluation of the AOI 30.1 area is recommended.

Freight elevators were located within the manufacturing portion of the plant, near Column O, Row 26 (AOI 30.2) and Column N, Row 45 (AOI 30.3). CRA was on-Site on December 7, 2011 to observe the pits and the removal of the pistons from AOI 30.3. Minor staining was observed on the concrete surface of the elevator shaft located near Column O, Row 26 at the time of removal; however, on-Site representatives indicated that the staining was from the removal of the piston and was not present prior to removal. Based on the observations made by CRA on December 7, 2011, no further evaluation of the AOI 30.2 area is recommended. Standing oil was present in the pit of the former freight elevator associated with AOI 30.3. Additional oil was released into the concrete pit during the removal of the pistons. All oil was removed from the pit upon completion of piston removal and the pit was cleaned prior to backfilling with crushed stone. No evidence of significant cracks or staining, or a drop in the fluid level within the pit was observed by CRA. Based on the observations made by CRA on December 7, 2011 and analytical data in the general vicinity of the former elevator, no further evaluation of the AOI 30.3 area is recommended by CRA.

Photographs taken during elevator pit inspection activities are included in Attachment C.

Please contact David Favero at (217) 741-6235 or Jeni Quigley at (269) 685-5181 with any questions or regarding this Memorandum or the enclosed information.



LEGEND

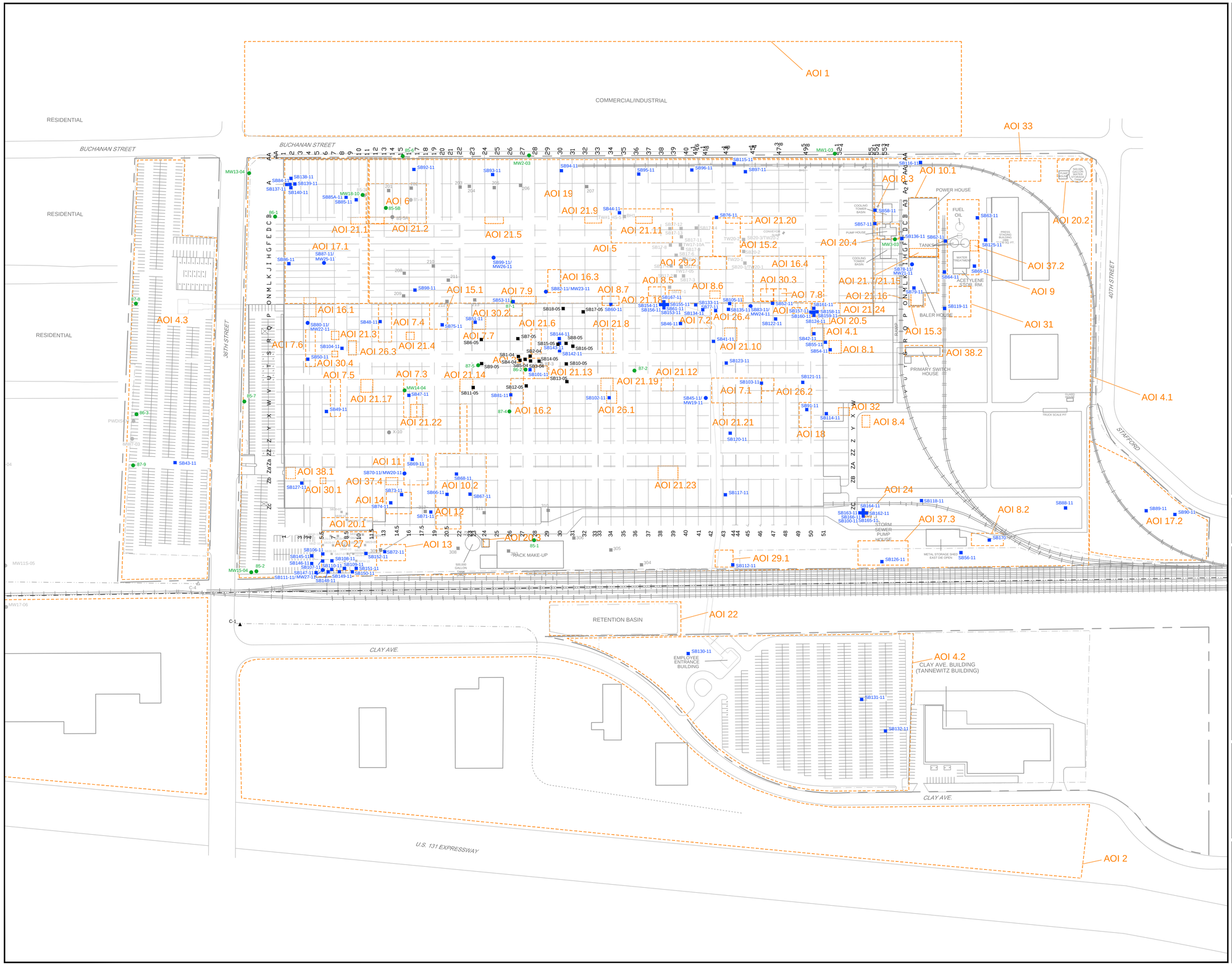
MW20-11	MONITORING WELL LOCATION
PWDISCH	PURGE WELL LOCATION
X-10	DESTROYED/REMOVED MONITORING WELL LOCATION
C-2	CULVERT LOCATION
87-3	AIR PURGE WELL
BH1	APPROXIMATE LOCATION OF DEWATERING WELLS
	APPROXIMATE SITE BOUNDARY
	FENCE
	RAILROAD
	COLE DRAIN
654.0	GROUNDWATER ELEVATION CONTOUR
658.83	GROUNDWATER ELEVATION MEASURED SEPTEMBER - OCTOBER, 2011

SOURCE: EDI ENGINEERING & SCIENCE, JUNE 1987 AND JUNE 1988 AND EARTH TECH, SEPTEMBER 2001.

figure 1

SITE-WIDE INVESTIGATION - OCTOBER 2011
GROUNDWATER CONTOURS - SEPTEMBER - OCTOBER 2011
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan

017360-T05(MEMO057)GN-DE002 JUL 23/2012



№	Revision	Date	Initial

LEGEND

■ SB51-11	SITE-WIDE INVESTIGATION SOIL BORING LOCATION
■ TW20-2	HISTORICAL SAMPLE LOCATION
● MW6-03	HISTORICAL MONITORING WELL LOCATION
● SB78-11/ MW21-11	SITE-WIDE INVESTIGATION SOIL BORING/MONITORING WELL LOCATION
— - —	APPROXIMATE SITE BOUNDARY
— x — x —	FENCE
—+—+—	RAILROAD
— · · — · · —	COLE DRAIN
- - - - -	APPROXIMATE AOI

KEY MAP

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

SAMPLE LOCATIONS

SITE-WIDE INVESTIGATION - STAGE II

FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
J.Q.	E.B.	MAY 2012	
Scale: 1:140	Project №: 017360-T05	Report №: MEMO057	Drawing №: PLAN 1

SB84-11	2/18/2011 (1-3) ft BGS mg/kg	2/18/2011 (3-5) ft BGS mg/kg	2/18/2011 (19-21) ft BGS mg/kg
SVOCs			
2-Methylnaphthalene	-	29 J (d)	-
Acenaphthene	-	95 J (d)	-
Anthracene	-	190 (bce)	-
Benzo(a)anthracene	-	230 (ps)	-
Benzo(a)pyrene	-	160 (ps)	-
Benzo(b)fluoranthene	-	270 (ps)	-
Fluoranthene	-	640 (d)	-
Fluorene	-	95 J (d)	-
Indeno(1,2,3-cd)pyrene	-	89 J (ps)	-
Naphthalene	-	40 J (bd)	-
Phenanthrene	-	770 (bcdh)(klm)	-
VOCs			
Methylene chloride	0.23 J (bc)	0.82 J (bc)	0.22 J (bc)

SB87-05	7/11/2005 (0-2) ft BGS mg/kg	7/11/2005 (2-4) ft BGS mg/kg	7/11/2005 (14-16) ft BGS mg/kg	7/11/2005 (16-18) ft BGS mg/kg
VOCs				
Trichloroethene	1.6 (bc)	2.5 (bc)	0.29 (bc)	0.38 (bc)

SB53-11	2/18/2011 (1-3) ft BGS mg/kg	2/18/2011 (20-22) ft BGS mg/kg
VOCs		
Methylene chloride	0.19 J (bc)	0.18 J (bc)

SB82-11	2/25/2011 (1-3) ft BGS mg/kg
VOCs	
Trichloroethene	0.14 (bc)

SB15-05	12/3/2005 (0-2) ft BGS mg/kg	12/3/2005 (10-12) ft BGS mg/kg
VOCs		
Trichloroethene	2.1 (bc)	12 (bcdf)

87-3	1/16/1987 (14-15.5) ft BGS mg/kg	1/16/1987 (18-19.5) ft BGS mg/kg
VOCs		
Trichloroethene	0.11 (bc)	0.14 (bc)

HA144-11	10/3/2011 (0-2) ft BGS mg/kg	10/3/2011 (2-4) ft BGS mg/kg
VOCs		
Trichloroethene	0.6 (bc)	0.32 (bc)

SB2-04	7/14/2004 (0-2) ft BGS mg/kg
VOCs	
Trichloroethene	12 (bcdf)

SB14-05	7/12/2005 (0-2) ft BGS mg/kg	7/12/2005 (16-18) ft BGS mg/kg
VOCs		
Trichloroethene	0.82 (bc)	0.12 (bc)

SB8-05	7/12/2005 (0-2) ft BGS mg/kg	7/12/2005 (2-4) ft BGS mg/kg	7/12/2005 (10-12) ft BGS mg/kg	7/12/2005 (16-18) ft BGS mg/kg
VOCs				
Trichloroethene	46 (bcdfg)	1.5 (bc)	5.9 (bcd)	0.17 (bc)

SB17-12	8/7/1998 (0-25) ft BGS mg/kg
Metals	
Selenium	0.8 (d)

SB17-10A	8/10/1998 (0-30) ft BGS mg/kg
Metals	
Selenium	0.5 (d)

SB17-13	8/10/1998 (0-20) ft BGS mg/kg
Metals	
Selenium	0.9 (d)

SB17-09	8/7/1998 (0-35) ft BGS mg/kg
Metals	
Selenium	0.9 (d)

SB17-11	8/12/1998 (12-30) ft BGS mg/kg
VOCs	
Trichloroethene	0.39 (bc)

SB16-05	12/3/2005 (0-2) ft BGS mg/kg	12/3/2005 (6-8) ft BGS mg/kg
VOCs		
Trichloroethene	1.2 (bc)/0.74 (bc)	0.16 (bc)

SB17-06	8/5/1998 (0-35) ft BGS mg/kg
Metals	
Selenium	0.5 (d)

SB17-07	8/4/1998 (0-25) ft BGS mg/kg
Metals	
Selenium	1.1 (d)

SB17-04	8/6/1998 (0-25) ft BGS mg/kg
Metals	
Selenium	0.6 (d)

SB5-04	7/15/2004 (0-2) ft BGS mg/kg
VOCs	
Trichloroethene	5.7 (bcd)

SB87-11	2/18/2011 (18-20) ft BGS mg/kg
VOCs	
Methylene chloride	0.19 J (bc)

SB51-11	3/1/2011 (1-3) ft BGS mg/kg
VOCs	
Trichloroethene	0.11 (bc)

SB57-11	3/2/2011 (16.5-18.5) ft BGS mg/kg
Metals	
Arsenic	7.6 J (bcd)
Manganese	702 J (bcd)

SB62-11	3/3/2011 (0.5-2.5) ft BGS mg/kg
SVOCs	
Benzo(a)pyrene	3.7 (p)
Fluoranthene	10 (d)
Phenanthrene	4.6 (d)

SB64-11	3/2/2011 (12-14) ft BGS mg/kg
Metals	
Arsenic	5.9 J (bcd)

SB79-11	3/2/2011 (1-3) ft BGS mg/kg	3/2/2011 (16.5-18.5) ft BGS mg/kg
VOCs		
Methylene chloride	0.26 (bc)	0.15 J (bc)

SB1-04	7/15/2004 (0-2) ft BGS mg/kg
VOCs	
Trichloroethene	2 (bc)

SB61-11	2/28/2011 (1-3) ft BGS mg/kg
PCBs	
Aroclor-1254 (PCB-1254)	4.4 (p)
Total PCBs	4.4 (p)

SB17-01	8/3/1998 (0-25) ft BGS mg/kg
Metals	
Selenium	1.1 (d)

SB46-11	2/18/2011 (1-3) ft BGS mg/kg	2/18/2011 (19-21) ft BGS mg/kg
VOCs		
Methylene chloride	0.19 J (bc)	0.2 J (bc)

SB77-11	2/22/2011 (1-3) ft BGS mg/kg
SVOCs	
2-Methylnaphthalene	7.5 J (d)
Acenaphthene	31 J (d)
Anthracene	47 J (bce)
Benzo(a)anthracene	65 (p)
Benzo(a)pyrene	58 (pc)
Benzo(b)fluoranthene	77 (p)
Fluoranthene	160 (d)
Fluorene	22 J (d)
Indeno(1,2,3-cd)pyrene	28 J (p)
Naphthalene	31 J (d)
Phenanthrene	150 (bd)

SB143-11	9/29/2011 (1-3) ft BGS mg/kg
VOCs	
Trichloroethene	0.61 (bc)

SB103-11	2/17/2011 (2-4) ft BGS mg/kg
VOCs	
Trichloroethene	0.3 (bc)

SB41-11	2/22/2011 (1-3) ft BGS mg/kg
VOCs	
Trichloroethene	0.22 (bc)/0.37 (bc)

SB166-11	9/29/2011 (0-2) ft BGS mg/kg	9/29/2011 (2-4) ft BGS mg/kg
PCBs		
Aroclor-1260 (PCB-1260)	12 (p)	6.4 (p)
Total PCBs	12 (p)	6.4 (p)

SB100-11	3/15/2011 (0.5-2.5) ft BGS mg/kg
SVOCs	
Benzo(a)pyrene	3.9 (p)
Fluoranthene	10 (d)
Phenanthrene	5.9 (d)

SB56-11	3/4/2011 (1-3) ft BGS mg/kg
VOCs	
1,1-Dichloroethene	0.072 (f)

SB165-11	9/29/2011 (2-4) ft BGS mg/kg
PCBs	
Aroclor-1260 (PCB-1260)	13 (p)
Total PCBs	13 (p)

SB3-04	7/14/2004 (0-2) ft BGS mg/kg
VOCs	
Trichloroethene	2.8 (bc)

SB126-11	3/4/2011 (1-3) ft BGS mg/kg
VOCs	
Benzene	1.3 (bc)
Ethylbenzene	0.97 (d)
Xylenes (total)	3.9 (d)

SB101-11	2/16/2011 (1-3) ft BGS mg/kg
VOCs	
Trichloroethene	1.8 (bc)

SB10-05	7/12/2005 (0-2) ft BGS mg/kg
VOCs	
Trichloroethene	0.54 (bc)

SB112-11	3/15/2011 (2-4) ft BGS mg/kg
VOCs	
Trichloroethene	0.11 (bc)

SB142-11	9/29/2011 (1-3) ft BGS mg/kg
VOCs	
Trichloroethene	0.15 (bc)

86-2	4/29/1986 (24-25.5) ft BGS mg/kg
VOCs	
Trichloroethene	0.26 (bc)

SB13-05	7/11/2005 (0-2) ft BGS mg/kg	7/11/2005 (12-14) ft BGS mg/kg	7/11/2005 (16-18) ft BGS mg/kg
VOCs			
Trichloroethene	1.5 (bc)	0.29 (bc)	0.44 (bc)

SB12-05	7/11/2005 (0-2) ft BGS mg/kg	7/11/2005 (2-4) ft BGS mg/kg	7/11/2005 (4-6) ft BGS mg/kg	7/11/2005 (14-16) ft BGS mg/kg
VOCs				
Trichloroethene	2.2 J (bc)	5.5 (bcd)	0.53 (bc)	0.14 (bc)
Xylenes (total)	-	0.91 (d)	-	-

SB70-11	2/14/2011 (1-3) ft BGS mg/kg
Metals	
Chromium	21.0 (d)

SB71-11	3/4/2011 (0.5-2.5) ft BGS mg/kg
Metals	
Copper	104 (d)

SB47-11	2/16/2011 (1-3) ft BGS mg/kg
Metals	
Mercury	0.18 (d)
VOCs	
Methylene chloride	0.19 J (bc)

SB43-11	3/15/2011 (6-8) ft BGS mg/kg
Metals	
Selenium	0.42 J (d)

SB4-04	7/15/2004 (0-2) ft BGS mg/kg
VOCs	
Trichloroethene	0.19 (bc)

Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria [6]

Parameters	Statewide Default Background a	Residential Drinking Water Protection b	Non-Residential Drinking Water Protection c	Groundwater Surface Water Interface Protection d	Groundwater Contact Protection e	Residential Soil Volatilization to Indoor Air Inhalation f	Non-Residential Soil Volatilization to Indoor Air Inhalation g	Residential Infinite Source Volatile Soil Inhalation h	Non-Residential Infinite Source Volatile Soil Inhalation i	Residential Finite VSIC for 5 Meter Source Thickness j	Non-Residential Finite VSIC for 5 Meter Source Thickness k	Residential Finite VSIC for 2 Meter Source Thickness L	Non-Residential Finite VSIC for 2 Meter Source Thickness m	Residential Particulate Soil Inhalation n	Non-Residential Particulate Soil Inhalation o	Residential Direct Contact p	Non-Residential Direct Contact q	Soil Saturation Concentration Screening r
VOCs (mg/kg)																		
1,3-Dichloroethene	--	0.14	0.34	2.6	220	0.062	0.33	1.1	3.7	5.3	15	13	37	62000	78000	200	570	570
Benzene	--	0.1	0.1	4	220	1.6	8.4	13	45	34	99	79	230	390000	470000	180	400	400
Ethylbenzene	--	1.5	1.5	0.36	140	87	140	720	2400	1000	3100	2200	6500	10000000	13000000	140	140	140
Methylene chloride	--	0.1	0.1	30	2900	45	240	210	700	590	1700	1400	4000	6600000	8300000	1300	2300	2300
Trichloroethene	--	0.1	0.1	4	440	7.1	37	78	260	170	440	390	1100	1800000	2300000	300	500	500
Xylenes (total)	--	5.6	5.6	0.82	150	150	150	46000	54000	61000	65000	130000	130000	29000000	33000000	150	150	150
SVOCs (mg/kg)																		
2-Methylnaphthalene	--	57	170	4.2	5500	2700	4900	1300	1800	1500	1800	1500	1800	670000	290000	8100	26000	--
Acenaphthene	--	500	880	8.7	970	190000	350000	81000	97000	81000	97000	81000	97000	140000000	42000000	41000	130000	--
Anthracene	--	41	41	ID	41	1000000	1000000	1400000	1600000	1400000	1600000	1400000	1600000	670000000	29000000	230000	730000	--
Benzo(a)anthracene	--	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	20	80	--
Benzo(a)pyrene	--	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1500	1900	2	8	--
Benzo(b)fluoranthene	--	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	20	80	--
Dibenz(a,h)anthracene	--	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	2	8	--
Fluoranthene	--	730	730	5.5	730	1000000	1000000	740000	990000	740000	880000	740000	880000	93000000	41000000	46000	130000	--
Fluorene	--	390	890	5.3	890	580000	1000000	130000	150000	130000	150000	130000	150000	93000000	41000000	27000	87000	--
Indeno(1,2,3-cd)pyrene	--	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	20	80	--
Naphthalene	--	35	100	0.73	2100	250	470	300	350	300	350	300	350	200000	59000	16000	52000	--
Phenanthrene	--	56	160	2.1	1100	2800	5500	160	190	160	190	160	190	6700	2900	1600	5200	--
PCBs (mg/kg)																		
Aroclor-1254 (PCB-1254)	--	NLL	NLL	NLL	NLL	NLL	5000	16000	240	810	7900	28000	7900	28000	5200	6500	4	16	--
Aroclor-1260 (PCB-1260)	--	NLL	NLL	NLL	NLL	NLL	5000	16000	240	810	7900	28000	7900	28000	5200	6500	4	16	--
Total PCBs	--	NLL	NLL	NLL	NLL	NLL	5000	16000	240	810	7900	28000	7900	28000	5200	6500	4	16	--
Metals (mg/kg)																		
Aluminum	6900	1	1	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	50000	370000	--
Antimony	--	4.3	4.3	94	40000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	5900	180	670	--
Arsenic	5.8	4.6	4.6	4.6	2000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	720	910	7.6	37	--
Barium	75	1300	1300	440	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	330000	130000	97000	130000	--
Cadmium	1.2	6	6	3	230000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1700	2200	550	2100	--
Chromium	18	30	30	3.3	140000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	260	240	2500	9200	--
Chromium VI (hexavalent)	18	30	30	3.3	140000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	260	240	2500	9200	--
Cobalt	6.8	0.8	2	2	48000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	5900	2600	9000	--
Copper	32	5800	5800	79	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	130000	59000	20000	73000	--
Iron	12000	6	6	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	160000	580000	--
Lead	21	700	700	2500	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1000000	44000	400	900	--
Lead - coarse fraction	21	700	700	--	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1000000	44000	400	900	--
Lead - fine fraction	21	700	700	--	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1000000	44000	400	900	--
Lead - total (calculated fine/ coarse fraction)	21	700	700	--	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1000000	44000	400	900	--
Magnesium	--	5000	22000	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	67000000	2900000	1000000	1000000	--
Manganese	440	1	1	26	180000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	5300	1500	23000	90000	--
Mercury	0.13	1.7	1.7	0.05	47	48	89	52	62	52	62	52	62	20000	5500	160	580	--
Nickel	20	100	100	74	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	16000	40000	130000	--
Selenium	0.41	4	4	0.4	78000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	130000	59000	2600	9600	--
Silver	1	4.5	13	0.1	200000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	6700	2900	2500	9000	--
Sodium	--	2500	7000	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	1000000	1000000	--
Vanadium	--	72	990	190	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	750	5500	--
Zinc	47	2400	5000	170	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	170000	630000	--

No	Revision	Date	Initial

0 90 180ft

LEGEND

- SB51-11 SOIL BORING LOCATION
- TW20-2 HISTORICAL SAMPLE LOCATION
- MW6-03 MONITORING WELL LOCATION
- SB78-11/ MW21-11 SOIL BORING/MONITORING WELL LOCATION
- APPROXIMATE SITE BOUNDARY
- FENCE
- RAILROAD
- COLE DRAIN
- APPROXIMATE AOI

KEY MAP

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

ANALYTICAL RESULTS OF SOIL SAMPLES EXCEEDING GENERIC PART 201 CRITERIA

WYOMING, MICHIGAN

SITE-WIDE STAGE II FORMER GRAND RAPIDS METAL PLANT

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
J.Q.	E.B.	MAY 2012	
Scale: 1:180	Project No: 017360-T05	Report No: MEMO057	Drawing No: PLAN 2

017360-T05(MEMO057)GN-DE007 JUL 23/2012

Michigan Act 451, Part 201 Cleanup Criteria and Part 111 Hydrocarbon Screening Levels: Residential and Non-Residential Generic Cleanup Criteria																		
Parameters	Statewide Default Background	Residential Drinking Water Protection	Non-Residential Drinking Water Protection	Groundwater Surface Water Interface Protection	Groundwater Contact Protection	Residential Soil Volatilization to Indoor Air Inhalation	Non-Residential Soil Volatilization to Indoor Air Inhalation	Residential Infinite Source Volatile Soil Inhalation	Non-Residential Infinite Source Volatile Soil Inhalation	Residential Infinite Source 5 Meter Source Thickness	Non-Residential Infinite Source 5 Meter Source Thickness	Residential Finite VSIC for 2 Meter Source Thickness	Non-Residential Finite VSIC for 2 Meter Source Thickness	Residential Particulate Soil Inhalation	Non-Residential Particulate Soil Inhalation	Residential Direct Contact	Non-Residential Direct Contact	Soil Saturation Concentration Screening
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
SVOCs (mg/kg)																		
Acenaphthene	--	300	880	8.7	970	190000	390000	81000	97000	81000	97000	81000	97000	64000000	42000000	43000	130000	--
Benanthracene	--	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	ID	ID	20	80	--
Benzo(a)pyrene	--	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	1300	1800	2	8	--
Benzo(b)fluoranthene	--	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	20	80	--
Dibenz(a,h)anthracene	--	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	2	3	ID	ID	--
Fluoranthene	--	750	730	9.3	790	10000000	10000000	7600000	8900000	7400000	8500000	7400000	8500000	93000000	41000000	48000	130000	--
Fluorene	--	560	860	5.9	640	9900000	10000000	5900000	10000000	5400000	10000000	5400000	10000000	67000000	41000000	29000	87000	--
Indeno(1,2,3-cd)pyrene	--	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL	ID	ID	20	80	--
Naphthalene	--	33	100	0.73	1500	280	470	990	1600	990	1600	990	1600	290000	130000	16000	53000	--
Phenanthrene	--	56	160	2.1	1100	2800	5100	160	190	160	190	160	190	6700	2900	1600	5200	--
PCBs (mg/kg)																		
Total PCBs	--	NLL	NLL	NLL	NLL	5000	16000	240	910	7900	28000	7900	28000	5200	6500	4	16	--
Metals (mg/kg)																		
Aluminum	6900	1	1	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	99000	370000	--
Antimony	--	4.3	4.3	94	46000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	5900	160	670	--
Arsenic	5.8	4.6	4.6	4.6	2000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	750	930	7.6	37	--
Barium	75	1300	1300	440	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	5500000	1500000	37000	130000	--
Cadmium	1.2	6	6	2	280000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	3700	2200	550	2100	--
Chromium	18	30	30	3.3	540000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	280	240	2500	9200	--
Chromium VI (hexavalent)	--	30	30	3.3	540000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	280	240	2500	9200	--
Cobalt	8.6	0.9	2	2	46000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	3900	2600	9000	--
Copper	32	5830	5900	79	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1300000	310000	20000	75000	--
Iron	12000	6	6	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	140000	560000	--
Lead	21	700	700	2300	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	100000	44000	400	900	--
Lead - coarse fraction	21	700	700	--	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	100000	44000	400	900	--
Lead - fine fraction	21	700	700	--	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	100000	44000	400	900	--
Lead - total (calculated by fine/coarse fraction)	21	700	700	--	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	100000	44000	400	900	--
Magnesium	--	8000	22000	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	4700000	1900000	1000000	3000000	--
Manganese	440	1	1	28	180000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	3300	1900	2200	8000	--
Mercury	0.13	1.7	1.7	0.03	47	45	89	51	61	51	61	51	61	20000	8800	140	550	--
Nickel	22	100	520	78	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	14000	40000	150000	--
Selenium	0.41	4	4	0.4	78000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1300000	590000	2600	9600	--
Silver	1	4.5	13	0.1	200000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	6700	2800	2000	8000	--
Sodium	--	2500	7000	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	1000000	3000000	--
Vanadium	--	72	990	190	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	1700	6300	--
Zinc	47	2400	5000	170	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	170000	650000	--

SB40-10	4/20/2010 (0-2) ft BGS mg/kg	4/20/2010 (2-4) ft BGS mg/kg	4/20/2010 (4-6) ft BGS mg/kg	4/20/2010 (6-8) ft BGS mg/kg
Metals				
Antimony	27.8 J (bc)	5.8 J (bc)	-	-
Arsenic	11.4 J (bcdp)	7.4 J (bcd)	6.2 J (bcd)	-
Cadmium	3.9 (d)	-	-	-
Chromium	475 (bcdno)	170 (bcd)	53.4 (bcd)	-
Chromium VI (hexavalent)	3.7 (d)	-	-	-
Cobalt	15.6 (bcd)	33.1 (bcd)	9.2 (bcd)	-
Copper	613 (d)	240 (d)	75.9 (d)	-
Iron	61600 (bc)	68500 (bc)	84000 (bc)	12200 (bc)
Lead	976 (bcpq)	578 (p)	-	-
Lead - coarse fraction	1130 (bcpq)	786 (bcp)	-	-
Lead - fine fraction	1260 (bcpq)	578 (p)	-	-
Lead - total (calculated by fine/coarse fraction)	1140 (bcpq)	757 (bcp)	-	-
Magnesium	9200 (b)	-	8450 (b)	-
Manganese	914 (bcd)	717 (bcd)	740 (bcd)	550 (bcd)
Mercury	0.42 (d)	0.28 (d)	-	-
Nickel	268 J (bcd)	141 J (bcd)	-	-
Selenium	0.91 J (d)	-	-	0.76 J (d)
Silver	1.3 (d)	-	-	-
Sodium	-	-	-	2670 (b)
Zinc	819 J (d)	260 J (d)	-	-
SVOCs				
Benzo(a)anthracene	30 (p)	-	-	-
Benzo(a)pyrene	27 (pq)	9.9 (pq)	11 (pq)	18 (pq)
Benzo(b)fluoranthene	42 (p)	-	-	25 (p)
Dibenz(a,h)anthracene	5.6 J (p)	-	-	2.7 J (p)
Fluoranthene	53 (d)	21 (d)	32 (d)	59 (d)
Naphthalene	1.5 J (d)	0.78 J (d)	-	-
Phenanthrene	25 (d)	11 (d)	25 (d)	41 (d)

SB20-05	12/12/2005 (0-2) ft BGS mg/kg	12/12/2005 (2-4) ft BGS mg/kg	12/12/2005 (4-6) ft BGS mg/kg
Metals			
Arsenic	18.5 (bcdp)	-	22.4 (bcdp)
Barium	608 (d)	-	-
Cadmium	4.5 (d)	-	-
Chromium	577 (bcdno)	49.1 (bcd)	184 (bcd)
Lead	575 (p)	-	-
Mercury	0.18 (d)	-	-
Selenium	1.7 (d)	-	-
Silver	1.5 (d)	-	-
SVOCs			
Benzo(a)anthracene	29 (p)	-	-
Benzo(a)pyrene	28 (pq)	8.4 (pq)	-
Benzo(b)fluoranthene	38 (p)	-	-
Dibenz(a,h)anthracene	6.2 J (p)	-	-
Fluoranthene	49 (d)	17 (d)	-
Naphthalene	2.6 J (d)	0.91 J (d)	-
Phenanthrene	30 (d)	14 (d)	-

SB33-07	7/10/2007 (2-4) ft BGS mg/kg	7/10/2007 (4-6) ft BGS mg/kg	7/10/2007 (6-8) ft BGS mg/kg
Metals			
Magnesium	8490 J (b)	10700 J (b)	10900 J (b)

SB25-05	12/12/2005 (0-2) ft BGS mg/kg	12/12/2005 (2-4) ft BGS mg/kg	12/12/2005 (4-6) ft BGS mg/kg
Metals			
Arsenic	-	29.4 (bcdp)	-
Barium	-	559 (d)	-
Cadmium	-	38.1 (bcd)	-
Chromium	-	4970 (bcdnop)	46.3 (bcd)
Lead	-	3710 (bcdpq)	-
Silver	-	31.1 (bcd)	-
SVOCs			
Benzo(a)pyrene	6 (p)	-	-
Fluoranthene	16 (d)	-	-
Phenanthrene	10 (d)	-	-

SB32-07	7/10/2007 (0-2) ft BGS mg/kg
Metals	
Chromium	21.5 J (d)

SB21-05	12/12/2005 (0-2) ft BGS mg/kg	12/12/2005 (2-4) ft BGS mg/kg	12/12/2005 (4-6) ft BGS mg/kg	12/12/2005 (6-8) ft BGS mg/kg
Metals				
Arsenic	-	-	23.7 (bcdp)	-
Barium	-	-	472 (d)	-
Cadmium	-	-	7.8 (bcd)	-
Chromium	24.5 (d)	21.4 (d)	2800 (bcdnop)	768 (bcdno)
Lead	-	-	5410 (bcdpq)	-
Selenium	0.48 (d)	-	-	0.77 (d)
Silver	-	-	15.3 (bcd)	5.2 (bd)
SVOCs				
Benzo(a)pyrene	-	17 (pq)	-	-
Benzo(b)fluoranthene	-	24 (p)	-	-
Dibenz(a,h)anthracene	-	3.4 J (p)	-	-
Fluoranthene	-	37 (d)	-	-
Phenanthrene	2.2 J (d)	23 (d)	2.4 (d)	-

SB27-07	7/10/2007 (0-2) ft BGS mg/kg	7/10/2007 (2-4) ft BGS mg/kg	7/10/2007 (4-6) ft BGS mg/kg	7/10/2007 (6-8) ft BGS mg/kg
Metals				
Antimony	4.7 J (bc)	29.6 J (bc)	-	-
Arsenic	10.3 J (bcdp)	14.5 J (bcdp)	50.3 J (bcdpq)	-
Barium	745 J (d)	1050 J (d)	-	-
Cadmium	5.8 J (d)	28.3 J (bcd)	-	-
Chromium	424 J (bcdno)	13200 (bcdnopq)	-	-
Cobalt	47.2 J (bcd)	146 J (bcd)	-	-
Copper	1790 (d)	2480 (d)	-	-
Iron	186000 (bcp)	278000 (bcp)	-	-
Lead	1630 (bcpq)	5830 (bcdpq)	-	-
Manganese	3140 (bcdo)	7180 (bcdno)	-	-
Nickel	449 J (bcd)	6710 (bcd)	-	-
Selenium	0.44 J (d)	0.78 J (d)	3.5 J (d)	0.82 J (d)
Silver	5.5 J (bd)	13.5 J (bcd)	-	-
Zinc	2990 (bd)	7520 (bcd)	-	-
SVOCs				
Benzo(a)pyrene	25 (pq)	-	-	-
Benzo(b)fluoranthene	35 (p)	-	-	-
Dibenz(a,h)anthracene	6.4 (p)	-	-	-
Fluoranthene	13 (d)	-	-	-
Indeno(1,2,3-cd)pyrene	21 (p)	-	-	-

SB26-07	7/10/2007 (0-2) ft BGS mg/kg	7/10/2007 (2-4) ft BGS mg/kg	7/10/2007 (6-8) ft BGS mg/kg
Metals			
Aluminum	-	9260 (bc)	-
Antimony	17.4 J (bc)	34.8 J (bc)	-
Arsenic	13.1 J (bcdp)	18.2 J (bcdp)	11.9 J (bcdp)
Barium	-	2230 J (bcd)	-
Cadmium	4.9 J (d)	54.0 J (bcd)	-
Chromium	270 J (bcdno)	2380 J (bcdno)	-
Cobalt	27.6 J (bcd)	118 J (bcd)	-
Copper	985 (d)	4410 (d)	-
Iron	109000 (bc)	276000 (bcp)	14600 (bc)
Lead	904 (bcpq)	3420 (bcdpq)	-
Manganese	1120 (bcd)	3280 (bcdo)	-
Nickel	255 J (bcd)	1780 J (bcd)	-
Selenium	0.52 J (d)	0.97 J (d)	-
Silver	7.0 J (bd)	14.3 J (bcd)	-
Vanadium	-	94.6 J (b)	-
Zinc	4090 (bd)	5040 (bcd)	-

SB34-10	4/20/2010 (2-4) ft BGS mg/kg
Metals	
Arsenic	5.9 J (bcd)

SB35-10	4/20/2010 (2-4) ft BGS mg/kg	4/20/2010 (4-6) ft BGS mg/kg
Metals		
Arsenic	6.5 J (bcd)	-
Chromium	244 (bcdo)	919 (bcdno)
Cobalt	10.4 (bcd)	10.3 (bcd)
Copper	-	165 (d)
Iron	12700 (bc)	30900 (bc)
Lead	-	4750 (bcdpq)
Lead - coarse fraction	760 (bcp)	5440 (bcpq)
Lead - fine fraction	1350 (bcpq)	9210 (bcpq)
Lead - total (calculated by fine/coarse fraction)	862 (bcp)	5720 (bcpq)
Magnesium	-	14300 (b)
Manganese	-	813 (bcd)
Nickel	169 J (bcd)	535 J (bcd)
SVOCs		
Acenaphthene	-	18 J (d)
Benzo(a)anthracene	23 (p)	100 (pq)
Benzo(a)pyrene	23 (pq)	91 (pq)
Benzo(b)fluoranthene	34 (p)	130 (pq)
Dibenz(a,h)anthracene	5.2 J (p)	18 J (pq)
Fluoranthene	41 (d)	250 (d)
Fluorene	-	17 J (d)
Indeno(1,2,3-cd)pyrene	-	53 J (p)
Naphthalene	0.81 J (d)	4 J (d)
Phenanthrene	22 (d)	180 (bcdhij)

SB19-05	12/12/2005 (0-2) ft BGS mg/kg	12/12/2005 (2-4) ft BGS mg/kg
Metals		
Chromium	26.0 (d)	341 (bcdno)
Selenium	-	0.60 (d)
Silver	-	3.0 (d)
SVOCs		
Phenanthrene	-	3.1 (d)

SB39-10	4/20/2010 (0-2) ft BGS mg/kg	4/20/2010 (2-4) ft BGS mg/kg	4/20/2010 (4-6) ft BGS mg/kg	4/20/2010 (6-8) ft BGS mg/kg	4/20/2010 (8-10) ft BGS mg/kg
Metals					
Magnesium	14600 (b)	8270 (b)	13000 (b)	9640 (b)	8810 (b)

SB31-07	7/10/2007 (2-4) ft BGS mg/kg	7/10/2007 (4-6) ft BGS mg/kg	7/10/2007 (8-10) ft BGS mg/kg
Metals			
Chromium	-	-	70.9 J (bcd)
Cobalt	-	-	14.2 J (bcd)
Magnesium	11500 J (b)	15800 J (b)	-

SB29-07	7/10/2007 (0-2) ft BGS mg/kg	7/10/2007 (2-4) ft BGS mg/kg	7/10/2007 (4-6) ft BGS mg/kg
Metals			
Chromium	41.0 J (bcd)	-	-
Cobalt	7.4 J (bcd)	-	-
Silver	2.9 J (d)	2.5 J (d)	1.2 J (d)

SB38-10	4/20/2010 (8-10) ft BGS mg/kg
Metals	
Selenium	0.60 J (d)

SB28-07	7/10/2007 (0-2) ft BGS mg/kg	7/10/2007 (2-4) ft BGS mg/kg	7/10/2007 (4-6) ft BGS mg/kg
Metals			
Aluminum	-	7860 (bc)	-
Arsenic	-	-	31.9 J (bcdp)
Barium	-	-	476 J (d)
Cadmium	-	-	7.6 J (bcd)
Chromium	-	-	1460 J (bcdno)
Cobalt	-	7.8 J (bcd)	35.4 J (bcd)
Copper	118 (d)	-	838 (d)
Iron	-	-	96000 (bc)
Lead	-	-	1170 (bcpq)
Manganese	-	-	1580 (bcdo)
Nickel	-	-	566 J (bcd)
Selenium	-	-	0.68 J (d)
Silver	-	-	2.4 J (d)
Vanadium	-	-	79.0 J (b)
Zinc	-	-	792 (d)

