CONESTOGA-ROVERS & ASSOCIATES

14496 Sheldon Road, Suite #200
Plymouth, Michigan 48170
Telephone: (734) 453-5123 Fax: (734) 453-5201
www.CRAworld.com

MEMORANDUM

TO:	Darlene Stringer, MDEQ Sara Pearson, MDEQ	REF. NO.:	017360-T05
FROM:	Chris Meincke/Jeni Quigley/55/Det.	DATE:	June 7, 2011
CC:	David Favero, RACER		
RE:	**Data Package** **2011 Site-Wide Investigation** **Former Grand Rapids Metal Plan** **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 implemented was described in the Site-Wide Investigation Work Plan (Work Plan), submitted to the Michigan Department of Environmental Quality (MDEQ) on January 7, 2011. The samples were collected during the field investigation conducted between February 8, 2011 and March 16, 2011. At the approval of the MDEQ, the April 2011 Semi-Annual Groundwater Monitoring activities were completed in conjunction with the Site-wide investigation. This memorandum (Memorandum) has been prepared to present the "Data Package" summarizing the data collected during the Site-wide investigation field activities.

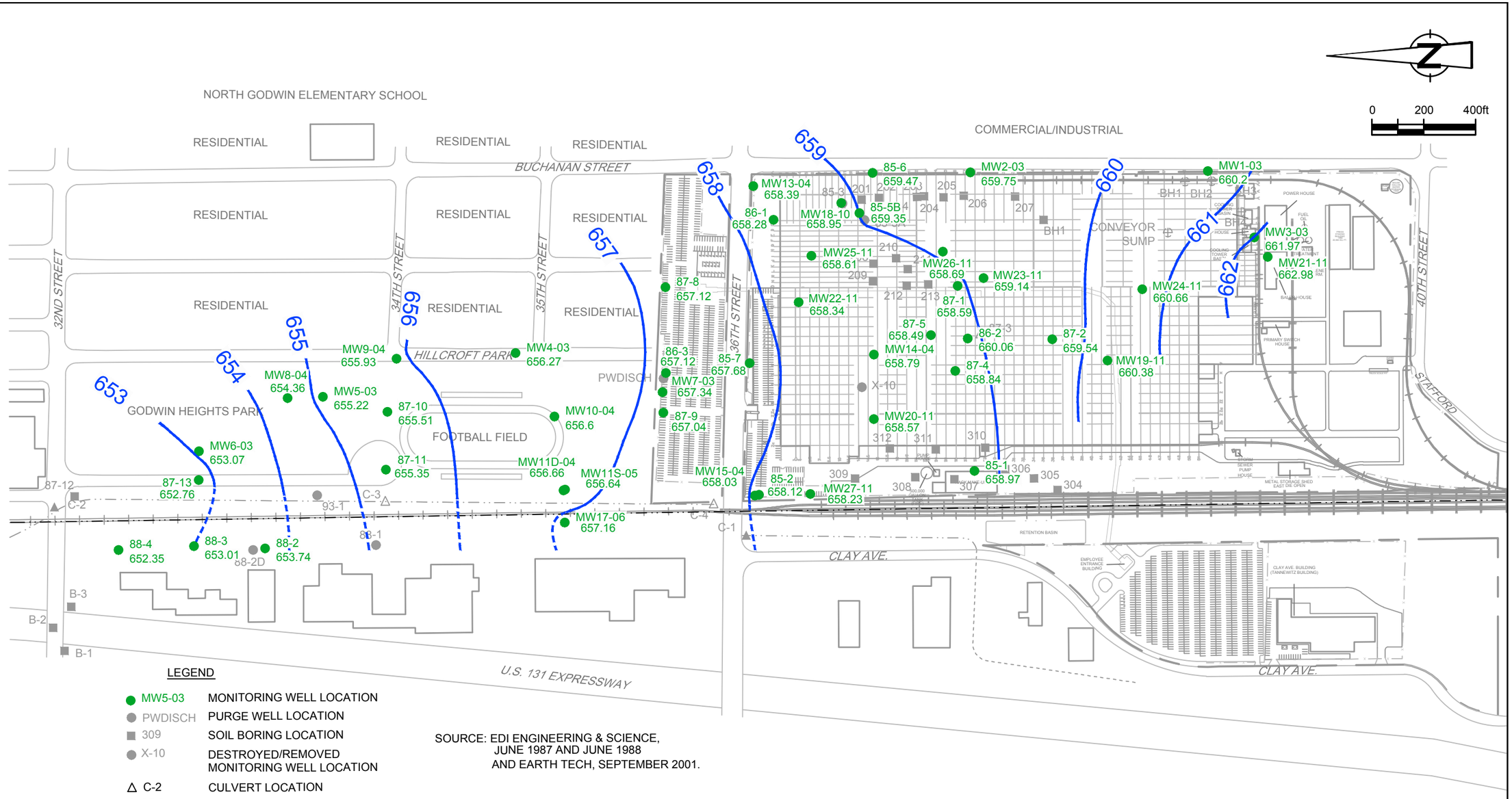
Field activities included the advancement of soil borings, the installation of monitoring wells, and the collection of soil, groundwater, and borehole water samples. Figure 1 presents a groundwater contour map, based on groundwater elevations collected in February and March 2011. Plan 1 presents the 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. Table 1 presents a Sample Summary. Analytical results for soil, groundwater and borehole water samples are presented in Tables 3, 4 and 5, respectively.