SB36-10	4/20/2010 (0-2) ft BGS mg/kg	4/20/2010 (2-4) ft BGS mg/kg	4/20/2010 (4-6) ft BGS mg/kg
Metals			
Antimony	-	-	5.0 J (bc)
Arsenic	-	8.3 J (bcdp)	-
Chromium	424 (bcdno)/862 (bcdno)	2540 (bcdnop)	233 (bcd)
Cobalt	13.6 (bcd)/17.6 (bcd)	268 (bcd)	7.0 (bcd)
Copper	-	122 (d)	-
Iron	12100 (bc)/14600 (bc)	122000 (bc)	15200 (bc)
Manganese	593 (bcd)/795 (bcd)	1040 (bcd)	-
Nickel	246 J (bcd)/477 J (bcd)	5540 J (bcd)	216 J (bcd)
Selenium	0.44 J (d)	-	-
Silver	-	-	2.1 (d)
SVOCs			
Benzo(a)pyrene	-	4.9 (p)	-
Fluoranthene	-	14 (d)	-
Phenanthrene	-	6.9 (d)	-

SB106-11	3/14/2011 (0-2) ft BGS mg/kg	3/14/2011 (2-4) ft BGS mg/kg
Metals		
Arsenic	5.9 J (bcd)	-
Chromium	23.4 (d)/200 (bcd)	-
Nickel	117 (bcd)	-
Silver	-	4.0 (d)

SB145-11	9/30/2011 (0-2) ft BGS mg/kg	9/30/2011 (2-4) ft BGS mg/kg	9/30/2011 (4-6) ft BGS mg/kg	9/30/2011 (6-8) ft BGS mg/kg	9/30/2011 (8-10) ft BGS mg/kg
Metals					
Antimony	-	81 J (bc)	-	-	-
Arsenic	6.1 J (bcd)	-	-	6.3 J (bcd)	-
Mercury	-	-	-	0.19 (d)	-
Selenium	-	-	-	3.0 J (d)	1.7 J (d)
SVOCs					
Phenanthrene	-	-	2.6 (d)	-	-

SB146-11	9/30/2011 (0-2) ft BGS mg/kg	9/30/2011 (2-4) ft BGS mg/kg	9/30/2011 (6-8) ft BGS mg/kg	9/30/2011 (8-10) ft BGS mg/kg
Metals				
Arsenic	14 J (bcdp)	7.9 J (bcdp)	-	-
Mercury	-	-	0.18 (d)	-
Selenium	0.75 J (d)	-	3.4 J (d)	3.7 J (d)

SB107-11	3/14/2011 (0-2) ft BGS mg/kg	3/14/2011 (2-4) ft BGS mg/kg	3/14/2011 (4-6) ft BGS mg/kg	3/14/2011 (6-8) ft BGS mg/kg
Metals				
Arsenic	6.5 J (bcd)	-	-	-
Chromium	23.0 J (d)	22.4 (d)	291 (bcdno)	-
Manganese	-	-	1190 (bcd)	-
Nickel	-	-	172 (bcd)	-
Selenium	-	-	1.6 J (d)	1.1 J (d)
SVOCs				
Benzo(a)pyrene	-	-	8.9 J (pq)	-
Fluoranthene	-	-	23 (d)	-
Phenanthrene	-	-	18 (d)	-

SB147-11	9/30/2011 (0-2) ft BGS mg/kg	9/30/2011 (4-6) ft BGS mg/kg	9/30/2011 (6-8) ft BGS mg/kg	9/30/2011 (8-10) ft BGS mg/kg
Metals				
Arsenic	-	-	-	6.0 J (bcd)
Cadmium	-	-	4.0 (d)	-
Chromium	-	-	23 (d)	22 (d)
Copper	78 J (d)	-	-	-
Mercury	-	0.19 (d)	0.18 (d)	-
Selenium	-	4.4 J (bcd)	7.6 J (bcd)	7.9 J (bcd)
Zinc	-	-	470 J (d)	290 J (d)

SB111-11	3/14/2011 (0-2) ft BGS mg/kg	3/14/2011 (4-6) ft BGS mg/kg	3/14/2011 (6-8) ft BGS mg/kg
Metals			
Arsenic	6.3 J (bcd)	-	-
Selenium	-	0.56 J (d)	11.9 J (bcd)

SB110-11	3/14/2011 (2-4) ft BGS mg/kg	3/14/2011 (4-6) ft BGS mg/kg	3/14/2011 (6-8) ft BGS mg/kg
Metals			
Mercury	-	-	0.14 (d)
Selenium	-	0.43 J (d)	3.6 J (d)
Silver	3.9 (d)	2.0 (d)	-

SB148-11	9/30/2011 (0-2) ft BGS mg/kg	9/30/2011 (2-4) ft BGS mg/kg	9/30/2011 (4-6) ft BGS mg/kg	9/30/2011 (6-8) ft BGS mg/kg	9/30/2011 (8-10) ft BGS mg/kg
Metals					
Antimony	-	9.1 J (bc)	-	-	-
Arsenic	-	17 J (bcdp)	-	-	7.8 J (bcdp)
Cadmium	-	95 (bcd)	-	-	22 (bcd)
Chromium	-	110 (bcd)	-	26 (d)	38 (bcd)
Cobalt	-	21 (bcd)	-	-	-
Copper	-	1300 J (d)	-	-	280 J (d)
Lead	-	1200 (bcpq)	-	-	-
Manganese	-	1000 (bcd)	-	-	-
Nickel	-	270 J (bcd)	-	-	-
Selenium	-	-	-	-	0.55 J (d)
Silver	-	1.5 (d)	3.3 (d)	-	4.3 (d)
Zinc	-	1900 J (d)	-	-	490 J (d)
PCBs					
Total PCBs	14 (p)	10 (p)	-	-	7.1 (p)
SVOCs					
Naphthalene	-	0.92 J (d)	-	-	-
Phenanthrene	-	2.6 J (d)	-	-	-

SB108-11	3/14/2011 (6-8) ft BGS mg/kg
Metals	
Selenium	0.79 J (d)

SB149-11	9/30/2011 (0-2) ft BGS mg/kg	9/30/2011 (4-6) ft BGS mg/kg	9/30/2011 (8-10) ft BGS mg/kg
Metals			
Arsenic	-	6.2 J (bcd)	-
Chromium	-	34 (bcd)	-
Mercury	-	0.18 (d)	-
Selenium	-	5.5 J (bcd)	1.2 J (d)
PCBs			
Total PCBs	8.9 (p)	-	-
SVOCs			
Benzo(a)pyrene	3.3 (p)	-	-
Fluoranthene	5.9 (d)	-	-

SB150-11	9/30/2011 (0-2) ft BGS mg/kg	9/30/2011 (6-8) ft BGS mg/kg
Metals		
Selenium	-	0.55 J (d)
PCBs		
Total PCBs	4.8 (p)	-

SB109-11	3/14/2011 (0-2) ft BGS mg/kg	3/14/2011 (2-4) ft BGS mg/kg	3/14/2011 (4-6) ft BGS mg/kg	3/14/2011 (6-8) ft BGS mg/kg
Metals				
Antimony	-	22.8 J (bc)	27.2 J (bc)	-
Arsenic	36.6 J (bcdp)	-	8.0 J (bcdp)	-
Chromium	-	-	27.8 (d)	-
Selenium	0.53 J (d)	-	-	2.7 J (d)
SVOCs				
Benzo(a)anthracene	-	-	35 (p)	-
Benzo(a)pyrene	-	-	27 (pq)	-
Benzo(b)fluoranthene	-	-	42 (p)	-
Dibenz(a,h)anthracene	-	-	4.9 J (p)	-
Fluoranthene	-	-	93 (d)	-
Fluorene	-	-	7.6 J (d)	-
Naphthalene	-	-	0.82 J (d)	-
Phenanthrene	-	-	74 (bd)	-

SB130-11
YEE
ICE
NG

NO	Revision	Date	Initial

0 50 100ft

LEGEND

- SB51-11 SOIL BORING LOCATION
- TW20-2 HISTORICAL SAMPLE LOCATION
- MW6-03 MONITORING WELL LOCATION
- SB78-11/MW21-11 SOIL BORING/MONITORING WELL LOCATION
- APPROXIMATE SITE BOUNDARY
- FENCE
- RAILROAD
- COLE DRAIN
- APPROXIMATE AOI

KEY MAP

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

ANALYTICAL RESULTS OF SOIL SAMPLES EXCEEDING GENERIC PART 201 CRITERIA

WYOMING, MICHIGAN

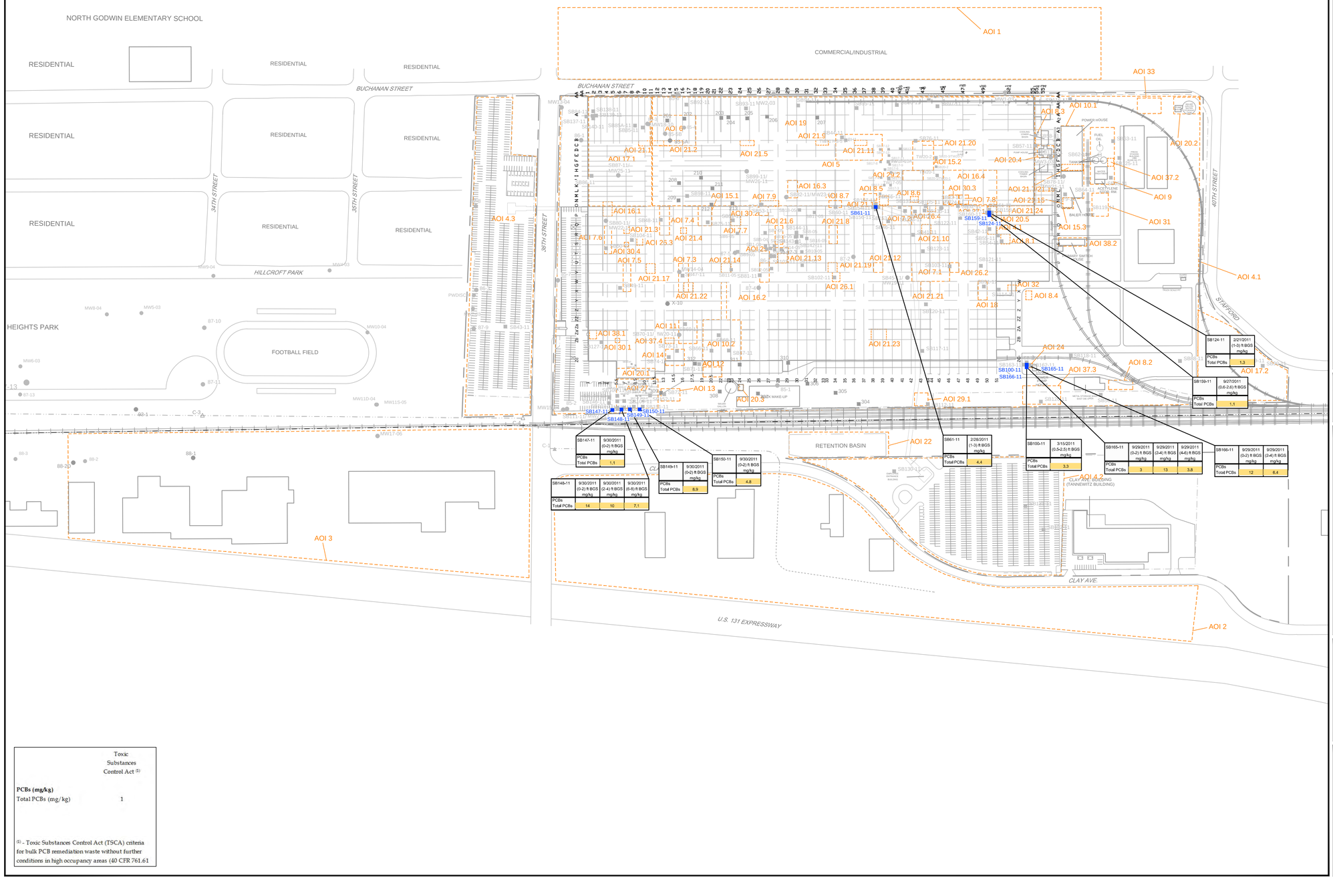
BULK UNLOAD AREA
FORMER GRAND RAPIDS METAL PLANT

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
J.Q.	E.B.	MAY 2012	
Scale: 1:100	Project N°: 017360-T05	Report N°: MEMO057	Drawing N°: PLAN 3

017360-T05(MEMO057)GN-DE009 JUL 23/2012



	Toxic Substances Control Act [1]
PCBs (mg/kg)	
Total PCBs (mg/kg)	1

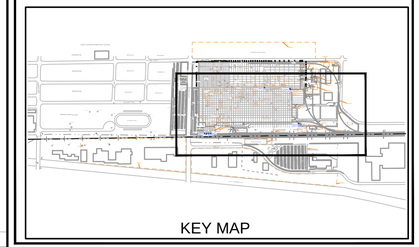
[1] - Toxic Substances Control Act (TSCA) criteria for bulk PCB remediation waste without further conditions in high occupancy areas (40 CFR 761.61

No	Revision	Date	Initial

0 100 200ft

LEGEND

- SB51-11 SOIL BORING LOCATION
- TW20-2 HISTORICAL SAMPLE LOCATION
- MW6-03 MONITORING WELL LOCATION
- SB78-11/MW21-11 SOIL BORING/MONITORING WELL LOCATION
- APPROXIMATE SITE BOUNDARY
- FENCE
- RAILROAD
- COLE DRAIN
- APPROXIMATE AOI



KEY MAP

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

ANALYTICAL RESULTS OF SOIL SAMPLES EXCEEDING TSCA CRITERIA

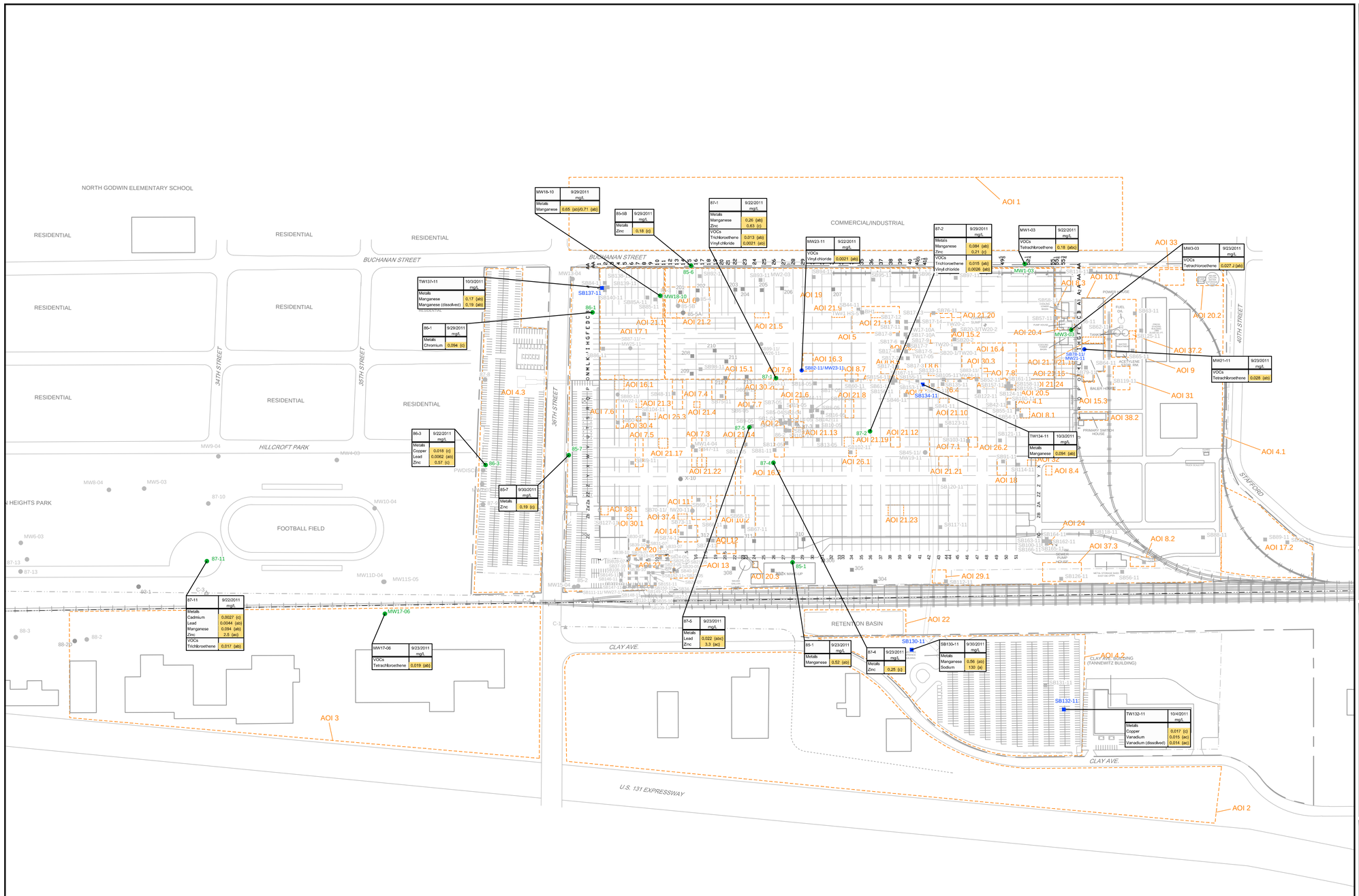
WYOMING, MICHIGAN

SITE-WIDE STAGE II FORMER GRAND RAPIDS METAL PLANT

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
J.Q.	E.B.	MAY 2012	
Scale: 1:200	Project No: 017360-T05	Report No: MEMO057	Drawing No: PLAN 4



Nº	Revision	Date	Initial

MW18-10	9/29/2011 mg/L
Metals	
Manganese	0.65 {ab}/0.71 {ab}

85-5B	9/29/2011 mg/L
Metals	
Zinc	0.18 {c}

87-1	9/22/2011 mg/L
Metals	
Manganese	0.26 {ab}
Zinc	0.63 {c}
VOCs	
Trichloroethene	0.013 {ab}
Vinyl chloride	0.0021 {ab}

MW23-11	9/22/2011 mg/L
VOCs	
Vinyl chloride	0.0021 {ab}

87-2	9/29/2011 mg/L
Metals	
Manganese	0.084 {ab}
Zinc	0.21 {c}
VOCs	
Trichloroethene	0.015 {ab}
Vinyl chloride	0.0026 {ab}

MW1-03	9/22/2011 mg/L
VOCs	
Tetrachloroethene	0.18 {abc}

MW3-03	9/23/2011 mg/L
VOCs	
Tetrachloroethene	0.027 J {ab}

MW21-11	9/23/2011 mg/L
VOCs	
Tetrachloroethene	0.028 {ab}

TW137-11	10/3/2011 mg/L
Metals	
Manganese	0.17 {ab}
Manganese (dissolved)	0.19 {ab}

86-1	9/29/2011 mg/L
Metals	
Chromium	0.094 {c}

86-3	9/22/2011 mg/L
Metals	
Copper	0.018 {c}
Lead	0.0062 {ab}
Zinc	0.57 {c}

85-7	9/30/2011 mg/L
Metals	
Zinc	0.19 {c}

TW134-11	10/3/2011 mg/L
Metals	
Manganese	0.094 {ab}

87-11	9/22/2011 mg/L
Metals	
Cadmium	0.0027 {c}
Lead	0.0044 {ab}
Manganese	0.094 {ab}
Zinc	2.5 {ac}
VOCs	
Trichloroethene	0.017 {ab}

MW17-06	9/23/2011 mg/L
VOCs	
Tetrachloroethene	0.019 {ab}

87-5	9/23/2011 mg/L
Metals	
Lead	0.022 {abc}
Zinc	3.3 {ac}

85-1	9/23/2011 mg/L
Metals	
Manganese	0.52 {ab}

87-4	9/23/2011 mg/L
Metals	
Zinc	0.25 {c}

SB130-11	9/30/2011 mg/L
Metals	
Manganese	0.56 {ab}
Sodium	130 {a}

TW132-11	10/4/2011 mg/L
Metals	
Copper	0.017 {c}
Vanadium	0.015 {ac}
Vanadium (dissolved)	0.014 {ac}

Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria (1)

	Residential Drinking Water a	Non-Residential Drinking Water b	Groundwater Surface Water Interface c	Residential Groundwater Volatilization to Indoor Air Inhalation d	Non-Residential Groundwater Volatilization to Indoor Air Inhalation e	Groundwater Contact f	Water Solubility g	Flammability and Explosivity Screening Levels h	Acute Inhalation Screening Levels i
VOCs (mg/L)									
Tetrachloroethene	0.005	0.005	0.06	25	170	12	200	ID	200
Trichloroethene	0.005	0.005	0.2	15	97	22	1100	ID	1100
Vinyl chloride	0.002	0.002	0.013	1.1	13	1	2760	33	ID
Metals (mg/L)									
Cadmium	0.005	0.005	0.0025	NLV	NLV	190	NC	ID	ID
Chromium	0.1	0.1	0.011	NLV	NLV	460	NC	ID	ID
Copper	1	1	0.013	NLV	NLV	7400	NC	ID	ID
Lead	0.004	0.004	0.014	NLV	NLV	ID	NC	ID	ID
Manganese	0.05	0.05	1.3	NLV	NLV	9100	NC	ID	ID
Manganese (dissolved)	0.05	0.05	1.3	NLV	NLV	9100	NC	ID	ID
Sodium	120	350	NC	NLV	NLV	1000000	NC	ID	ID
Vanadium	0.0045	0.062	0.012	NLV	NLV	970	NC	ID	ID
Vanadium (dissolved)	0.0045	0.062	0.012	NLV	NLV	970	NC	ID	ID
Zinc	2.4	5	0.17	NLV	NLV	110000	NC	ID	ID

LEGEND

■ SB51-11	SOIL BORING LOCATION
■ TW20-2	HISTORICAL SAMPLE LOCATION
● MW6-03	MONITORING WELL LOCATION
● SB78-11/ MW21-11	SITE-WIDE INVESTIGATION LOCATION
— - —	APPROXIMATE SITE BOUNDARY
—x—x—	FENCE
—+—+—	RAILROAD
—··—··—	COLE DRAIN
- - - -	APPROXIMATE AOI

KEY MAP

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
EXCEEDING GENERIC PART 201 CRITERIA

WYOMING, MICHIGAN

STAGE II SITE-WIDE
FORMER GRAND RAPIDS METAL PLANT

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: J.Q.	Reviewed By: E.B.	Date: APRIL 2012	
Scale: 1:200	Project Nº: 017360-T05	Report Nº: MEMO057	Drawing Nº: PLAN 5

017360-T05(MEMO057)GN-DE011 JUL 26/2012

TABLE 1

GROUNDWATER ELEVATION DATA
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Location	*Measurement Date*	*Groundwater Elevation* [(1)]	*Depth Below Top of Riser*
85-1	9/21/2011	659.50	16.06
85-2	9/21/2011	658.16	13.51
85-5B	9/21/2011	660.77	21.48
85-6	9/21/2011	661.08	20.12
85-7	9/21/2011	658.23	20.16
86-1	9/21/2011	659.47	21.64
86-2	9/21/2011	660.70	20.87
86-3	9/21/2011	657.63	18.68
87-1	9/21/2011	659.39	22.15
87-2	9/21/2011	655.93	21.19
87-4	9/21/2011	655.60	22.07
87-5	9/21/2011	653.04	21.90
87-8	9/21/2011	660.08	19.66
87-9	9/21/2011	659.47	16.09
87-10	9/21/2011	659.15	12.25
87-11	9/21/2011	657.73	10.90
87-13	9/21/2011	657.51	10.81
88-2	9/21/2011	653.98	12.06
88-3	9/21/2011	653.33	11.35
88-4	9/21/2011	652.64	8.85
MW1-03	9/21/2011	662.56	18.48
MW2-03	9/21/2011	656.97	20.85
MW3-03	9/21/2011	656.93	14.77
MW4-03	9/21/2011	656.87	22.85
MW5-03	10/27/2011	655.57	20.25
MW6-03	9/21/2011	659.39	12.32
MW7-03	9/21/2011	658.10	17.45
MW8-04	9/21/2011	657.43	19.96
MW9-04	9/21/2011	660.51	22.35
MW10-04	9/21/2011	661.11	9.69
MW11D-04	9/21/2011	661.49	6.61
MW11S-05	9/21/2011	658.83	6.94
MW13-04	9/21/2011	664.89	19.87
MW14-04	9/21/2011	658.67	22.26
MW15-04	9/21/2011	659.73	13.66
MW17-06	9/21/2011	661.65	7.55
MW18-10	9/21/2011	659.20	21.65
MW19-11	9/21/2011	659.15	20.51
MW20-11	9/21/2011	658.36	22.21
MW21-11	9/21/2011	662.86	17.34
MW22-11	9/21/2011	656.75	22.58
MW23-11	9/21/2011	655.57	21.75
MW24-11	9/21/2011	653.41	20.22
MW25-11	9/21/2011	657.81	22.04
MW26-11	9/21/2011	654.79	22.16
MW27-11	9/21/2011	656.44	13.08

Notes:

[(1)] Groundwater Elevations measured in feet above mean sea level

TABLE 2

SAMPLE SUMMARY
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Date	Sample Identification	Sample Location	Matrix	Sample Depth (ft bgs)			QC Sample	Analysis
9/22/2011	GW-17360-092211-EM-001	87-9	Water	50.3	to	53.5		VOCs
9/22/2011	GW-17360-092211-EM-002	MW7-03	Water	36	to	41		VOCs
9/22/2011	GW-17360-092211-EM-003	MW7-03	Water	36	to	41	Duplicate (-003)	VOCs
9/22/2011	GW-17360-092211-EM-004	86-3	Water	41.5	to	46.5		VOCs, Metals
9/22/2011	GW-17360-092211-EM-005	87-8	Water	19.7	to	22.7		VOCs
9/22/2011	GW-17360-092211-EM-006	MW6-03	Water	13	to	18		VOCs
9/22/2011	GW-17360-092211-EM-007	87-13	Water	40	to	43		VOCs
9/22/2011	GW-17360-092211-EM-008	87-11	Water	30	to	33		VOCs, Metals
9/22/2011	GW-17360-092211-EM-009	87-10	Water	29	to	32		VOCs
9/22/2011	GW-17360-092211-EM-010	MW9-04	Water	43	to	48		VOCs
9/22/2011	GW-17360-092211-EM-011	MW11D-04	Water	40	to	45		VOCs
9/22/2011	GW-17360-092211-EM-012	MW11S-05	Water	5	to	10		VOCs
9/22/2011	GW-17360-092211-EM-013	MW10-04	Water	33	to	38		VOCs
9/22/2011	GW-17360-092211-EM-014	MW4-03	Water	52	to	57		VOCs
9/22/2011	GW-17360-092211-EM-015	MW8-04	Water	30	to	35	MS/MSD	VOCs
9/22/2011	GW-17360-092211-EM-016	MW5-03	Water	30	to	35		VOCs
9/22/2011	GW-17360-092211-EM-017	MW19-11	Water	19	to	24		VOCs
9/22/2011	GW-17360-092211-EM-018	MW23-11	Water	20	to	25		VOCs
9/22/2011	GW-17360-092211-EM-019	87-1	Water	24	to	29		VOCs, Metals
9/22/2011	GW-17360-092211-EM-020	MW1-03	Water	30	to	35		VOCs
9/22/2011	GW-17360-092211-EM-021	MW2-03	Water	22	to	27		VOCs
9/22/2011	GW-17360-092211-EM-022	85-6	Water	19.5	to	24.5		VOCs, SVOCs
9/23/2011	GW-17360-092311-EM-023	88-4	Water	18	to	21		VOCs
9/23/2011	GW-17360-092311-EM-024	88-3	Water	27	to	30		VOCs
9/23/2011	GW-17360-092311-EM-025	88-2	Water	26	to	29		VOCs
9/23/2011	GW-17360-092311-EM-026	MW17-06	Water	51	to	56		VOCs
9/23/2011	GW-17360-092311-EM-027	MW15-04	Water	25	to	30		VOCs
9/23/2011	GW-17360-092311-EM-028	85-2	Water	13.5	to	18.5		VOCs, Metals
9/23/2011	GW-17360-092311-EM-029	87-5	Water	39.5	to	50.5		VOCs, Metals
9/23/2011	GW-17360-092311-EM-030	86-2	Water	39.5	to	50.5		VOCs
9/23/2011	GW-17360-092311-EM-031	87-4	Water	24	to	27		VOCs, Metals
9/23/2011	GW-17360-092311-EM-032	MW27-11	Water	12.5	to	17.5		VOCs
9/23/2011	GW-17360-092311-EM-033	MW27-11	Water	12.5	to	17.5	Duplicate (-032)	VOCs
9/23/2011	GW-17360-092311-EM-034	MW14-04	Water	45	to	50		VOCs
9/23/2011	GW-17360-092311-EM-035	MW20-11	Water	21	to	26		VOCs
9/23/2011	GW-17360-092311-EM-036	MW22-11	Water	21.5	to	26.5		VOCs
9/23/2011	GW-17360-092311-EM-037	85-1	Water	15.5	to	20.5		VOCs, Metals
9/23/2011	GW-17360-092311-EM-038	MW3-03	Water	25	to	30	MS/MSD	VOCs, Sodium, Chloride
9/23/2011	GW-17360-092311-EM-039	MW21-11	Water	16.5	to	21.5		VOCs
9/26/2011	SO-17360-092611-EM-001	SB136-11	Soil	0.5	to	2.5		Sodium, Chloride
9/26/2011	SO-17360-092611-EM-002	SB136-11	Soil	15	to	17		Sodium, Chloride
9/26/2011	SO-17360-092611-EM-003	SB134-11	Soil	0.5	to	2.5		VOCs, PAHs, Metals, PCBs
9/26/2011	SO-17360-092611-EM-004	SB134-11	Soil	17	to	19		VOCs, PAHs, Metals, PCBs
9/26/2011	SO-17360-092611-EM-005	SB133-11	Soil	0.5	to	2.5		VOCs, PAHs, Metals, PCBs
9/26/2011	SO-17360-092611-EM-006	SB133-11	Soil	17	to	19		VOCs, PAHs, Metals, PCBs
9/26/2011	SO-17360-092611-EM-007	SB135-11	Soil	0.5	to	2.5		VOCs, PAHs, Metals, PCBs
9/26/2011	SO-17360-092611-EM-008	SB135-11	Soil	17	to	19		VOCs, PAHs, Metals, PCBs
9/27/2011	SO-17360-092711-EM-009	SB159-11	Soil	0.6	to	2.6		PCBs
9/27/2011	SO-17360-092711-EM-010	SB159-11	Soil	2.6	to	4		PCBs
9/27/2011	SO-17360-092711-EM-011	SB159-11	Soil	4	to	6		PCBs
9/27/2011	SO-17360-092711-EM-012	SB159-11	Soil	6	to	8		PCBs
9/27/2011	SO-17360-092711-EM-013	SB159-11	Soil	8	to	10		PCBs
9/27/2011	SO-17360-092711-EM-014	SB158-11	Soil	0.5	to	2.5		PCBs
9/27/2011	SO-17360-092711-EM-015	SB158-11	Soil	2.5	to	4		PCBs
9/27/2011	SO-17360-092711-EM-016	SB158-11	Soil	4	to	6		PCBs
9/27/2011	SO-17360-092711-EM-017	SB158-11	Soil	6	to	8		PCBs
9/27/2011	SO-17360-092711-EM-018	SB158-11	Soil	8	to	10		PCBs
9/27/2011	SO-17360-092711-EM-019	SB161-11	Soil	0.5	to	2.5		PCBs
9/27/2011	SO-17360-092711-EM-020	SB161-11	Soil	2.5	to	4		PCBs
9/27/2011	SO-17360-092711-EM-021	SB161-11	Soil	4	to	6		PCBs
9/27/2011	SO-17360-092711-EM-022	SB161-11	Soil	6	to	8		PCBs
9/27/2011	SO-17360-092711-EM-023	SB161-11	Soil	8	to	10		PCBs
9/27/2011	SO-17360-092711-EM-024	SB160-11	Soil	0.5	to	2.5		PCBs
9/27/2011	SO-17360-092711-EM-025	SB160-11	Soil	2.5	to	4		PCBs
9/27/2011	SO-17360-092711-EM-026	SB160-11	Soil	4	to	6		PCBs
9/27/2011	SO-17360-092711-EM-027	SB160-11	Soil	6	to	8		PCBs
9/27/2011	SO-17360-092711-EM-028	SB160-11	Soil	8	to	10		PCBs
9/27/2011	SO-17360-092711-EM-029	SB157-11	Soil	0.7	to	2.7		PCBs
9/27/2011	SO-17360-092711-EM-030	SB157-11	Soil	2.7	to	5		PCBs
9/27/2011	SO-17360-092711-EM-031	SB157-11	Soil	5	to	7		PCBs
9/27/2011	SO-17360-092711-EM-032	SB132-11	Soil	0	to	2	MS/MSD	VOCs, PAHs, Metals, Sodium, Chloride
9/27/2011	SO-17360-092711-EM-033	SB132-11	Soil	10	to	12		VOCs, PAHs, Metals, Sodium, Chloride
9/27/2011	SO-17360-092711-EM-034	SB131-11	Soil	0	to	2		VOCs, PAHs, Metals, Sodium, Chloride
9/27/2011	SO-17360-092711-EM-035	SB131-11	Soil	8	to	10		VOCs, PAHs, Metals, Sodium, Chloride
9/27/2011	SO-17360-092711-EM-036	SB130-11	Soil	0	to	2		VOCs, PAHs, Metals, Sodium, Chloride
9/27/2011	SO-17360-092711-EM-037	SB130-11	Soil	8	to	10		VOCs, PAHs, Metals, Sodium, Chloride
9/28/2011	SO-17360-092811-EM-038	SB154-11	Soil	0.5	to	2.5		PCBs
9/28/2011	SO-17360-092811-EM-039	SB154-11	Soil	2.5	to	4		PCBs
9/28/2011	SO-17360-092811-EM-040	SB154-11	Soil	4	to	6		PCBs

TABLE 2

SAMPLE SUMMARY
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Date	*Sample Identification*	*Sample Location*	*Matrix*	*Sample Depth (ft bgs)*			*QC Sample*	*Analysis*
9/28/2011	SO-17360-092811-EM-041	SB154-11	Soil	6	to	8		PCBs
9/28/2011	SO-17360-092811-EM-042	SB154-11	Soil	8	to	10		PCBs
9/28/2011	SO-17360-092811-EM-043	SB156-11	Soil	0.5	to	2.5		PCBs
9/28/2011	SO-17360-092811-EM-044	SB156-11	Soil	2.5	to	4		PCBs
9/28/2011	SO-17360-092811-EM-045	SB156-11	Soil	4	to	6		PCBs
9/28/2011	SO-17360-092811-EM-046	SB156-11	Soil	6	to	8		PCBs
9/28/2011	SO-17360-092811-EM-047	SB156-11	Soil	8	to	10		PCBs
9/28/2011	SO-17360-092811-EM-048	SB155-11	Soil	0.5	to	2.5		PCBs
9/28/2011	SO-17360-092811-EM-049	SB155-11	Soil	2.5	to	4		PCBs
9/28/2011	SO-17360-092811-EM-050	SB155-11	Soil	4	to	6		PCBs
9/28/2011	SO-17360-092811-EM-051	SB155-11	Soil	6	to	8		PCBs
9/28/2011	SO-17360-092811-EM-052	SB155-11	Soil	8	to	10		PCBs
9/28/2011	SO-17360-092811-EM-053	SB153-11	Soil	1	to	3		PCBs
9/28/2011	SO-17360-092811-EM-054	SB153-11	Soil	3	to	5		PCBs
9/28/2011	SO-17360-092811-EM-055	SB153-11	Soil	5	to	7		PCBs
9/28/2011	SO-17360-092811-EM-056	SB153-11	Soil	7	to	9		PCBs
9/28/2011	SO-17360-092811-EM-057	SB153-11	Soil	9	to	10		PCBs
9/28/2011	SO-17360-092811-EM-058	SB167-11	Soil	1.5	to	3.5		PCBs
9/28/2011	SO-17360-092811-EM-059	SB167-11	Soil	3.5	to	5.5		PCBs
9/28/2011	SO-17360-092811-EM-060	SB167-11	Soil	5.5	to	7.5		PCBs
9/28/2011	SO-17360-092811-EM-061	SB167-11	Soil	7.5	to	9.5		PCBs
9/28/2011	SO-17360-092811-EM-062	SB140-11	Soil	2	to	4		VOCs, PAHs, Metals, PCBs
9/28/2011	SO-17360-092811-EM-063	SB140-11	Soil	2	to	4	Duplicate (-062)	VOCs, PAHs, Metals, PCBs
9/28/2011	SO-17360-092811-EM-064	SB140-11	Soil	16	to	18		VOCs, PAHs, Metals, PCBs
9/28/2011	SO-17360-092811-EM-065	SB138-11	Soil	2	to	4		VOCs, PAHs, Metals, PCBs
9/28/2011	SO-17360-092811-EM-066	SB138-11	Soil	16	to	18		VOCs, PAHs, Metals, PCBs
9/28/2011	SO-17360-092811-EM-067	SB139-11	Soil	1.5	to	3.5		VOCs, PAHs, Metals, PCBs
9/28/2011	SO-17360-092811-EM-068	SB139-11	Soil	16	to	18		VOCs, PAHs, Metals, PCBs
9/29/2011	GW-17360-092911-EM-040	86-1	Water	18.5	to	29	MS/MSD	VOCs, SVOCs, Metals
9/29/2011	GW-17360-092911-EM-041	MW25-11	Water	20	to	25		VOCs
9/29/2011	GW-17360-092911-EM-042	MW18-10	Water	16	to	26		VOCs, SVOCs, Metals
9/29/2011	GW-17360-092911-EM-043	MW18-10	Water	16	to	26	Duplicate (-042)	VOCs, SVOCs, Metals
9/29/2011	GW-17360-092911-EM-044	85-5B	Water	21.9	to	31.9		VOCs, SVOCs, Metals
9/29/2011	GW-17360-092911-EM-045	MW26-11	Water	21	to	26		VOCs
9/29/2011	GW-17360-092911-EM-046	87-2	Water	33.2	to	38.2		VOCs, Metals
9/29/2011	GW-17360-092911-EM-047	C-1	Water		NA			VOCs
9/29/2011	GW-17360-092911-EM-048	C-2	Water		NA			VOCs
9/29/2011	GW-17360-092911-EM-049	C-3	Water		NA			VOCs
9/29/2011	SO-17360-092911-EM-069	SB137-11	Soil	0.7	to	2.7		VOCs, PAHs, Metals, PCBs
9/29/2011	SO-17360-092911-EM-070	SB137-11	Soil	16	to	18		VOCs, PAHs, Metals, PCBs
9/29/2011	SO-17360-092911-EM-071	SB163-11	Soil	0	to	2	MS/MSD	PCBs
9/29/2011	SO-17360-092911-EM-072	SB163-11	Soil	2	to	4		PCBs
9/29/2011	SO-17360-092911-EM-073	SB163-11	Soil	4	to	6		PCBs
9/29/2011	SO-17360-092911-EM-074	SB163-11	Soil	6	to	8		PCBs
9/29/2011	SO-17360-092911-EM-075	SB163-11	Soil	8	to	10		PCBs
9/29/2011	SO-17360-092911-EM-076	SB164-11	Soil	0	to	2		PCBs
9/29/2011	SO-17360-092911-EM-077	SB164-11	Soil	0	to	2	Duplicate (-076)	PCBs
9/29/2011	SO-17360-092911-EM-078	SB164-11	Soil	2	to	4		PCBs
9/29/2011	SO-17360-092911-EM-079	SB164-11	Soil	4	to	6		PCBs
9/29/2011	SO-17360-092911-EM-080	SB164-11	Soil	6	to	8		PCBs
9/29/2011	SO-17360-092911-EM-081	SB164-11	Soil	8	to	10		PCBs
9/29/2011	SO-17360-092911-EM-082	SB162-11	Soil	0	to	2		PCBs
9/29/2011	SO-17360-092911-EM-083	SB162-11	Soil	2	to	4		PCBs
9/29/2011	SO-17360-092911-EM-084	SB162-11	Soil	4	to	6		PCBs
9/29/2011	SO-17360-092911-EM-085	SB162-11	Soil	6	to	8		PCBs
9/29/2011	SO-17360-092911-EM-086	SB162-11	Soil	8	to	10		PCBs
9/29/2011	SO-17360-092911-EM-087	SB166-11	Soil	0	to	2		PCBs
9/29/2011	SO-17360-092911-EM-088	SB166-11	Soil	2	to	4		PCBs
9/29/2011	SO-17360-092911-EM-089	SB166-11	Soil	4	to	6		PCBs
9/29/2011	SO-17360-092911-EM-090	SB166-11	Soil	6	to	8		PCBs
9/29/2011	SO-17360-092911-EM-091	SB166-11	Soil	8	to	10		PCBs
9/29/2011	SO-17360-092911-EM-092	SB165-11	Soil	0	to	2		PCBs
9/29/2011	SO-17360-092911-EM-093	SB165-11	Soil	2	to	4		PCBs
9/29/2011	SO-17360-092911-EM-094	SB165-11	Soil	4	to	6		PCBs
9/29/2011	SO-17360-092911-EM-095	SB165-11	Soil	6	to	8		PCBs
9/29/2011	SO-17360-092911-EM-096	SB165-11	Soil	8	to	10		PCBs
9/29/2011	SO-17360-092911-EM-097	SB143-11	Soil	1	to	3		VOCs
9/29/2011	SO-17360-092911-EM-098	SB143-11	Soil	3	to	5		VOCs
9/29/2011	SO-17360-092911-EM-099	SB143-11	Soil	5	to	7		VOCs
9/29/2011	SO-17360-092911-EM-100	SB143-11	Soil	7	to	9		VOCs
9/29/2011	SO-17360-092911-EM-101	SB143-11	Soil	9	to	11		VOCs
9/29/2011	SO-17360-092911-EM-102	SB143-11	Soil	11	to	13	MS/MSD	VOCs
9/29/2011	SO-17360-092911-EM-103	SB143-11	Soil	13	to	15		VOCs
9/29/2011	SO-17360-092911-EM-104	SB143-11	Soil	15	to	17		VOCs
9/29/2011	SO-17360-092911-EM-105	SB143-11	Soil	17	to	19		VOCs
9/29/2011	SO-17360-092911-EM-106	SB142-11	Soil	1	to	3		VOCs
9/29/2011	SO-17360-092911-EM-107	SB142-11	Soil	1	to	3	Duplicate (-106)	VOCs
9/29/2011	SO-17360-092911-EM-108	SB142-11	Soil	3	to	5		VOCs
9/29/2011	SO-17360-092911-EM-109	SB142-11	Soil	5	to	7		VOCs
9/29/2011	SO-17360-092911-EM-110	SB142-11	Soil	7	to	9		VOCs

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WYOMING, MICHIGAN

Sample Date	*Sample Identification*	*Sample Location*	*Matrix*	*Sample Depth (ft bgs)*			*QC Sample*	*Analysis*
9/29/2011	SO-17360-092911-EM-111	SB142-11	Soil	9	to	11		VOCs
9/29/2011	SO-17360-092911-EM-112	SB142-11	Soil	11	to	13		VOCs
9/29/2011	SO-17360-092911-EM-113	SB142-11	Soil	13	to	15		VOCs
9/29/2011	SO-17360-092911-EM-114	SB142-11	Soil	15	to	17		VOCs
9/29/2011	SO-17360-092911-EM-115	SB142-11	Soil	17	to	19		VOCs
9/30/2011	SO-17360-093011-EM-116	SB152-11	Soil	0	to	2		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-117	SB152-11	Soil	2	to	4		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-118	SB152-11	Soil	4	to	6		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-119	SB152-11	Soil	6	to	8		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-120	SB152-11	Soil	8	to	10		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-121	SB151-11	Soil	0	to	2		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-122	SB151-11	Soil	2	to	4		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-123	SB151-11	Soil	4	to	6		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-124	SB151-11	Soil	6	to	8		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-125	SB151-11	Soil	8	to	10		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-126	SB150-11	Soil	0	to	2		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-127	SB150-11	Soil	2	to	4		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-128	SB150-11	Soil	4	to	6		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-129	SB150-11	Soil	6	to	8		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-130	SB150-11	Soil	8	to	10		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-131	SB149-11	Soil	0	to	2		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-132	SB149-11	Soil	2	to	4		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-133	SB149-11	Soil	4	to	6		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-134	SB149-11	Soil	6	to	8		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-135	SB149-11	Soil	8	to	10		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-136	SB148-11	Soil	0	to	2		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-137	SB148-11	Soil	2	to	4		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-138	SB148-11	Soil	4	to	6		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-139	SB148-11	Soil	6	to	8		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-140	SB148-11	Soil	8	to	10		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-141	SB147-11	Soil	0	to	2		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-142	SB147-11	Soil	2	to	4		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-143	SB147-11	Soil	4	to	6		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-144	SB147-11	Soil	6	to	8		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-145	SB147-11	Soil	8	to	10		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-146	SB146-11	Soil	0	to	2	MS/MSD	PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-147	SB146-11	Soil	2	to	4		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-148	SB146-11	Soil	4	to	6		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-149	SB146-11	Soil	6	to	8		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-150	SB146-11	Soil	8	to	10		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-151	SB145-11	Soil	0	to	2		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-152	SB145-11	Soil	0	to	2	Duplicate (-151)	PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-153	SB145-11	Soil	2	to	4		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-154	SB145-11	Soil	4	to	6		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-155	SB145-11	Soil	6	to	8		PAHs, Metals, PCBs
9/30/2011	SO-17360-093011-EM-156	SB145-11	Soil	8	to	10		PAHs, Metals, PCBs
9/30/2011	GW-17360-093011-EM-050	85-7	Water	20.6	to	25.6		VOCs, Metals
9/30/2011	GW-17360-093011-EM-051	MW13-04	Water	25	to	30		VOCs
9/30/2011	GW-17360-093011-EM-052	SB130-11	Water	10.5	to	15.5		VOCs, PAHs, Metals, Sodium, Chloride
9/30/2011	TB-17360-093011-EM-053	Trip Blank	Water		NA			VOCs
10/3/2011	SO-17360-100311-EM-157	HA144-11	Soil	0	to	2		VOCs
10/3/2011	SO-17360-100311-EM-158	HA144-11	Soil	2	to	4		VOCs
10/3/2011	GW-17360-100311-EM-054	TW134-11	Water	20	to	25		VOCs, PAHs, Metals[1], PCBs
10/3/2011	GW-17360-100311-EM-055	TW137-11	Water	19	to	24		VOCs, PAHs, Metals[1], PCBs
10/4/2011	GW-17360-100411-EM-056	TW132-11	Water	12.5	to	17.5		VOCs, PAHs, Metals[1], Sodium, Chloride
10/4/2011	GW-17360-100411-EM-057	TW131-11	Water	11	to	16		VOCs, PAHs, Metals[1], Sodium, Chloride
10/19/2011	WG-17360-101911-JV-058	MW24-11	Water	19	to	24		VOCs
10/19/2011	WG-17360-101911-JV-059	MW24-11	Water	19	to	24	Duplicate (-058)	VOCs
10/19/2011	Tripblank-17360-101911-060	Trip Blank	Water		NA			VOCs

Notes:
VOCs - Target Compound List Volatile Organic Compounds
SVOCs - Target Compound List Semi-Volatile Organic Compounds
PAHs - Polycyclic Aromatic Hydrocarbons
Metals - Antimony, Arsenic, Barium, Beryllium, Cadmium, total Chromium, Cobalt, Copper, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc
PCBs - Polychlorinated Biphenyls
QC - Quality Control
MS/MSD - Matrix Spike /Matrix Spike Duplicate
[1] - Borehole water samples were field filtered for dissolved metals

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location																			
							Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria [1]													
Sample Identification		Statewide	Residential	Non-Residential	Groundwater	Groundwater	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Soil Saturation	Toxic
Sample Date		Default	Drinking Water	Drinking Water	Surface Water	Contact	Soil Volatilization	Soil Volatilization	Infinite Source	Infinite Source	Finite VSIC for	Finite VSIC for	Finite VSIC for	Finite VSIC for	Particulate	Particulate	Direct	Direct	Concentration	Substances
Sample Depth		Background	Protection	Protection	Interface Protection [6]	Protection	to Indoor Air	to Indoor Air	Volatile Soil	Volatile Soil	5 Meter Source	5 Meter Source	2 Meter Source	2 Meter Source	Soil Inhalation	Soil Inhalation	Contact	Contact	Screening	Control Act [2]
Area of Interest							Inhalation	Inhalation	Inhalation	Inhalation	Thickness	Thickness	Thickness	Thickness						
Sample Type																				
	Units	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
Metals																				
Antimony	mg/kg	NA	4.3	4.3	94	49000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	5900	180	670	NA	NA
Arsenic	mg/kg	5.8	4.6	4.6	4.6	2000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	720	910	7.6	37	NA	NA
Barium	mg/kg	75	1300	1300	440	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	330000	150000	37000	130000	NA	NA
Beryllium	mg/kg	NA	51	51	84	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1300	590	410	1600	NA	NA
Cadmium	mg/kg	1.2	6	6	3.0	230000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1700	2200	550	2100	NA	NA
Chromium	mg/kg	18	30	30	3.3	140000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	260	240	2500	9200	NA	NA
Cobalt	mg/kg	6.8	0.8	2	2	48000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	5900	2600	9000	NA	NA
Copper	mg/kg	32	5800	5800	75	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	130000	59000	20000	73000	NA	NA
Lead	mg/kg	21	700	700	2500	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	100000	44000	400	900	NA	NA
Manganese	mg/kg	440	1	1	26	180000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	3300	1500	25000	90000	NA	NA
Mercury	mg/kg	0.13	1.7	1.7	0.05	47	48	89	52	62	52	62	52	62	20000	8800	160	580	NA	NA
Nickel	mg/kg	20	100	100	76	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	16000	40000	150000	NA	NA
Selenium	mg/kg	0.41	4	4	0.4	78000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	130000	59000	2600	9600	NA	NA
Silver	mg/kg	1	4.5	13	0.1	200000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	6700	2900	2500	9000	NA	NA
Sodium	mg/kg	NA	2500	7000	NA	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	1000000	1000000	NA	NA
Thallium	mg/kg	NA	2.3	2.3	4.2	15000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	5900	35	130	NA	NA
Vanadium	mg/kg	NA	72	990	190	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	750	5500	NA	NA
Zinc	**mg/kg**	**47**	**2400**	**5000**	**170**	**1000000**	**NLV**	**NLV**	**NLV**	**NLV**	**NLV**	**NLV**	**NLV**	**NLV**	**ID**	**ID**	**170000**	**630000**	**NA**	**NA**
PCBs																				
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	mg/kg	NA	NLL	NLL	NLL	NLL	3000	16000	240	810	7900	28000	7900	28000	5200	6500	4	16	NA	1
Semi-Volatile Organic Compounds																				
2-Methylnaphthalene	mg/kg	NA	57	170	4.2	5500	2700	4900	1500	1800	1500	1800	1500	1800	670000	290000	8100	26000	NA	NA
Acenaphthene	mg/kg	NA	300	880	8.7	970	190000	350000	81000	97000	81000	97000	81000	97000	14000000	6200000	41000	130000	NA	NA
Acenaphthylene	mg/kg	NA	5.9	17	ID	440	1600	3000	2200	2700	2200	2700	2200	2700	2300000	1000000	1600	5200	NA	NA
Anthracene	mg/kg	NA	41	41	ID	41	1000000	1000000	1400000	1600000	1400000	1600000	1400000	1600000	67000000	29000000	230000	730000	NA	NA
Benzo(a)anthracene	mg/kg	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	20	80	NA	NA
Benzo(a)pyrene	mg/kg	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1500	1900	2	8	NA	NA
Benzo(b)fluoranthene	mg/kg	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	20	80	NA	NA
Benzo(g,h,i)perylene	mg/kg	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	800000	350000	2500	7000	NA	NA
Benzo(k)fluoranthene	mg/kg	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	200	800	NA	NA
Chrysene	mg/kg	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	2000	8000	NA	NA
Dibenz(a,h)anthracene	mg/kg	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	2	8	NA	NA
Fluoranthene	mg/kg	NA	730	730	5.5	730	1000000	1000000	740000	890000	740000	880000	740000	880000	9300000	4100000	46000	130000	NA	NA
Fluorene	mg/kg	NA	390	890	5.3	890	580000	1000000	130000	150000	130000	150000	130000	150000	9300000	4100000	27000	87000	NA	NA
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	20	80	NA	NA
Naphthalene	mg/kg	NA	35	100	0.73	2100	250	470	300	350	300	350	300	350	200000	88000	16000	52000	NA	NA
Phenanthrene	mg/kg	NA	56	160	2.1	1100	2800	5100	160	190	160	190	160	190	6700	2900	1600	5200	NA	NA
Pyrene	mg/kg	NA	480	480	ID	480	1000000	1000000	650000	780000	650000	780000	650000	780000	6700000	2900000	29000	84000	NA	NA

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STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location																			
							Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria [1]													
Sample Identification		Statewide	Residential	Non-Residential	Groundwater	Groundwater	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Soil Saturation	Toxic
Sample Date		Default	Drinking Water	Drinking Water	Surface Water	Contact	Soil Volatilization	Soil Volatilization	Infinite Source	Infinite Source	Finite VSIC for	Finite VSIC for	Finite VSIC for	Finite VSIC for	Particulate	Particulate	Direct	Direct	Concentration	Substances
Sample Depth		Background	Protection	Protection	Interface Protection [6]	Protection	to Indoor Air	to Indoor Air	Volatile Soil	Volatile Soil	5 Meter Source	5 Meter Source	2 Meter Source	2 Meter Source	Soil Inhalation	Soil Inhalation	Contact	Contact	Screening	Control Act [2]
Area of Interest							Inhalation	Inhalation	Inhalation	Inhalation	Thickness	Thickness	Thickness	Thickness						
Sample Type																				
	Units	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
Volatile Organic Compounds																				
1,1,1-Trichloroethane	mg/kg	NA	4	4	1.8	460	250	460	3800	4500	12000	15000	28000	31000	67000000	29000000	460	460	460	NA
1,1,2,2-Tetrachloroethane	mg/kg	NA	0.17	0.7	1.6	94	4.3	23	10	34	10	34	14	34	54000	68000	53	240	870	NA
1,1,2-Trichloroethane	mg/kg	NA	0.1	0.1	6.6	420	4.6	24	17	57	21	57	44	120	190000	250000	180	840	920	NA
1,1-Dichloroethane	mg/kg	NA	18	50	15	890	230	430	2100	2500	5900	6000	14000	14000	33000000	15000000	890	890	890	NA
1,1-Dichloroethene	mg/kg	NA	0.14	0.14	2.6	220	0.062	0.33	1.1	3.7	5.3	15	13	37	62000	78000	200	570	570	NA
1,2,4-Trichlorobenzene	mg/kg	NA	4.2	4.2	5.9	1100	1100	1100	28000	34000	28000	34000	28000	34000	25000000	11000000	990	1100	1100	NA
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	0.01	0.01	ID	1.2	1.2	1.2	13	15	13	15	13	15	13000	5900	1.2	1.2	1.2	NA
1,2-Dibromoethane [3]	mg/kg	NA	0.02	0.02	0.11	0.5	0.67	3.6	1.7	5.8	1.7	5.8	3.3	9.8	14000	18000	0.092	0.43	890	NA
1,2-Dichlorobenzene	mg/kg	NA	14	14	0.28	210	210	210	39000	46000	39000	46000	52000	55000	100000000	44000000	210	210	210	NA
1,2-Dichloroethane	mg/kg	NA	0.1	0.1	7.2	380	2.1	11	6.2	21	11	33	26	74	120000	150000	91	420	1200	NA
1,2-Dichloropropane	mg/kg	NA	0.1	0.1	4.6	320	4	7.4	25	30	50	51	110	120	270000	120000	140	550	550	NA
1,3-Dichlorobenzene	mg/kg	NA	0.17	0.48	0.68	51	26	48	79	94	79	94	110	110	200000	8800	170	170	170	NA
1,4-Dichlorobenzene	mg/kg	NA	1.7	1.7	0.36	140	19	100	77	260	77	260	110	340	450000	570000	400	1900	NA	NA
2-Butanone (MEK)[4]	mg/kg	NA	260	760	44	27000	27000	27000	29000	35000	29000	35000	35000	36000	67000000	29000000	27000	27000	27000	NA
2-Hexanone	mg/kg	NA	20	58	ID	2500	990	1800	1100	1300	1100	1300	1400	1500	2700000	1200000	2500	2500	2500	NA
4-Methyl-2-pentanone (MIBK)[5]	mg/kg	NA	36	100	ID	2700	2700	2700	45000	53000	45000	53000	67000	70000	140000000	60000000	2700	2700	2700	NA
Acetone	mg/kg	NA	15	42	34	110000	110000	110000	130000	160000	130000	160000	190000	200000	390000000	170000000	23000	73000	110000	NA
Benzene	**mg/kg**	**NA**	**0.1**	**0.1**	**4**	**220**	**1.6**	**8.4**	**13**	**45**	**34**	**99**	**79**	**230**	**380000**	**470000**	**180**	**400**	**400**	**NA**
Bromodichloromethane	mg/kg	NA	1.6	1.6	ID	280	1.2	6.4	9.1	31	9.7	31	19	57	84000	110000	110	490	1500	NA
Bromoform	mg/kg	NA	1.6	1.6	ID	870	150	770	900	3100	900	3100	900	3100	2800000	3600000	820	870	870	NA
Bromomethane (Methyl bromide)	mg/kg	NA	0.2	0.58	0.7	1400	0.86	1.6	11	13	57	57	140	140	330000	150000	320	1000	2200	NA
Carbon disulfide	mg/kg	NA	16	46	ID	280	76	140	1300	1600	7900	8000	19000	19000	47000000	21000000	280	280	280	NA
Carbon tetrachloride	mg/kg	NA	0.1	0.1	0.9	92	0.19	0.99	3.5	12	12	34	28	79	130000	170000	96	390	390	NA
Chlorobenzene	mg/kg	NA	2	2	0.5	260	120	220	770	920	990	1100	2100	2100	4700000	2100000	260	260	260	NA
Chloroethane	mg/kg	NA	8.6	34	22	950	950	950	30000	36000	120000	120000	280000	280000	670000000	290000000	950	950	950	NA
Chloroform (Trichloromethane)	mg/kg	NA	1.6	1.6	7	1500	7.2	38	45	150	120	340	270	790	1300000	1600000	1200	1500	1500	NA
Chloromethane (Methyl chloride)	mg/kg	NA	5.2	22	ID	1100	2.3	10	40	120	410	1000	1000	2500	4900000	2600000	1100	1100	1100	NA
cis-1,2-Dichloroethene	mg/kg	NA	1.4	1.4	12	640	22	41	180	210	420	430	990	1000	2300000	1000000	640	640	640	NA
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	mg/kg	NA	1.6	1.6	ID	360	3.9	21	24	80	24	80	33	98	130000	160000	110	500	610	NA
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	95	270	ID	1000	900	1700	53000	63000	550000	550000	1400000	1400000	3300000000	1500000000	1000	1000	1000	NA
Ethylbenzene	mg/kg	NA	1.5	1.5	0.36	140	87	140	720	2400	1000	3100	2200	6500	10000000	13000000	140	140	140	NA
Isopropyl benzene	mg/kg	NA	91	260	3.2	390	390	390	1700	2000	1700	2000	2800	3000	5800000	2600000	390	390	390	NA
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butyl ether (MTBE)	mg/kg	NA	0.8	0.8	140	5900	5900	5900	25000	30000	39000	41000	87000	89000	200000000	88000000	1500	5900	5900	NA
Methylene chloride	mg/kg	NA	0.1	0.1	30	2300	45	240	210	700	590	1700	1400	4000	6600000	8300000	1300	2300	2300	NA
Styrene	mg/kg	NA	2.7	2.7	2.1	270	250	520	970	3300	970	3300	1400	4200	5500000	6900000	400	520	520	NA
Tetrachloroethene	mg/kg	NA	0.1	0.1	1.2	88	11	60	180	600	480	1400	1100	3300	5400000	6800000	88	88	88	NA
Toluene	mg/kg	NA	16	16	5.4	250	250	250	2800	3300	5100	36000	12000	36000	27000000	12000000	250	250	250	NA
trans-1,2-Dichloroethene	mg/kg	NA	2	2	30	1400	23	43	280	330	830	840	2000	2000	4700000	2100000	1400	1400	1400	NA
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	mg/kg	NA	0.1	0.1	4	440	7.1	37	78	260	170	440	390	1100	1800000	2300000	500	500	500	NA
Trichlorofluoromethane (CFC-11)	mg/kg	NA	52	150	NA	560	560	560	92000	110000	630000	140000000	1500000	140000000	3800000000	1700000000	560	560	560	NA
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	550	550	1.7	550	550	550	180000	210000	880000	890000	2100000	2100000	5100000000	2300000000	550	550	550	NA
Vinyl chloride	mg/kg	NA	0.04	0.04	0.26	20	0.27	2.8	4.2	29	30	170	73	420	350000	890000	3.8	34	490	NA
Xylenes (total)	mg/kg	NA	5.6	5.6	0.82	150	150	150	46000	54000	61000	65000	130000	130000	290000000	130000000	150	150	150	NA
General Chemistry																				
Chloride	mg/kg	NA	5000	5000	ID	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	500	500	NA	NA

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FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location																			
							Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria [1]												
Sample Identification		Statewide	Residential	Non-Residential	Groundwater	Groundwater	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Soil Saturation	Toxic
Sample Date		Default	Drinking Water	Drinking Water	Surface Water	Contact	Soil Volatilization	Soil Volatilization	Infinite Source	Infinite Source	Finite VSIC for	Finite VSIC for	Finite VSIC for	Finite VSIC for	Particulate	Particulate	Direct	Direct	Concentration	Substances
Sample Depth		Background	Protection	Protection	Interface Protection [6]	Protection	to Indoor Air	to Indoor Air	Volatile Soil	Volatile Soil	5 Meter Source	5 Meter Source	2 Meter Source	2 Meter Source	Soil Inhalation	Soil Inhalation	Contact	Contact	Screening	Control Act [2]
Area of Interest							Inhalation	Inhalation	Inhalation	Inhalation	Thickness	Thickness	Thickness	Thickness						
Sample Type																				
	Units	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s

Notes:

[1] Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.

[2] Toxic Substances Control Act (TSCA) Criterion for bulk PCB remediation waste in High Occupancy Areas (40 CFR 761.61(a)(4)(i))

[3] 1,2-Dibromoethane also known as Ethylene dibromide

[4] 2-Butanone also known as Methyl ethyl ketone (MEK)

[5] 4-Methyl-2-pentanone also known as Methyl isobutyl ketone (MIBK)

[6] Carbonate Hardness of 150 mg/L was used to calculate Groundwater Surface Water Interface Protection Criteria.

-- Parameter was not analyzed.

U - Not present at or above the associated value.

J - Estimated concentration.

UJ - Estimated reporting limit.

R - Rejected.

ID - Insufficient data to develop criterion.

NA - A criterion or value is not available or, in the case of background and CAS numbers, not applicable.

NLL - Hazardous substance is not likely to leach under most soil conditions.

NLV - Hazardous substance is not likely to volatilize under most conditions.

Exceeds Generic Cleanup Criteria.

Superscript letter notes the criterion exceeded.

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STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HA144-11*	*HA144-11*	*SB130-11*	*SB130-11*	*SB131-11*	*SB131-11*	*SB132-11*	*SB132-11*	*SB133-11*	*SB133-11*	*SB134-11*	*SB134-11*	*SB135-11*	*SB135-11*
Sample Identification		*S-17360-100311-EM-157*	*S-17360-100311-EM-158*	*S-17360-092711-EM-036*	*S-17360-092711-EM-037*	*S-17360-092711-EM-034*	*S-17360-092711-EM-035*	*S-17360-092711-EM-032*	*S-17360-092711-EM-033*	*S-17360-092611-EM-005*	*S-17360-092611-EM-006*	*S-17360-092611-EM-003*	*S-17360-092611-EM-004*	*S-17360-092611-EM-007*	*S-17360-092611-EM-008*
Sample Date		*10/3/2011*	*10/3/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/26/2011*	*9/26/2011*	*9/26/2011*	*9/26/2011*	*9/26/2011*	*9/26/2011*
Sample Depth		*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(10-12) ft BGS*	*(0.5-2.5) ft BGS*	*(17-19) ft BGS*	*(0.5-2.5) ft BGS*	*(17-19) ft BGS*	*(0.5-2.5) ft BGS*	*(17-19) ft BGS*
Area of Interest		*AOI 25*	*AOI 25*	*AOI 4.2*	*AOI 4.2*	*AOI 4.2*	*AOI 4.2*	*AOI 4.2*	*AOI 4.2*	*AOI 8.6*	*AOI 8.6*	*AOI 8.6*	*AOI 8.6*	*AOI 8.6*	*AOI 8.6*
Sample Type															
	Units														
Metals															
Antimony	mg/kg	--	--	0.15 UJ	0.17 UJ	0.16 UJ	0.15 UJ	0.16 UJ	0.17 UJ	0.15 UJ	0.17 UJ	0.16 UJ	0.13 UJ	0.14 UJ	0.14 UJ
Arsenic	mg/kg	--	--	1.1	1.4	1.4	0.83	1.2	1.1	1.4	1.4	1.0	1.1	1.3	1.7
Barium	mg/kg	--	--	11	11	3.8	4.1	6.7	6.8	16	4.2	20	3.5	18	5.7
Beryllium	mg/kg	--	--	0.13 J	0.17	0.12 J	0.062 J	0.13 J	0.15 J	0.17	0.072 J	0.15 J	0.085 J	0.15	0.13 J
Cadmium	mg/kg	--	--	0.075 U	0.084 U	0.078 U	0.074 U	0.079 U	0.087 U	0.076 U	0.083 U	0.080 U	0.064 U	0.82	0.068 U
Chromium	mg/kg	--	--	3.3	7.9	3.8	3.0	4.5	7.1	5.0	3.2	4.2	3.4	4.9	7.2
Cobalt	mg/kg	--	--	1.4	2.2	2.1	1.7	2.2	4.0	2.1	1.6	1.7	1.6	2.1	3.0
Copper	mg/kg	--	--	2.1	5.2	3.2	2.2	3.7	6.0	2.8	3.8	3.3	3.7	52	5.4
Lead	mg/kg	--	--	2.4	2.4	1.9	0.98	1.6	2.6	3.8	1.4	4.9	1.1	6.6	2.3
Manganese	mg/kg	--	--	72	35	97	100	82	53	110	110	110	130	89	150
Mercury	mg/kg	--	--	0.041 U	0.040	0.031 U	0.031 U	0.039 U	0.036 U	0.040 U	0.037 U	0.040 U	0.038 U	0.063	0.033 U
Nickel	mg/kg	--	--	2.9	5.6	3.7	3.1	5.0	8.5	4.3	3.2	3.6	3.6	4.8	6.3
Selenium	mg/kg	--	--	0.20 J	0.21 J	0.27 J	0.092 J	0.23 J	0.39 J	0.17 J	0.13 J	0.17 J	0.18 J	0.13 J	0.13 J
Silver	mg/kg	--	--	0.075 U	0.084 U	0.078 U	0.074 U	0.079 U	0.087 U	0.076 U	0.083 U	0.080 U	0.064 U	0.021 J	0.068 U
Sodium	mg/kg	--	--	75 U	84 U	78 U	74 U	79 U	87 U	76 U	100	80 U	72	71 U	68 U
Thallium	mg/kg	--	--	0.075 U	0.084 U	0.078 U	0.074 U	0.19 U	0.087 U	0.083 U	0.083 U	0.22 U	0.080 U	0.071 U	0.068 U
Vanadium	mg/kg	--	--	6.4	9.3	6.5	3.5	6.7	13	8.9	4.9	7.3	4.7	7.6	7.7
Zinc	mg/kg	--	--	7.7	9.9	6.8	4.9	7.0	13	10	6.3	9.7	7.2	120	10
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	--	--	--	--	--	--	--	--	0.034 U	0.034 U	0.035 U	0.034 U	0.035 U	0.034 U
Aroclor-1221 (PCB-1221)	mg/kg	--	--	--	--	--	--	--	--	0.034 U	0.034 U	0.035 U	0.034 U	0.035 U	0.034 U
Aroclor-1232 (PCB-1232)	mg/kg	--	--	--	--	--	--	--	--	0.034 U	0.034 U	0.035 U	0.034 U	0.035 U	0.034 U
Aroclor-1242 (PCB-1242)	mg/kg	--	--	--	--	--	--	--	--	0.034 U	0.034 U	0.035 U	0.034 U	0.035 U	0.034 U
Aroclor-1248 (PCB-1248)	mg/kg	--	--	--	--	--	--	--	--	0.034 U	0.034 U	0.035 U	0.034 U	0.035 U	0.034 U
Aroclor-1254 (PCB-1254)	mg/kg	--	--	--	--	--	--	--	--	0.034 U	0.034 U	0.035 U	0.034 U	0.035 U	0.034 U
Aroclor-1260 (PCB-1260)	mg/kg	--	--	--	--	--	--	--	--	0.034 U	0.034 U	0.035 U	0.034 U	0.041	0.034 U
Total PCBs	mg/kg	--	--	--	--	--	--	--	--	ND	ND	ND	ND	0.041	ND
Semi-Volatile Organic Compounds															
2-Methylnaphthalene	mg/kg	--	--	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.28 U	0.27 U	0.04 J	0.27 U	5.5 U	0.27 U
Acenaphthene	mg/kg	--	--	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.28 U	0.27 U	0.067 J	0.27 U	5.5 U	0.27 U
Acenaphthylene	mg/kg	--	--	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.28 U	0.27 U	1.4 U	0.27 U	5.5 U	0.27 U
Anthracene	mg/kg	--	--	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.011 J	0.27 U	0.16 J	0.27 U	5.5 U	0.27 U
Benzo(a)anthracene	mg/kg	--	--	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.054 J	0.27 U	0.6 J	0.27 U	5.5 U	0.27 U
Benzo(a)pyrene	mg/kg	--	--	0.0074 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.046 J	0.27 U	0.45 J	0.27 U	5.5 U	0.27 U
Benzo(b)fluoranthene	mg/kg	--	--	0.0092 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.06 J	0.27 U	0.62 J	0.27 U	5.5 U	0.27 U
Benzo(g,h,i)perylene	mg/kg	--	--	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.03 J	0.27 U	0.29 J	0.27 U	0.2 J	0.27 U
Benzo(k)fluoranthene	mg/kg	--	--	0.0057 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.029 J	0.27 U	0.37 J	0.27 U	5.5 U	0.27 U
Chrysene	mg/kg	--	--	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.063 J	0.27 U	0.63 J	0.27 U	5.5 U	0.27 U
Dibenz(a,h)anthracene	mg/kg	--	--	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.28 U	0.27 U	1.4 U	0.27 U	5.5 U	0.27 U
Fluoranthene	mg/kg	--	--	0.014 J	0.28 U	0.0039 J	0.27 U	0.27 U	0.29 U	0.12 J	0.27 U	1.2 J	0.27 U	0.083 J	0.27 U
Fluorene	mg/kg	--	--	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.0052 J	0.27 U	0.079 J	0.27 U	5.5 U	0.27 U
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	0.0049 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.026 J	0.27 U	0.23 J	0.27 U	5.5 U	0.27 U
Naphthalene	mg/kg	--	--	0.27 U	0.28 U	0.0039 J	0.27 U	0.27 U	0.29 U	0.0041 J	0.27 U	0.031 J	0.0061 J	5.5 U	0.27 U
Phenanthrene	mg/kg	--	--	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.07 J	0.27 U	0.98 J	0.27 U	5.5 U	0.27 U
Pyrene	mg/kg	--	--	0.011 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.088 J	0.27 U	0.93 J	0.27 U	0.076 J	0.27 U