Samples were not collected from several locations proposed in the Work Plan due to the presence of equipment/material obstacles, subsurface basements, energized switches, and refusal during drilling. Additionally, an additional Area of Interest (AOI) was identified during the utility locate activities. AOI 8.7 was identified as "Potential Former Underground Storage Tank" based on ground penetrating radar (GPR) imaging conducted as part of private utility clearance activities prior to initiation of drilling activities. A brief list and description of variances from the Work Plan is provided below:

Location	Deviation
SB44-11	Not installed due to greater than 18 inches of thick concrete
SB59-11	Not installed at this time due to equipment/debris on ground surface
SB60-11	Moved to AOI 8.7 (New AOI)
SB61-11	Moved to AOI 8.5
SB76-11	Not installed due to presence of subsurface basements
SB77-11	Not installed at AOI 15.2 due to presence of subsurface basements – moved to AOI 8.6
SB95-11	Not installed at this time due to equipment (mobile crane)
SB113-11	Not installed due to presence of subsurface basements
SB123-11	Not installed due to presence of subsurface debris/refusal
SB128-11	Not installed at this time due to operation of current Switch House
SB129-11	Not installed at this time due to operation of current Switch House

It is anticipated that additional investigation activities, including the October Semi-Annual Groundwater Monitoring activities, may tentatively be implemented upon approval of MDEQ.

Please contact David Favero at (217) 741-6235 or Jeni Quigley at (517) 316-2397 with any questions or regarding this Memorandum or the enclosed information.



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

figure 1

SITE-WIDE INVESTIGATION - 2011
GROUNDWATER CONTOURS, FEBRUARY - MARCH 2011
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan

017360-T05(MEMO055)GN-DE002 JUN 07/2011

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Date	*Sample Identification*	*Sample Location*	*Matrix*	*Sample Depth*			*QC Sample*	*Analysis*
2/9/2011	GW-17360-020911-DR-001	MW3-03	Water	25	to	30		VOCs, PAHs, Metals
2/9/2011	GW-17360-020911-DR-002	85-1	Water	15.5	to	21	Duplicate (-045)	VOCs, PAHs, Metals
2/9/2011	GW-17360-020911-DR-003	MW17-06	Water	51	to	56	MS/MSD	VOCs
2/9/2011	GW-17360-020911-DR-004	88-2	Water	26	to	29		VOCs
2/9/2011	GW-17360-020911-DR-005	88-3	Water	27	to	30		VOCs
2/9/2011	GW-17360-020911-DR-006	88-4	Water	18	to	21		VOCs
2/9/2011	GW-17360-020911-DR-007	MW9-04	Water	43	to	48		VOCs
2/9/2011	GW-17360-020911-DR-008	MW4-03	Water	52	to	57		VOCs
2/9/2011	GW-17360-020911-DR-009	C-2	Water		NA			VOCs
2/9/2011	GW-17360-020911-DR-010	C-1	Water		NA			VOCs
2/9/2011	TB-17360-020911	Trip Blank	Water		NA			VOCs
2/10/2011	GW-17360-021011-DR-011	MW6-03	Water	13	to	18		VOCs
2/10/2011	GW-17360-021011-DR-012	87-13	Water	40	to	43		VOCs
2/10/2011	GW-17360-021011-DR-013	MW8-04	Water	30	to	35		VOCs
2/10/2011	GW-17360-021011-DR-014	MW5-03	Water	30	to	35		VOCs
2/10/2011	GW-17360-021011-DR-015	C-3	Water		NA			VOCs
2/10/2011	GW-17360-021011-DR-016	87-10	Water	29	to	32		VOCs, PAHs, Metals
2/10/2011	GW-17360-021011-DR-017	87-10	Water	29	to	32	Duplicate (-016)	VOCs, PAHs, Metals
2/10/2011	GW-17360-021011-DR-018	87-11	Water	30	to	33		VOCs, PAHs, Metals
2/10/2011	GW-17360-021011-DR-019	MW10-04	Water	33	to	38		VOCs
2/10/2011	GW-17360-021011-DR-020	MW11D-04	Water	40	to	45		VOCs
2/10/2011	GW-17360-021011-DR-021	MW11D-04	Water	40	to	45	Duplicate (-020)	VOCs
2/10/2011	GW-17360-021011-DR-022	MW11S-05	Water	5	to	10		VOCs
2/10/2011	GW-17360-021011-DR-023	MW1-03	Water	30	to	35		VOCs
2/10/2011	GW-17360-021011-DR-024	MW2-03	Water	22	to	27		VOCs
2/11/2011	GW-17360-021111-DR-025	MW7-03	Water	36	to	41		VOCs
2/11/2011	GW-17360-021111-DR-026	87-9	Water	50.3	to	54		VOCs, PAHs, Metals
2/11/2011	GW-17360-021111-DR-027	86-3	Water	41.5	to	47		VOCs, PAHs, Metals
2/11/2011	GW-17360-021111-DR-028	87-8	Water	19.7	to	23		VOCs, PAHs, Metals
2/11/2011	GW-17360-021111-DR-029	85-7	Water	20.6	to	26		VOCs, PAHs, Metals
2/11/2011	GW-17360-021111-DR-030	85-6	Water	19.5	to	25		VOCs, PAHs, Metals, TPH
2/11/2011	TB-17360-021111	Trip Blank	Water		NA			VOCs, TPH
2/14/2011	TB-17360-021411	Trip Blank	Water		NA			VOCs, TPH
2/14/2011	GW-17360-021411-JY-031	86-2	Water	39.5	to	51		VOCs, PAHs, Metals
2/14/2011	GW-17360-021411-JY-032	87-2	Water	33.2	to	38		VOCs, PAHs, Metals
2/14/2011	GW-17360-021411-JY-033	87-4	Water	24	to	27	MS/MSD	VOCs, PAHs, Metals
2/14/2011	GW-17360-021411-JY-034	87-5	Water	39.5	to	51		VOCs, PAHs, Metals
2/14/2011	GW-17360-021411-JY-035	MW14-04	Water	45	to	50		VOCs, PAHs, Metals
2/14/2011	GW-17360-021411-JY-036	MW18-10	Water	16	to	26		VOCs, PAHs, Metals, TPH
2/14/2011	GW-17360-021411-JY-037	MW18-10	Water	16	to	26	Duplicate (-036)	VOCs, PAHs, Metals, TPH
2/14/2011	GW-17360-021411-JY-038	85-5B	Water	21.9	to	32		VOCs, PAHs, Metals, TPH
2/14/2011	GW-17360-021411-JY-039	87-1	Water	24	to	29		VOCs, PAHs, Metals
2/15/2011	GW-17360-021411-JY-040	MW13-04	Water	25	to	30		VOCs, PAHs, Metals
2/15/2011	GW-17360-021411-JY-041	86-1	Water	18.5	to	29		VOCs, PAHs, Metals, TPH
2/14/2011	SO-17360-021411-DR-042	SB68-11	Soil	1	to	3		VOCs, SVOCs, Metals, PCBs

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Date	*Sample Identification*	*Sample Location*	*Matrix*	*Sample Depth*			*QC Sample*	*Analysis*
2/14/2011	SO-17360-021411-DR-043	SB66-11	Soil	1	to	3		VOCs, SVOCs, Metals, PCBs
2/14/2011	SO-17360-021411-DR-044	SB67-11	Soil	1	to	3		VOCs, SVOCs, Metals, PCBs
2/14/2011	SO-17360-021411-DR-045	SB67-11	Soil	20	to	22		VOCs, SVOCs, Metals, PCBs
2/14/2011	SO-17360-021411-DR-046	SB67-11	Soil	20	to	22	Duplicate (-045)	VOCs, SVOCs, Metals, PCBs
2/14/2011	SO-17360-021411-DR-047	SB69-11	Soil	1	to	3		VOCs, PAHs, Metals, PCBs, Cyanide
2/14/2011	SO-17360-021411-DR-048	SB69-11	Soil	20	to	22		VOCs, PAHs, Metals, PCBs, Cyanide
2/14/2011	SO-17360-021411-DR-049	SB70-11	Soil	1	to	3		VOCs, PAHs, Metals, PCBs, Cyanide
2/14/2011	SO-17360-021411-DR-050	SB70-11	Soil	20	to	22		VOCs, PAHs, Metals, PCBs, Cyanide
2/15/2011	SO-17360-021511-DR-051	SB73-11	Soil	1	to	3		VOCs, PAHs, Metals, PCBs
2/15/2011	SO-17360-021511-DR-052	SB73-11	Soil	12	to	14		VOCs, PAHs, Metals, PCBs
2/15/2011	SO-17360-021511-DR-053	SB73-11	Soil	20	to	22		VOCs, PAHs, Metals, PCBs
2/15/2011	SO-17360-021511-DR-054	SB74-11	Soil	1	to	3		VOCs, PAHs, Metals, PCBs
2/15/2011	SO-17360-021511-DR-055	SB74-11	Soil	12	to	14		VOCs, PAHs, Metals, PCBs
2/15/2011	TB-17360-021511-SO	Trip Blank	Water		NA			VOCs
2/15/2011	SO-17360-021511-DR-056	SB127-11	Soil	1	to	3	MS/MSD	VOCs, PAHs, Metals, PCBs
2/15/2011	SO-17360-021511-DR-057	SB127-11	Soil	20	to	22		VOCs, PAHs, Metals, PCBs
2/15/2011	SO-17360-021511-DR-058	SB49-11	Soil	20	to	22		VOCs, PAHs, Metals
2/15/2011	SO-17360-021511-DR-059	SB50-11	Soil	1	to	3		VOCs, PAHs, Metals
2/15/2011	SO-17360-021511-DR-060	SB50-11	Soil	20	to	22		VOCs, PAHs, Metals
2/16/2011	TB-17360-021611-SO	Trip Blank	Water		NA			VOCs
2/16/2011	SO-17360-021611-JY-061	SB80-11	Soil	1	to	3		VOCs, PAHs, Metals, PCBs, Cyanide
2/16/2011	SO-17360-021611-JY-062	SB80-11	Soil	20	to	22		VOCs, PAHs, Metals, PCBs, Cyanide
2/16/2011	SO-17360-021611-JY-063	SB104-11	Soil	1	to	3		VOCs, PAHs, Metals, PCBs
2/16/2011	SO-17360-021611-JY-064	SB104-11	Soil	20	to	22		VOCs, PAHs, Metals, PCBs
2/16/2011	SO-17360-021611-JY-065	SB48-11	Soil	1	to	3		VOCs, PAHs, Metals
2/16/2011	SO-17360-021611-JY-066	SB48-11	Soil	20	to	22		VOCs, PAHs, Metals
2/16/2011	SO-17360-021611-JY-067	SB47-11	Soil	1	to	3		VOCs, PAHs, Metals
2/16/2011	SO-17360-021611-JY-068	SB81-11	Soil	2	to	3		VOCs, PAHs, Metals, PCBs
2/16/2011	SO-17360-021611-JY-069	SB101-11	Soil	1	to	3		VOCs
2/16/2011	SO-17360-021611-JY-070	SB101-11	Soil	20	to	22		VOCs
2/17/2011	TB-17360-021711-SO	Trip Blank	Water		NA			VOCs
2/17/2011	SO-17360-021711-DR-071	SB98-11	Soil	1	to	3		VOCs, PAHs, Metals, PCBs
2/17/2011	SO-17360-021711-DR-072	SB98-11	Soil	1	to	3	Duplicate (-071)	VOCs, PAHs, Metals, PCBs
2/17/2011	SO-17360-021711-DR-073	SB98-11	Soil	20	to	22		VOCs, PAHs, Metals, PCBs
2/17/2011	SO-17360-021711-DR-074	SB75-11	Soil	1	to	3		VOCs, PAHs, Metals, PCBs
2/17/2011	SO-17360-021711-DR-075	SB102-11	Soil	1	to	3		VOCs, PAHs, Metals, PCBs
2/17/2011	SO-17360-021711-DR-076	SB102-11	Soil	19	to	21		VOCs, PAHs, Metals, PCBs
2/17/2011	SO-17360-021711-DR-077	SB117-11	Soil	1	to	3		VOCs, PAHs, Metals, PCBs
2/17/2011	SO-17360-021711-DR-078	SB117-11	Soil	18	to	20		VOCs, PAHs, Metals, PCBs
2/17/2011	SO-17360-021711-DR-079	SB120-11	Soil	1	to	3		VOCs, PAHs, Metals, PCBs
2/17/2011	SO-17360-021711-DR-080	SB45-11	Soil	1	to	3		VOCs, PAHs, Metals, Cr III, CR VI
2/17/2011	SO-17360-021711-DR-081	SB45-11	Soil	18	to	20	MS/MSD	VOCs, PAHs, Metals, Cr III, CR VI
2/17/2011	SO-17360-021711-DR-082	SB103-11	Soil	0	to	2		VOCs, PAHs, Metals, PCBs
2/17/2011	SO-17360-021711-DR-083	SB103-11	Soil	2	to	4		VOCs, PAHs, Metals, PCBs
2/17/2011	SO-17360-021711-DR-084	SB103-11	Soil	18	to	20		VOCs, PAHs, Metals, PCBs