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*HA144-11*	*HA144-11*	*SB130-11*	*SB130-11*	*SB131-11*	*SB131-11*	*SB132-11*	*SB132-11*	*SB133-11*	*SB133-11*	*SB134-11*	*SB134-11*	*SB135-11*	*SB135-11*
Sample Identification		*S-17360-100311-EM-157*	*S-17360-100311-EM-158*	*S-17360-092711-EM-036*	*S-17360-092711-EM-037*	*S-17360-092711-EM-034*	*S-17360-092711-EM-035*	*S-17360-092711-EM-032*	*S-17360-092711-EM-033*	*S-17360-092611-EM-005*	*S-17360-092611-EM-006*	*S-17360-092611-EM-003*	*S-17360-092611-EM-004*	*S-17360-092611-EM-007*	*S-17360-092611-EM-008*
Sample Date		*10/3/2011*	*10/3/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/26/2011*	*9/26/2011*	*9/26/2011*	*9/26/2011*	*9/26/2011*	*9/26/2011*
Sample Depth		*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(10-12) ft BGS*	*(0.5-2.5) ft BGS*	*(17-19) ft BGS*	*(0.5-2.5) ft BGS*	*(17-19) ft BGS*	*(0.5-2.5) ft BGS*	*(17-19) ft BGS*
Area of Interest		*AOI 25*	*AOI 25*	*AOI 4.2*	*AOI 4.2*	*AOI 4.2*	*AOI 4.2*	*AOI 4.2*	*AOI 4.2*	*AOI 8.6*	*AOI 8.6*	*AOI 8.6*	*AOI 8.6*	*AOI 8.6*	*AOI 8.6*
Sample Type															
	Units														
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
1,1,2,2-Tetrachloroethane	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
1,1,2-Trichloroethane	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
1,1-Dichloroethane	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
1,1-Dichloroethene	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
1,2,4-Trichlorobenzene	mg/kg	0.24 U	0.27 U	0.2 U	0.21 U	0.21 U	0.23 U	0.21 U	0.0096 J	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.24 U	0.27 U	0.2 U	0.21 U	0.21 U	0.23 U	0.21 U	0.24 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U
1,2-Dibromoethane [3]	mg/kg	0.24 U	0.27 U	0.2 U	0.21 U	0.21 U	0.23 U	0.21 U	0.24 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U
1,2-Dichlorobenzene	mg/kg	0.095 U	0.11 U	0.082 U	0.085 U	0.086 U	0.091 U	0.083 U	0.097 U	0.083 U	0.083 U	0.09 U	0.084 U	0.086 U	0.078 U
1,2-Dichloroethane	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
1,2-Dichloropropane	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
1,3-Dichlorobenzene	mg/kg	0.095 U	0.11 U	0.082 U	0.085 U	0.086 U	0.091 U	0.083 U	0.097 U	0.083 U	0.083 U	0.09 U	0.084 U	0.086 U	0.078 U
1,4-Dichlorobenzene	mg/kg	0.095 U	0.11 U	0.082 U	0.085 U	0.086 U	0.091 U	0.083 U	0.097 U	0.083 U	0.083 U	0.09 U	0.084 U	0.086 U	0.078 U
2-Butanone (MEK) [4]	mg/kg	R	0.8 UJ	R	0.049 J	0.07 J	0.061 J	R	R	0.047 J	R	R	R	0.049 J	R
2-Hexanone	mg/kg	2.4 U	2.7 U	2 UJ	2.1 UJ	2.1 UJ	2.3 UJ	2.1 UJ	2.4 UJ	2.1 UJ	2.1 UJ	2.2 UJ	2.1 UJ	2.1 UJ	2 UJ
4-Methyl-2-pentanone (MIBK) [5]	mg/kg	2.4 U	2.7 U	2 UJ	2.1 UJ	2.1 UJ	2.3 UJ	2.1 UJ	2.4 UJ	2.1 UJ	2.1 UJ	2.2 UJ	2.1 UJ	2.1 UJ	2 UJ
Acetone	mg/kg	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Benzene	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
Bromodichloromethane	mg/kg	0.095 U	0.11 U	0.082 U	0.085 U	0.086 U	0.091 U	0.083 U	0.097 U	0.083 U	0.083 U	0.09 U	0.084 U	0.086 U	0.078 U
Bromoform	mg/kg	0.095 UJ	0.11 UJ	0.082 U	0.085 U	0.086 U	0.091 U	0.083 U	0.097 U	0.083 U	0.083 U	0.09 U	0.084 U	0.086 U	0.078 U
Bromomethane (Methyl bromide)	mg/kg	0.24 U	0.27 U	0.2 U	0.21 U	0.21 U	0.23 U	R	0.24 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U
Carbon disulfide	mg/kg	0.24 U	0.27 U	0.2 U	0.21 U	0.21 U	0.23 U	0.21 U	0.24 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U
Carbon tetrachloride	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
Chlorobenzene	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
Chloroethane	mg/kg	0.24 U	0.27 U	0.2 U	0.21 U	0.21 U	0.23 U	0.21 U	0.24 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U
Chloroform (Trichloromethane)	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
Chloromethane (Methyl chloride)	mg/kg	0.24 UJ	0.27 UJ	0.2 U	0.21 U	0.21 U	0.23 U	0.21 U	0.24 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U
cis-1,2-Dichloroethene	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
cis-1,3-Dichloropropene	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
Cyclohexane	mg/kg	1.1 U	1.3 U	0.98 U	1 U	1 U	1.1 U	1 U	1.2 U	1 U	0.99 U	1.1 U	1 U	1 U	0.94 U
Dibromochloromethane	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.095 U	0.11 U	0.082 UJ	0.085 UJ	0.086 UJ	0.091 UJ	0.083 UJ	0.097 UJ	0.083 UJ	0.083 UJ	0.09 UJ	0.084 UJ	0.086 UJ	0.078 UJ
Ethylbenzene	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
Isopropyl benzene	mg/kg	0.24 U	0.27 U	0.2 U	0.21 U	0.21 U	0.23 U	0.21 U	0.24 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U
Methyl acetate	mg/kg	1.1 U	1.3 U	0.98 U	1 U	1 U	1.1 U	1 U	1.2 U	1 U	0.99 U	1.1 U	1 U	1 U	0.94 U
Methyl cyclohexane	mg/kg	1.1 U	1.3 U	0.98 U	1 U	1 U	1.1 U	1 U	1.2 U	1 U	0.99 U	1.1 U	1 U	0.016 J	0.94 U
Methyl tert butyl ether (MTBE)	mg/kg	0.24 U	0.27 U	0.2 U	0.21 U	0.21 U	0.23 U	0.21 U	0.24 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U
Methylene chloride	mg/kg	0.24 U	0.27 U	0.2 U	0.21 U	0.21 U	0.23 U	0.21 U	0.24 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U
Styrene	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
Tetrachloroethene	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
Toluene	mg/kg	0.095 U	0.11 U	0.082 U	0.085 U	0.086 U	0.091 U	0.083 U	0.097 U	0.083 U	0.083 U	0.09 U	0.084 U	0.086 U	0.078 U
trans-1,2-Dichloroethene	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
trans-1,3-Dichloropropene	mg/kg	0.047 U	0.053 U	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
Trichloroethene	mg/kg	**0.6** [bc]	**0.32** [bc]	0.041 U	0.043 U	0.043 U	0.046 U	0.042 U	0.049 U	0.042 U	0.041 U	0.045 U	0.042 U	0.043 U	0.039 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.095 U	0.11 U	0.082 U	0.085 U	0.086 U	0.091 U	0.083 U	0.097 U	0.083 U	0.083 U	0.09 U	0.084 U	0.086 U	0.078 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.24 U	0.27 U	0.2 U	0.21 U	0.21 U	0.23 U	0.21 U	0.24 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.2 U
Vinyl chloride	mg/kg	0.038 U	0.043 U	0.033 U	0.034 U	0.034 U	0.036 U	0.033 U	0.039 U	0.033 U	0.033 U	0.036 U	0.034 U	0.034 U	0.031 U
Xylenes (total)	mg/kg	0.14 U	0.16 U	0.12 U	0.13 U	0.13 U	0.14 U	0.13 U	0.15 U	0.12 U	0.12 U	0.13 U	0.13 U	0.13 U	0.12 U
General Chemistry															
Chloride	mg/kg	--	--	10 U	3.6 J	10 U	10 U	10 U	10 U	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB136-11*	*SB136-11*	*SB137-11*	*SB137-11*	*SB138-11*	*SB138-11*	*SB139-11*	*SB139-11*	*SB140-11*	*SB140-11*	*SB140-11*	*SB142-11*	*SB142-11*	*SB142-11*
Sample Identification		*S-17360-092611-EM-001*	*S-17360-092611-EM-002*	*S-17360-092911-EM-069*	*S-17360-092911-EM-070*	*S-17360-092811-EM-065*	*S-17360-092811-EM-066*	*S-17360-092811-EM-067*	*S-17360-092811-EM-068*	*S-17360-092811-EM-062*	*S-17360-092811-EM-063*	*S-17360-092811-EM-064*	*S-17360-092911-EM-106*	*S-17360-092911-EM-107*	*S-17360-092911-EM-108*
Sample Date		*9/26/2011*	*9/26/2011*	*9/29/2011*	*9/29/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*
Sample Depth		*(0.5-2.5) ft BGS*	*(15-17) ft BGS*	*(0.7-2.7) ft BGS*	*(16-18) ft BGS*	*(2-4) ft BGS*	*(16-18) ft BGS*	*(1.5-3.5) ft BGS*	*(16-18) ft BGS*	*(2-4) ft BGS*	*(2-4) ft BGS*	*(16-18) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*
Area of Interest		*AOI 10.1*	*AOI 10.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 25*	*AOI 25*	*AOI 25*
Sample Type											*Duplicate*			*Duplicate*	
	Units														
Metals															
Antimony	mg/kg	--	--	0.15 U	0.15 U	0.14 U	0.16 U	0.15 U	0.17 U	0.16 U	0.15 U	0.17 U	--	--	--
Arsenic	mg/kg	--	--	1.2	1.1	1.6	1.6	2.8	1.6	2.9	1.6	1.5	--	--	--
Barium	mg/kg	--	--	30	3.1	25	4.2	43	5.6	22	21	5.3	--	--	--
Beryllium	mg/kg	--	--	0.15	0.15 U	0.16	0.16 U	0.20	0.063 J	0.16	0.20	0.064 J	--	--	--
Cadmium	mg/kg	--	--	0.048 J	0.075 U	0.040 J	0.079 U	0.11	0.087 U	0.087	0.076 U	0.039 J	--	--	--
Chromium	mg/kg	--	--	5.7	2.2	6.1	2.7	5.8	4.2	8.4	9.9	2.7	--	--	--
Cobalt	mg/kg	--	--	2.2	0.92	2.3	1.2	2.6	1.4	3.2	3.6	1.7	--	--	--
Copper	mg/kg	--	--	3.7	1.6	3.4	2.6	9.5	3.9	7.0	5.7	6.5	--	--	--
Lead	mg/kg	--	--	13	0.90	6.9	1.4	17	1.6	6.7	3.6	1.5	--	--	--
Manganese	mg/kg	--	--	170	53	110	73	210	87	210	150	74	--	--	--
Mercury	mg/kg	--	--	0.035 U	0.038 U	0.024 J	0.031 U	0.019 J	0.032 U	0.016 J	0.036 U	0.036 U	--	--	--
Nickel	mg/kg	--	--	4.3	2.1	4.7	2.7	5.7	3.3	6.6	7.8	2.8	--	--	--
Selenium	mg/kg	--	--	0.18 J	0.097 J	0.16 J	0.12 J	0.27 J	0.14 J	0.26 J	0.25 J	0.17 J	--	--	--
Silver	mg/kg	--	--	0.073 U	0.075 U	0.069 U	0.079 U	0.019 J	0.087 U	0.082 U	0.076 U	0.084 U	--	--	--
Sodium	mg/kg	85	76 U	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	mg/kg	--	--	0.073 U	0.075 U	0.072 U	0.079 U	0.091 U	0.087 U	0.098 U	0.076 U	0.084 U	--	--	--
Vanadium	mg/kg	--	--	8.9	3.4	8.2	3.9	8.0	4.8	10	14	4.4	--	--	--
Zinc	mg/kg	--	--	13	4.7	10	5.6	17	8.0	24	14	7.0	--	--	--
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	--	--	0.035 U	0.034 U	0.034 U	0.034 U	0.035 UJ	0.037 U	0.035 U	0.035 U	0.036 U	--	--	--
Aroclor-1221 (PCB-1221)	mg/kg	--	--	0.035 U	0.034 U	0.034 U	0.034 U	0.035 UJ	0.037 U	0.035 U	0.035 U	0.036 U	--	--	--
Aroclor-1232 (PCB-1232)	mg/kg	--	--	0.035 U	0.034 U	0.034 U	0.034 U	0.035 UJ	0.037 U	0.035 U	0.035 U	0.036 U	--	--	--
Aroclor-1242 (PCB-1242)	mg/kg	--	--	0.035 U	0.034 U	0.034 U	0.034 U	0.035 UJ	0.037 U	0.035 U	0.035 U	0.036 U	--	--	--
Aroclor-1248 (PCB-1248)	mg/kg	--	--	0.035 U	0.034 U	0.034 U	0.034 U	0.035 UJ	0.037 U	0.035 U	0.035 U	0.036 U	--	--	--
Aroclor-1254 (PCB-1254)	mg/kg	--	--	0.035 U	0.034 U	0.034 U	0.034 U	0.035 UJ	0.037 U	0.035 U	0.035 U	0.036 U	--	--	--
Aroclor-1260 (PCB-1260)	mg/kg	--	--	0.035 U	0.034 U	0.1	0.034 U	0.035 UJ	0.037 U	0.035 U	0.035 U	0.036 U	--	--	--
Total PCBs	mg/kg	--	--	ND	ND	0.1	ND	0 UJ	ND	ND	ND	ND	--	--	--
Semi-Volatile Organic Compounds															
2-Methylnaphthalene	mg/kg	--	--	0.36	0.27 U	0.0042 J	0.27 U	0.12 J	0.12 J	0.048 J	0.28 U	0.29 U	--	--	--
Acenaphthene	mg/kg	--	--	0.0063 J	0.27 U	0.27 U	0.27 U	0.008 J	0.16 J	0.28 U	0.28 U	0.29 U	--	--	--
Acenaphthylene	mg/kg	--	--	0.28 U	0.27 U	0.27 U	0.27 U	0.0053 J	4.5 U	0.0047 J	0.28 U	0.29 U	--	--	--
Anthracene	mg/kg	--	--	0.0051 J	0.27 U	0.27 U	0.27 U	0.018 J	0.3 J	0.011 J	0.28 U	0.29 U	--	--	--
Benzo(a)anthracene	mg/kg	--	--	0.023 J	0.0044 J	0.27 U	0.27 U	0.064 J	0.41 J	0.075 J	0.28 U	0.29 U	--	--	--
Benzo(a)pyrene	mg/kg	--	--	0.015 J	0.27 U	0.27 U	0.27 U	0.055 J	0.27 J	0.06 J	0.28 U	0.29 U	--	--	--
Benzo(b)fluoranthene	mg/kg	--	--	0.021 J	0.0047 J	0.27 U	0.27 U	0.11 J	0.41 J	0.11 J	0.0041 J	0.29 U	--	--	--
Benzo(g,h,i)perylene	mg/kg	--	--	0.0097 J	0.27 U	0.27 U	0.27 U	0.059 J	0.19 J	0.049 J	0.28 U	0.29 U	--	--	--
Benzo(k)fluoranthene	mg/kg	--	--	0.012 J	0.27 U	0.27 U	0.27 U	0.041 J	0.14 J	0.032 J	0.28 U	0.29 U	--	--	--
Chrysene	mg/kg	--	--	0.029 J	0.0049 J	0.27 U	0.27 U	0.098 J	0.38 J	0.089 J	0.28 U	0.29 U	--	--	--
Dibenz(a,h)anthracene	mg/kg	--	--	0.28 U	0.27 U	0.27 U	0.27 U	0.014 J	4.5 U	0.013 J	0.28 U	0.29 U	--	--	--
Fluoranthene	mg/kg	--	--	0.033 J	0.01 J	0.0034 J	0.27 U	0.16 J	1 J	0.14 J	0.0056 J	0.29 U	--	--	--
Fluorene	mg/kg	--	--	0.0051 J	0.27 U	0.27 U	0.27 U	0.0057 J	0.17 J	0.28 U	0.28 U	0.29 U	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	0.0087 J	0.27 U	0.27 U	0.27 U	0.048 J	0.16 J	0.04 J	0.28 U	0.29 U	--	--	--
Naphthalene	mg/kg	--	--	0.28	0.27 U	0.27 U	0.27 U	0.074 J	0.18 J	0.032 J	0.28 U	0.29 U	--	--	--
Phenanthrene	mg/kg	--	--	0.1 J	0.01 J	0.006 J	0.27 U	0.15 J	1.2 J	0.07 J	0.28 U	0.29 U	--	--	--
Pyrene	mg/kg	--	--	0.027 J	0.0073 J	0.27 U	0.27 U	0.1 J	0.73 J	0.11 J	0.005 J	0.29 U	--	--	--

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB136-11*	*SB136-11*	*SB137-11*	*SB137-11*	*SB138-11*	*SB138-11*	*SB139-11*	*SB139-11*	*SB140-11*	*SB140-11*	*SB140-11*	*SB142-11*	*SB142-11*	*SB142-11*
Sample Identification		*S-17360-092611-EM-001*	*S-17360-092611-EM-002*	*S-17360-092911-EM-069*	*S-17360-092911-EM-070*	*S-17360-092811-EM-065*	*S-17360-092811-EM-066*	*S-17360-092811-EM-067*	*S-17360-092811-EM-068*	*S-17360-092811-EM-062*	*S-17360-092811-EM-063*	*S-17360-092811-EM-064*	*S-17360-092911-EM-106*	*S-17360-092911-EM-107*	*S-17360-092911-EM-108*
Sample Date		*9/26/2011*	*9/26/2011*	*9/29/2011*	*9/29/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*
Sample Depth		*(0.5-2.5) ft BGS*	*(15-17) ft BGS*	*(0.7-2.7) ft BGS*	*(16-18) ft BGS*	*(2-4) ft BGS*	*(16-18) ft BGS*	*(1.5-3.5) ft BGS*	*(16-18) ft BGS*	*(2-4) ft BGS*	*(2-4) ft BGS*	*(16-18) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*
Area of Interest		*AOI 10.1*	*AOI 10.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 17.1*	*AOI 25*	*AOI 25*	*AOI 25*
Sample Type											*Duplicate*			*Duplicate*	
	Units														
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
1,1,2,2-Tetrachloroethane	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
1,1,2-Trichloroethane	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
1,1-Dichloroethane	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
1,1-Dichloroethene	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
1,2,4-Trichlorobenzene	mg/kg	--	--	0.24 U	0.23 U	0.21 U	0.24 U	0.23 U	0.26 U	0.2 U	0.23 U	0.24 U	0.23 U	0.23 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	--	--	0.24 U	0.23 U	0.21 U	0.24 U	0.23 U	0.26 U	0.2 U	0.23 U	0.24 U	0.23 U	0.23 U	0.22 U
1,2-Dibromoethane [3]	mg/kg	--	--	0.24 U	0.23 U	0.21 U	0.24 U	0.23 U	0.26 U	0.2 U	0.23 U	0.24 U	0.23 U	0.23 U	0.22 U
1,2-Dichlorobenzene	mg/kg	--	--	0.098 U	0.094 U	0.085 U	0.095 U	0.09 U	0.1 U	0.082 U	0.091 U	0.097 U	0.092 U	0.091 U	0.09 U
1,2-Dichloroethane	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
1,2-Dichloropropane	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
1,3-Dichlorobenzene	mg/kg	--	--	0.098 U	0.094 U	0.085 U	0.095 U	0.09 U	0.1 U	0.082 U	0.091 U	0.097 U	0.092 U	0.091 U	0.09 U
1,4-Dichlorobenzene	mg/kg	--	--	0.098 U	0.094 U	0.085 U	0.095 U	0.09 U	0.1 U	0.082 U	0.091 U	0.097 U	0.092 U	0.091 U	0.09 U
2-Butanone (MEK)[4]	mg/kg	--	--	0.061 J	0.11 J	0.066 J	0.062 J	0.079 J	0.06 J	0.054 J	0.068 J	0.096 J	0.051 J	R	R
2-Hexanone	mg/kg	--	--	2.4 U	2.3 U	2.1 U	2.4 U	2.3 U	2.6 U	2 U	2.3 U	2.4 U	2.3 U	2.3 U	2.2 U
4-Methyl-2-pentanone (MIBK)[5]	mg/kg	--	--	2.4 U	2.3 U	2.1 U	2.4 U	2.3 U	2.6 U	2 U	2.3 U	2.4 U	2.3 U	2.3 U	2.2 U
Acetone	mg/kg	--	--	R	R	R	R	R	R	R	R	R	0.69 UJ	0.68 UJ	0.67 UJ
Benzene	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
Bromodichloromethane	mg/kg	--	--	0.098 U	0.094 U	0.085 U	0.095 U	0.09 U	0.1 U	0.082 U	0.091 U	0.097 U	0.092 U	0.091 U	0.09 U
Bromoform	mg/kg	--	--	0.098 U	0.094 U	0.085 U	0.095 U	0.09 U	0.1 U	0.082 U	0.091 U	0.097 U	0.092 U	0.091 U	0.09 U
Bromomethane (Methyl bromide)	mg/kg	--	--	0.24 U	0.23 U	0.21 U	0.24 U	0.23 U	0.26 U	0.2 U	0.23 U	0.24 U	0.23 U	0.23 U	0.22 U
Carbon disulfide	mg/kg	--	--	0.24 U	0.23 U	0.21 U	0.24 U	0.23 U	0.26 U	0.2 U	0.23 U	0.24 U	0.23 U	0.23 U	0.22 U
Carbon tetrachloride	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
Chlorobenzene	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
Chloroethane	mg/kg	--	--	0.24 U	0.23 U	0.21 U	0.24 U	0.23 U	0.26 U	0.2 U	0.23 U	0.24 U	0.23 U	0.23 U	0.22 U
Chloroform (Trichloromethane)	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
Chloromethane (Methyl chloride)	mg/kg	--	--	0.24 U	0.23 U	0.21 U	0.24 U	0.23 U	0.26 U	0.2 U	0.23 U	0.24 U	0.23 U	0.23 U	0.22 U
cis-1,2-Dichloroethene	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
cis-1,3-Dichloropropene	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
Cyclohexane	mg/kg	--	--	1.2 U	1.1 U	1 U	1.1 U	1.1 U	1.2 U	0.98 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U
Dibromochloromethane	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
Dichlorodifluoromethane (CFC-12)	mg/kg	--	--	0.098 U	0.094 U	0.085 U	0.095 U	0.09 U	0.1 U	0.082 U	0.091 U	0.097 U	0.092 U	0.091 U	0.09 U
Ethylbenzene	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
Isopropyl benzene	mg/kg	--	--	0.24 U	0.23 U	0.21 U	0.24 U	0.0091 J	0.26 U	0.2 U	0.23 U	0.24 U	0.23 U	0.23 U	0.22 U
Methyl acetate	mg/kg	--	--	1.2 U	1.1 U	1 U	1.1 U	1.1 U	1.2 U	0.98 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U
Methyl cyclohexane	mg/kg	--	--	0.076 J	1.1 U	0.019 J	1.1 U	0.086 J	1.2 U	0.98 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U
Methyl tert butyl ether (MTBE)	mg/kg	--	--	0.24 U	0.23 U	0.21 U	0.24 U	0.23 U	0.26 U	0.2 U	0.23 U	0.24 U	0.23 U	0.23 U	0.22 U
Methylene chloride	mg/kg	--	--	0.24 U	0.23 U	0.21 U	0.24 U	0.23 U	0.26 U	0.2 U	0.23 U	0.24 U	0.23 U	0.23 U	0.22 U
Styrene	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
Tetrachloroethene	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
Toluene	mg/kg	--	--	0.035 J	0.094 U	0.085 U	0.095 U	0.03 J	0.1 U	0.082 U	0.091 U	0.097 U	0.092 U	0.091 U	0.09 U
trans-1,2-Dichloroethene	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
trans-1,3-Dichloropropene	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	0.046 U	0.045 U	0.045 U
Trichloroethene	mg/kg	--	--	0.049 U	0.047 U	0.043 U	0.047 U	0.045 U	0.051 U	0.041 U	0.046 U	0.049 U	**0.15** [bc]	0.074	0.045 U
Trichlorofluoromethane (CFC-11)	mg/kg	--	--	0.098 U	0.094 U	0.085 U	0.095 U	0.09 U	0.1 U	0.082 U	0.091 U	0.097 U	0.092 UJ	0.091 UJ	0.09 UJ
Trifluorotrichloroethane (Freon 113)	mg/kg	--	--	0.24 U	0.23 U	0.21 U	0.24 U	0.23 U	0.26 U	0.2 U	0.23 U	0.24 U	0.23 U	0.23 U	0.22 U
Vinyl chloride	mg/kg	--	--	0.039 U	0.038 U	0.034 U	0.038 U	0.036 U	0.041 U	0.033 U	0.036 U	0.039 U	0.037 U	0.036 U	0.036 U
Xylenes (total)	mg/kg	--	--	0.068 J	0.14 U	0.13 U	0.14 U	0.069 J	0.15 U	0.12 U	0.14 U	0.15 U	0.14 U	0.14 U	0.13 U
General Chemistry															
Chloride	mg/kg	18	23	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB142-11*	*SB142-11*	*SB142-11*	*SB142-11*	*SB142-11*	*SB142-11*	*SB142-11*	*SB143-11*	*SB143-11*	*SB143-11*	*SB143-11*	*SB143-11*	*SB143-11*	*SB143-11*
Sample Identification		*S-17360-092911-EM-109*	*S-17360-092911-EM-110*	*S-17360-092911-EM-111*	*S-17360-092911-EM-112*	*S-17360-092911-EM-113*	*S-17360-092911-EM-114*	*S-17360-092911-EM-115*	*S-17360-092911-EM-097*	*S-17360-092911-EM-098*	*S-17360-092911-EM-099*	*S-17360-092911-EM-100*	*S-17360-092911-EM-101*	*S-17360-092911-EM-102*	*S-17360-092911-EM-103*
Sample Date		*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*
Sample Depth		*(5-7) ft BGS*	*(7-9) ft BGS*	*(9-11) ft BGS*	*(11-13) ft BGS*	*(13-15) ft BGS*	*(15-17) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(5-7) ft BGS*	*(7-9) ft BGS*	*(9-11) ft BGS*	*(11-13) ft BGS*	*(13-15) ft BGS*
Area of Interest		*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	
Sample Type															
	Units														
Metals															
Antimony	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds															
2-Methylnaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB142-11*	*SB142-11*	*SB142-11*	*SB142-11*	*SB142-11*	*SB142-11*	*SB142-11*	*SB143-11*	*SB143-11*	*SB143-11*	*SB143-11*	*SB143-11*	*SB143-11*	*SB143-11*
Sample Identification		*S-17360-092911-EM-109*	*S-17360-092911-EM-110*	*S-17360-092911-EM-111*	*S-17360-092911-EM-112*	*S-17360-092911-EM-113*	*S-17360-092911-EM-114*	*S-17360-092911-EM-115*	*S-17360-092911-EM-097*	*S-17360-092911-EM-098*	*S-17360-092911-EM-099*	*S-17360-092911-EM-100*	*S-17360-092911-EM-101*	*S-17360-092911-EM-102*	*S-17360-092911-EM-103*
Sample Date		*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*
Sample Depth		*(5-7) ft BGS*	*(7-9) ft BGS*	*(9-11) ft BGS*	*(11-13) ft BGS*	*(13-15) ft BGS*	*(15-17) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(5-7) ft BGS*	*(7-9) ft BGS*	*(9-11) ft BGS*	*(11-13) ft BGS*	*(13-15) ft BGS*
Area of Interest		*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	
Sample Type															
	Units														
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
1,1,2,2-Tetrachloroethane	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
1,1,2-Trichloroethane	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
1,1-Dichloroethane	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
1,1-Dichloroethene	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
1,2,4-Trichlorobenzene	mg/kg	0.23 U	0.21 U	0.23 U	0.24 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.24 U	0.02 J
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.23 U	0.21 U	0.23 U	0.24 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.24 U	0.24 U
1,2-Dibromoethane [3]	mg/kg	0.23 U	0.21 U	0.23 U	0.24 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.24 U	0.24 U
1,2-Dichlorobenzene	mg/kg	0.093 U	0.084 U	0.091 U	0.094 U	0.085 U	0.087 U	0.085 U	0.088 U	0.088 U	0.09 U	0.089 U	0.096 U	0.094 U	0.094 U
1,2-Dichloroethane	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
1,2-Dichloropropane	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
1,3-Dichlorobenzene	mg/kg	0.093 U	0.084 U	0.091 U	0.094 U	0.085 U	0.087 U	0.085 U	0.088 U	0.088 U	0.09 U	0.089 U	0.096 U	0.094 U	0.094 U
1,4-Dichlorobenzene	mg/kg	0.093 U	0.084 U	0.091 U	0.094 U	0.085 U	0.087 U	0.085 U	0.088 U	0.088 U	0.09 U	0.089 U	0.096 U	0.094 U	0.094 U
2-Butanone (MEK) [4]	mg/kg	0.052 J	0.054 J	0.086 J	R	R	0.066 J	0.052 J	R	R	R	0.072 J	R	0.051 J	R
2-Hexanone	mg/kg	2.3 U	2.1 U	2.3 U	2.4 U	2.1 U	2.2 U	2.1 U	2.2 U	2.2 U	2.2 U	2.2 U	2.4 U	2.4 U	2.4 U
4-Methyl-2-pentanone (MIBK) [5]	mg/kg	2.3 U	2.1 U	2.3 U	2.4 U	2.1 U	2.2 U	2.1 U	2.2 U	2.2 U	2.2 U	2.2 U	2.4 U	2.4 U	2.4 U
Acetone	mg/kg	0.7 UJ	0.63 UJ	0.68 UJ	0.71 UJ	0.64 UJ	0.65 UJ	0.64 UJ	R	R	R	R	R	R	0.71 UJ
Benzene	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
Bromodichloromethane	mg/kg	0.093 U	0.084 U	0.091 U	0.094 U	0.085 U	0.087 U	0.085 U	0.088 U	0.088 U	0.09 U	0.089 U	0.096 U	0.094 U	0.094 U
Bromoform	mg/kg	0.093 U	0.084 U	0.091 U	0.094 U	0.085 U	0.087 U	0.085 U	0.088 U	0.088 U	0.09 U	0.089 U	0.096 U	0.094 U	0.094 U
Bromomethane (Methyl bromide)	mg/kg	0.23 U	0.21 U	0.23 U	0.24 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.24 U	0.24 U
Carbon disulfide	mg/kg	0.23 U	0.21 U	0.23 U	0.24 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.24 U	0.24 U
Carbon tetrachloride	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
Chlorobenzene	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
Chloroethane	mg/kg	0.23 U	0.21 U	0.23 U	0.24 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.24 U	0.24 U
Chloroform (Trichloromethane)	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
Chloromethane (Methyl chloride)	mg/kg	0.23 U	0.21 U	0.23 U	0.24 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.24 U	0.24 U
cis-1,2-Dichloroethene	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
cis-1,3-Dichloropropene	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
Cyclohexane	mg/kg	1.1 U	1 U	1.1 U	1.1 U	1 U	1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Dibromochloromethane	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.093 U	0.084 U	0.091 U	0.094 U	0.085 U	0.087 U	0.085 U	0.088 U	0.088 U	0.09 U	0.089 U	0.096 U	0.094 U	0.094 U
Ethylbenzene	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
Isopropyl benzene	mg/kg	0.23 U	0.21 U	0.23 U	0.24 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.24 U	0.24 U
Methyl acetate	mg/kg	1.1 U	1 U	1.1 U	1.1 U	1 U	1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Methyl cyclohexane	mg/kg	1.1 U	1 U	1.1 U	1.1 U	1 U	1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.024 J
Methyl tert butyl ether (MTBE)	mg/kg	0.23 U	0.21 U	0.23 U	0.24 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.24 U	0.24 U
Methylene chloride	mg/kg	0.23 U	0.21 U	0.23 U	0.24 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.24 U	0.24 U
Styrene	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
Tetrachloroethene	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
Toluene	mg/kg	0.093 U	0.084 U	0.091 U	0.094 U	0.085 U	0.087 U	0.085 U	0.088 U	0.088 U	0.09 U	0.089 U	0.096 U	0.094 U	0.094 U
trans-1,2-Dichloroethene	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
trans-1,3-Dichloropropene	mg/kg	0.046 U	0.042 U	0.046 U	0.047 U	0.043 U	0.043 U	0.042 U	0.044 U	0.044 U	0.045 U	0.045 U	0.048 U	0.047 U	0.047 U
Trichloroethene	mg/kg	0.011 J	0.028 J	0.022 J	0.034 J	0.064	0.089	0.056	**0.61 [6]**	0.061	0.059	0.045 U	0.048 U	0.047 U	0.078
Trichlorofluoromethane (CFC-11)	mg/kg	0.093 UJ	0.084 UJ	0.091 UJ	0.094 UJ	0.085 UJ	0.087 UJ	0.085 UJ	0.088 U	0.088 U	0.09 U	0.089 U	0.096 U	0.094 U	0.094 UJ
Trifluorotrichloroethane (Freon 113)	mg/kg	0.23 U	0.21 U	0.23 U	0.24 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.24 U	0.24 U
Vinyl chloride	mg/kg	0.037 U	0.034 U	0.036 U	0.038 U	0.034 U	0.035 U	0.034 U	0.035 U	0.035 U	0.036 U	0.036 U	0.038 U	0.038 U	0.038 U
Xylenes (total)	mg/kg	0.14 U	0.13 U	0.14 U	0.14 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.14 U	0.14 U	0.14 U
General Chemistry															
Chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		SB143-11	SB143-11	SB145-11	SB145-11	SB145-11	SB145-11	SB145-11	SB145-11	SB146-11	SB146-11	SB146-11	SB146-11	SB146-11	SB147-11
Sample Identification		S-17360-092911-EM-104	S-17360-092911-EM-105	S-17360-093011-EM-151	S-17360-093011-EM-152	S-17360-093011-EM-153	S-17360-093011-EM-154	S-17360-093011-EM-155	S-17360-093011-EM-156	S-17360-093011-EM-146	S-17360-093011-EM-147	S-17360-093011-EM-148	S-17360-093011-EM-149	S-17360-093011-EM-150	S-17360-093011-EM-141
Sample Date		9/29/2011	9/29/2011	9/30/2011	9/30/2011	9/30/2011	9/30/2011	9/30/2011	9/30/2011	9/30/2011	9/30/2011	9/30/2011	9/30/2011	9/30/2011	9/30/2011
Sample Depth		(15-17) ft BGS	(17-19) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(0-2) ft BGS
Area of Interest		AOI 25	AOI 25	AOI 27	AOI 27	AOI 27	AOI 27	AOI 27	AOI 27	AOI 27	AOI 27	AOI 27	AOI 27	AOI 27	AOI 27
Sample Type					Duplicate										
	Units														
Metals															
Antimony	mg/kg	--	--	0.37 J	0.17 UJ	**81 J[bc]**	0.59 J	0.92 J	0.17 J	0.26 J	0.30 UJ	0.14 UJ	0.38 UJ	0.37 UJ	0.51 J
Arsenic	mg/kg	--	--	**6.1 J[bcd]**	4.5 J	1.9 J	1.7 J	**6.3 J[bcd]**	1.4 J	**14 J[bcdp]**	**7.9 J[bcdp]**	2.5 J	3.5 J	4.8 J	3.8 J
Barium	mg/kg	--	--	46	36	13	11	98	23	41	31	14	39	44	37
Beryllium	mg/kg	--	--	0.39	0.26	0.19	0.14 J	0.48	0.18 J	0.36	0.35	0.14	0.43	0.27 J	0.26
Cadmium	mg/kg	--	--	0.17	0.11	0.044 J	0.085 U	0.55	0.26	0.18	0.053 J	0.033 J	0.54	0.41	2.2
Chromium	mg/kg	--	--	8.4	5.8	18	3.3	9.6	15	4.2	5.8	4.6	9.7	14	13
Cobalt	mg/kg	--	--	3.5	4.1	4.8	1.5	1.7	1.5	2.3	3.7	1.4	1.6	1.8	3.2
Copper	mg/kg	--	--	26 J	15 J	5.1 J	3.7 J	17 J	15	35 J	51 J	24 J	14 J	16 J	**78 J[d]**
Lead	mg/kg	--	--	34 J	8.3 J	130	2.6	18	3.2	11	13	3.9	9.3	5.3	180
Manganese	mg/kg	--	--	67	180	91	66	130	21	18	98	79	57	46	160
Mercury	mg/kg	--	--	0.043	0.045 U	0.036 U	0.036 U	**0.19[d]**	0.058 J	0.042 U	0.040 U	0.038 U	**0.18[d]**	0.083 J	0.019 J
Nickel	mg/kg	--	--	12	7.7	5.1	6.4	9.0	5.5	14	16	3.5	12	5.1	16 J
Selenium	mg/kg	--	--	0.24 J	0.17 J	0.20 J	0.16 J	**3.0 J[d]**	**1.7 J[d]**	**0.75 J[d]**	0.16 J	0.10 J	**3.4 J[d]**	**3.7 J[d]**	0.17 J
Silver	mg/kg	--	--	0.075 U	0.084 U	0.072 U	0.085 U	0.17 U	0.029 J	0.088 U	0.074 U	0.069 U	0.19 U	0.19 U	0.12
Sodium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	mg/kg	--	--	0.14 U	0.18 U	0.072 U	0.085 U	0.18 U	0.34	0.45	0.18 U	0.072 U	0.19 U	0.19 U	0.099 U
Vanadium	mg/kg	--	--	6.9	10	6.4	5.3	30	24	5.2	7.8	5.6	26	21	11
Zinc	mg/kg	--	--	25 J	44 J	15 J	7.9 J	16 J	6.9 J	75 J	14 J	13 J	12 J	11 J	150 J
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	--	--	0.036 U	0.037 U	0.035 U	0.036 U	0.08 U	0.048 U	0.037 U	0.036 U	0.035 U	0.081 U	0.077 U	0.18 U
Aroclor-1221 (PCB-1221)	mg/kg	--	--	0.036 U	0.037 U	0.035 U	0.036 U	0.08 U	0.048 U	0.037 U	0.036 U	0.035 U	0.081 U	0.077 U	0.18 U
Aroclor-1232 (PCB-1232)	mg/kg	--	--	0.036 U	0.037 U	0.035 U	0.036 U	0.08 U	0.048 U	0.037 U	0.036 U	0.035 U	0.081 U	0.077 U	0.18 U
Aroclor-1242 (PCB-1242)	mg/kg	--	--	0.036 U	0.037 U	0.035 U	0.036 U	0.08 U	0.048 U	0.037 U	0.036 U	0.035 U	0.081 U	0.077 U	0.18 U
Aroclor-1248 (PCB-1248)	mg/kg	--	--	0.036 U	0.037 U	0.035 U	0.036 U	0.08 U	0.048 U	0.037 U	0.036 U	0.035 U	0.081 U	0.077 U	0.18 U
Aroclor-1254 (PCB-1254)	mg/kg	--	--	0.036 U	0.037 U	0.035 U	0.036 U	0.08 U	0.048 U	0.037 U	0.036 U	0.035 U	0.081 U	0.077 U	0.18 U
Aroclor-1260 (PCB-1260)	mg/kg	--	--	0.036 U	0.037 U	0.035 U	0.036 U	0.08 U	0.048 U	0.037 U	0.036 U	0.035 U	0.081 U	0.077 U	1.1
Total PCBs	mg/kg	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.1[s]**
Semi-Volatile Organic Compounds															
2-Methylnaphthalene	mg/kg	--	--	0.13 J	0.019 J	0.008 J	0.12 J	0.091 J	0.39 U	0.078 J	0.13 J	0.0061 J	0.11 J	0.62 U	0.25 J
Acenaphthene	mg/kg	--	--	0.04 J	0.0081 J	0.0067 J	0.37 J	0.015 J	0.39 U	0.3 U	0.11 J	0.0057 J	1.3 U	0.62 U	0.027 J
Acenaphthylene	mg/kg	--	--	0.0081 J	0.3 U	0.28 U	0.013 J	0.011 J	0.39 U	0.3 U	1.1 U	0.28 U	1.3 U	0.62 U	0.048 J
Anthracene	mg/kg	--	--	0.11 J	0.016 J	0.019 J	0.63 J	0.045 J	0.39 U	0.012 J	0.38 J	0.026 J	1.3 U	0.62 U	0.11 J
Benzo(a)anthracene	mg/kg	--	--	0.47 J	0.076 J	0.11 J	1.5	0.21 J	0.39 U	0.069 J	1.6	0.12 J	0.044 J	0.62 U	0.96 J
Benzo(a)pyrene	mg/kg	--	--	0.48 J	0.061 J	0.098 J	1.1	0.21 J	0.39 U	0.041 J	1.2	0.11 J	0.034 J	0.62 U	1.1 J
Benzo(b)fluoranthene	mg/kg	--	--	0.73 J	0.11 J	0.15 J	1.5	0.28 J	0.39 U	0.1 J	1.6	0.16 J	0.047 J	0.62 U	1.7 J
Benzo(g,h,i)perylene	mg/kg	--	--	0.35 J	0.046 J	0.087 J	0.69 J	0.17 J	0.39 U	0.034 J	0.8 J	0.075 J	1.3 U	0.62 U	1 J
Benzo(k)fluoranthene	mg/kg	--	--	0.31 J	0.05 J	0.061 J	0.78	0.13 J	0.39 U	0.026 J	0.76 J	0.061 J	0.025 J	0.62 U	0.81 J
Chrysene	mg/kg	--	--	0.6 J	0.099 J	0.12 J	1.3	0.25 J	0.39 U	0.12 J	1.8	0.14 J	0.054 J	0.62 U	1.4 J
Dibenz(a,h)anthracene	mg/kg	--	--	0.11 J	0.013 J	0.025 J	0.24 J	0.045 J	0.39 U	0.3 U	0.27 J	0.022 J	1.3 U	0.62 U	0.25 J
Fluoranthene	mg/kg	--	--	0.9 J	0.14 J	0.2 J	3.3	0.46 J	0.39 U	0.12 J	3.1	0.24 J	0.12 J	0.62 U	2.3 J
Fluorene	mg/kg	--	--	0.042 J	0.0064 J	0.0067 J	0.3 J	0.02 J	0.39 U	0.0057 J	0.15 J	0.008 J	1.3 U	0.62 U	0.034 J
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	0.3 J	0.038 J	0.065 J	0.65 J	0.14 J	0.39 U	0.022 J	0.7 J	0.067 J	1.3 U	0.62 U	0.87 J
Naphthalene	mg/kg	--	--	0.072 J	0.013 J	0.0056 J	0.081 J	0.061 J	0.39 U	0.046 J	0.099 J	0.0052 J	0.063 J	0.62 U	0.16 J
Phenanthrene	mg/kg	--	--	0.56 J	0.11 J	0.092 J	**2.6[d]**	0.23 J	0.39 U	0.2 J	1.7	0.11 J	0.089 J	0.62 U	0.73 J
Pyrene	mg/kg	--	--	0.72 J	0.11 J	0.15 J	2.4	0.35 J	0.39 U	0.099 J	2.3	0.18 J	0.065 J	0.022 J	1.7 J