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Date	*Sample Identification*	*Sample Location*	*Matrix*	*Sample Depth*	*QC Sample*	*Analysis*
2/18/2011	TB-17360-021811-SO	Trip Blank	Water	NA		VOCs
2/18/2011	SO-17360-021811-DR-085	SB87-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/18/2011	SO-17360-021811-DR-086	SB87-11	Soil	18 to 20		VOCs, PAHs, Metals, PCBs
2/18/2011	SO-17360-021811-DR-087	SB84-11	Soil	3 to 5		VOCs, PAHs, Metals, PCBs
2/18/2011	SO-17360-021811-DR-088	SB84-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/18/2011	SO-17360-021811-DR-089	SB84-11	Soil	19 to 21		VOCs, PAHs, Metals, PCBs
2/18/2011	SO-17360-021811-DR-090	SB53-11	Soil	1 to 3		VOCs, PAHs, Metals
2/18/2011	SO-17360-021811-DR-091	SB53-11	Soil	20 to 22		VOCs, PAHs, Metals
2/18/2011	SO-17360-021811-DR-092	SB46-11	Soil	1 to 3		VOCs, PAHs, Metals
2/18/2011	SO-17360-021811-DR-093	SB46-11	Soil	19 to 21		VOCs, PAHs, Metals
2/21/2011	TB-17360-022211-SO	Trip Blank	Water	NA		VOCs
2/21/2011	SO-17360-022111-DR-094	SB114-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/21/2011	SO-17360-022111-DR-095	SB114-11	Soil	17 to 19		VOCs, PAHs, Metals, PCBs
2/21/2011	SO-17360-022111-DR-096	SB91-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/21/2011	SO-17360-022111-DR-097	SB91-11	Soil	17 to 19		VOCs, PAHs, Metals, PCBs
2/21/2011	SO-17360-022111-DR-098	SB121-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/21/2011	SO-17360-022111-DR-099	SB121-11	Soil	1 to 3	Duplicate (-098)	VOCs, PAHs, Metals, PCBs
2/21/2011	SO-17360-022111-DR-100	SB121-11	Soil	17 to 19		VOCs, PAHs, Metals, PCBs
2/21/2011	SO-17360-022111-DR-101	SB54-11	Soil	2 to 4		VOCs, PAHs, PCBs
2/21/2011	SO-17360-022111-DR-102	SB55-11	Soil	2 to 4		VOCs, PAHs, PCBs
2/21/2011	SO-17360-022111-DR-103	SB42-11	Soil	1 to 3		VOCs, PAHs, Metals
2/21/2011	SO-17360-022111-DR-104	SB42-11	Soil	18 to 20		VOCs, PAHs, Metals
2/21/2011	SO-17360-022111-DR-105	SB124-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/21/2011	SO-17360-022111-DR-106	SB124-11	Soil	17 to 19	MS/MSD	VOCs, PAHs, Metals, PCBs
2/22/2011	SO-17360-022211-DR-107	SB122-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/22/2011	SO-17360-022211-DR-108	SB122-11	Soil	17 to 19		VOCs, PAHs, Metals, PCBs
2/22/2011	SO-17360-022211-DR-109	SB52-11	Soil	1 to 3		VOCs, PAHs, Metals
2/22/2011	SO-17360-022211-DR-110	SB52-11	Soil	17 to 19		VOCs, PAHs, Metals
2/22/2011	SO-17360-022211-DR-111	SB105-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/22/2011	SO-17360-022211-DR-112	SB105-11	Soil	17.5 to 20		VOCs, PAHs, Metals, PCBs
2/22/2011	SO-17360-022211-DR-113	SB77-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/22/2011	SO-17360-022211-DR-114	SB77-11	Soil	18 to 20		VOCs, PAHs, Metals, PCBs
2/22/2011	SO-17360-022211-DR-115	SB41-11	Soil	1 to 3		VOCs, PAHs, Metals
2/22/2011	SO-17360-022211-DR-116	SB41-11	Soil	1 to 3	Duplicate (-116)	VOCs, PAHs, Metals
2/22/2011	SO-17360-022211-DR-117	SB41-11	Soil	18 to 20		VOCs, PAHs, Metals
2/22/2011	SO-17360-022211-DR-118	SB83-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs, Cyanide
2/22/2011	SO-17360-022211-DR-119	SB83-11	Soil	17 to 19		VOCs, PAHs, Metals, PCBs, Cyanide
2/23/2011	TB-17360-022311-SO	Trip Blank	Water	NA		VOCs
2/23/2011	SO-17360-022311-DR-120	SB96-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/23/2011	SO-17360-022311-DR-121	SB96-11	Soil	20 to 22	MS/MSD	VOCs, PAHs, Metals, PCBs
2/23/2011	SO-17360-022311-DR-122	SB97-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/23/2011	SO-17360-022311-DR-123	SB97-11	Soil	20 to 22		VOCs, PAHs, Metals, PCBs