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB143-11*	*SB143-11*	*SB145-11*	*SB145-11*	*SB145-11*	*SB145-11*	*SB145-11*	*SB145-11*	*SB146-11*	*SB146-11*	*SB146-11*	*SB146-11*	*SB146-11*	*SB147-11*
Sample Identification		*S-17360-092911-EM-104*	*S-17360-092911-EM-105*	*S-17360-093011-EM-151*	*S-17360-093011-EM-152*	*S-17360-093011-EM-153*	*S-17360-093011-EM-154*	*S-17360-093011-EM-155*	*S-17360-093011-EM-156*	*S-17360-093011-EM-146*	*S-17360-093011-EM-147*	*S-17360-093011-EM-148*	*S-17360-093011-EM-149*	*S-17360-093011-EM-150*	*S-17360-093011-EM-141*
Sample Date		*9/29/2011*	*9/29/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*
Sample Depth		*(15-17) ft BGS*	*(17-19) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*
Area of Interest		*AOI 25*	*AOI 25*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*
Sample Type					*Duplicate*										
	Units														
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/kg	0.21 U	0.24 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.21 U	0.24 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane [3]	mg/kg	0.21 U	0.24 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	0.085 U	0.094 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	0.085 U	0.094 U	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	0.085 U	0.094 U	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK) [4]	mg/kg	0.069 J	R	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	2.1 U	2.4 U	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (MIBK) [5]	mg/kg	2.1 U	2.4 U	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	0.64 UJ	0.71 UJ	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	0.085 U	0.094 U	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	0.085 U	0.094 U	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	mg/kg	0.21 U	0.24 U	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	mg/kg	0.21 U	0.24 U	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	0.21 U	0.24 U	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	mg/kg	0.21 U	0.24 U	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	1 U	1.1 U	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	mg/kg	0.085 U	0.094 U	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl benzene	mg/kg	0.21 U	0.24 U	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	1 U	1.1 U	--	--	--	--	--	--	--	--	--	--	--	--
Methyl cyclohexane	mg/kg	1 U	1.1 U	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	mg/kg	0.21 U	0.24 U	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	mg/kg	0.21 U	0.24 U	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	0.085 U	0.094 U	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	0.042 U	0.047 U	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	0.071	0.059	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	mg/kg	0.085 UJ	0.094 UJ	--	--	--	--	--	--	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	mg/kg	0.21 U	0.24 U	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	mg/kg	0.034 U	0.038 U	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	mg/kg	0.13 U	0.14 U	--	--	--	--	--	--	--	--	--	--	--	--
General Chemistry															
Chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB147-11*	*SB147-11*	*SB147-11*	*SB147-11*	*SB148-11*	*SB148-11*	*SB148-11*	*SB148-11*	*SB148-11*	*SB149-11*	*SB149-11*	*SB149-11*	*SB149-11*	*SB149-11*
Sample Identification		*S-17360-093011-EM-142*	*S-17360-093011-EM-143*	*S-17360-093011-EM-144*	*S-17360-093011-EM-145*	*S-17360-093011-EM-136*	*S-17360-093011-EM-137*	*S-17360-093011-EM-138*	*S-17360-093011-EM-139*	*S-17360-093011-EM-140*	*S-17360-093011-EM-131*	*S-17360-093011-EM-132*	*S-17360-093011-EM-133*	*S-17360-093011-EM-134*	*S-17360-093011-EM-135*
Sample Date		*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*
Sample Depth		*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*
Area of Interest		*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*
Sample Type															
	Units														
Metals															
Antimony	mg/kg	0.38 J	0.41 J	0.50 J	0.61 J	0.16 UJ	**9.1 J**[ec]	1.2 J	3.9 J	0.14 UJ	0.46 J	0.47 J	0.22 J	0.14 UJ	0.15 UJ
Arsenic	mg/kg	2.3 J	4.1 J	4.1 J	**6.0 J**[bcd]	2.2 J	**17 J**[bcdp]	1.4 J	**7.8 J**[bcdp]	1.5 J	4.2 J	1.3 J	**6.2 J**[bcd]	1.3 J	3.6 J
Barium	mg/kg	32	150	210	140	14	390	12	140	6.7	29	32	48	3.7	5.5
Beryllium	mg/kg	0.20	0.57	0.69	0.52	0.16	0.28	0.17 U	0.26	0.19	0.22	0.16	0.50	0.039 J	0.20
Cadmium	mg/kg	1.4	1.0	**4.0**[d]	2.7	0.78	**95**[bcd]	1.4	**22**[bcd]	0.18	0.36	0.17	0.79	0.070 U	0.074 U
Chromium	mg/kg	7.7	14	**23**[a]	**22**[a]	4.2	**110**[bcd]	**26**[a]	**38**[bcd]	12	8.7	5.3	**34**[bcd]	4.4	6.8
Cobalt	mg/kg	2.3	1.5	2.7	2.3	2.0	**21**[bcd]	1.9	6.2	2.2	3.2	2.1	1.8	0.89	1.3
Copper	mg/kg	41 J	16 J	33 J	29 J	15 J	**1300 J**[d]	41 J	**280 J**[d]	4.6 J	23	16	26	1.8	5.9
Lead	mg/kg	63	14	30	24	20	**1200**[bcpq]	130	340	1.9	49	28	10	1.4	3.0
Manganese	mg/kg	100	67	100	61	74	**1000**[bcd]	96	310	38	270	210	36	17	20
Mercury	mg/kg	0.031 U	**0.19**[d]	**0.18**[d]	0.10 J	0.029 U	0.041 U	0.040 U	0.049 U	0.041 U	0.013 J	0.016 J	**0.18**[d]	0.039 U	0.040 U
Nickel	mg/kg	12 J	21	69 J	47 J	7.9	**270 J**[bcd]	23 J	67 J	3.6	7.6	5.3	14	2.2	3.4
Selenium	mg/kg	0.16 J	**4.4 J**[bcd]	**7.6 J**[bcd]	**7.9 J**[bcd]	0.16 J	0.29 J	0.17 UJ	**0.55 J**[d]	0.19 J	0.18 J	0.11 J	**5.5 J**[bcd]	0.15 J	**1.2 J**[d]
Silver	mg/kg	0.085	0.066 J	0.086 J	0.074 J	0.080 U	**1.5**[d]	**3.3**[d]	**4.3**[d]	0.066 U	0.029 J	0.037 J	0.063 J	0.015 J	0.074 U
Sodium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	mg/kg	0.074 U	0.22 U	0.28 U	0.22 U	0.23 U	0.16 U	0.085 U	0.16 U	0.066 U	0.087 U	0.080 U	0.15 J	0.070 U	0.074 U
Vanadium	mg/kg	10	26	28	34	6.0	46	1.4	17	9.4	8.6	6.3	27	5.4	8.1
Zinc	mg/kg	130 J	80 J	**470 J**[d]	**290 J**[d]	48 J	**1900 J**[d]	29 J	**490 J**[d]	11 J	29 J	34 J	20 J	3.5 J	5.7 J
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.036 U	0.098 U	0.12 U	0.11 U	1.8 U	0.81 U	0.18 U	1.1 U	0.035 U	1.8 U	0.038 U	0.075 U	0.035 U	0.036 U
Aroclor-1221 (PCB-1221)	mg/kg	0.036 U	0.098 U	0.12 U	0.11 U	1.8 U	0.81 U	0.18 U	1.1 U	0.035 U	1.8 U	0.038 U	0.075 U	0.035 U	0.036 U
Aroclor-1232 (PCB-1232)	mg/kg	0.036 U	0.098 U	0.12 U	0.11 U	1.8 U	0.81 U	0.18 U	1.1 U	0.035 U	1.8 U	0.038 U	0.075 U	0.035 U	0.036 U
Aroclor-1242 (PCB-1242)	mg/kg	0.036 U	0.098 U	0.12 U	0.11 U	1.8 U	0.81 U	0.18 U	1.1 U	0.035 U	1.8 U	0.038 U	0.075 U	0.035 U	0.036 U
Aroclor-1248 (PCB-1248)	mg/kg	0.036 U	0.098 U	0.12 U	0.11 U	1.8 U	0.81 U	0.18 U	1.1 U	0.035 U	1.8 U	0.038 U	0.075 U	0.035 U	0.036 U
Aroclor-1254 (PCB-1254)	mg/kg	0.036 U	0.098 U	0.12 U	0.11 U	1.8 U	10	0.18 U	1.1 U	0.035 U	1.8 U	0.038 U	0.075 U	0.035 U	0.036 U
Aroclor-1260 (PCB-1260)	mg/kg	0.28	0.098 U	0.12 U	0.11 U	14	0.81 U	0.89	7.1	0.035 U	8.9	0.34	0.075 U	0.035 U	0.036 U
Total PCBs	mg/kg	0.28	ND	ND	ND	**14**[ps]	**10**[ps]	0.89	**7.1**[ps]	ND	**8.9**[ps]	0.34	ND	ND	ND
Semi-Volatile Organic Compounds															
2-Methylnaphthalene	mg/kg	0.086 J	0.097 J	0.18 J	0.08 J	0.064 J	0.45 J	1.2 U	0.15 J	0.28 U	0.03 J	0.3 U	0.062 J	0.28 U	0.29 U
Acenaphthene	mg/kg	0.58 U	1.6 U	0.93 U	0.86 U	0.58 U	16 U	1.2 U	8.6 U	0.28 U	1.4 U	0.3 U	0.59 U	0.28 U	0.29 U
Acenaphthylene	mg/kg	0.017 J	1.6 U	0.014 J	0.86 U	0.027 J	16 U	1.2 U	8.6 U	0.28 U	0.035 J	0.3 U	0.59 U	0.28 U	0.29 U
Anthracene	mg/kg	0.029 J	0.049 J	0.033 J	0.012 J	0.077 J	16 U	1.2 U	8.6 U	0.28 U	0.25 J	0.012 J	0.009 J	0.28 U	0.29 U
Benzo(a)anthracene	mg/kg	0.19 J	0.22 J	0.11 J	0.061 J	0.54 J	0.6 J	0.052 J	0.57 J	0.0059 J	3.1	0.084 J	0.59 U	0.28 U	0.29 U
Benzo(a)pyrene	mg/kg	0.22 J	0.26 J	0.11 J	0.059 J	0.7	0.2 J	0.045 J	0.41 J	0.28 U	**3.3**[p]	0.095 J	0.029 J	0.28 U	0.29 U
Benzo(b)fluoranthene	mg/kg	0.32 J	0.46 J	0.21 J	0.11 J	0.98	1.2 J	0.075 J	0.91 J	0.0053 J	4.8	0.14 J	0.049 J	0.28 U	0.29 U
Benzo(g,h,i)perylene	mg/kg	0.21 J	0.29 J	0.11 J	0.066 J	0.5 J	0.61 J	0.043 J	0.44 J	0.28 U	2.5	0.074 J	0.027 J	0.28 U	0.29 U
Benzo(k)fluoranthene	mg/kg	0.15 J	0.12 J	0.07 J	0.06 J	0.51 J	0.35 J	0.03 J	0.27 J	0.28 U	2.2	0.058 J	0.016 J	0.28 U	0.29 U
Chrysene	mg/kg	0.28 J	0.34 J	0.2 J	0.11 J	0.74	2.7 J	0.076 J	1.6 J	0.0057 J	3.8	0.099 J	0.59 U	0.28 U	0.29 U
Dibenz(a,h)anthracene	mg/kg	0.028 J	0.058 J	0.93 U	0.86 U	0.12 J	16 U	1.2 U	8.6 U	0.28 U	0.73 J	0.021 J	0.59 U	0.28 U	0.29 U
Fluoranthene	mg/kg	0.44 J	0.53 J	0.3 J	0.15 J	1.1	0.95 J	0.089 J	0.98 J	0.0036 J	**5.9**[d]	0.17 J	0.085 J	0.28 U	0.29 U
Fluorene	mg/kg	0.0082 J	1.6 U	0.027 J	0.86 U	0.015 J	16 U	1.2 U	8.6 U	0.28 U	0.035 J	0.3 U	0.017 J	0.28 U	0.29 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.15 J	0.22 J	0.085 J	0.052 J	0.45 J	0.37 J	0.036 J	0.31 J	0.28 U	2.1	0.059 J	0.017 J	0.28 U	0.29 U
Naphthalene	mg/kg	0.04 J	0.07 J	0.12 J	0.055 J	0.042 J	**0.92 J**[d]	0.015 J	0.23 J	0.28 U	0.031 J	0.3 U	0.039 J	0.28 U	0.29 U
Phenanthrene	mg/kg	0.17 J	0.22 J	0.21 J	0.084 J	0.24 J	**2.6 J**[d]	0.041 J	1 J	0.28 U	0.95 J	0.061 J	0.076 J	0.28 U	0.29 U
Pyrene	mg/kg	0.31 J	0.37 J	0.2 J	0.11 J	0.84	0.7 J	0.068 J	0.69 J	0.28 U	4.4	0.13 J	0.045 J	0.28 U	0.29 U

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB147-11*	*SB147-11*	*SB147-11*	*SB147-11*	*SB148-11*	*SB148-11*	*SB148-11*	*SB148-11*	*SB148-11*	*SB149-11*	*SB149-11*	*SB149-11*	*SB149-11*	*SB149-11*
Sample Identification		*S-17360-093011-EM-142*	*S-17360-093011-EM-143*	*S-17360-093011-EM-144*	*S-17360-093011-EM-145*	*S-17360-093011-EM-136*	*S-17360-093011-EM-137*	*S-17360-093011-EM-138*	*S-17360-093011-EM-139*	*S-17360-093011-EM-140*	*S-17360-093011-EM-131*	*S-17360-093011-EM-132*	*S-17360-093011-EM-133*	*S-17360-093011-EM-134*	*S-17360-093011-EM-135*
Sample Date		*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*
Sample Depth		*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*
Area of Interest		*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*
Sample Type															
	Units														
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane [3]	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)[4]	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (MIBK)[5]	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl benzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl cyclohexane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
General Chemistry															
Chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB150-11*	*SB150-11*	*SB150-11*	*SB150-11*	*SB150-11*	*SB151-11*	*SB151-11*	*SB151-11*	*SB151-11*	*SB151-11*	*SB152-11*	*SB152-11*	*SB152-11*	*SB152-11*
Sample Identification		*S-17360-093011-EM-126*	*S-17360-093011-EM-127*	*S-17360-093011-EM-128*	*S-17360-093011-EM-129*	*S-17360-093011-EM-130*	*S-17360-093011-EM-121*	*S-17360-093011-EM-122*	*S-17360-093011-EM-123*	*S-17360-093011-EM-124*	*S-17360-093011-EM-125*	*S-17360-093011-EM-116*	*S-17360-093011-EM-117*	*S-17360-093011-EM-118*	*S-17360-093011-EM-119*
Sample Date		*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*
Sample Depth		*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*
Area of Interest		*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*
Sample Type															
	Units														
Metals															
Antimony	mg/kg	0.23 J	0.23 J	1.2 J	0.40 J	0.18 UJ	0.14 UJ	0.15 UJ	0.15 UJ	0.16 UJ	0.17 UJ	0.17 UJ	0.17 UJ	0.13 UJ	0.16 UJ
Arsenic	mg/kg	1.8 J	1.8 J	1.8 J	2.3 J	2.4 J	1.5 J	1.2 J	1.1 J	1.3 J	2.1 J	1.1 J	1.1 J	0.97 J	1.4 J
Barium	mg/kg	15	19	17	48	19	20	15	14	10	10	47	32	5.1	8.0
Beryllium	mg/kg	0.14 J	0.15	0.13 J	0.22	0.10 J	0.16	0.16	0.13 J	0.069 J	0.10 J	0.21	0.16 J	0.12 J	0.20
Cadmium	mg/kg	0.47	0.44	0.56	1.0	0.053 J	0.067 J	0.048 J	0.053 J	0.082 U	0.087 U	0.083 U	0.086 U	0.066 U	0.079 U
Chromium	mg/kg	7.3	6.9	7.9	6.0	6.3	9.2	5.2	4.0	3.4	6.3	5.8	6.7	6.1	10
Cobalt	mg/kg	2.3	2.0	2.3	2.1	1.5	2.7	1.9	1.7	1.3	1.7	2.3	1.8	2.0	3.2
Copper	mg/kg	19	13	27	17	3.5	7.8	28	3.5	0.89	2.7	3.5	3.5	1.5	4.1
Lead	mg/kg	53	21	27	12	3.1	9.5	4.0	2.8	1.5	2.7	4.5	4.2	1.7	3.6
Manganese	mg/kg	130	85	91	73	25	150	65	63	17	22	280	120	29	46
Mercury	mg/kg	0.042	0.020 J	0.035 U	0.039 J	0.042 U	0.029 J	0.036 U	0.028 U	0.035 U	0.028	0.039 U	0.018 J	0.035 U	0.035 U
Nickel	mg/kg	7.0	5.9	7.1	6.2	4.1	7.3	4.3	3.6	2.5	3.8	4.7	3.6	4.0	6.9
Selenium	mg/kg	0.10 J	0.13 J	0.13 J	**0.55 J[a]**	0.31 J	0.10 J	0.11 J	0.11 J	0.16 UJ	0.13 J	0.15 J	0.19 J	0.11 J	0.16 J
Silver	mg/kg	0.079 U	0.073 U	0.077 U	0.079 J	0.090 U	0.070 U	0.074 U	0.074 U	0.082 U	0.087 U	0.083 U	0.086 U	0.066 U	0.079 U
Sodium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	mg/kg	0.079 U	0.073 U	0.077 U	0.098 U	0.10 U	0.070 U	0.074 U	0.074 U	0.082 U	0.087 U	0.18 U	0.24 U	0.085 U	0.079 U
Vanadium	mg/kg	7.5	7.0	8.1	12	12	10	7.7	6.9	9.7	12	8.8	8.1	8.0	16
Zinc	mg/kg	33 J	23 J	39 J	160 J	22 J	12 J	9.2 J	7.6 J	3.6 J	6.6 J	12 J	9.0 J	5.1 J	9.6 J
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.73 U	0.036 U	0.037 U	0.046 U	0.038 U	0.035 U	0.035 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.035 U	0.035 U
Aroclor-1221 (PCB-1221)	mg/kg	0.73 U	0.036 U	0.037 U	0.046 U	0.038 U	0.035 U	0.035 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.035 U	0.035 U
Aroclor-1232 (PCB-1232)	mg/kg	0.73 U	0.036 U	0.037 U	0.046 U	0.038 U	0.035 U	0.035 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.035 U	0.035 U
Aroclor-1242 (PCB-1242)	mg/kg	0.73 U	0.036 U	0.037 U	0.046 U	0.038 U	0.035 U	0.035 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.035 U	0.035 U
Aroclor-1248 (PCB-1248)	mg/kg	0.73 U	0.036 U	0.037 U	0.046 U	0.038 U	0.035 U	0.035 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.035 U	0.035 U
Aroclor-1254 (PCB-1254)	mg/kg	0.73 U	0.036 U	0.037 U	0.046 U	0.038 U	0.035 U	0.035 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.035 U	0.035 U
Aroclor-1260 (PCB-1260)	mg/kg	4.8	0.22	0.076	0.043 J	0.038 U	0.035 U	0.035 U	0.035 U	0.057	0.037 U	0.036 U	0.036 U	0.035 U	0.035 U
Total PCBs	mg/kg	**4.8[as]**	0.22	0.076	0.043 J	ND	ND	ND	ND	0.057	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds															
2-Methylnaphthalene	mg/kg	0.015 J	0.036 J	0.0041 J	0.022 J	0.3 U	1.4 U	0.28 U	0.28 U	0.29 U	0.29 U	1.1 U	0.0059 J	0.28 U	0.28 U
Acenaphthene	mg/kg	0.0061 J	0.11 J	0.0072 J	0.37 U	0.3 U	1.4 U	0.28 U	0.28 U	0.29 U	0.29 U	1.1 U	0.28 U	0.28 U	0.28 U
Acenaphthylene	mg/kg	0.014 J	0.012 J	0.0047 J	0.37 U	0.3 U	1.4 U	0.28 U	0.28 U	0.29 U	0.29 U	0.023 J	0.28 U	0.28 U	0.28 U
Anthracene	mg/kg	0.049 J	0.25 J	0.045 J	0.37 U	0.3 U	1.4 U	0.28 U	0.28 U	0.032 J	0.29 U	0.014 J	0.28 U	0.28 U	0.28 U
Benzo(a)anthracene	mg/kg	0.28 J	0.61	0.26 J	0.017 J	0.3 U	0.026 J	0.0061 J	0.0066 J	0.29 U	0.29 U	0.039 J	0.011 J	0.28 U	0.28 U
Benzo(a)pyrene	mg/kg	0.4	0.53 J	0.25 J	0.017 J	0.3 U	0.021 J	0.0071 J	0.0064 J	0.29 U	0.29 U	0.041 J	0.014 J	0.28 U	0.28 U
Benzo(b)fluoranthene	mg/kg	0.67	0.89	0.39	0.029 J	0.3 U	0.034 J	0.013 J	0.0095 J	0.29 U	0.29 U	0.069 J	0.018 J	0.28 U	0.28 U
Benzo(g,h,i)perylene	mg/kg	0.55	0.38 J	0.2 J	0.017 J	0.3 U	1.4 U	0.0073 J	0.0057 J	0.29 U	0.29 U	0.043 J	0.013 J	0.28 U	0.28 U
Benzo(k)fluoranthene	mg/kg	0.25 J	0.38 J	0.15 J	0.0087 J	0.3 U	0.018 J	0.0047 J	0.0058 J	0.29 U	0.29 U	0.024 J	0.0082 J	0.28 U	0.28 U
Chrysene	mg/kg	0.43	0.65	0.3	0.026 J	0.3 U	0.037 J	0.0085 J	0.0077 J	0.29 U	0.29 U	0.056 J	0.017 J	0.0033 J	0.28 U
Dibenz(a,h)anthracene	mg/kg	0.091 J	0.1 J	0.053 J	0.37 U	0.3 U	1.4 U	0.28 U	0.28 U	0.29 U	0.29 U	1.1 U	0.28 U	0.28 U	0.28 U
Fluoranthene	mg/kg	0.65	1.6	0.56	0.035 J	0.005 J	0.037 J	0.009 J	0.01 J	0.29 U	0.29 U	0.076 J	0.029 J	0.0077 J	0.28 U
Fluorene	mg/kg	0.0097 J	0.1 J	0.0096 J	0.37 U	0.3 U	1.4 U	0.28 U	0.28 U	0.29 U	0.29 U	1.1 U	0.28 U	0.28 U	0.28 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.37	0.35 J	0.17 J	0.014 J	0.3 U	1.4 U	0.0067 J	0.0045 J	0.29 U	0.29 U	0.033 J	0.0099 J	0.28 U	0.28 U
Naphthalene	mg/kg	0.011 J	0.032 J	0.014 J	0.016 J	0.3 U	1.4 U	0.28 U	0.28 U	0.29 U	0.29 U	1.1 U	0.0035 J	0.28 U	0.28 U
Phenanthrene	mg/kg	0.16 J	1.1	0.17 J	0.026 J	0.3 U	0.033 J	0.28 U	0.0051 J	0.29 U	0.29 U	0.027 J	0.017 J	0.28 U	0.28 U
Pyrene	mg/kg	0.52	1.1	0.41	0.027 J	0.3 U	0.031 J	0.0077 J	0.0082 J	0.29 U	0.29 U	0.066 J	0.02 J	0.005 J	0.28 U

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB150-11*	*SB150-11*	*SB150-11*	*SB150-11*	*SB150-11*	*SB151-11*	*SB151-11*	*SB151-11*	*SB151-11*	*SB151-11*	*SB152-11*	*SB152-11*	*SB152-11*	*SB152-11*
Sample Identification		*S-17360-093011-EM-126*	*S-17360-093011-EM-127*	*S-17360-093011-EM-128*	*S-17360-093011-EM-129*	*S-17360-093011-EM-130*	*S-17360-093011-EM-121*	*S-17360-093011-EM-122*	*S-17360-093011-EM-123*	*S-17360-093011-EM-124*	*S-17360-093011-EM-125*	*S-17360-093011-EM-116*	*S-17360-093011-EM-117*	*S-17360-093011-EM-118*	*S-17360-093011-EM-119*
Sample Date		*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*	*9/30/2011*
Sample Depth		*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*
Area of Interest		*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*	*AOI 27*
Sample Type															
	Units														
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane [3]	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)[4]	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (MIBK)[5]	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl benzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl cyclohexane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
General Chemistry															
Chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB152-11*	*SB153-11*	*SB154-11*	*SB155-11*	*SB156-11*	*SB156-11*	*SB157-11*	*SB158-11*	*SB159-11*	*SB159-11*	*SB159-11*	*SB160-11*	*SB160-11*	*SB161-11*
Sample Identification		*S-17360-093011-EM-120*	*S-17360-092811-EM-053*	*S-17360-092811-EM-038*	*S-17360-092811-EM-048*	*S-17360-092811-EM-043*	*S-17360-092811-EM-044*	*S-17360-092711-EM-029*	*S-17360-092711-EM-014*	*S-17360-092711-EM-009*	*S-17360-092711-EM-010*	*S-17360-092711-EM-011*	*S-17360-092711-EM-024*	*S-17360-092711-EM-025*	*S-17360-092711-EM-019*
Sample Date		*9/30/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*
Sample Depth		*(8-10) ft BGS*	*(1-3) ft BGS*	*(0.5-2.5) ft BGS*	*(0.5-2.5) ft BGS*	*(0.5-2.5) ft BGS*	*(2.5-4) ft BGS*	*(0.7-2.7) ft BGS*	*(0.5-2.5) ft BGS*	*(0.6-2.6) ft BGS*	*(2.6-4) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(2.5-4) ft BGS*	*(0.5-2.5) ft BGS*
Area of Interest		*AOI 27*	*AOI 39.1*	*AOI 39.1*	*AOI 39.1*	*AOI 39.1*	*AOI 39.1*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*
Sample Type															
	Units														
Metals															
Antimony	mg/kg	0.17 UJ	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/kg	0.98 J	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium	mg/kg	9.7	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium	mg/kg	0.19	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	0.084 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	6.4	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	2.6	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	6.5	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	2.5	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/kg	47	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.017 J	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	mg/kg	6.4	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	mg/kg	0.23 J	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	0.084 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	mg/kg	0.085 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/kg	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	8.8 J	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.036 U	0.034 U	0.035 U	0.034 U	0.035 U	0.035 UJ	0.034 U	0.033 U	0.17 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Aroclor-1221 (PCB-1221)	mg/kg	0.036 U	0.034 U	0.035 U	0.034 U	0.035 U	0.035 UJ	0.034 U	0.033 U	0.17 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Aroclor-1232 (PCB-1232)	mg/kg	0.036 U	0.034 U	0.035 U	0.034 U	0.035 U	0.035 UJ	0.034 U	0.033 U	0.17 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Aroclor-1242 (PCB-1242)	mg/kg	0.036 U	0.034 U	0.035 U	0.034 U	0.035 U	0.035 UJ	0.034 U	0.033 U	0.17 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Aroclor-1248 (PCB-1248)	mg/kg	0.036 U	0.034 U	0.035 U	0.034 U	0.035 U	0.035 UJ	0.034 U	0.033 U	0.17 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Aroclor-1254 (PCB-1254)	mg/kg	0.036 U	0.034 U	0.035 U	0.034 U	0.035 U	0.035 UJ	0.034 U	0.033 U	1.1	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Aroclor-1260 (PCB-1260)	mg/kg	0.036 U	0.034 U	0.035 U	0.034 U	0.035 U	0.035 UJ	0.034 U	0.033 U	0.17 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	**1.1***	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds															
2-Methylnaphthalene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	0.29 U	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB152-11*	*SB153-11*	*SB154-11*	*SB155-11*	*SB156-11*	*SB156-11*	*SB157-11*	*SB158-11*	*SB159-11*	*SB159-11*	*SB159-11*	*SB160-11*	*SB160-11*	*SB161-11*
Sample Identification		*S-17360-093011-EM-120*	*S-17360-092811-EM-053*	*S-17360-092811-EM-038*	*S-17360-092811-EM-048*	*S-17360-092811-EM-043*	*S-17360-092811-EM-044*	*S-17360-092711-EM-029*	*S-17360-092711-EM-014*	*S-17360-092711-EM-009*	*S-17360-092711-EM-010*	*S-17360-092711-EM-011*	*S-17360-092711-EM-024*	*S-17360-092711-EM-025*	*S-17360-092711-EM-019*
Sample Date		*9/30/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/28/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*	*9/27/2011*
Sample Depth		*(8-10) ft BGS*	*(1-3) ft BGS*	*(0.5-2.5) ft BGS*	*(0.5-2.5) ft BGS*	*(0.5-2.5) ft BGS*	*(2.5-4) ft BGS*	*(0.7-2.7) ft BGS*	*(0.5-2.5) ft BGS*	*(0.6-2.6) ft BGS*	*(2.6-4) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(2.5-4) ft BGS*	*(0.5-2.5) ft BGS*
Area of Interest		*AOI 27*	*AOI 39.1*	*AOI 39.1*	*AOI 39.1*	*AOI 39.1*	*AOI 39.1*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*	*AOI 39.2*
Sample Type															
	Units														
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane [3]	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)[4]	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (MIBK)[5]	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl benzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl cyclohexane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
General Chemistry															
Chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB162-11*	*SB163-11*	*SB164-11*	*SB164-11*	*SB165-11*	*SB165-11*	*SB165-11*	*SB166-11*	*SB166-11*	*SB166-11*	*SB167-11*
Sample Identification		*S-17360-092911-EM-082*	*S-17360-092911-EM-071*	*S-17360-092911-EM-076*	*S-17360-092911-EM-077*	*S-17360-092911-EM-092*	*S-17360-092911-EM-093*	*S-17360-092911-EM-094*	*S-17360-092911-EM-087*	*S-17360-092911-EM-088*	*S-17360-092911-EM-089*	*S-17360-092811-EM-058*
Sample Date		*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/28/2011*
Sample Depth		*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(1.5-3.5) ft BGS*
Area of Interest		*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 39.1*
Sample Type					*Duplicate*							
	Units											
Metals												
Antimony	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Barium	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Beryllium	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Nickel	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Selenium	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Sodium	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Thallium	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	--	--	--	--	--	--	--	--	--	--	--
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	0.17 U	0.034 U	0.035 U	0.035 U	0.34 U	1.7 U	0.68 U	1.7 U	1.7 U	0.035 U	0.035 U
Aroclor-1221 (PCB-1221)	mg/kg	0.17 U	0.034 U	0.035 U	0.035 U	0.34 U	1.7 U	0.68 U	1.7 U	1.7 U	0.035 U	0.035 U
Aroclor-1232 (PCB-1232)	mg/kg	0.17 U	0.034 U	0.035 U	0.035 U	0.34 U	1.7 U	0.68 U	1.7 U	1.7 U	0.035 U	0.035 U
Aroclor-1242 (PCB-1242)	mg/kg	0.17 U	0.034 U	0.035 U	0.035 U	0.34 U	1.7 U	0.68 U	1.7 U	1.7 U	0.035 U	0.035 U
Aroclor-1248 (PCB-1248)	mg/kg	0.17 U	0.034 U	0.035 U	0.035 U	0.34 U	1.7 U	0.68 U	1.7 U	1.7 U	0.035 U	0.035 U
Aroclor-1254 (PCB-1254)	mg/kg	0.17 U	0.034 U	0.035 U	0.035 U	0.34 U	1.7 U	0.68 U	1.7 U	1.7 U	0.035 U	0.035 U
Aroclor-1260 (PCB-1260)	mg/kg	0.56	0.034 U	0.14	0.078	3	13	3.8	12	6.4	0.035 U	0.035 U
Total PCBs	mg/kg	0.56	ND	0.14	0.078	**3**[a]	**13**[ps]	**3.8**[a]	**12**[ps]	**6.4**[ps]	ND	ND
Semi-Volatile Organic Compounds												
2-Methylnaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Fluorene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB162-11*	*SB163-11*	*SB164-11*	*SB164-11*	*SB165-11*	*SB165-11*	*SB165-11*	*SB166-11*	*SB166-11*	*SB166-11*	*SB167-11*
Sample Identification		*S-17360-092911-EM-082*	*S-17360-092911-EM-071*	*S-17360-092911-EM-076*	*S-17360-092911-EM-077*	*S-17360-092911-EM-092*	*S-17360-092911-EM-093*	*S-17360-092911-EM-094*	*S-17360-092911-EM-087*	*S-17360-092911-EM-088*	*S-17360-092911-EM-089*	*S-17360-092811-EM-058*
Sample Date		*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/28/2011*
Sample Depth		*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(1.5-3.5) ft BGS*
Area of Interest		*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 24*	*AOI 39.1*
Sample Type					*Duplicate*							
	Units											
Volatile Organic Compounds												
1,1,1-Trichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane [3]	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)[4]	mg/kg	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (MIBK)[5]	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	mg/kg	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Isopropyl benzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Methyl cyclohexane	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--
General Chemistry												
Chloride	mg/kg	--	--	--	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria* [1]								
Sample Identification		Residential	Non-Residential	Groundwater	Residential	Non-Residential	Groundwater	***Water***	Flammability and	Acute
Sample Date		Drinking	Drinking	Surface Water	Groundwater	Groundwater	Contact	***Solubility***	Explosivity	Inhalation
Area of Interest		Water	Water	Interface [5]	Volatilization to	Volatilization to			Screening Levels	Screening Levels
Sample Type					Indoor Air Inhalation	Indoor Air Inhalation				
	Units	a	b	c	d	e	f	g	h	i
Metals										
Antimony	mg/L	0.006	0.006	0.13	NLV	NLV	68	NA	ID	ID
Arsenic	mg/L	0.01	0.01	0.01	NLV	NLV	4.3	NA	ID	ID
Barium	mg/L	2	2	0.67	NLV	NLV	14000	NA	ID	ID
Beryllium	mg/L	0.004	0.004	0.0067	NLV	NLV	290	NA	ID	ID
Cadmium	mg/L	0.005	0.005	0.0025	NLV	NLV	190	NA	ID	ID
Chromium	mg/L	0.1	0.1	0.011	NLV	NLV	460	NA	ID	ID
Cobalt	mg/L	0.04	0.1	0.1	NLV	NLV	2400	NA	ID	ID
Copper	mg/L	1	1	0.013	NLV	NLV	7400	NA	ID	ID
Lead	mg/L	0.004	0.004	0.014	NLV	NLV	ID	NA	ID	ID
Manganese	mg/L	0.05	0.05	1.3	NLV	NLV	9100	NA	ID	ID
Mercury	mg/L	0.002	0.002	0.0000013	0.056	0.056	0.056	0.056	ID	ID
Nickel	**mg/L**	**0.1**	**0.1**	**0.073**	**NLV**	**NLV**	**74000**	**NA**	**ID**	**ID**
Selenium	mg/L	0.05	0.05	0.005	NLV	NLV	970	NA	ID	ID
Silver	mg/L	0.034	0.098	0.0002	NLV	NLV	1500	NA	ID	ID
Sodium	mg/L	120	350	NA	NLV	NLV	1000000	NA	ID	ID
Thallium	mg/L	0.002	0.002	0.0037	NLV	NLV	13	NA	ID	ID
Vanadium	mg/L	0.0045	0.062	0.012	NLV	NLV	970	NA	ID	ID
Zinc	mg/L	2.4	5	0.17	NLV	NLV	110000	NA	ID	ID
Antimony (dissolved)	mg/L	0.006	0.006	0.13	NLV	NLV	68	NA	ID	ID
Arsenic (dissolved)	mg/L	0.01	0.01	0.01	NLV	NLV	4.3	NA	ID	ID
Barium (dissolved)	mg/L	2	2	0.67	NLV	NLV	14000	NA	ID	ID
Beryllium (dissolved)	mg/L	0.004	0.004	0.0067	NLV	NLV	290	NA	ID	ID
Cadmium (dissolved)	mg/L	0.005	0.005	0.0025	NLV	NLV	190	NA	ID	ID
Chromium (dissolved)	mg/L	0.1	0.1	0.011	NLV	NLV	460	NA	ID	ID
Cobalt (dissolved)	mg/L	0.04	0.1	0.1	NLV	NLV	2400	NA	ID	ID
Copper (dissolved)	mg/L	1	1	0.013	NLV	NLV	7400	NA	ID	ID
Lead (dissolved)	mg/L	0.004	0.004	0.014	NLV	NLV	ID	NA	ID	ID
Manganese (dissolved)	mg/L	0.05	0.05	1.3	NLV	NLV	9100	NA	ID	ID
Mercury (dissolved)	mg/L	0.002	0.002	0.0000013	0.056	0.056	0.056	0.056	ID	ID
Nickel (dissolved)	mg/L	0.1	0.1	0.073	NLV	NLV	74000	NA	ID	ID
Selenium (dissolved)	mg/L	0.05	0.05	0.005	NLV	NLV	970	NA	ID	ID
Silver (dissolved)	mg/L	0.034	0.098	0.0002	NLV	NLV	1500	NA	ID	ID
Thallium (dissolved)	mg/L	0.002	0.002	0.0037	NLV	NLV	13	NA	ID	ID
Vanadium (dissolved)	mg/L	0.0045	0.062	0.012	NLV	NLV	970	NA	ID	ID
Zinc (dissolved)	mg/L	2.4	5	0.17	NLV	NLV	110000	NA	ID	ID

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria* [1]								
Sample Identification		Residential	Non-Residential	Groundwater	Residential	Non-Residential	Groundwater	***Water***	Flammability and	Acute
Sample Date		Drinking	Drinking	Surface Water	Groundwater	Groundwater	Contact	***Solubility***	Explosivity	Inhalation
Area of Interest		Water	Water	Interface [5]	Volatilization to	Volatilization to			Screening Levels	Screening Levels
Sample Type					Indoor Air Inhalation	Indoor Air Inhalation				
	Units	a	b	c	d	e	f	g	h	i
Polychlorinated Biphenyls										
Aroclor-1016 (PCB-1016)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221 (PCB-1221)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232 (PCB-1232)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242 (PCB-1242)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248 (PCB-1248)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254 (PCB-1254)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260 (PCB-1260)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	mg/L	0.0005	0.0005	0.0002	0.045	0.045	0.0033	0.0447	ID	ID
Semi-Volatile Organic Compounds										
2,2'-Oxybis(1-chloropropane) (bis[2-Chloroisopropyl] ether)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	mg/L	0.73	2.1	NA	NLV	NLV	170	1200	ID	ID
2,4,6-Trichlorophenol	mg/L	0.12	0.47	0.005	NLV	NLV	10	800	ID	ID
2,4-Dichlorophenol	mg/L	0.073	0.21	0.011	NLV	NLV	48	4500	ID	ID
2,4-Dimethylphenol	mg/L	0.37	1	0.38	NLV	NLV	520	7870	ID	ID
2,4-Dinitrophenol	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.0077	0.032	NA	NLV	NLV	8.6	270	ID	ID
2,6-Dinitrotoluene	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	mg/L	1.8	5.2	NA	ID	ID	6.7	6.74	ID	ID
2-Chlorophenol	mg/L	0.045	0.13	0.018	ID	ID	94	22000	ID	ID
2-Methylnaphthalene	mg/L	0.26	0.75	0.019	25	25	25	24.6	ID	ID
2-Methylphenol	mg/L	0.37	1	0.03	NLV	NLV	810	28000	NA	ID
2-Nitroaniline	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	mg/L	0.02	0.058	ID	NLV	NLV	79	2500	ID	ID
3&4-Methylphenol	mg/L	0.37	1	0.03	NLV	NLV	810	28000	NA	ID
3,3'-Dichlorobenzidine	mg/L	0.0011	0.0043	0.0003	NLV	NLV	0.18	3.11	ID	ID
3-Nitroaniline	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	mg/L	0.02	0.02	NA	NLV	NLV	9.5	200	ID	ID
4-Bromophenyl phenyl ether	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	mg/L	0.15	0.42	0.0074	NLV	NLV	79	3900	ID	ID
4-Chloroaniline	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	mg/L	1.3	3.8	0.038	4.2	4.2	4.2	4.24	ID	ID
Acenaphthylene	mg/L	0.052	0.15	ID	3.9	3.9	3.9	3.93	ID	ID
Acetophenone	mg/L	1.5	4.4	NA	6100	6100	6100	6100	ID	ID
Anthracene	mg/L	0.043	0.043	ID	0.043	0.043	0.043	0.0434	ID	ID
Atrazine	mg/L	0.003	0.003	0.0073	NLV	NLV	5.4	70	ID	ID