TABLE 1

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

Sample Date	*Sample Identification*	*Sample Location*	*Matrix*	*Sample Depth*	*QC Sample*	*Analysis*
2/23/2011	SO-17360-022311-DR-124	SB115-11	Soil	2 to 4		VOCs, PAHs, Metals, PCBs
2/23/2011	SO-17360-022311-DR-125	SB115-11	Soil	20 to 22		VOCs, PAHs, Metals, PCBs
2/25/2011	TB-17360-022511-SO	Trip Blank	Water	NA		VOCs
2/25/2011	SO-17360-022511-DR-126	SB99-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/25/2011	SO-17360-022511-DR-127	SB99-11	Soil	20 to 22		VOCs, PAHs, Metals, PCBs
2/25/2011	SO-17360-022511-DR-128	SB82-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs, Cyanide
2/25/2011	SO-17360-022511-DR-129	SB82-11	Soil	20 to 22		VOCs, PAHs, Metals, PCBs, Cyanide
2/25/2011	SO-17360-022511-DR-130	SB86-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/25/2011	SO-17360-022511-DR-131	SB86-11	Soil	20 to 22		VOCs, PAHs, Metals, PCBs
2/28/2011	TB-17360-022811-SO	Trip Blank	Water	NA		VOCs
2/28/2011	SO-17360-022811-DR-132	SB54-11	Soil	17 to 19	MS/MSD	VOCs, PAHs, PCBs
2/28/2011	SO-17360-022811-DR-133	SB55-11	Soil	15 to 17		VOCs, PAHs, PCBs
2/28/2011	SO-17360-022811-DR-134	SB61-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/28/2011	SO-17360-022811-DR-135	SB61-11	Soil	18 to 20		VOCs, PAHs, Metals, PCBs
2/28/2011	SO-17360-022811-DR-136	SB60-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/28/2011	SO-17360-022811-DR-137	SB60-11	Soil	18 to 20		VOCs, PAHs, Metals, PCBs
2/28/2011	SO-17360-022811-DR-138	SB85A-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
2/28/2011	SO-17360-022811-DR-139	SB85A-11	Soil	1 to 3	Duplicate (-138)	VOCs, PAHs, Metals, PCBs
2/28/2011	SO-17360-022811-DR-140	SB85A-11	Soil	19 to 21		VOCs, PAHs, Metals, PCBs
3/1/2011	SO-17360-030111-DR-141	SB92-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/1/2011	SO-17360-030111-DR-142	SB92-11	Soil	17 to 19		VOCs, PAHs, Metals, PCBs
3/1/2011	SO-17360-030111-DR-143	SB93-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/1/2011	SO-17360-030111-DR-144	SB93-11	Soil	16 to 18		VOCs, PAHs, Metals, PCBs
3/1/2011	SO-17360-030111-DR-145	SB94-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/1/2011	SO-17360-030111-DR-146	SB94-11	Soil	16 to 18		VOCs, PAHs, Metals, PCBs
3/1/2011	SO-17360-030111-DR-147	SB51-11	Soil	1 to 3	MS/MSD	VOCs, PAHs, Metals
3/1/2011	SO-17360-030111-DR-148	SB51-11	Soil	19 to 21		VOCs, PAHs, Metals
3/2/2011	TB-17360-030211-SO	Trip Blank	Water	NA		VOCs
3/2/2011	SO-17360-030211-DR-149	SB58-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/2/2011	SO-17360-030211-DR-150	SB58-11	Soil	16.5 to 19		VOCs, PAHs, Metals, PCBs
3/2/2011	SO-17360-030211-DR-151	SB57-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/2/2011	SO-17360-030211-DR-152	SB57-11	Soil	16.5 to 19		VOCs, PAHs, Metals, PCBs
3/2/2011	SO-17360-030211-DR-153	SB79-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/2/2011	SO-17360-030211-DR-154	SB79-11	Soil	16.5 to 19		VOCs, PAHs, Metals, PCBs
3/2/2011	SO-17360-030211-DR-155	SB78-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/2/2011	SO-17360-030211-DR-156	SB78-11	Soil	16 to 18		VOCs, PAHs, Metals, PCBs
3/2/2011	SO-17360-030211-DR-157	SB119-11	Soil	0.5 to 2.5		VOCs, PAHs, Metals, PCBs
3/2/2011	SO-17360-030211-DR-158	SB119-11	Soil	12 to 14		VOCs, PAHs, Metals, PCBs
3/2/2011	SO-17360-030211-DR-159	SB64-11	Soil	0.5 to 2.5		VOCs, PAHs, Metals, PCBs
3/2/2011	SO-17360-030211-DR-160	SB64-11	Soil	12 to 14		VOCs, PAHs, Metals, PCBs

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Date	*Sample Identification*	*Sample Location*	*Matrix*	*Sample Depth*	*QC Sample*	*Analysis*
3/3/2011	SO-17360-030311-DR-161	SB62-11	Soil	0.5 to 2.5		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-162	SB62-11	Soil	11 to 13		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-163	SB116-11	Soil	2 to 4		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-164	SB116-11	Soil	2 to 4	Duplicate (-164)	VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-165	SB116-11	Soil	16 to 18		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-166	SB63-11	Soil	0.5 to 2.5		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-167	SB63-11	Soil	14 to 16		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-168	SB125-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-169	SB125-11	Soil	13 to 15		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-170	SB65-11	Soil	0.5 to 2.5		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-171	SB65-11	Soil	13 to 15		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-172	SB90-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-173	SB90-11	Soil	12 to 14	MS/MSD	VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-174	SB89-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-175	SB89-11	Soil	12 to 14		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-176	SB88-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/3/2011	SO-17360-030311-DR-177	SB88-11	Soil	12 to 14		VOCs, PAHs, Metals, PCBs
3/4/2011	TB-17360-030411-SO	Trip Blank	Water	NA		VOCs
3/4/2011	SO-17360-030411-DR-178	SB56-11	Soil	1 to 3		VOCs, PAHs
3/4/2011	SO-17360-030411-DR-179	SB56-11	Soil	12.5 to 15		VOCs, PAHs
3/4/2011	SO-17360-030411-DR-180	SB126-11	Soil	1 to 3		VOCs, PAHs, Metals, PCBs
3/4/2011	SO-17360-030411-DR-181	SB126-11	Soil	12.5 to 15		VOCs, PAHs, Metals, PCBs
3/4/2011	SO-17360-030411-DR-182	SB118-11	Soil	0 to 2		VOCs, PAHs, Metals, PCBs
3/4/2011	SO-17360-030411-DR-183	SB118-11	Soil	12.5 to 15		VOCs, PAHs, Metals, PCBs
3/4/2011	SO-17360-030411-DR-184	SB71-11	Soil	0.5 to 2.5		VOCs, PAHs, Metals, PCBs
3/4/2011	SO-17360-030411-DR-185	SB71-11	Soil	15 to 17		VOCs, PAHs, Metals, PCBs
3/4/2011	SO-17360-030411-DR-186	SB72-11	Soil	0.5 to 2.5		VOCs, PAHs, Metals, PCBs
3/4/2011	SO-17360-030411-DR-187	SB72-11	Soil	13 to 15		VOCs, PAHs, Metals, PCBs
3/8/2011	TB-17360-030811-GW	Trip Blank	Water	NA		VOCs
3/8/2011	GW-17360-030811-DR-188	SB104-11	Water	25 to 25		VOCs, PAHs, Metals[1]
3/8/2011	GW-17360-030811-DR-189	SB102-11	Water	23.5 to 24		VOCs, PAHs, Metals[1]
3/8/2011	GW-17360-030811-DR-190	SB105-11	Water	22.2 to 22		VOCs, PAHs, Metals[1]
3/8/2011	GW-17360-030811-DR-191	SB61-11	Water	23 to 23		VOCs, PAHs, Metals[1]
3/8/2011	GW-17360-030811-DR-192	SB61-11	Water	23 to 23	Duplicate (-191)	VOCs, PAHs, Metals[1]
3/8/2011	GW-17360-030811-DR-193	SB60-11	Water	23.2 to 23		VOCs, PAHs, Metals[1]
3/8/2011	GW-17360-030811-DR-194	SB88-11	Water	16 to 16	MS/MSD	VOCs, PAHs, Metals[1]
3/8/2011	GW-17360-030811-DR-195	SB56-11	Water	15.5 to 16		VOCs, PAHs
3/8/2011	GW-17360-030811-DR-196	SB64-11	Water	15.5 to 16		VOCs, PAHs, Metals[1]
3/9/2011	TB-17360-030911-GW	Trip Blank	Water	NA		VOCs