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria* [1]								
Sample Identification		Residential	Non-Residential	Groundwater	Residential	Non-Residential	Groundwater	***Water***	Flammability and	Acute
Sample Date		Drinking	Drinking	Surface Water	Groundwater	Groundwater	Contact	***Solubility***	Explosivity	Inhalation
Area of Interest		Water	Water	Interface [5]	Volatilization to	Volatilization to			Screening Levels	Screening Levels
Sample Type					Indoor Air Inhalation	Indoor Air Inhalation				
	Units	a	b	c	d	e	f	g	h	i
Benzaldehyde	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	mg/L	0.0021	0.0085	ID	NLV	NLV	0.0094	0.0094	ID	ID
Benzo(a)pyrene	mg/L	0.005	0.005	ID	NLV	NLV	0.001	0.00162	ID	ID
Benzo(b)fluoranthene	mg/L	0.0015	0.0015	ID	ID	ID	0.0015	0.0015	ID	ID
Benzo(g,h,i)perylene	mg/L	0.001	0.001	NA	NLV	NLV	0.001	0.00026	ID	ID
Benzo(k)fluoranthene	mg/L	0.001	0.001	NA	NLV	NLV	0.001	0.0008	ID	ID
Biphenyl (1,1-Biphenyl)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	mg/L	0.002	0.0083	0.001	38	210	5.7	17200	17000	17000
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.006	0.006	0.025	NLV	NLV	0.32	0.34	NA	0.34
Butyl benzylphthalate (BBP)	mg/L	1.2	2.7	0.067	NLV	NLV	2.7	2.69	ID	ID
Caprolactam	mg/L	5.8	17	NA	NLV	NLV	390000	5250000	NA	1000000
Carbazole	mg/L	0.085	0.35	0.01	NLV	NLV	7.4	7.48	ID	ID
Chrysene	mg/L	0.0016	0.0016	ID	ID	ID	0.0016	0.0016	ID	ID
Dibenz(a,h)anthracene	mg/L	0.002	0.002	ID	NLV	NLV	0.002	0.00249	ID	ID
Dibenzofuran	mg/L	ID	ID	0.004	10	10	ID	10	ID	ID
Diethyl phthalate	mg/L	5.5	16	0.11	NLV	NLV	1100	1080	NA	ID
Dimethyl phthalate	mg/L	73	210	NA	NLV	NLV	4200	4190	NA	ID
Di-n-butylphthalate (DBP)	mg/L	0.88	2.5	0.0097	NLV	NLV	11	11.2	NA	ID
Di-n-octyl phthalate (DnOP)	mg/L	0.13	0.38	ID	NLV	NLV	0.4	3	ID	ID
Fluoranthene	mg/L	0.21	0.21	0.0016	0.21	0.21	0.21	0.206	ID	ID
Fluorene	mg/L	0.88	2	0.012	2	2	2	1.98	ID	ID
Hexachlorobenzene	mg/L	0.001	0.001	0.0002	0.44	3	0.0046	6.2	ID	ID
Hexachlorobutadiene	mg/L	0.015	0.042	0.000053	1.6	3.2	0.4	3.23	ID	ID
Hexachlorocyclopentadiene	mg/L	0.05	0.05	ID	0.13	0.42	1.6	1.8	ID	ID
Hexachloroethane	mg/L	0.0073	0.021	0.0067	27	50	1.9	50	ID	ID
Indeno(1,2,3-cd)pyrene	mg/L	0.002	0.002	ID	NLV	NLV	0.002	0.000022	ID	ID
Isophorone	mg/L	0.77	3.1	1.3	NLV	NLV	990	12000	NA	12000
Naphthalene	mg/L	0.52	1.5	0.011	31	31	31	31	NA	31
Nitrobenzene	mg/L	0.0034	0.0096	0.18	280	550	11	2090	NA	ID
N-Nitrosodi-n-propylamine	mg/L	0.005	0.005	NA	NLV	NLV	0.36	9890	ID	ID
N-Nitrosodiphenylamine	mg/L	0.27	1.1	NA	NLV	NLV	35	35.1	ID	ID
Pentachlorophenol	mg/L	0.001	0.001	0.0018	NLV	NLV	0.2	1850	ID	ID
Phenanthrene	mg/L	0.052	0.15	0.002	1	1	1	1	ID	ID
Phenol	mg/L	4.4	13	0.45	NLV	NLV	29000	82800	NA	ID
Pyrene	mg/L	0.14	0.14	ID	0.14	0.14	0.14	0.135	ID	ID
Volatile Organic Compounds										
1,1,1-Trichloroethane	mg/L	0.2	0.2	0.089	660	1300	1300	1330	ID	1300
1,1,2,2-Tetrachloroethane	mg/L	0.0085	0.035	0.078	12	77	4.7	2970	ID	ID
1,1,2-Trichloroethane	mg/L	0.005	0.005	0.33	17	110	21	4420	NA	ID

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria* [1]								
Sample Identification		Residential	Non-Residential	Groundwater	Residential	Non-Residential	Groundwater	***Water***	Flammability and	Acute
Sample Date		Drinking	Drinking	Surface Water	Groundwater	Groundwater	Contact	***Solubility***	Explosivity	Inhalation
Area of Interest		Water	Water	Interface [5]	Volatilization to	Volatilization to			Screening Levels	Screening Levels
Sample Type					Indoor Air Inhalation	Indoor Air Inhalation				
	Units	a	b	c	d	e	f	g	h	i
1,1-Dichloroethane	mg/L	0.88	2.5	0.74	1000	2300	2400	5060	380	ID
1,1-Dichloroethene	mg/L	0.007	0.007	0.13	0.2	1.3	11	2250	97	140
1,2,4-Trichlorobenzene	mg/L	0.07	0.07	0.099	300	300	19	300	NA	300
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.0002	0.0002	NA	1.2	1.2	0.39	1.23	NA	ID
1,2-Dibromoethane [2]	mg/L	0.00005	0.00005	0.0057	2.4	15	0.025	4200	ID	ID
1,2-Dichlorobenzene	mg/L	0.6	0.6	0.013	160	160	160	156	NA	160
1,2-Dichloroethane	mg/L	0.005	0.005	0.36	9.6	59	19	8520	2500	ID
1,2-Dichloropropane	mg/L	0.005	0.005	0.23	16	36	16	2800	550	2800
1,3-Dichlorobenzene	mg/L	0.0066	0.019	0.028	18	41	2	111	ID	ID
1,4-Dichlorobenzene	mg/L	0.075	0.075	0.017	16	74	6.4	73.8	NA	ID
2-Butanone (MEK) [3]	mg/L	13	38	2.2	240000	240000	240000	240000	ID	240000
2-Hexanone	mg/L	1	2.9	ID	4200	8700	5200	16000	NA	ID
4-Methyl-2-pentanone (MIBK) [4]	mg/L	1.8	5.2	ID	20000	20000	13000	20000	ID	20000
Acetone	mg/L	0.73	2.1	1.7	1000000	1000000	31000	1000000	15000	1000000
Benzene	mg/L	0.005	0.005	0.2	5.6	35	11	1750	68	67
Bromodichloromethane	mg/L	0.08	0.08	ID	4.8	37	14	6740	ID	ID
Bromoform	mg/L	0.08	0.08	ID	470	3100	140	3100	ID	ID
Bromomethane (Methyl bromide)	mg/L	0.01	0.029	0.035	4	9	70	14500	ID	ID
Carbon disulfide	mg/L	0.8	2.3	ID	250	550	1200	1190	13	ID
Carbon tetrachloride	mg/L	0.005	0.005	0.045	0.37	2.4	4.6	793	ID	96
Chlorobenzene	mg/L	0.1	0.1	0.025	210	470	86	472	160	ID
Chloroethane	mg/L	0.43	1.7	1.1	5700	5700	440	5740	110	ID
Chloroform (Trichloromethane)	mg/L	0.08	0.08	0.35	28	180	150	7920	ID	ID
Chloromethane (Methyl chloride)	mg/L	0.26	1.1	ID	8.6	45	490	6340	36	210
cis-1,2-Dichloroethene	mg/L	0.07	0.07	0.62	93	210	200	3500	530	ID
cis-1,3-Dichloropropene	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	mg/L	0.08	0.08	ID	14	110	18	2600	ID	ID
Dichlorodifluoromethane (CFC-12)	mg/L	1.7	4.8	ID	220	300	300	300	ID	ID
Ethylbenzene	mg/L	0.074	0.074	0.018	110	170	170	169	43	170
Isopropyl benzene	mg/L	0.8	2.3	0.028	56	56	56	56	29	ID
Methyl acetate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl cyclohexane	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butyl ether (MTBE)	mg/L	0.04	0.04	7.1	47000	47000	610	46800	ID	ID
Methylene chloride	mg/L	0.005	0.005	1.5	220	1400	220	17000	ID	ID
Styrene	mg/L	0.1	0.1	0.08	170	310	9.7	310	140	310
Tetrachloroethene	mg/L	0.005	0.005	0.06	25	170	12	200	ID	200
Toluene	mg/L	0.79	0.79	0.27	530	530	530	526	61	ID
trans-1,2-Dichloroethene	mg/L	0.1	0.1	1.5	85	200	220	6300	230	ID
trans-1,3-Dichloropropene	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	mg/L	0.005	0.005	0.2	15	97	22	1100	ID	1100

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria* [1]								
Sample Identification Sample Date Area of Interest Sample Type		Residential Drinking Water	Non-Residential Drinking Water	Groundwater Surface Water Interface [5]	Residential Groundwater Volatilization to Indoor Air Inhalation	Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Groundwater Contact	***Water Solubility***	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels
	Units	a	b	c	d	e	f	g	h	i
Trichlorofluoromethane (CFC-11)	mg/L	2.6	7.3	NA	1100	1100	1100	1100	ID	1100
Trifluorotrichloroethane (Freon 113)	mg/L	170	170	0.032	170	170	170	170	ID	170
Vinyl chloride	mg/L	0.002	0.002	0.013	1.1	13	1	2760	33	ID
Xylenes (total)	mg/L	0.28	0.28	0.041	190	190	190	186	70	190
General Chemistry										
Chloride	mg/L	250	250	FF	NLV	NLV	ID		ID	ID

Notes:

[1] Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.

[2] 1,2-Dibromoethane also known as Ethylene dibromide

[3] 2-Butanone also known as Methyl ethyl ketone (MEK)

[4] 4-Methyl-2-pentanone also known as Methyl isobutyl ketone (MIBK)

[5] Carbonate Hardness of 150 mg/L was used to calculate Groundwater Surface Water Interface Protection Criteria.

-- Parameter was not analyzed.

U - Not present at or above the associated value.

J - Estimated concentration.

UJ - Estimated reporting limit.

R - Rejected.

ID - Insufficient data to develop criterion.

NA - A criterion or value is not available or, in the case of background and CAS numbers, not applicable.

NLL - Hazardous substance is not likely to leach under most soil conditions.

NLV - Hazardous substance is not likely to volatilize under most conditions.

[ ] - Exceeds Generic Cleanup Criteria.

Superscript letter notes the criterion exceeded.

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*85-1*	*85-2*	*85-5B*	*85-6*	*85-7*	*86-1*	*86-2*	*86-3*
Sample Identification		*GW-17360-092311-EM-037*	*GW-17360-092311-EM-028*	*GW-17360-092911-EM-044*	*GW-17360-092211-EM-022*	*GW-17360-093011-EM-050*	*GW-17360-092911-EM-040*	*GW-17360-092311-EM-030*	*GW-17360-092211-EM-004*
Sample Date		*9/23/2011*	*9/23/2011*	*9/29/2011*	*9/22/2011*	*9/30/2011*	*9/29/2011*	*9/23/2011*	*9/22/2011*
Area of Interest		*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 19, AOI 4.1*	*AOI 6, AOI 25, AOI 1, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*
Sample Type									
	Units								
Metals									
Antimony	mg/L	0.002 U	0.00025 J	0.002 U	--	0.002 U	0.002 U	--	0.002 U
Arsenic	mg/L	0.0082	0.00069 J	0.0089	--	0.00053 J	0.00047 J	--	0.005 U
Barium	mg/L	0.07 J	0.12	0.093 J	--	0.071 J	0.033 J	--	0.029 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	--	0.001 U	0.001 U	--	0.001 U
Cadmium	mg/L	0.001 U	0.00015 J	0.001 U	--	0.001 U	0.00064 J	--	0.00037 J
Chromium	mg/L	0.01 U	0.0015 J	0.01 U	--	0.01 U	**0.094**[c]	--	0.01 U
Cobalt	mg/L	0.0011 J	0.00048 J	0.00025 J	--	0.000092 J	0.0017 J	--	0.00012 J
Copper	mg/L	0.004 U	0.013	0.00048 J	--	0.0017 J	0.003 J	--	**0.018**[c]
Lead	mg/L	0.00031 J	0.0025 J	0.00085 J	--	0.0016 J	0.0011 J	--	**0.0062**[ab]
Manganese	mg/L	**0.52**[ab]	0.041 J	0.036 J	--	0.035 J	0.013 J	--	0.012 J
Mercury	mg/L	0.04 U	0.04 U	0.04 U	--	0.04 U	0.04 U	--	0.04 U
Nickel	mg/L	0.0015 J	0.0019 J	0.00061 J	--	0.02 U	0.049	--	0.02 U
Selenium	mg/L	0.005 U	0.00098 J	0.005 U	--	0.005 U	0.0013 J	--	0.005 U
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	--	0.0002 U	0.0002 U	--	0.0002 U
Sodium	mg/L	--	--	--	--	--	--	--	--
Thallium	mg/L	0.002 U	0.002 U	0.002 U	--	0.002 U	0.002 U	--	0.002 U
Vanadium	mg/L	0.004 U	0.004	0.004 U	--	0.004 U	0.004 U	--	0.004 U
Zinc	mg/L	0.15	0.069	**0.18**[c]	--	**0.19**[c]	0.062 U	--	**0.57**[c]
Antimony (dissolved)	mg/L	--	--	--	--	--	--	--	--
Arsenic (dissolved)	mg/L	--	--	--	--	--	--	--	--
Barium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Beryllium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cadmium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Chromium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cobalt (dissolved)	mg/L	--	--	--	--	--	--	--	--
Copper (dissolved)	mg/L	--	--	--	--	--	--	--	--
Lead (dissolved)	mg/L	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--
Mercury (dissolved)	mg/L	--	--	--	--	--	--	--	--
Nickel (dissolved)	mg/L	--	--	--	--	--	--	--	--
Selenium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Silver (dissolved)	mg/L	--	--	--	--	--	--	--	--
Thallium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Vanadium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Zinc (dissolved)	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*85-1*	*85-2*	*85-5B*	*85-6*	*85-7*	*86-1*	*86-2*	*86-3*
Sample Identification		*GW-17360-092311-EM-037*	*GW-17360-092311-EM-028*	*GW-17360-092911-EM-044*	*GW-17360-092211-EM-022*	*GW-17360-093011-EM-050*	*GW-17360-092911-EM-040*	*GW-17360-092311-EM-030*	*GW-17360-092211-EM-004*
Sample Date		*9/23/2011*	*9/23/2011*	*9/29/2011*	*9/22/2011*	*9/30/2011*	*9/29/2011*	*9/23/2011*	*9/22/2011*
Area of Interest		*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 19, AOI 4.1*	*AOI 6, AOI 25, AOI 1, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*
Sample Type									
	Units								
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/L	--	--	--	--	--	--	--	--
Total PCBs	mg/L	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis[2-Chlor	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
2,4,5-Trichlorophenol	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
2,4,6-Trichlorophenol	mg/L	--	--	0.0077 U	0.0038 U	--	0.0038 U	--	--
2,4-Dichlorophenol	mg/L	--	--	0.019 U	0.0096 U	--	0.0096 U	--	--
2,4-Dimethylphenol	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
2,4-Dinitrophenol	mg/L	--	--	0.038 U	0.019 U	--	0.019 U	--	--
2,4-Dinitrotoluene	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
2,6-Dinitrotoluene	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
2-Chloronaphthalene	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
2-Chlorophenol	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
2-Methylnaphthalene	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
2-Methylphenol	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
2-Nitroaniline	mg/L	--	--	0.038 U	0.019 U	--	0.019 U	--	--
2-Nitrophenol	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
3&4-Methylphenol	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
3,3'-Dichlorobenzidine	mg/L	--	--	0.0019 U	0.00096 U	--	0.00096 U	--	--
3-Nitroaniline	mg/L	--	--	0.038 U	0.019 U	--	0.019 U	--	--
4,6-Dinitro-2-methylphenol	mg/L	--	--	0.038 U	0.019 U	--	0.019 U	--	--
4-Bromophenyl phenyl ether	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
4-Chloro-3-methylphenol	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
4-Chloroaniline	mg/L	--	--	0.019 U	0.0096 U	--	0.0096 U	--	--
4-Chlorophenyl phenyl ether	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
4-Nitroaniline	mg/L	--	--	0.038 U	0.019 U	--	0.019 U	--	--
4-Nitrophenol	mg/L	--	--	0.038 U	0.019 U	--	0.019 U	--	--
Acenaphthene	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Acenaphthylene	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Acetophenone	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Anthracene	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Atrazine	mg/L	--	--	0.0058 U	0.0029 U	--	0.0029 U	--	--
Benzaldehyde	mg/L	--	--	0.0096 U	0.0048 UJ	--	0.0048 U	--	--
Benzo(a)anthracene	mg/L	--	--	0.0019 U	0.00096 U	--	0.00096 U	--	--
Benzo(a)pyrene	mg/L	--	--	0.0019 U	0.00096 U	--	0.00096 U	--	--
Benzo(b)fluoranthene	mg/L	--	--	0.0019 U	0.00096 U	--	0.00096 U	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*85-1*	*85-2*	*85-5B*	*85-6*	*85-7*	*86-1*	*86-2*	*86-3*
Sample Identification		*GW-17360-092311-EM-037*	*GW-17360-092311-EM-028*	*GW-17360-092911-EM-044*	*GW-17360-092211-EM-022*	*GW-17360-093011-EM-050*	*GW-17360-092911-EM-040*	*GW-17360-092311-EM-030*	*GW-17360-092211-EM-004*
Sample Date		*9/23/2011*	*9/23/2011*	*9/29/2011*	*9/22/2011*	*9/30/2011*	*9/29/2011*	*9/23/2011*	*9/22/2011*
Area of Interest		*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 19, AOI 4.1*	*AOI 6, AOI 25, AOI 1, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*
Sample Type									
	Units								
Benzo(g,h,i)perylene	mg/L	--	--	0.0019 U	0.00096 U	--	0.00096 U	--	--
Benzo(k)fluoranthene	mg/L	--	--	0.0019 U	0.00096 U	--	0.00096 U	--	--
Biphenyl (1,1-Biphenyl)	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
bis(2-Chloroethoxy)methane	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
bis(2-Chloroethyl)ether	mg/L	--	--	0.0019 U	0.00096 U	--	0.00096 U	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Butyl benzylphthalate (BBP)	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Caprolactam	mg/L	--	--	0.019 U	0.0096 U	--	0.0096 U	--	--
Carbazole	mg/L	--	--	0.019 U	0.0096 U	--	0.0096 U	--	--
Chrysene	mg/L	--	--	0.0019 U	0.00096 U	--	0.00096 U	--	--
Dibenz(a,h)anthracene	mg/L	--	--	0.0038 U	0.0019 U	--	0.0019 U	--	--
Dibenzofuran	mg/L	--	--	0.0077 U	0.0038 U	--	0.0038 U	--	--
Diethyl phthalate	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Dimethyl phthalate	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Di-n-butylphthalate (DBP)	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Di-n-octyl phthalate (DnOP)	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Fluoranthene	mg/L	--	--	0.0007 J	0.00096 U	--	0.00096 U	--	--
Fluorene	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Hexachlorobenzene	mg/L	--	--	0.00038 U	0.00019 U	--	0.00019 U	--	--
Hexachlorobutadiene	mg/L	--	--	0.0019 U	0.00096 U	--	0.00096 U	--	--
Hexachlorocyclopentadiene	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 UJ	--	--
Hexachloroethane	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Indeno(1,2,3-cd)pyrene	mg/L	--	--	0.0038 U	0.0019 U	--	0.0019 U	--	--
Isophorone	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Naphthalene	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Nitrobenzene	mg/L	--	--	0.0058 U	0.0029 U	--	0.0029 U	--	--
N-Nitrosodi-n-propylamine	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
N-Nitrosodiphenylamine	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Pentachlorophenol	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Phenanthrene	mg/L	--	--	0.0038 U	0.0019 U	--	0.0019 U	--	--
Phenol	mg/L	--	--	0.0096 U	0.0048 U	--	0.0048 U	--	--
Pyrene	mg/L	--	--	0.00079 J	0.0048 U	--	0.0048 U	--	--
Volatile Organic Compounds									
1,1,1-Trichloroethane	mg/L	0.001 U	0.0055	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 UJ	0.001 UJ	0.001 U	0.001 UJ	0.001 U	0.001 U	0.001 UJ	0.001 UJ
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.0013	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.00028 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*85-1*	*85-2*	*85-5B*	*85-6*	*85-7*	*86-1*	*86-2*	*86-3*
Sample Identification		*GW-17360-092311-EM-037*	*GW-17360-092311-EM-028*	*GW-17360-092911-EM-044*	*GW-17360-092211-EM-022*	*GW-17360-093011-EM-050*	*GW-17360-092911-EM-040*	*GW-17360-092311-EM-030*	*GW-17360-092211-EM-004*
Sample Date		*9/23/2011*	*9/23/2011*	*9/29/2011*	*9/22/2011*	*9/30/2011*	*9/29/2011*	*9/23/2011*	*9/22/2011*
Area of Interest		*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 19, AOI 4.1*	*AOI 6, AOI 25, AOI 1, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 6, AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*
Sample Type									
	Units								
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 UJ	0.001 UJ	0.001 U	0.001 U
1,2-Dibromoethane [2]	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (MEK) [3]	mg/L	0.01 UJ	0.01 UJ	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 UJ	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (MIBK) [4]	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 UJ	0.01 UJ	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 UJ	0.01 UJ
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 UJ	0.001 UJ	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.00061 J	0.001 U	0.00022 J	0.00049 J
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.0016	0.001 U	0.00076 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 UJ	0.001 UJ	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.00042 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 UJ	0.01 UJ	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 UJ	0.01 UJ
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.005 U	0.0003 J	0.00032 J	0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.00096 J	0.0013	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.00019 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 UJ	0.001 UJ	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	0.001	0.00043 J	0.001 U	0.0019	0.001 U	0.0034	0.0042
Trichlorofluoromethane (CFC-11)	mg/L	0.001 UJ	0.001 UJ	0.001 U	0.001 UJ	0.001 U	0.001 U	0.001 UJ	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.00088 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
General Chemistry									
Chloride	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*87-1*	*87-2*	*87-4*	*87-5*	*87-8*	*87-9*	*87-10*	*87-11*
Sample Identification		*GW-17360-092211-EM-019*	*GW-17360-092911-EM-046*	*GW-17360-092311-EM-031*	*GW-17360-092311-EM-029*	*GW-17360-092211-EM-005*	*GW-17360-092211-EM-001*	*GW-17360-092211-EM-009*	*GW-17360-092211-EM-008*
Sample Date		*9/22/2011*	*9/29/2011*	*9/23/2011*	*9/23/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*
Area of Interest		*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.3*	*AOI 25, AOI 4.3*	*AOI 25*	*AOI 25*
Sample Type									
	Units								
Metals									
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.00042 J	--	--	--	0.00016 J
Arsenic	mg/L	0.005 U	0.00048 J	0.005 U	0.005 U	--	--	--	0.00067 J
Barium	mg/L	0.13	0.14	0.053 J	0.071 J	--	--	--	0.098 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	--	--	--	0.001 U
Cadmium	mg/L	0.00027 J	0.001 U	0.001 U	0.00017 J	--	--	--	**0.0027**[c]
Chromium	mg/L	0.01 U	0.01 U	0.0015 J	0.01 U	--	--	--	0.01 U
Cobalt	mg/L	0.00057 J	0.00017 J	0.02 U	0.000092 J	--	--	--	0.00065 J
Copper	mg/L	0.004 U	0.00035 J	0.004 U	0.004 U	--	--	--	0.0064
Lead	mg/L	0.00053 J	0.00051 J	0.00033 J	**0.022**[abc]	--	--	--	**0.0044**[ab]
Manganese	mg/L	**0.26**[ab]	**0.084**[ab]	0.0058 J	0.0087 J	--	--	--	**0.094**[ab]
Mercury	mg/L	0.04 U	0.04 U	0.04 U	0.04 U	--	--	--	0.04 U
Nickel	mg/L	0.0016 J	0.00054 J	0.02 U	0.02 U	--	--	--	0.0031 J
Selenium	mg/L	0.005 U	0.005 U	0.00063 J	0.005 U	--	--	--	0.005 U
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	--	--	--	0.0002 U
Sodium	mg/L	--	--	--	--	--	--	--	--
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	--	--	--	0.002 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	--	--	--	0.004 U
Zinc	mg/L	**0.63**[c]	**0.21**[c]	**0.25**[c]	**3.3**[ac]	--	--	--	**2.5**[ac]
Antimony (dissolved)	mg/L	--	--	--	--	--	--	--	--
Arsenic (dissolved)	mg/L	--	--	--	--	--	--	--	--
Barium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Beryllium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cadmium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Chromium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cobalt (dissolved)	mg/L	--	--	--	--	--	--	--	--
Copper (dissolved)	mg/L	--	--	--	--	--	--	--	--
Lead (dissolved)	mg/L	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--
Mercury (dissolved)	mg/L	--	--	--	--	--	--	--	--
Nickel (dissolved)	mg/L	--	--	--	--	--	--	--	--
Selenium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Silver (dissolved)	mg/L	--	--	--	--	--	--	--	--
Thallium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Vanadium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Zinc (dissolved)	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*87-1*	*87-2*	*87-4*	*87-5*	*87-8*	*87-9*	*87-10*	*87-11*
Sample Identification		*GW-17360-092211-EM-019*	*GW-17360-092911-EM-046*	*GW-17360-092311-EM-031*	*GW-17360-092311-EM-029*	*GW-17360-092211-EM-005*	*GW-17360-092211-EM-001*	*GW-17360-092211-EM-009*	*GW-17360-092211-EM-008*
Sample Date		*9/22/2011*	*9/29/2011*	*9/23/2011*	*9/23/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*
Area of Interest		*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.3*	*AOI 25, AOI 4.3*	*AOI 25*	*AOI 25*
Sample Type									
	Units								
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/L	--	--	--	--	--	--	--	--
Total PCBs	mg/L	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis[2-Chlor	mg/L	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/L	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/L	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/L	--	--	--	--	--	--	--	--
2-Methylphenol	mg/L	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/L	--	--	--	--	--	--	--	--
3&4-Methylphenol	mg/L	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/L	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/L	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/L	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/L	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/L	--	--	--	--	--	--	--	--
Acenaphthene	mg/L	--	--	--	--	--	--	--	--
Acenaphthylene	mg/L	--	--	--	--	--	--	--	--
Acetophenone	mg/L	--	--	--	--	--	--	--	--
Anthracene	mg/L	--	--	--	--	--	--	--	--
Atrazine	mg/L	--	--	--	--	--	--	--	--
Benzaldehyde	mg/L	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/L	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/L	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*87-1*	*87-2*	*87-4*	*87-5*	*87-8*	*87-9*	*87-10*	*87-11*
Sample Identification		*GW-17360-092211-EM-019*	*GW-17360-092911-EM-046*	*GW-17360-092311-EM-031*	*GW-17360-092311-EM-029*	*GW-17360-092211-EM-005*	*GW-17360-092211-EM-001*	*GW-17360-092211-EM-009*	*GW-17360-092211-EM-008*
Sample Date		*9/22/2011*	*9/29/2011*	*9/23/2011*	*9/23/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*
Area of Interest		*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.3*	*AOI 25, AOI 4.3*	*AOI 25*	*AOI 25*
Sample Type									
	Units								
Benzo(g,h,i)perylene	mg/L	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/L	--	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	mg/L	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/L	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/L	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/L	--	--	--	--	--	--	--	--
Caprolactam	mg/L	--	--	--	--	--	--	--	--
Carbazole	mg/L	--	--	--	--	--	--	--	--
Chrysene	mg/L	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/L	--	--	--	--	--	--	--	--
Dibenzofuran	mg/L	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/L	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/L	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/L	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/L	--	--	--	--	--	--	--	--
Fluoranthene	mg/L	--	--	--	--	--	--	--	--
Fluorene	mg/L	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/L	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/L	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/L	--	--	--	--	--	--	--	--
Hexachloroethane	mg/L	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/L	--	--	--	--	--	--	--	--
Isophorone	mg/L	--	--	--	--	--	--	--	--
Naphthalene	mg/L	--	--	--	--	--	--	--	--
Nitrobenzene	mg/L	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/L	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/L	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/L	--	--	--	--	--	--	--	--
Phenanthrene	mg/L	--	--	--	--	--	--	--	--
Phenol	mg/L	--	--	--	--	--	--	--	--
Pyrene	mg/L	--	--	--	--	--	--	--	--
Volatile Organic Compounds									
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 UJ	0.001 U	0.001 U	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.00096 J	0.001 U	0.001 U	0.00049 J	0.001 U	0.001 U	0.00018 J	0.0005 J
1,1-Dichloroethene	mg/L	0.00064 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*87-1*	*87-2*	*87-4*	*87-5*	*87-8*	*87-9*	*87-10*	*87-11*
Sample Identification		*GW-17360-092211-EM-019*	*GW-17360-092911-EM-046*	*GW-17360-092311-EM-031*	*GW-17360-092311-EM-029*	*GW-17360-092211-EM-005*	*GW-17360-092211-EM-001*	*GW-17360-092211-EM-009*	*GW-17360-092211-EM-008*
Sample Date		*9/22/2011*	*9/29/2011*	*9/23/2011*	*9/23/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*
Area of Interest		*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.3*	*AOI 25, AOI 4.3*	*AOI 25*	*AOI 25*
Sample Type									
	Units								
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane [2]	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (MEK) [3]	mg/L	0.01 U	0.01 U	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (MIBK) [4]	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 UJ	0.01 U	0.01 U	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.0012	0.001 U	0.00025 J	0.0013	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.025	0.012	0.001 U	0.00039 J	0.001 U	0.001 U	0.00059 J	0.0055
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 UJ	0.001 U	0.001 UJ	0.001 U	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 UJ	0.01 U	0.01 U	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.00075 J	0.00022 J
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.00037 J	0.001 U	0.00048 J	0.001 U
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.006	0.0026	0.001 U	0.0011	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	**0.013** [ab]	**0.015** [ab]	0.0038	0.0017	0.001 U	0.0012	0.0049	**0.017** [ab]
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	**0.0021** [ab]	**0.0026** [ab]	0.001 U	0.00023 J	0.001 U	0.001 U	0.001 U	0.0019
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
General Chemistry									
Chloride	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*87-13*	*88-2*	*88-3*	*88-4*	*C-1*	*C-2*	*C-3*	*MW1-03*
Sample Identification		*GW-17360-092211-EM-007*	*GW-17360-092311-EM-025*	*GW-17360-092311-EM-024*	*GW-17360-092311-EM-023*	*GW-17360-092911-EM-047*	*GW-17360-092911-EM-048*	*GW-17360-092911-EM-049*	*GW-17360-092211-EM-020*
Sample Date		*9/22/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/22/2011*
Area of Interest		*AOI 25*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25, AOI 1, AOI 4.1*
Sample Type									
	Units								
Metals									
Antimony	mg/L	--	--	--	--	--	--	--	--
Arsenic	mg/L	--	--	--	--	--	--	--	--
Barium	mg/L	--	--	--	--	--	--	--	--
Beryllium	mg/L	--	--	--	--	--	--	--	--
Cadmium	mg/L	--	--	--	--	--	--	--	--
Chromium	mg/L	--	--	--	--	--	--	--	--
Cobalt	mg/L	--	--	--	--	--	--	--	--
Copper	mg/L	--	--	--	--	--	--	--	--
Lead	mg/L	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--
Mercury	mg/L	--	--	--	--	--	--	--	--
Nickel	mg/L	--	--	--	--	--	--	--	--
Selenium	mg/L	--	--	--	--	--	--	--	--
Silver	mg/L	--	--	--	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--	--	--	--
Thallium	mg/L	--	--	--	--	--	--	--	--
Vanadium	mg/L	--	--	--	--	--	--	--	--
Zinc	mg/L	--	--	--	--	--	--	--	--
Antimony (dissolved)	mg/L	--	--	--	--	--	--	--	--
Arsenic (dissolved)	mg/L	--	--	--	--	--	--	--	--
Barium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Beryllium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cadmium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Chromium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cobalt (dissolved)	mg/L	--	--	--	--	--	--	--	--
Copper (dissolved)	mg/L	--	--	--	--	--	--	--	--
Lead (dissolved)	mg/L	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--
Mercury (dissolved)	mg/L	--	--	--	--	--	--	--	--
Nickel (dissolved)	mg/L	--	--	--	--	--	--	--	--
Selenium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Silver (dissolved)	mg/L	--	--	--	--	--	--	--	--
Thallium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Vanadium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Zinc (dissolved)	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*87-13*	*88-2*	*88-3*	*88-4*	*C-1*	*C-2*	*C-3*	*MW1-03*
Sample Identification		*GW-17360-092211-EM-007*	*GW-17360-092311-EM-025*	*GW-17360-092311-EM-024*	*GW-17360-092311-EM-023*	*GW-17360-092911-EM-047*	*GW-17360-092911-EM-048*	*GW-17360-092911-EM-049*	*GW-17360-092211-EM-020*
Sample Date		*9/22/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/22/2011*
Area of Interest		*AOI 25*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25, AOI 1, AOI 4.1*
Sample Type									
	Units								
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/L	--	--	--	--	--	--	--	--
Total PCBs	mg/L	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis[2-Chlor	mg/L	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/L	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/L	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/L	--	--	--	--	--	--	--	--
2-Methylphenol	mg/L	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/L	--	--	--	--	--	--	--	--
3&4-Methylphenol	mg/L	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/L	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/L	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/L	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/L	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/L	--	--	--	--	--	--	--	--
Acenaphthene	mg/L	--	--	--	--	--	--	--	--
Acenaphthylene	mg/L	--	--	--	--	--	--	--	--
Acetophenone	mg/L	--	--	--	--	--	--	--	--
Anthracene	mg/L	--	--	--	--	--	--	--	--
Atrazine	mg/L	--	--	--	--	--	--	--	--
Benzaldehyde	mg/L	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/L	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/L	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*87-13*	*88-2*	*88-3*	*88-4*	*C-1*	*C-2*	*C-3*	*MW1-03*
Sample Identification		*GW-17360-092211-EM-007*	*GW-17360-092311-EM-025*	*GW-17360-092311-EM-024*	*GW-17360-092311-EM-023*	*GW-17360-092911-EM-047*	*GW-17360-092911-EM-048*	*GW-17360-092911-EM-049*	*GW-17360-092211-EM-020*
Sample Date		*9/22/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/22/2011*
Area of Interest		*AOI 25*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25, AOI 1, AOI 4.1*
Sample Type									
	Units								
Benzo(g,h,i)perylene	mg/L	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/L	--	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	mg/L	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/L	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/L	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/L	--	--	--	--	--	--	--	--
Caprolactam	mg/L	--	--	--	--	--	--	--	--
Carbazole	mg/L	--	--	--	--	--	--	--	--
Chrysene	mg/L	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/L	--	--	--	--	--	--	--	--
Dibenzofuran	mg/L	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/L	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/L	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/L	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/L	--	--	--	--	--	--	--	--
Fluoranthene	mg/L	--	--	--	--	--	--	--	--
Fluorene	mg/L	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/L	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/L	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/L	--	--	--	--	--	--	--	--
Hexachloroethane	mg/L	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/L	--	--	--	--	--	--	--	--
Isophorone	mg/L	--	--	--	--	--	--	--	--
Naphthalene	mg/L	--	--	--	--	--	--	--	--
Nitrobenzene	mg/L	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/L	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/L	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/L	--	--	--	--	--	--	--	--
Phenanthrene	mg/L	--	--	--	--	--	--	--	--
Phenol	mg/L	--	--	--	--	--	--	--	--
Pyrene	mg/L	--	--	--	--	--	--	--	--
Volatile Organic Compounds									
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 U	0.0091 UJ
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*87-13*	*88-2*	*88-3*	*88-4*	*C-1*	*C-2*	*C-3*	*MW1-03*
Sample Identification		*GW-17360-092211-EM-007*	*GW-17360-092311-EM-025*	*GW-17360-092311-EM-024*	*GW-17360-092311-EM-023*	*GW-17360-092911-EM-047*	*GW-17360-092911-EM-048*	*GW-17360-092911-EM-049*	*GW-17360-092211-EM-020*
Sample Date		*9/22/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*	*9/29/2011*	*9/29/2011*	*9/29/2011*	*9/22/2011*
Area of Interest		*AOI 25*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25, AOI 1, AOI 4.1*
Sample Type									
	Units								
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 UJ	0.001 UJ	0.0091 U
1,2-Dibromoethane [2]	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
2-Butanone (MEK) [3]	mg/L	0.01 U	0.01 UJ	0.01 UJ	0.01 UJ	0.0011 J	0.0033 J	0.00095 J	0.091 UJ
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.091 U
4-Methyl-2-pentanone (MIBK) [4]	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.091 U
Acetone	mg/L	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.011	0.012	0.011	0.091 UJ
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 UJ	0.001 UJ	0.0091 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 UJ	0.005 UJ	0.045 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.00026 J	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 UJ	0.001 UJ	0.0091 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Methyl acetate	mg/L	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 U	0.01 U	0.01 U	0.091 UJ
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.045 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.045 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.00027 J	0.00013 J	0.001 U	0.0091 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.00057 J	0.00032 J	0.001 U	**0.18** [abc]
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 UJ	0.001 UJ	0.0091 U
Trichloroethene	mg/L	0.00045 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0023 J
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 UJ	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 U	0.0091 UJ
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0091 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.00071 J	0.0006 J	0.002 U	0.018 U
General Chemistry									
Chloride	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW2-03*	*MW3-03*	*MW4-03*	*MW5-03*	*MW6-03*	*MW7-03*	*MW7-03*	*MW8-04*
Sample Identification		*GW-17360-092211-EM-021*	*GW-17360-092311-EM-038*	*GW-17360-092211-EM-014*	*GW-17360-092211-EM-016*	*GW-17360-092211-EM-006*	*GW-17360-092211-EM-002*	*GW-17360-092211-EM-003*	*GW-17360-092211-EM-015*
Sample Date		*9/22/2011*	*9/23/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*
Area of Interest		*AOI 25, AOI 1, AOI 4.1*	*AOI 25, AOI 1, AOI 4.1*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25, AOI 4.3*	*AOI 25, AOI 4.3*	*AOI 25*
Sample Type								*Duplicate*	
	Units								
Metals									
Antimony	mg/L	--	--	--	--	--	--	--	--
Arsenic	mg/L	--	--	--	--	--	--	--	--
Barium	mg/L	--	--	--	--	--	--	--	--
Beryllium	mg/L	--	--	--	--	--	--	--	--
Cadmium	mg/L	--	--	--	--	--	--	--	--
Chromium	mg/L	--	--	--	--	--	--	--	--
Cobalt	mg/L	--	--	--	--	--	--	--	--
Copper	mg/L	--	--	--	--	--	--	--	--
Lead	mg/L	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--
Mercury	mg/L	--	--	--	--	--	--	--	--
Nickel	mg/L	--	--	--	--	--	--	--	--
Selenium	mg/L	--	--	--	--	--	--	--	--
Silver	mg/L	--	--	--	--	--	--	--	--
Sodium	mg/L	--	120	--	--	--	--	--	--
Thallium	mg/L	--	--	--	--	--	--	--	--
Vanadium	mg/L	--	--	--	--	--	--	--	--
Zinc	mg/L	--	--	--	--	--	--	--	--
Antimony (dissolved)	mg/L	--	--	--	--	--	--	--	--
Arsenic (dissolved)	mg/L	--	--	--	--	--	--	--	--
Barium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Beryllium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cadmium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Chromium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cobalt (dissolved)	mg/L	--	--	--	--	--	--	--	--
Copper (dissolved)	mg/L	--	--	--	--	--	--	--	--
Lead (dissolved)	mg/L	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--
Mercury (dissolved)	mg/L	--	--	--	--	--	--	--	--
Nickel (dissolved)	mg/L	--	--	--	--	--	--	--	--
Selenium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Silver (dissolved)	mg/L	--	--	--	--	--	--	--	--
Thallium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Vanadium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Zinc (dissolved)	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW2-03*	*MW3-03*	*MW4-03*	*MW5-03*	*MW6-03*	*MW7-03*	*MW7-03*	*MW8-04*
Sample Identification		*GW-17360-092211-EM-021*	*GW-17360-092311-EM-038*	*GW-17360-092211-EM-014*	*GW-17360-092211-EM-016*	*GW-17360-092211-EM-006*	*GW-17360-092211-EM-002*	*GW-17360-092211-EM-003*	*GW-17360-092211-EM-015*
Sample Date		*9/22/2011*	*9/23/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*
Area of Interest		*AOI 25, AOI 1, AOI 4.1*	*AOI 25, AOI 1, AOI 4.1*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25, AOI 4.3*	*AOI 25, AOI 4.3*	*AOI 25*
Sample Type								*Duplicate*	
	Units								
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/L	--	--	--	--	--	--	--	--
Total PCBs	mg/L	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis[2-Chlor	mg/L	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/L	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/L	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/L	--	--	--	--	--	--	--	--
2-Methylphenol	mg/L	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/L	--	--	--	--	--	--	--	--
3&4-Methylphenol	mg/L	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/L	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/L	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/L	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/L	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/L	--	--	--	--	--	--	--	--
Acenaphthene	mg/L	--	--	--	--	--	--	--	--
Acenaphthylene	mg/L	--	--	--	--	--	--	--	--
Acetophenone	mg/L	--	--	--	--	--	--	--	--
Anthracene	mg/L	--	--	--	--	--	--	--	--
Atrazine	mg/L	--	--	--	--	--	--	--	--
Benzaldehyde	mg/L	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/L	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/L	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW2-03*	*MW3-03*	*MW4-03*	*MW5-03*	*MW6-03*	*MW7-03*	*MW7-03*	*MW8-04*
Sample Identification		*GW-17360-092211-EM-021*	*GW-17360-092311-EM-038*	*GW-17360-092211-EM-014*	*GW-17360-092211-EM-016*	*GW-17360-092211-EM-006*	*GW-17360-092211-EM-002*	*GW-17360-092211-EM-003*	*GW-17360-092211-EM-015*
Sample Date		*9/22/2011*	*9/23/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*
Area of Interest		*AOI 25, AOI 1, AOI 4.1*	*AOI 25, AOI 1, AOI 4.1*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25, AOI 4.3*	*AOI 25, AOI 4.3*	*AOI 25*
Sample Type								*Duplicate*	
	Units								
Benzo(g,h,i)perylene	mg/L	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/L	--	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	mg/L	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/L	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/L	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/L	--	--	--	--	--	--	--	--
Caprolactam	mg/L	--	--	--	--	--	--	--	--
Carbazole	mg/L	--	--	--	--	--	--	--	--
Chrysene	mg/L	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/L	--	--	--	--	--	--	--	--
Dibenzofuran	mg/L	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/L	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/L	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/L	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/L	--	--	--	--	--	--	--	--
Fluoranthene	mg/L	--	--	--	--	--	--	--	--
Fluorene	mg/L	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/L	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/L	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/L	--	--	--	--	--	--	--	--
Hexachloroethane	mg/L	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/L	--	--	--	--	--	--	--	--
Isophorone	mg/L	--	--	--	--	--	--	--	--
Naphthalene	mg/L	--	--	--	--	--	--	--	--
Nitrobenzene	mg/L	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/L	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/L	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/L	--	--	--	--	--	--	--	--
Phenanthrene	mg/L	--	--	--	--	--	--	--	--
Phenol	mg/L	--	--	--	--	--	--	--	--
Pyrene	mg/L	--	--	--	--	--	--	--	--
Volatile Organic Compounds									
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW2-03*	*MW3-03*	*MW4-03*	*MW5-03*	*MW6-03*	*MW7-03*	*MW7-03*	*MW8-04*
Sample Identification		*GW-17360-092211-EM-021*	*GW-17360-092311-EM-038*	*GW-17360-092211-EM-014*	*GW-17360-092211-EM-016*	*GW-17360-092211-EM-006*	*GW-17360-092211-EM-002*	*GW-17360-092211-EM-003*	*GW-17360-092211-EM-015*
Sample Date		*9/22/2011*	*9/23/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*
Area of Interest		*AOI 25, AOI 1, AOI 4.1*	*AOI 25, AOI 1, AOI 4.1*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25, AOI 4.3*	*AOI 25, AOI 4.3*	*AOI 25*
Sample Type								*Duplicate*	
	Units								
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane [2]	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (MEK) [3]	mg/L	0.01 UJ	0.01 UJ	0.0014 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (MIBK) [4]	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.00033 J	0.001 U	0.001 U	0.00035 J	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0015	0.0005 J	0.001 U	0.012	0.00018 J	0.00029 J	0.00031 J	0.001
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00022 J	0.00025 J	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.005 U	0.00035 J	0.00026 J	0.005 U	0.005 U	0.005 U	0.00035 J
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.005	**0.027 J [ab]**	0.00046 J	0.00057 J	0.001 U	0.001 U	0.001 U	0.0003 J
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	0.0017	0.00028 J	0.00056 J	0.001 U	0.0013	0.0013	0.00017 J
Trichlorofluoromethane (CFC-11)	mg/L	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
General Chemistry									
Chloride	mg/L	--	200	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW9-04*	*MW10-04*	*MW11D-04*	*MW11S-05*	*MW13-04*	*MW14-04*	*MW15-04*	*MW17-06*
Sample Identification		*GW-17360-092211-EM-010*	*GW-17360-092211-EM-013*	*GW-17360-092211-EM-011*	*GW-17360-092211-EM-012*	*GW-17360-093011-EM-051*	*GW-17360-092311-EM-034*	*GW-17360-092311-EM-027*	*GW-17360-092311-EM-026*
Sample Date		*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/30/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*
Area of Interest		*AOI 25*	*AOI 25*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 3*
Sample Type									
	Units								
Metals									
Antimony	mg/L	--	--	--	--	--	--	--	--
Arsenic	mg/L	--	--	--	--	--	--	--	--
Barium	mg/L	--	--	--	--	--	--	--	--
Beryllium	mg/L	--	--	--	--	--	--	--	--
Cadmium	mg/L	--	--	--	--	--	--	--	--
Chromium	mg/L	--	--	--	--	--	--	--	--
Cobalt	mg/L	--	--	--	--	--	--	--	--
Copper	mg/L	--	--	--	--	--	--	--	--
Lead	mg/L	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--
Mercury	mg/L	--	--	--	--	--	--	--	--
Nickel	mg/L	--	--	--	--	--	--	--	--
Selenium	mg/L	--	--	--	--	--	--	--	--
Silver	mg/L	--	--	--	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--	--	--	--
Thallium	mg/L	--	--	--	--	--	--	--	--
Vanadium	mg/L	--	--	--	--	--	--	--	--
Zinc	mg/L	--	--	--	--	--	--	--	--
Antimony (dissolved)	mg/L	--	--	--	--	--	--	--	--
Arsenic (dissolved)	mg/L	--	--	--	--	--	--	--	--
Barium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Beryllium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cadmium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Chromium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cobalt (dissolved)	mg/L	--	--	--	--	--	--	--	--
Copper (dissolved)	mg/L	--	--	--	--	--	--	--	--
Lead (dissolved)	mg/L	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--
Mercury (dissolved)	mg/L	--	--	--	--	--	--	--	--
Nickel (dissolved)	mg/L	--	--	--	--	--	--	--	--
Selenium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Silver (dissolved)	mg/L	--	--	--	--	--	--	--	--
Thallium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Vanadium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Zinc (dissolved)	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW9-04*	*MW10-04*	*MW11D-04*	*MW11S-05*	*MW13-04*	*MW14-04*	*MW15-04*	*MW17-06*
Sample Identification		*GW-17360-092211-EM-010*	*GW-17360-092211-EM-013*	*GW-17360-092211-EM-011*	*GW-17360-092211-EM-012*	*GW-17360-093011-EM-051*	*GW-17360-092311-EM-034*	*GW-17360-092311-EM-027*	*GW-17360-092311-EM-026*
Sample Date		*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/30/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*
Area of Interest		*AOI 25*	*AOI 25*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 3*
Sample Type									
	Units								
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/L	--	--	--	--	--	--	--	--
Total PCBs	mg/L	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis[2-Chlor	mg/L	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/L	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/L	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/L	--	--	--	--	--	--	--	--
2-Methylphenol	mg/L	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/L	--	--	--	--	--	--	--	--
3&4-Methylphenol	mg/L	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/L	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/L	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/L	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/L	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/L	--	--	--	--	--	--	--	--
Acenaphthene	mg/L	--	--	--	--	--	--	--	--
Acenaphthylene	mg/L	--	--	--	--	--	--	--	--
Acetophenone	mg/L	--	--	--	--	--	--	--	--
Anthracene	mg/L	--	--	--	--	--	--	--	--
Atrazine	mg/L	--	--	--	--	--	--	--	--
Benzaldehyde	mg/L	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/L	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/L	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW9-04*	*MW10-04*	*MW11D-04*	*MW11S-05*	*MW13-04*	*MW14-04*	*MW15-04*	*MW17-06*
Sample Identification		*GW-17360-092211-EM-010*	*GW-17360-092211-EM-013*	*GW-17360-092211-EM-011*	*GW-17360-092211-EM-012*	*GW-17360-093011-EM-051*	*GW-17360-092311-EM-034*	*GW-17360-092311-EM-027*	*GW-17360-092311-EM-026*
Sample Date		*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/30/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*
Area of Interest		*AOI 25*	*AOI 25*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 3*
Sample Type									
	Units								
Benzo(g,h,i)perylene	mg/L	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/L	--	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	mg/L	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/L	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/L	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/L	--	--	--	--	--	--	--	--
Caprolactam	mg/L	--	--	--	--	--	--	--	--
Carbazole	mg/L	--	--	--	--	--	--	--	--
Chrysene	mg/L	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/L	--	--	--	--	--	--	--	--
Dibenzofuran	mg/L	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/L	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/L	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/L	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/L	--	--	--	--	--	--	--	--
Fluoranthene	mg/L	--	--	--	--	--	--	--	--
Fluorene	mg/L	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/L	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/L	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/L	--	--	--	--	--	--	--	--
Hexachloroethane	mg/L	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/L	--	--	--	--	--	--	--	--
Isophorone	mg/L	--	--	--	--	--	--	--	--
Naphthalene	mg/L	--	--	--	--	--	--	--	--
Nitrobenzene	mg/L	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/L	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/L	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/L	--	--	--	--	--	--	--	--
Phenanthrene	mg/L	--	--	--	--	--	--	--	--
Phenol	mg/L	--	--	--	--	--	--	--	--
Pyrene	mg/L	--	--	--	--	--	--	--	--
Volatile Organic Compounds									
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0045	0.0017 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 UJ	0.001 U	0.001 UJ	0.001 UJ	0.001 U	0.001 UJ	0.001 UJ	0.0017 UJ
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
1,1-Dichloroethane	mg/L	0.001 U	0.00026 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW9-04*	*MW10-04*	*MW11D-04*	*MW11S-05*	*MW13-04*	*MW14-04*	*MW15-04*	*MW17-06*
Sample Identification		*GW-17360-092211-EM-010*	*GW-17360-092211-EM-013*	*GW-17360-092211-EM-011*	*GW-17360-092211-EM-012*	*GW-17360-093011-EM-051*	*GW-17360-092311-EM-034*	*GW-17360-092311-EM-027*	*GW-17360-092311-EM-026*
Sample Date		*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/22/2011*	*9/30/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*
Area of Interest		*AOI 25*	*AOI 25*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 4.1*	*AOI 25, AOI 3*
Sample Type									
	Units								
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U	0.0017 U
1,2-Dibromoethane [2]	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
2-Butanone (MEK) [3]	mg/L	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 UJ	0.01 UJ	0.017 UJ
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U
4-Methyl-2-pentanone (MIBK) [4]	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U
Acetone	mg/L	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ	0.017 UJ
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Bromodichloromethane	mg/L	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U	0.0017 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.0084 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Chloroform (Trichloromethane)	mg/L	0.0085	0.00024 J	0.0011	0.001 U	0.00024 J	0.0011	0.00027 J	0.0017 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.0016	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.031
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U	0.0017 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 UJ	0.001 U	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 U	0.0017 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Methyl acetate	mg/L	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ	0.017 UJ
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Methyl tert butyl ether (MTBE)	mg/L	0.00024 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0084 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0084 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Tetrachloroethene	mg/L	0.00042 J	0.001 U	0.00041 J	0.001 U	0.00034 J	0.001 U	0.001 U	**0.019** [ab]
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.00033 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00062 J
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U	0.0017 U
Trichloroethene	mg/L	0.00028 J	0.0028	0.001	0.00028 J	0.00022 J	0.0023	0.0012	0.0032
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 UJ	0.0017 UJ
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0033 U
General Chemistry									
Chloride	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW18-10*	*MW18-10*	*MW19-11*	*MW20-11*	*MW21-11*	*MW22-11*	*MW23-11*	*MW24-11*
Sample Identification		*GW-17360-092911-EM-042*	*GW-17360-092911-EM-043*	*GW-17360-092211-EM-017*	*GW-17360-092311-EM-035*	*GW-17360-092311-EM-039*	*GW-17360-092311-EM-036*	*GW-17360-092211-EM-018*	*WG-17360-101911-JV-058*
Sample Date		*9/29/2011*	*9/29/2011*	*9/22/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*	*9/22/2011*	*10/19/2011*
Area of Interest		*OI 4.1, AOI 6, AOI 17.1, AOI 1*	*OI 4.1, AOI 6, AOI 17.1, AOI 1*	*AOI 7.1, AOI 26.2*	*AOI 11*	*AOI 15.3*	*AOI 16.1*	*AOI 16.3*	*AOI 16.4*
Sample Type			*Duplicate*						
	Units								
Metals									
Antimony	mg/L	0.002 U	0.002 U	--	--	--	--	--	--
Arsenic	mg/L	0.0016 J	0.0016 J	--	--	--	--	--	--
Barium	mg/L	0.076 J	0.084 J	--	--	--	--	--	--
Beryllium	mg/L	0.001 U	0.001 U	--	--	--	--	--	--
Cadmium	mg/L	0.001 U	0.001 U	--	--	--	--	--	--
Chromium	mg/L	0.01 U	0.01 U	--	--	--	--	--	--
Cobalt	mg/L	0.00037 J	0.0004 J	--	--	--	--	--	--
Copper	mg/L	0.0003 J	0.004 U	--	--	--	--	--	--
Lead	mg/L	0.003 U	0.003 U	--	--	--	--	--	--
Manganese	mg/L	**0.65**[ab]	**0.71**[ab]	--	--	--	--	--	--
Mercury	mg/L	0.04 U	0.04 U	--	--	--	--	--	--
Nickel	mg/L	0.0014 J	0.0015 J	--	--	--	--	--	--
Selenium	mg/L	0.005 U	0.005 U	--	--	--	--	--	--
Silver	mg/L	0.0002 U	0.0002 U	--	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--	--	--	--
Thallium	mg/L	0.002 U	0.002 U	--	--	--	--	--	--
Vanadium	mg/L	0.004 U	0.004 U	--	--	--	--	--	--
Zinc	mg/L	0.05 U	0.05 U	--	--	--	--	--	--
Antimony (dissolved)	mg/L	--	--	--	--	--	--	--	--
Arsenic (dissolved)	mg/L	--	--	--	--	--	--	--	--
Barium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Beryllium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cadmium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Chromium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Cobalt (dissolved)	mg/L	--	--	--	--	--	--	--	--
Copper (dissolved)	mg/L	--	--	--	--	--	--	--	--
Lead (dissolved)	mg/L	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--
Mercury (dissolved)	mg/L	--	--	--	--	--	--	--	--
Nickel (dissolved)	mg/L	--	--	--	--	--	--	--	--
Selenium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Silver (dissolved)	mg/L	--	--	--	--	--	--	--	--
Thallium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Vanadium (dissolved)	mg/L	--	--	--	--	--	--	--	--
Zinc (dissolved)	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW18-10*	*MW18-10*	*MW19-11*	*MW20-11*	*MW21-11*	*MW22-11*	*MW23-11*	*MW24-11*
Sample Identification		*GW-17360-092911-EM-042*	*GW-17360-092911-EM-043*	*GW-17360-092211-EM-017*	*GW-17360-092311-EM-035*	*GW-17360-092311-EM-039*	*GW-17360-092311-EM-036*	*GW-17360-092211-EM-018*	*WG-17360-101911-JV-058*
Sample Date		*9/29/2011*	*9/29/2011*	*9/22/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*	*9/22/2011*	*10/19/2011*
Area of Interest		*OI 4.1, AOI 6, AOI 17.1, AOI 1*	*OI 4.1, AOI 6, AOI 17.1, AOI 1*	*AOI 7.1, AOI 26.2*	*AOI 11*	*AOI 15.3*	*AOI 16.1*	*AOI 16.3*	*AOI 16.4*
Sample Type			*Duplicate*						
	Units								
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/L	--	--	--	--	--	--	--	--
Total PCBs	mg/L	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis[2-Chlor	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/L	0.0076 U	0.0076 U	--	--	--	--	--	--
2,4-Dichlorophenol	mg/L	0.019 U	0.019 U	--	--	--	--	--	--
2,4-Dimethylphenol	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
2,4-Dinitrophenol	mg/L	0.038 U	0.038 U	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
2-Chloronaphthalene	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
2-Chlorophenol	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
2-Methylnaphthalene	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
2-Methylphenol	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
2-Nitroaniline	mg/L	0.038 U	0.038 U	--	--	--	--	--	--
2-Nitrophenol	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
3&4-Methylphenol	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/L	0.0019 U	0.0019 U	--	--	--	--	--	--
3-Nitroaniline	mg/L	0.038 U	0.038 U	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/L	0.038 U	0.038 U	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
4-Chloroaniline	mg/L	0.019 U	0.019 U	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
4-Nitroaniline	mg/L	0.038 U	0.038 U	--	--	--	--	--	--
4-Nitrophenol	mg/L	0.038 U	0.038 U	--	--	--	--	--	--
Acenaphthene	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Acenaphthylene	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Acetophenone	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Anthracene	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Atrazine	mg/L	0.0057 U	0.0057 U	--	--	--	--	--	--
Benzaldehyde	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Benzo(a)anthracene	mg/L	0.0019 U	0.0019 U	--	--	--	--	--	--
Benzo(a)pyrene	mg/L	0.0019 U	0.0019 U	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/L	0.0019 U	0.0019 U	--	--	--	--	--	--