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Date	*Sample Identification*	*Sample Location*	*Matrix*	*Sample Depth*	*QC Sample*	*Analysis*
3/9/2011	GW-17360-030911-DR-197	SB57-11	Water	20.5 to 21		VOCs, PAHs, Metals[1]
3/9/2011	GW-17360-030911-DR-198	SB71-11	Water	20 to 20		VOCs, PAHs, Metals[1]
3/9/2011	GW-17360-030911-DR-199	SB67-11	Water	24 to 24		VOCs, SVOCs
3/9/2011	GW-17360-030911-DR-200	MW20-11	Water	21 to 26		VOCs, PAHs, Metals, PCBs, Cyanide
3/9/2011	GW-17360-030911-DR-201	MW19-11	Water	19 to 24	MS/MSD	VOCs, PAHs, Metals, Cr III, CR VI
3/9/2011	GW-17360-030911-DR-202	MW21-11	Water	16.5 to 22		VOCs, PAHs, Metals, PCBs
3/9/2011	GW-17360-030911-DR-203	MW24-11	Water	19 to 24		VOCs, PAHs, Metals, PCBs, Cyanide
3/9/2011	GW-17360-030911-DR-204	MW24-11	Water	19 to 24	Duplicate (-204)	VOCs, PAHs, Metals, PCBs, Cyanide
3/10/2011	TB-17360-031011-GW	Trip Blank	Water	NA		VOCs
3/10/2011	GW-17360-031011-DR-205	MW22-11	Water	21.5 to 27		VOCs, PAHs, Metals, PCBs, Cyanide
3/10/2011	GW-17360-031011-DR-206	MW25-11	Water	20 to 25		VOCs, PAHs, Metals, PCBs
3/10/2011	GW-17360-031011-DR-207	MW26-11	Water	21 to 26		VOCs, PAHs, Metals, PCBs
3/10/2011	GW-17360-031011-DR-208	MW23-11	Water	20 to 25		VOCs, PAHs, Metals, PCBs, Cyanide
3/10/2011	GW-17360-031011-DR-209	85-2	Water	13.5 to 19		VOCs, PAHs, Metals
3/10/2011	GW-17360-031011-DR-210	MW15-04	Water	25 to 30		VOCs, PAHs, Metals
3/14/2011	SO-17360-031411-DR-211	SB106-11	Soil	0 to 2		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-212	SB106-11	Soil	0 to 2	Duplicate (-211)	PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-213	SB106-11	Soil	2 to 4		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-214	SB106-11	Soil	4 to 6		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-215	SB106-11	Soil	6 to 8		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-216	SB106-11	Soil	8 to 10		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-217	SB107-11	Soil	0 to 2	MS/MSD	PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-218	SB107-11	Soil	2 to 4		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-219	SB107-11	Soil	4 to 6		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-220	SB107-11	Soil	6 to 8		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-221	SB107-11	Soil	8 to 10		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-222	SB108-11	Soil	0 to 2		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-223	SB108-11	Soil	2 to 4		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-224	SB108-11	Soil	4 to 6		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-225	SB108-11	Soil	6 to 8		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-226	SB108-11	Soil	8 to 10		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-227	SB109-11	Soil	0 to 2		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-228	SB109-11	Soil	2 to 4		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-229	SB109-11	Soil	4 to 6		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-230	SB109-11	Soil	6 to 8		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-231	SB109-11	Soil	8 to 10		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-232	SB109-11	Soil	8 to 10	Duplicate (-232)	PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-233	SB110-11	Soil	0 to 2		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-234	SB110-11	Soil	2 to 4		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-235	SB110-11	Soil	4 to 6		PAHs, Metals, PCBs