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW18-10*	*MW18-10*	*MW19-11*	*MW20-11*	*MW21-11*	*MW22-11*	*MW23-11*	*MW24-11*
Sample Identification		*GW-17360-092911-EM-042*	*GW-17360-092911-EM-043*	*GW-17360-092211-EM-017*	*GW-17360-092311-EM-035*	*GW-17360-092311-EM-039*	*GW-17360-092311-EM-036*	*GW-17360-092211-EM-018*	*WG-17360-101911-JV-058*
Sample Date		*9/29/2011*	*9/29/2011*	*9/22/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*	*9/22/2011*	*10/19/2011*
Area of Interest		*OI 4.1, AOI 6, AOI 17.1, AOI 1*	*OI 4.1, AOI 6, AOI 17.1, AOI 1*	*AOI 7.1, AOI 26.2*	*AOI 11*	*AOI 15.3*	*AOI 16.1*	*AOI 16.3*	*AOI 16.4*
Sample Type			*Duplicate*						
	Units								
Benzo(g,h,i)perylene	mg/L	0.0019 U	0.0019 U	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/L	0.0019 U	0.0019 U	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/L	0.0019 U	0.0019 U	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Caprolactam	mg/L	0.019 U	0.019 U	--	--	--	--	--	--
Carbazole	mg/L	0.019 U	0.019 U	--	--	--	--	--	--
Chrysene	mg/L	0.0019 U	0.0019 U	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/L	0.0038 U	0.0038 U	--	--	--	--	--	--
Dibenzofuran	mg/L	0.0076 U	0.0076 U	--	--	--	--	--	--
Diethyl phthalate	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Dimethyl phthalate	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Fluoranthene	mg/L	0.0019 U	0.0019 U	--	--	--	--	--	--
Fluorene	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Hexachlorobenzene	mg/L	0.00038 U	0.00038 U	--	--	--	--	--	--
Hexachlorobutadiene	mg/L	0.0019 U	0.0019 U	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Hexachloroethane	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/L	0.0038 U	0.0038 U	--	--	--	--	--	--
Isophorone	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Naphthalene	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Nitrobenzene	mg/L	0.0057 U	0.0057 U	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Pentachlorophenol	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Phenanthrene	mg/L	0.0038 U	0.0038 U	--	--	--	--	--	--
Phenol	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Pyrene	mg/L	0.0095 U	0.0095 U	--	--	--	--	--	--
Volatile Organic Compounds									
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ	0.001 UJ	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00035 J	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW18-10*	*MW18-10*	*MW19-11*	*MW20-11*	*MW21-11*	*MW22-11*	*MW23-11*	*MW24-11*
Sample Identification		*GW-17360-092911-EM-042*	*GW-17360-092911-EM-043*	*GW-17360-092211-EM-017*	*GW-17360-092311-EM-035*	*GW-17360-092311-EM-039*	*GW-17360-092311-EM-036*	*GW-17360-092211-EM-018*	*WG-17360-101911-JV-058*
Sample Date		*9/29/2011*	*9/29/2011*	*9/22/2011*	*9/23/2011*	*9/23/2011*	*9/23/2011*	*9/22/2011*	*10/19/2011*
Area of Interest		*OI 4.1, AOI 6, AOI 17.1, AOI 1*	*OI 4.1, AOI 6, AOI 17.1, AOI 1*	*AOI 7.1, AOI 26.2*	*AOI 11*	*AOI 15.3*	*AOI 16.1*	*AOI 16.3*	*AOI 16.4*
Sample Type			*Duplicate*						
	Units								
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane [2]	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (MEK) [3]	mg/L	0.01 U	0.01 U	0.01 U	0.01 UJ	0.01 UJ	0.01 UJ	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (MIBK) [4]	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ
Acetone	mg/L	0.01 U	0.01 U	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00016 J	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 UJ	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.0002 J	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.00086 J	0.001 U	0.00031 J	0.001 U	0.001 U	0.00059 J
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.00022 J	0.001 U	0.0033	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.00017 J	0.005 U	0.005 U	0.005 U	0.005 U	0.00027 J	0.005 U	0.005 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.0007 J	0.00071 J	0.00082 J	0.001 U	**0.028** [ab]	0.00064 J	0.001 U	0.0039
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.0007 J	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ
Trichloroethene	mg/L	0.001 U	0.001 U	0.00036 J	0.001 U	0.0012	0.001 U	0.00081 J	0.00077 J
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 UJ	0.001 UJ	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.0021** [ab]	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
General Chemistry									
Chloride	mg/L	--	--	--	--	--	--	--	--

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW24-11*	*MW25-11*	*MW26-11*	*MW27-11*	*MW27-11*	*SB130-11*	*TW131-11*	*TW132-11*
Sample Identification		*WG-17360-101911-JV-059*	*GW-17360-092911-EM-041*	*GW-17360-092911-EM-045*	*GW-17360-092311-EM-032*	*GW-17360-092311-EM-033*	*GW-17360-093011-EM-052*	*GW-17360-100411-EM-057*	*GW-17360-100411-EM-056*
Sample Date		*10/19/2011*	*9/29/2011*	*9/29/2011*	*9/23/2011*	*9/23/2011*	*9/30/2011*	*10/4/2011*	*10/4/2011*
Area of Interest		*AOI 16.4*	*AOI 17.1*	*AOI 19*	*AOI 27*	*AOI 27*	*AOI 4.2*	*AOI 4.2*	*AOI 4.2*
Sample Type		*Duplicate*				*Duplicate*			
	Units								
Metals									
Antimony	mg/L	--	--	--	--	--	0.002 U	0.002 U	0.00059 J
Arsenic	mg/L	--	--	--	--	--	0.0025 J	0.00071 J	0.0011 J
Barium	mg/L	--	--	--	--	--	0.062 J	0.0057 J	0.034 J
Beryllium	mg/L	--	--	--	--	--	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	--	--	--	--	--	0.001 U	0.001 U	0.00016 J
Chromium	mg/L	--	--	--	--	--	0.0024 J	0.0014 J	0.0033 J
Cobalt	mg/L	--	--	--	--	--	0.0042 J	0.02 U	0.0019 J
Copper	mg/L	--	--	--	--	--	0.0031 J	0.004 U	**0.017**[c]
Lead	mg/L	--	--	--	--	--	0.001 J	0.003 U	0.0012 J
Manganese	mg/L	--	--	--	--	--	**0.56**[ab]	0.004 J	0.045 J
Mercury	mg/L	--	--	--	--	--	0.04 U	0.04 U	0.04 U
Nickel	mg/L	--	--	--	--	--	0.006 J	0.00029 J	0.0064 J
Selenium	mg/L	--	--	--	--	--	0.0022 J	0.005 U	0.0016 J
Silver	mg/L	--	--	--	--	--	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	--	--	--	--	--	**130**[a]	36	100
Thallium	mg/L	--	--	--	--	--	0.002 U	0.002 U	0.002 U
Vanadium	mg/L	--	--	--	--	--	0.002 J	0.004 U	**0.015**[ac]
Zinc	mg/L	--	--	--	--	--	0.05 U	0.05 U	0.033 J
Antimony (dissolved)	mg/L	--	--	--	--	--	--	0.002 U	0.00058 J
Arsenic (dissolved)	mg/L	--	--	--	--	--	--	0.00046 J	0.00075 J
Barium (dissolved)	mg/L	--	--	--	--	--	--	0.0052 J	0.027 J
Beryllium (dissolved)	mg/L	--	--	--	--	--	--	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	--	--	--	--	--	--	0.001 U	0.001 U
Chromium (dissolved)	mg/L	--	--	--	--	--	--	0.0017 J	0.0014 J
Cobalt (dissolved)	mg/L	--	--	--	--	--	--	0.02 U	0.0004 J
Copper (dissolved)	mg/L	--	--	--	--	--	--	0.004 U	0.013
Lead (dissolved)	mg/L	--	--	--	--	--	--	0.003 U	0.003 U
Manganese (dissolved)	mg/L	--	--	--	--	--	--	0.0049 J	0.038 J
Mercury (dissolved)	mg/L	--	--	--	--	--	--	0.0002 U	0.0002 U
Nickel (dissolved)	mg/L	--	--	--	--	--	--	0.00029 J	0.0014 J
Selenium (dissolved)	mg/L	--	--	--	--	--	--	0.005 U	0.0017 J
Silver (dissolved)	mg/L	--	--	--	--	--	--	0.0002 U	0.0002 U
Thallium (dissolved)	mg/L	--	--	--	--	--	--	0.002 U	0.002 U
Vanadium (dissolved)	mg/L	--	--	--	--	--	--	0.004 U	**0.014**[ac]
Zinc (dissolved)	mg/L	--	--	--	--	--	--	0.05 U	0.05 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		MW24-11	MW25-11	MW26-11	MW27-11	MW27-11	SB130-11	TW131-11	TW132-11
Sample Identification		WG-17360-101911-JV-059	GW-17360-092911-EM-041	GW-17360-092911-EM-045	GW-17360-092311-EM-032	GW-17360-092311-EM-033	GW-17360-093011-EM-052	GW-17360-100411-EM-057	GW-17360-100411-EM-056
Sample Date		10/19/2011	9/29/2011	9/29/2011	9/23/2011	9/23/2011	9/30/2011	10/4/2011	10/4/2011
Area of Interest		AOI 16.4	AOI 17.1	AOI 19	AOI 27	AOI 27	AOI 4.2	AOI 4.2	AOI 4.2
Sample Type		Duplicate				Duplicate			
	Units								
Polychlorinated Biphenyls									
Aroclor-1016 (PCB-1016)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/L	--	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/L	--	--	--	--	--	--	--	--
Total PCBs	mg/L	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis[2-Chlor	mg/L	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/L	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/L	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/L	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.005 U
2-Methylphenol	mg/L	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/L	--	--	--	--	--	--	--	--
3&4-Methylphenol	mg/L	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/L	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/L	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/L	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/L	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/L	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/L	--	--	--	--	--	--	--	--
Acenaphthene	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.005 U
Acenaphthylene	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.005 U
Acetophenone	mg/L	--	--	--	--	--	--	--	--
Anthracene	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.005 U
Atrazine	mg/L	--	--	--	--	--	--	--	--
Benzaldehyde	mg/L	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/L	--	--	--	--	--	0.001 U	0.00098 U	0.00099 U
Benzo(a)pyrene	mg/L	--	--	--	--	--	0.001 U	0.00098 U	0.00099 U
Benzo(b)fluoranthene	mg/L	--	--	--	--	--	0.001 U	0.00098 U	0.00099 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW24-11*	*MW25-11*	*MW26-11*	*MW27-11*	*MW27-11*	*SB130-11*	*TW131-11*	*TW132-11*
Sample Identification		*WG-17360-101911-JV-059*	*GW-17360-092911-EM-041*	*GW-17360-092911-EM-045*	*GW-17360-092311-EM-032*	*GW-17360-092311-EM-033*	*GW-17360-093011-EM-052*	*GW-17360-100411-EM-057*	*GW-17360-100411-EM-056*
Sample Date		*10/19/2011*	*9/29/2011*	*9/29/2011*	*9/23/2011*	*9/23/2011*	*9/30/2011*	*10/4/2011*	*10/4/2011*
Area of Interest		*AOI 16.4*	*AOI 17.1*	*AOI 19*	*AOI 27*	*AOI 27*	*AOI 4.2*	*AOI 4.2*	*AOI 4.2*
Sample Type		*Duplicate*				*Duplicate*			
	Units								
Benzo(g,h,i)perylene	mg/L	--	--	--	--	--	0.001 U	0.00098 U	0.00099 U
Benzo(k)fluoranthene	mg/L	--	--	--	--	--	0.001 U	0.00098 U	0.00099 U
Biphenyl (1,1-Biphenyl)	mg/L	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/L	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/L	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/L	--	--	--	--	--	--	--	--
Caprolactam	mg/L	--	--	--	--	--	--	--	--
Carbazole	mg/L	--	--	--	--	--	--	--	--
Chrysene	mg/L	--	--	--	--	--	0.001 U	0.00098 U	0.00099 U
Dibenz(a,h)anthracene	mg/L	--	--	--	--	--	0.002 U	0.002 U	0.002 U
Dibenzofuran	mg/L	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/L	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/L	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/L	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/L	--	--	--	--	--	--	--	--
Fluoranthene	mg/L	--	--	--	--	--	0.001 U	0.00098 U	0.00099 U
Fluorene	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.005 U
Hexachlorobenzene	mg/L	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/L	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/L	--	--	--	--	--	--	--	--
Hexachloroethane	mg/L	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/L	--	--	--	--	--	0.002 U	0.002 U	0.002 U
Isophorone	mg/L	--	--	--	--	--	--	--	--
Naphthalene	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.005 U
Nitrobenzene	mg/L	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/L	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/L	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/L	--	--	--	--	--	--	--	--
Phenanthrene	mg/L	--	--	--	--	--	0.002 U	0.002 U	0.002 U
Phenol	mg/L	--	--	--	--	--	--	--	--
Pyrene	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.005 U
Volatile Organic Compounds									
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.0016	0.0016	0.001 U	0.001 U	0.00038 J
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.00045 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.00069 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*MW24-11*	*MW25-11*	*MW26-11*	*MW27-11*	*MW27-11*	*SB130-11*	*TW131-11*	*TW132-11*
Sample Identification		*WG-17360-101911-JV-059*	*GW-17360-092911-EM-041*	*GW-17360-092911-EM-045*	*GW-17360-092311-EM-032*	*GW-17360-092311-EM-033*	*GW-17360-093011-EM-052*	*GW-17360-100411-EM-057*	*GW-17360-100411-EM-056*
Sample Date		*10/19/2011*	*9/29/2011*	*9/29/2011*	*9/23/2011*	*9/23/2011*	*9/30/2011*	*10/4/2011*	*10/4/2011*
Area of Interest		*AOI 16.4*	*AOI 17.1*	*AOI 19*	*AOI 27*	*AOI 27*	*AOI 4.2*	*AOI 4.2*	*AOI 4.2*
Sample Type		*Duplicate*				*Duplicate*			
	Units								
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U
1,2-Dibromoethane [2]	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (MEK) [3]	mg/L	0.01 U	0.0016 J	0.01 U	0.01 UJ	0.01 UJ	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (MIBK) [4]	mg/L	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 UJ	0.01 U	0.01 U	0.01 UJ	0.01 UJ	0.01 U	0.01 U	0.01 U
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.00051 J	0.005 UJ	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.00057 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.0027	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 UJ	0.01 U	0.01 U	0.01 UJ	0.01 UJ	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.0038	0.00072 J	0.001 U	0.001 U	0.001 U	0.001 U	0.0017	0.00048 J
Toluene	mg/L	0.001 U	0.00017 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 UJ	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U
Trichloroethene	mg/L	0.00078 J	0.0002 J	0.0016	0.0019	0.0018	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 UJ	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.0011	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
General Chemistry									
Chloride	mg/L	--	--	--	--	--	140	5.5	54

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*TW134-11*	*TW137-11*
Sample Identification		*GW-17360-100311-EM-054*	*GW-17360-100311-EM-055*
Sample Date		*10/3/2011*	*10/3/2011*
Area of Interest		*AOI 7.2*	*AOI 17.1*
Sample Type			
	Units		
Metals			
Antimony	mg/L	0.0002 J	0.00027 J
Arsenic	mg/L	0.00049 J	0.00065 J
Barium	mg/L	0.045 J	0.041 J
Beryllium	mg/L	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.001 U
Chromium	mg/L	0.0012 J	0.001 J
Cobalt	mg/L	0.00015 J	0.00068 J
Copper	mg/L	0.004 U	0.004 U
Lead	mg/L	0.00028 J	0.003 U
Manganese	mg/L	**0.094**[ab]	**0.17**[ab]
Mercury	mg/L	0.04 U	0.04 U
Nickel	mg/L	0.00076 J	0.0017 J
Selenium	mg/L	0.0012 J	0.0011 J
Silver	mg/L	0.0002 U	0.0002 U
Sodium	mg/L	--	--
Thallium	mg/L	0.0011 J	0.002 U
Vanadium	mg/L	0.004 U	0.004 U
Zinc	mg/L	0.05 U	0.05 U
Antimony (dissolved)	mg/L	0.002 U	0.00026 J
Arsenic (dissolved)	mg/L	0.005 U	0.00079 J
Barium (dissolved)	mg/L	0.042 J	0.042 J
Beryllium (dissolved)	mg/L	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	0.001 U	0.001 U
Chromium (dissolved)	mg/L	0.0011 J	0.0012 J
Cobalt (dissolved)	mg/L	0.00012 J	0.00066 J
Copper (dissolved)	mg/L	0.004 U	0.004 U
Lead (dissolved)	mg/L	0.003 U	0.003 U
Manganese (dissolved)	mg/L	0.013 J	**0.19**[ab]
Mercury (dissolved)	mg/L	0.0002 U	0.0002 U
Nickel (dissolved)	mg/L	0.0012 J	0.0023 J
Selenium (dissolved)	mg/L	0.00067 J	0.0011 J
Silver (dissolved)	mg/L	0.0002 U	0.0002 U
Thallium (dissolved)	mg/L	0.002 U	0.002 U
Vanadium (dissolved)	mg/L	0.004 U	0.004 U
Zinc (dissolved)	mg/L	0.05 U	0.05 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*TW134-11*	*TW137-11*
Sample Identification		*GW-17360-100311-EM-054*	*GW-17360-100311-EM-055*
Sample Date		*10/3/2011*	*10/3/2011*
Area of Interest		*AOI 7.2*	*AOI 17.1*
Sample Type			
	Units		
Polychlorinated Biphenyls			
Aroclor-1016 (PCB-1016)	mg/L	0.000098 U	0.000099 U
Aroclor-1221 (PCB-1221)	mg/L	0.000098 U	0.000099 U
Aroclor-1232 (PCB-1232)	mg/L	0.000098 U	0.000099 U
Aroclor-1242 (PCB-1242)	mg/L	0.000098 U	0.000099 U
Aroclor-1248 (PCB-1248)	mg/L	0.000098 U	0.000099 U
Aroclor-1254 (PCB-1254)	mg/L	0.000098 U	0.000099 U
Aroclor-1260 (PCB-1260)	mg/L	0.000098 U	0.000099 U
Total PCBs	mg/L	ND	ND
Semi-Volatile Organic Compounds			
2,2'-Oxybis(1-chloropropane) (bis[2-Chlor	mg/L	--	--
2,4,5-Trichlorophenol	mg/L	--	--
2,4,6-Trichlorophenol	mg/L	--	--
2,4-Dichlorophenol	mg/L	--	--
2,4-Dimethylphenol	mg/L	--	--
2,4-Dinitrophenol	mg/L	--	--
2,4-Dinitrotoluene	mg/L	--	--
2,6-Dinitrotoluene	mg/L	--	--
2-Chloronaphthalene	mg/L	--	--
2-Chlorophenol	mg/L	--	--
2-Methylnaphthalene	mg/L	0.0049 U	0.0049 U
2-Methylphenol	mg/L	--	--
2-Nitroaniline	mg/L	--	--
2-Nitrophenol	mg/L	--	--
3&4-Methylphenol	mg/L	--	--
3,3'-Dichlorobenzidine	mg/L	--	--
3-Nitroaniline	mg/L	--	--
4,6-Dinitro-2-methylphenol	mg/L	--	--
4-Bromophenyl phenyl ether	mg/L	--	--
4-Chloro-3-methylphenol	mg/L	--	--
4-Chloroaniline	mg/L	--	--
4-Chlorophenyl phenyl ether	mg/L	--	--
4-Nitroaniline	mg/L	--	--
4-Nitrophenol	mg/L	--	--
Acenaphthene	mg/L	0.0049 U	0.0015 J
Acenaphthylene	mg/L	0.0049 U	0.0049 U
Acetophenone	mg/L	--	--
Anthracene	mg/L	0.0049 U	0.00023 J
Atrazine	mg/L	--	--
Benzaldehyde	mg/L	--	--
Benzo(a)anthracene	mg/L	0.00098 U	0.00097 U
Benzo(a)pyrene	mg/L	0.00098 U	0.00097 U
Benzo(b)fluoranthene	mg/L	0.00098 U	0.00097 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*TW134-11*	*TW137-11*
Sample Identification		*GW-17360-100311-EM-054*	*GW-17360-100311-EM-055*
Sample Date		*10/3/2011*	*10/3/2011*
Area of Interest		*AOI 7.2*	*AOI 17.1*
Sample Type			
	Units		
Benzo(g,h,i)perylene	mg/L	0.00098 U	0.00097 U
Benzo(k)fluoranthene	mg/L	0.00098 U	0.00097 U
Biphenyl (1,1-Biphenyl)	mg/L	--	--
bis(2-Chloroethoxy)methane	mg/L	--	--
bis(2-Chloroethyl)ether	mg/L	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	--	--
Butyl benzylphthalate (BBP)	mg/L	--	--
Caprolactam	mg/L	--	--
Carbazole	mg/L	--	--
Chrysene	mg/L	0.00098 U	0.00097 U
Dibenz(a,h)anthracene	mg/L	0.002 U	0.0019 U
Dibenzofuran	mg/L	--	--
Diethyl phthalate	mg/L	--	--
Dimethyl phthalate	mg/L	--	--
Di-n-butylphthalate (DBP)	mg/L	--	--
Di-n-octyl phthalate (DnOP)	mg/L	--	--
Fluoranthene	mg/L	0.00098 U	0.00034 J
Fluorene	mg/L	0.0049 U	0.00047 J
Hexachlorobenzene	mg/L	--	--
Hexachlorobutadiene	mg/L	--	--
Hexachlorocyclopentadiene	mg/L	--	--
Hexachloroethane	mg/L	--	--
Indeno(1,2,3-cd)pyrene	mg/L	0.002 U	0.0019 U
Isophorone	mg/L	--	--
Naphthalene	mg/L	0.0049 U	0.0049 U
Nitrobenzene	mg/L	--	--
N-Nitrosodi-n-propylamine	mg/L	--	--
N-Nitrosodiphenylamine	mg/L	--	--
Pentachlorophenol	mg/L	--	--
Phenanthrene	mg/L	0.002 U	0.0019 U
Phenol	mg/L	--	--
Pyrene	mg/L	0.0049 U	0.0002 J
Volatile Organic Compounds			
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
STAGE II SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*TW134-11*	*TW137-11*
Sample Identification		*GW-17360-100311-EM-054*	*GW-17360-100311-EM-055*
Sample Date		*10/3/2011*	*10/3/2011*
Area of Interest		*AOI 7.2*	*AOI 17.1*
Sample Type			
	Units		
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U
1,2-Dibromoethane [2]	mg/L	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U
2-Butanone (MEK) [3]	mg/L	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U
4-Methyl-2-pentanone (MIBK) [4]	mg/L	0.01 U	0.01 U
Acetone	mg/L	0.01 U	0.01 U
Benzene	mg/L	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.00085 J	0.00034 J
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.00031 J	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.005 U
Methylene chloride	mg/L	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.0013	0.001 U
Toluene	mg/L	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U
Trichloroethene	mg/L	0.00083 J	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U
General Chemistry			
Chloride	mg/L	--	--

ATTACHMENT A

STRATIGRAPHIC SOIL BORING LOGS AND WELL CONSTRUCTION DETAILS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: HA144-11
DATE COMPLETED: October 3, 2011
DRILLING METHOD: HAND AUGER
FIELD PERSONNEL: E. MICKELSON

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	CONCRETE						
	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, orange brown, moist	0.90	BACKFILLED WITH BENTONITE CHIPS	1HA 0.9-2' -157		100	
2				2HA 2-4' -158		100	
4	END OF BOREHOLE @ 4.0ft BGS	4.00					
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

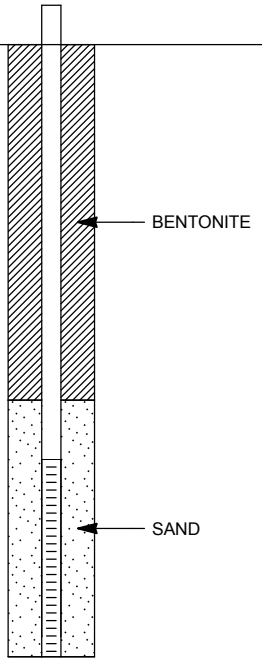
PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB130-11
DATE COMPLETED: September 27, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 511040.78
EASTING: 12772537.31
GROUND SURFACE ELEV. ft: 671.46

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist	
4	- clay lens, stiff, tan from 3.9 to 4.0ft BGS	
4	PT-PEAT, black	667.06
8	SP-SAND, trace silt, compact, fine to moderate grained, poorly graded, gray, moist	663.56
10	- wet at 10.5ft BGS	
14	- coarse grained sand from 14.5 to 14.7ft BGS	
15	END OF BOREHOLE @ 15.0ft BGS	656.46
	NOTE: ABANDONED AND BACKFILLED WITH BENTONITE CHIPS FOLLOWING SAMPLE COLLECTION	

TEMP MONITORING WELL



WELL DETAILS
Screened interval:
660.96 to 655.96ft
10.50 to 15.50ft BGS
Length: 5ft
Seal:
671.46 to 662.46ft
0.00 to 9.00ft BGS
Material: BENTONITE
Sand Pack:
662.46 to 655.96ft
9.00 to 15.50ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0-2' -036				0.0
1GP				
				0.0
				0.0
2GP				
8-10' -037				0.0
				0.0
3GP				
				0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

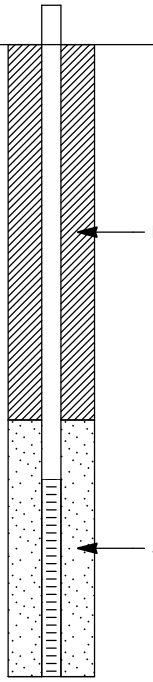
HOLE DESIGNATION: SB131-11
DATE COMPLETED: September 27, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510521.83
EASTING: 12772400.24

GROUND SURFACE 673.67

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	ASPHALT	673.47
2	SP-SAND, trace silt and fine gravel, compact, fine grained, poorly graded, orange brown, moist	
4		
6	- light brown at 5.0ft BGS - fine to medium grained, few fine gravel from 5.3 to 5.6ft BGS	
8		
10	- wet at 11.0ft BGS	
12		
14		
16		
18		
20	END OF BOREHOLE @ 20.0ft BGS	653.67
22	NOTE: ABANDONED AND BACKFILLED WITH BENTONITE CHIPS FOLLOWING SAMPLE COLLECTION	
24		
26		
28		
30		
32		
34		

TEMP MONITORING WELL



WELL DETAILS
Screened interval:
662.67 to 657.67ft
11.00 to 16.00ft BGS
Length: 5ft
Seal:
673.67 to 664.17ft
0.00 to 9.50ft BGS
Material: BENTONITE
Sand Pack:
664.17 to 657.67ft
9.50 to 16.00ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0-2' -034				0.0
1GP				
				0.0
				0.0
2GP				
8-10' -035				0.0
				0.0
3GP				
				0.0
				0.0
4GP				
				0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

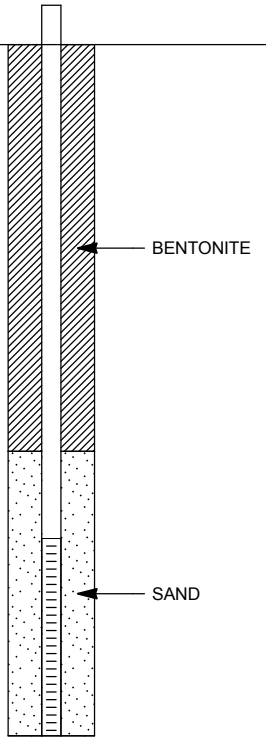
HOLE DESIGNATION: SB132-11
DATE COMPLETED: September 27, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510450.63
EASTING: 12772305.92

GROUND SURFACE 673.95

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	ASPHALT	673.75
	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist	
4	- light brown at 4.8ft BGS	
12	- wet at 12.5ft BGS	
14	- small black staining, no odor at 13.9ft BGS	
20	END OF BOREHOLE @ 20.0ft BGS	653.95
	NOTE: ABANDONED AND BACKFILLED WITH BENTONITE CHIPS FOLLOWING SAMPLE COLLECTION	

TEMP MONITORING WELL



WELL DETAILS
Screened interval:
661.45 to 656.45ft
12.50 to 17.50ft BGS
Length: 5ft
Seal:
673.95 to 663.65ft
0.00 to 10.30ft BGS
Material: BENTONITE
Sand Pack:
663.65 to 656.45ft
10.30 to 17.50ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0-2' -032				0.0
1GP		50		
				0.0
				0.0
2GP		60		
				0.0
10-12' -033				0.0
3GP		70		
				0.0
				0.0
4GP		70		
				0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB133-11
DATE COMPLETED: September 26, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 511018.67
EASTING: 12773580.99

GROUND SURFACE 680.97

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.47		0.5-2.5' -005				0.0
2	SP-SAND, trace silt, and fine gravel, compact, fine grained, poorly graded, light brown, moist			1GP		60		
4	- dark brown from 3.4 to 4.2ft BGS							0.0
6			BACKFILLED WITH BENTONITE CHIPS					0.0
8				2GP		70		
10	- few medium gravel from 8.5 to 8.9ft BGS							0.0
12	- fine to medium grained sand from 12.2 to 13.3ft BGS			3GP		60		0.0
14	- trace fine gravel from 12.4 to 12.9ft BGS							0.0
16	- wet at 15.5ft BGS							0.0
18				4GP 17-19' -006		60		
20								0.0
22				5GP		80		0.0
24								0.0
26	END OF BOREHOLE @ 25.0ft BGS	655.97						
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

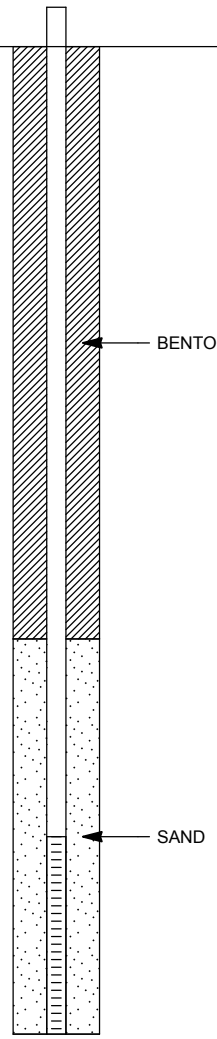
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB134-11
DATE COMPLETED: September 26, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510997.32
EASTING: 12773566.24
GROUND SURFACE 681.05

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	CONCRETE	680.55
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, light brown, moist	
	- potential fly-ash, no odor from 1.0 to 1.5ft BGS	
4	- potential fly-ash, no odor from 2.0 to 2.1ft BGS	
6		
8	- few medium gravel from 8.3 to 8.9ft BGS	
	- fine to medium grained at 9.2ft BGS	
10		
12	- coarse sand, trace fine gravel from 12.9 to 13.8ft BGS	
14		
16		
18	- with coarse gravel from 18.4 to 22.0ft BGS	
	- slight odor at 19.0ft BGS	
20	- wet at 20.0ft BGS	
22	- fine sand at 22.0ft BGS	
24		
	END OF BOREHOLE @ 25.0ft BGS	656.05
26	NOTE: ABANDONED AND BACKFILLED WITH BENTONITE CHIPS FOLLOWING SAMPLE COLLECTION	
28		
30		
32		
34		



WELL DETAILS
Screened interval:
661.05 to 656.05ft
20.00 to 25.00ft BGS
Length: 5ft
Seal:
681.05 to 666.05ft
0.00 to 15.00ft BGS
Material: BENTONITE
Sand Pack:
666.05 to 656.05ft
15.00 to 25.00ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0.5-2.5' -003				0.6
1GP		50		0.0
				0.0
2GP		5		0.0
				0.0
3GP		75		0.0
				0.0
4GP 17-19' -004		60		0.3
				0.0
5GP		80		0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB135-11
DATE COMPLETED: September 26, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510920.54
EASTING: 12773567.46
GROUND SURFACE 681.06

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.56						
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, light brown, moist			0.5-2.5' -007				0.0
				1GP		60		
4								0.0
6			BACKFILLED WITH BENTONITE CHIPS					0.0
8				2GP		70		
10	- medium gravel from 9.6 to 9.8ft BGS							0.0
12								0.0
				3GP		50		
14	- medium grained sand from 13.2 to 15.0ft BGS							0.0
	- sand and gravel at 15.0ft BGS							
16								0.0
				4GP 17-19' -008		70		
18								
	- slight odor at 19.0ft BGS							0.0
20	- wet at 20.0ft BGS							
22								0.0
				5GP		80		
24								0.0
	END OF BOREHOLE @ 25.0ft BGS	656.06						
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ⬭

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB136-11
DATE COMPLETED: September 26, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510401.46
EASTING: 12773779.45
GROUND SURFACE ELEV. ft: 679.85

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	679.35		0.5-2.5' -001				0.0
2	SP-SAND (FILL), few gravel, trace silt, fine grained, poorly graded, light brown, moist - small seam of black material, no odor at 1.7ft BGS			1GP		25		
4								0.0
6			BACKFILLED WITH BENTONITE CHIPS					0.2
8				2GP		50		
10	- medium to coarse gravel from 9.5 to 9.9ft BGS - fine to medium grained from 11.0 to 14.5ft BGS							0.3
12								0.3
14				3GP		75		
16				15-17' -002				0.3
18	- wet at 17.5ft BGS			4GP		70		0.2
20	END OF BOREHOLE @ 20.0ft BGS	659.85						0.4
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

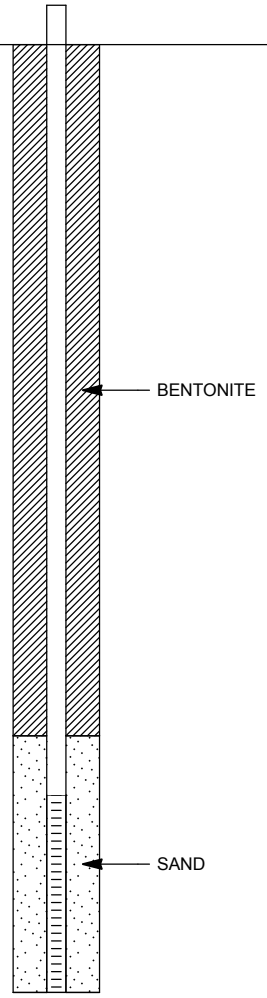
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB137-11
DATE COMPLETED: September 29, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512256.72
EASTING: 12773938.93
GROUND SURFACE ELEV. ft: 681.10

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.40					
2	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist		0.7-2.7' -069 1GP		25		0.0
4							0.0
6							0.0
8			2GP		20		0.0
10							0.0
12			3GP		70		0.0
14	- light tan at 14.9ft BGS						0.0
16			16-18' -070 4GP		70		0.0
18	- wet at 19.0ft BGS						0.0
20							0.0
22			5GP		90		0.0
24		656.10					
26	END OF BOREHOLE @ 25.0ft BGS NOTE: ABANDONED AND BACKFILLED WITH BENTONITE CHIPS FOLLOWING SAMPLE COLLECTION						
28							
30							
32							
34							



WELL DETAILS
Screened interval:
662.10 to 657.10ft
19.00 to 24.00ft BGS
Length: 5ft
Seal:
681.10 to 663.60ft
0.00 to 17.50ft BGS
Material: BENTONITE
Sand Pack:
663.60 to 657.10ft
17.50 to 24.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB138-11
DATE COMPLETED: September 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512229.38
EASTING: 12773959.52

GROUND SURFACE 681.14

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE							0.0
2	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, orange brown, moist	679.04		1GP (2-4' -065)		70		0.0
4	- dark brown from 4.3 to 4.4ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.0
6								0.0
8	- dark brown from 7.8 to 8.0ft BGS			2GP		65		0.0
10								0.0
12	- dark brown from 11.0 to 11.1ft BGS			3GP		60		0.0
14	- light tan at 14.5ft BGS							0.0
16				16-18' (-066 4GP)		70		0.0
18	- wet at 19.0ft BGS							0.0
20								0.0
22	- dark brown, organic odor from 22.5 to 22.8ft BGS			5GP		80		0.0
24								0.0
25	END OF BOREHOLE @ 25.0ft BGS	656.14						
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB139-11
DATE COMPLETED: September 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512217.99
EASTING: 12773942.74

GROUND SURFACE 681.12

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	CONCRETE	
		679.62
2	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, dark brown, moist	
4	- orange brown at 4.2ft BGS - black, potential fly-ash at 4.6ft BGS - orange brown at 5.0ft BGS	
6		
8		
10		
12		
14	- light tan at 14.3ft BGS	
16		
18		
20	- wet at 19.0ft BGS	
22		
24	- with fine gravel at 24.5ft BGS	
		656.12
26	END OF BOREHOLE @ 25.0ft BGS	
28		
30		
32		
34		

BOREHOLE: BACKFILLED WITH BENTONITE CHIPS

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1GP 1.5-3.5' -067		40		0.0
				0.0
				0.0
2GP		50		
				0.0
				0.0
3GP		70		
				0.0
16-18' -068 4GP		70		0.0
				0.0
				0.0
5GP		80		
				0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB140-11
DATE COMPLETED: September 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512229.74
EASTING: 12773931.43

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.10						
0	CONCRETE							0.0
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine to slightly moderate grained, poorly graded, brown, moist	679.20		1GP (2-4' -062/ 063)		50		
4	- black, potential fly-ash at 4.9ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.0
6	- fine to medium grained, orange brown at 5.0ft BGS							0.0
8	- light tan at 7.9ft BGS			2GP		60		
10								0.0
12	- orange brown at 11.0ft BGS			3GP		80		0.0
14	- light tan at 14.6ft BGS							0.0
16								0.0
18	- 0.03' black smear at 17.9ft BGS			(16-18' -064 4GP)		80		
20	- 0.02' black smear, becoming siltier at 18.6ft BGS - wet at 19.0ft BGS							0.0
22				5GP		80		0.0
24	- with silt at 23.0ft BGS							0.0
26	END OF BOREHOLE @ 25.0ft BGS	656.10						
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB142-11
DATE COMPLETED: September 29, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 511425.91
EASTING: 12773443.44
GROUND SURFACE 681.09

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.09						
2	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, orange brown, moist			1-3' -106/ 107' 1GP		60		0.0
4				3-5' -108				0.0
6			BACKFILLED WITH BENTONITE CHIPS	5-7' -109				0.2
8	- light tan, trace fine gravel from 7.6 to 12.9ft BGS - no gravel at 8.4ft BGS			2GP 7-9' -110		80		0.3
10				9-11' -111				0.0
12	- with fine gravel, orange brown at 12.9ft BGS			11-13' -112 3GP		80		0.0
14	- fine to medium grained sand, with fine gravel, light brown at 13.6ft BGS			13-15' -113				0.0
16				15-17' -114				0.0
18	- light tan at 18.2ft BGS			4GP 17-19' -115		70		0.0
20	- fine to medium grained sand, wet at 20.0ft BGS							0.0
22				5GP				
24	- silty sand at 23.8ft BGS							0.0
25	END OF BOREHOLE @ 25.0ft BGS	656.09						
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB143-11
DATE COMPLETED: September 29, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 511425.97
EASTING: 12773465.9

GROUND SURFACE 681.09

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	CONCRETE	679.89
2	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, orange brown, moist	
12	- trace clay, medium gravel, dark brown at 12.7ft BGS	
14	- fine to medium grained, few medium gravel, light brown from 15.0 to 18.6ft BGS	
18	- coarse gravel from 17.9 to 18.3ft BGS - light tan at 18.6ft BGS - rock debris at 19.2ft BGS	
20	- with silt, light brown, wet at 20.0ft BGS	
25	END OF BOREHOLE @ 25.0ft BGS	656.09

BOREHOLE: BACKFILLED WITH BENTONITE CHIPS

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1-3' -097 1GP		60		0.0
3-5' -098				0.0
5-7' -099				0.0
2GP 7-9' -100		70		0.0
9-11' -101				0.0
11-13' -102 3GP		70		3.2
13-15' -103				0.0
15-17' -104		70		0.0
4GP 17-19' -105				0.0
5GP				0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB145-11
DATE COMPLETED: September 30, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512167.07
EASTING: 12772829.9

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	672.68						
0	CONCRETE	672.18						
2	MIX OF SLAG AND POTENTIAL FLY-ASH (FILL)			0-2' -151/ 152				0.0
				1GP 2-4' -153		50		
4	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist	669.28						0.0
6			BACKFILLED WITH BENTONITE CHIPS	4-6' -154				0.0
8				6-8' -155 2GP		40		
10	PT-PEAT, black	663.98		8-10' -156				0.0
	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist	663.08						
	END OF BOREHOLE @ 10.0ft BGS	662.68						
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB146-11
DATE COMPLETED: September 30, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512167.37
EASTING: 12772807.05
GROUND SURFACE 672.13

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	ASPHALT	671.93
2	MIX OF POTENTIAL FLY-ASH AND BLACK SLAG (FILL)	
4	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, orange brown, moist - rock debris at 4.3ft BGS	668.53
6		
8	- black, potential fly-ash from 7.7 to 7.8ft BGS - concrete debris from 8.0 to 8.5ft BGS	663.63
	PT-PEAT, black	662.73
10	- tan, putty-like substance at 9.5ft BGS	662.13
	SP-SAND, fine grained	
	END OF BOREHOLE @ 10.0ft BGS	
12		
14		
16		
18		
20		
22		
24		
26		
28		
30		
32		
34		

BOREHOLE: BACKFILLED WITH BENTONITE CHIPS

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0-2' -146				0.0
1GP 2-4' -147		60		0.0
4-6' -148				0.0
6-8' -149 2GP		50		
8-10' -150				0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB147-11
DATE COMPLETED: September 30, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512154.28
EASTING: 12772779.57

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	671.45						
0	ASPHALT	671.05		0-2' -141				0.0
2	MIX OF POTENTIAL FLY-ASH AND BLACK SLAG (FILL)			1GP 2-4' -142		40		0.0
4	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, orange brown, moist - black to red brick debris from 4.2 to 9.3ft BGS	668.25	BACKFILLED WITH BENTONITE CHIPS	4-6' -143				0.0
6				6-8' -144 2GP		60		0.0
8	PT-PEAT, black	663.05		8-10' -155				0.0
10	PUTTY SUBSTANCE, tan	661.85						
	END OF BOREHOLE @ 10.0ft BGS	661.45						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ⬭

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB148-11
DATE COMPLETED: September 30, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512118.2
EASTING: 12772781.61

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	671.39						
0	ASPHALT	671.29						
	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, orange brown, moist			0-2' -136				0.0
2				1GP 2-4' -137		50		0.0
4	SLAG DEBRIS (FILL), mix of red brick and black slag	667.39						
	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, wet	666.39	BACKFILLED WITH BENTONITE CHIPS	4-6' -138				0.0
6				6-8' -139 2GP		50		
8	PT-PEAT, black	663.69						
	SP-SAND, trace silt, compact, fine grained, poorly graded, light tan, wet	662.69		8-10' -140				0.0
10	END OF BOREHOLE @ 10.0ft BGS	661.39						
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB149-11
DATE COMPLETED: September 30, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512084.49
EASTING: 12772782.26

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	671.63						
0	TOPSOIL	671.43		0-2' -131				0.0
2	SP-SAND, trace silt and fine gravel, compact, fine grained, poorly graded, orange brown, moist			1GP 2-4' -132		50		0.0
4			BACKFILLED WITH BENTONITE CHIPS	4-6' -133				0.0
6				6-8' -134 2GP		60		
8	PT-PEAT, black	664.83		8-10' -135				0.0
10	SP-SAND, trace silt and fine gravel, compact, fine grained, poorly graded, orange brown, moist	663.83						
12	- fine to medium grained sand, few fine gravel, light tan at 8.9ft BGS	661.63						
14	END OF BOREHOLE @ 10.0ft BGS							
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB150-11
DATE COMPLETED: September 30, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512045.89
EASTING: 12772782.08

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	671.63						
0	TOPSOIL	671.43		0-2' -126				0.0
2	SP-SAND, trace silt and fine gravel, compact, fine gravel, poorly graded, orange brown			1GP 2-4' -127		50		0.0
4			BACKFILLED WITH BENTONITE CHIPS	4-6' -128				0.0
6				6-8' -129 2GP		50		
8	- dark gray, damp, roots, silty from 8.5 to 8.8ft BGS	662.83		8-10' -130				0.0
10	PT-PEAT, black	662.13						
	SP-SAND, trace silt and fine gravel, compact, fine gravel, poorly graded, orange brown	661.63						
12	END OF BOREHOLE @ 10.0ft BGS							
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB151-11
DATE COMPLETED: September 30, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512034.26
EASTING: 12772792.71

GROUND SURFACE 672.13

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	ASPHALT	672.03
2	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist - coarse gravel, black, odor from 2.0 to 3.1ft BGS	
4		
6		
8	PT-PEAT, black	664.13
	- light brown at 8.8ft BGS	663.33
10	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist	662.13
	END OF BOREHOLE @ 10.0ft BGS	
12		
14		
16		
18		
20		
22		
24		
26		
28		
30		
32		
34		

BOREHOLE: BACKFILLED WITH BENTONITE CHIPS

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0-2' -121				0.0
1GP 2-4' -122				0.3
4-6' -123				0.4
6-8' -124 2GP				
8-10' -125				0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB152-11
DATE COMPLETED: September 30, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 512005.01
EASTING: 12772837.06

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	673.28						
0	ASPHALT	673.18						
	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, orange brown, moist			0-2' -116				0.0
2	- gravel, dark brown from 2.3 to 2.9ft BGS			1GP 2-4' -117		60		
4	- potential fly-ash from 4.1 to 4.4ft BGS			4-6' -118				0.0
6			BACKFILLED WITH BENTONITE CHIPS	6-8' -119 2GP				0.0
8						80		
	- fine to medium grained, light tan at 9.2ft BGS			8-10' -120				0.0
10	END OF BOREHOLE @ 10.0ft BGS	663.28						
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB153-11
DATE COMPLETED: September 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 511113.46
EASTING: 12773571.84

GROUND SURFACE 681.08

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0	CONCRETE	680.28						
2	SP-SAND, trace silt, compact, fine grained, poorly graded, brown, moist - light tan at 2.9ft BGS - dark brown at 3.5ft BGS - orange brown at 4.4ft BGS		BACKFILLED WITH BENTONITE CHIPS	1-3' -053 1GP		60		0.1
4				3-5' -054				2.0
6				5-7' -055				0.0
8				2GP 7-9' -056		65		0.0
10	END OF BOREHOLE @ 10.0ft BGS	671.08		9-10' -057				
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB154-11
DATE COMPLETED: September 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 511123.58
EASTING: 12773581.62
GROUND SURFACE 681.06

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.56						
2	SP-SAND, trace silt and fine gravel, compact, fine grained, poorly graded, orange brown, moist			0.5-2.5' -038				0.0
				1GP		50		
4	- brown from 3.5 to 3.9ft BGS			2.5-4' -039				0.0
			BACKFILLED WITH BENTONITE CHIPS	4-6' -040				
6								0.0
				6-8' -041 2GP		60		
8								
	- with medium gravel at 9.1ft BGS			8-10' -042				0.0
10	END OF BOREHOLE @ 10.0ft BGS	671.06						
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB155-11
DATE COMPLETED: September 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 511102.95
EASTING: 12773581.65

GROUND SURFACE 681.03

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.53		0.5-2.5' -048				0.0
2	SP-SAND, trace silt, compact, fine grained, poorly graded, light brown, moist			1GP 2.5-4' -049		50		0.1
4	- orange brown from 3.9 to 4.0ft BGS - orange brown at 4.1ft BGS		BACKFILLED WITH BENTONITE CHIPS	4-6' -050				0.0
6				6-8' -051 2GP		70		
8				8-10' -052				0.0
10	END OF BOREHOLE @ 10.0ft BGS	671.03						
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB156-11
DATE COMPLETED: September 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 511112.63
EASTING: 12773581.4
GROUND SURFACE 681.04

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.54						
2	SP-SAND, trace silt, compact, fine grained, poorly graded, brown, moist			0.5-2.5' -043				1.2
				1GP		50		
4	- orange brown at 3.8ft BGS			2.5-4' -044				0.0
			BACKFILLED WITH BENTONITE CHIPS	4-6' -045				
6								0.0
				6-8' -046				
8				2GP		70		
				8-10' -047				0.0
10	END OF BOREHOLE @ 10.0ft BGS	671.04						
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB157-11
DATE COMPLETED: September 27, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510674.12
EASTING: 12773559.28

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.07						
0	CONCRETE	680.37						
2	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist			0.7-2.7' -029 1GP		50		0.0
4	- few medium gravel from 4.0 to 4.5ft BGS			2.7-5' -030				0.0
6			BACKFILLED WITH BENTONITE CHIPS	2GP 5-7' -031		60		0.0
7	- REFUSAL at 7.0ft BGS	674.07						
8	END OF BOREHOLE @ 7.0ft BGS							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB158-11
DATE COMPLETED: September 27, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510654.99
EASTING: 12773560.11

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.04						
0	CONCRETE	680.54						
2	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist			0.5-2.5' -014				0.0
				1GP		60		
4	- black, potential fly-ash, lightweight from 3.5 to 3.7ft BGS			2.5-4' -015				0.0
6			BACKFILLED WITH BENTONITE CHIPS	4-6' -016				0.0
8				6-8' -017 2GP		70		
10	END OF BOREHOLE @ 10.0ft BGS	671.04		8-10' -018				0.0
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NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB159-11
DATE COMPLETED: September 27, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510664.63
EASTING: 12773549.59
GROUND SURFACE ELEV. 681.05 ft

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.45						
2	SP-SAND, trace silt, compact, fine grained, poorly graded, light brown, moist - rock debris from 2.1 to 2.3ft BGS			0.6-2.6' -009 1GP 2.6-4' -010		70		0.0 0.0
4	- trace fine gravel from 4.1 to 4.4ft BGS		BACKFILLED WITH BENTONITE CHIPS	4-6' -011				
6				6-8' -012 2GP		60		0.0
8				8-10' -013				0.0
10	END OF BOREHOLE @ 10.0ft BGS	671.05						
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NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB160-11
DATE COMPLETED: September 27, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510664.8
EASTING: 12773559.48
GROUND SURFACE ELEV. ft: 681.04

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.54						
	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist			0.5-2.5' -024				0.0
2				1GP		70		
	- black, potential fly-ash, lightweight from 3.5 to 3.6ft BGS			2.5-4' -025				0.0
4			BACKFILLED WITH BENTONITE CHIPS	4-6' -026				
6								0.0
				6-8' -027 2GP		65		
8								
				8-10' -028				0.0
10	END OF BOREHOLE @ 10.0ft BGS	671.04						
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NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB161-11
DATE COMPLETED: September 27, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510664.98
EASTING: 12773570.64

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.09						
0	CONCRETE	680.59						
2	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist			0.5-2.5' -019				0.0
				1GP		75		
4	- black, potential fly-ash, lightweight from 3.5 to 3.7ft BGS			2.5-4' -020				0.0
6			BACKFILLED WITH BENTONITE CHIPS	4-6' -021				0.0
8				6-8' -022 2GP		80		
10	END OF BOREHOLE @ 10.0ft BGS	671.09		8-10' -023				0.0
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NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB162-11
DATE COMPLETED: September 29, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510506.98
EASTING: 12772958.2

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	676.84						
0	CONCRETE	676.54		0-2' -082				0.0
2	SP-SAND, trace silt and fine gravel, compact, fine to slightly medium grained, poorly graded, orange brown, moist			1GP 2-4' -083		70		
4				4-6' -084				0.0
6			BACKFILLED WITH BENTONITE CHIPS	6-8' -085 2GP				0.0
8	- fine to medium grained, with fine gravel at 8.2ft BGS					60		
10	END OF BOREHOLE @ 10.0ft BGS	666.84		8-10' -086				0.0
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NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB163-11
DATE COMPLETED: September 29, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510526.99
EASTING: 12772958.47

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	676.89						
0	CONCRETE	676.59		0-2' -071				0.0
2	SP-SAND, trace silt and fine gravel, compact, fine to slightly moderately grained, poorly graded, orange brown, moist			1GP 2-4' -072		70		0.0
4	- with fine to medium gravel and fine to medium grained sand at 5.0ft BGS		BACKFILLED WITH BENTONITE CHIPS	4-6' -073				0.0
6				6-8' -074 2GP		60		0.0
8				8-10' -075				0.0
10	END OF BOREHOLE @ 10.0ft BGS	666.89						
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NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ⬭

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB164-11
DATE COMPLETED: September 29, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510517.08
EASTING: 12772967.33

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	677.03						
0	CONCRETE	676.73						
2	SP-SAND, trace silt and fine gravel, compact, fine to slightly moderate grained, poorly graded, orange brown, moist			0-2' -076/ 077				0.0
2				1GP 2-4' -078		60		
4								0.0
4			BACKFILLED WITH BENTONITE CHIPS	4-6' -079				
6								0.0
6				6-8' -080 2GP		70		
8	- fine to medium grained, with fine gravel at 8.2ft BGS							0.0
8				8-10' -081				
10	END OF BOREHOLE @ 10.0ft BGS	667.03						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ⬭

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB165-11
DATE COMPLETED: September 29, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510517.1
EASTING: 12772948.62

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	676.76						
0	CONCRETE	676.46		0-2' -092				0.0
2	SP-SAND, trace silt and fine gravel, compact, fine to slightly moderate grained, poorly graded, orange brown, moist			1GP 2-4' -093		60		0.0
4			BACKFILLED WITH BENTONITE CHIPS	4-6' -094				0.0
6				6-8' -095 2GP		70		0.0
8				8-10' -096				0.0
10	- fine to medium sand, with fine gravel at 9.7ft BGS	666.76						
	END OF BOREHOLE @ 10.0ft BGS							
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NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB166-11
DATE COMPLETED: September 29, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 510516.98
EASTING: 12772958.4

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	676.87						
0	CONCRETE	676.57		0-2' -087				0.0
2	SP-SAND, trace silt and fine gravel, compact, fine to slightly medium grained, poorly graded, orange brown, moist - potential fly-ash at 2.9ft BGS			1GP 2-4' -088		50		
4	- potential fly-ash at 3.6ft BGS - potential fly-ash at 4.5ft BGS		BACKFILLED WITH BENTONITE CHIPS	4-6' -089				0.0
6				6-8' -090 2GP				0.0
8						60		
10	- fine to medium grained sand, with fine gravel at 9.7ft BGS	666.87		8-10' -091				0.0
12	END OF BOREHOLE @ 10.0ft BGS							
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NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB167-11
DATE COMPLETED: September 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: E. MICKELSON

NORTHING: 511113.49
EASTING: 12773590.43
GROUND SURFACE ELEV. ft: 681.06

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE							
	SP-SAND, trace silt, compact, fine grained, poorly graded, dark brown, moist	679.56		1GP 1.5-3.5' -058		50		0.0
4	- brown at 3.9ft BGS			3.5-5.5' -059				0.0
	- orange brown at 5.0ft BGS		BACKFILLED WITH BENTONITE CHIPS	5.5-7.5' -060				0.0
8				2GP 7.5-9.5' -061		70		0.0
10	END OF BOREHOLE @ 10.0ft BGS	671.06						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 1/12/12

ATTACHMENT B

LUST REMOVAL PHOTOGRAPHS

[illegible]

[illegible]

SITE PHOTOGRAPHS
UST Removal Activities
Wyoming, Michigan

Photograph 1

Photograph 2

SITE PHOTOGRAPHS
UST Removal Activities
Wyoming, Michigan

ATTACHMENT C

ELEVATOR PIT PHOTOGRAPHS

Photo 1: Former passenger elevator pit (AOI 30.1)

Photo 2: Former freight elevator pit (AOI 30.2)

Photo 3: Former freight elevator pit (AOI 30.3)