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SITE-WIDE INVESTIGATION DATA PACKAGE
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Date	*Sample Identification*	*Sample Location*	*Matrix*	*Sample Depth*			*QC Sample*	*Analysis*
3/14/2011	SO-17360-031411-DR-236	SB110-11	Soil	6	to	8		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-237	SB110-11	Soil	8	to	10		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-238	SB111-11	Soil	0	to	2		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-239	SB111-11	Soil	2	to	4		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-240	SB111-11	Soil	4	to	6		PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-241	SB111-11	Soil	6	to	8	MS/MSD	PAHs, Metals, PCBs
3/14/2011	SO-17360-031411-DR-242	SB111-11	Soil	8	to	10		PAHs, Metals, PCBs
3/15/2011	TB-17360-031511-SO	Trip Blank	Soil	NA				VOCs
3/15/2011	SO-17360-031511-DR-243	SB100-11	Soil	0.5	to	2.5		VOCs, PAHs, Metals, PCBs
3/15/2011	SO-17360-031511-DR-244	SB100-11	Soil	8	to	10		VOCs, PAHs, Metals, PCBs
3/15/2011	SO-17360-031511-DR-245	SB43-11	Soil	0.5	to	2.5		VOCs, PAHs, Metals
3/15/2011	SO-17360-031511-DR-246	SB43-11	Soil	6	to	8		VOCs, PAHs, Metals
3/15/2011	SO-17360-031511-DR-247	SB43-11	Soil	13	to	15		VOCs, PAHs, Metals
3/15/2011	SO-17360-031511-DR-248	SB112-11	Soil	2	to	4		VOCs, PAHs, Metals, PCBs
3/15/2011	SO-17360-031511-DR-249	SB112-11	Soil	12	to	14		VOCs, PAHs, Metals, PCBs
3/15/2011	SO-17360-031511-DR-250	SB112-11	Soil	12	to	14	Duplicate (-250)	VOCs, PAHs, Metals, PCBs
3/16/2011	TB-17360-031611-GW	Trip Blank	Water	NA				VOCs
3/16/2011	GW-17360-031611-DR-251	MW27-11	Water	12.5	to	18		VOCs, PAHs, Metals, PCBs
3/16/2011	GW-17360-031611-DR-201	MW19-11	Water	19	to	24	MS/MSD	Cr III, Cr VI

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
Cyanide - Soil samples were analyzed for total cyanide. Groundwater samples were analyzed for total and amenable cyanide
QC - Quality Control
MS/MSD - Matrix Spike /Matrix Spike Duplicate
[1] - Borehole water samples were field filtered for dissolved metals

TABLE 2

GROUNDWATER ELEVATION DATA
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	2/9/2011	658.97	16.06
85-2	3/10/2011	658.12	13.51
85-5B	2/14/2011	659.35	21.48
85-6	2/11/2011	659.47	20.12
85-7	2/11/2011	657.68	20.16
86-1	2/15/2011	658.28	21.64
86-2	2/14/2011	660.06	20.87
86-3	2/11/2011	657.12	18.68
87-1	2/14/2011	658.59	22.15
87-2	2/14/2011	659.54	21.19
87-4	2/14/2011	658.84	22.07
87-5	2/14/2011	658.49	21.90
87-8	2/11/2011	657.12	19.66
87-9	2/11/2011	657.04	16.09
87-10	2/10/2011	655.51	12.25
87-11	2/10/2011	655.35	10.90
87-13	2/10/2011	652.76	10.81
88-2	2/9/2011	653.74	12.06
88-3	2/9/2011	653.01	11.35
88-4	2/9/2011	652.35	8.85
MW1-03	2/10/2011	660.20	18.48
MW2-03	2/10/2011	659.75	20.85
MW3-03	2/9/2011	661.97	14.77
MW4-03	2/9/2011	656.27	22.85
MW5-03	2/10/2011	655.22	20.60
MW6-03	2/10/2011	653.07	12.32
MW7-03	2/11/2011	657.34	17.45
MW8-04	2/10/2011	654.36	19.96
MW9-04	2/9/2011	655.94	22.35
MW10-04	2/10/2011	656.60	9.69
MW11D-04	2/10/2011	656.66	6.61
MW11S-05	2/10/2011	656.64	6.94
MW13-04	2/15/2011	658.39	19.87
MW14-04	2/14/2011	658.79	22.26
MW15-04	3/10/2011	658.03	13.66
MW17-06	2/9/2011	657.16	7.55
MW18-10	2/14/2011	658.95	21.65
MW19-11	3/16/2011	660.38	20.51
MW20-11	3/9/2011	658.57	22.21
MW21-11	3/9/2011	662.98	17.34
MW22-11	3/10/2011	658.34	22.58
MW23-11	3/10/2011	659.14	21.75
MW24-11	3/9/2011	660.66	20.22
MW25-11	3/10/2011	658.61	22.04
MW26-11	3/10/2011	658.69	22.16
MW27-11	3/16/2011	658.23	13.08

Notes:

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

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
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:* [1]						*SB41-11*	*SB41-11*	*SB41-11*	*SB42-11*	*SB42-11*	*SB43-11*	*SB43-11*	*SB43-11*	*SB45-11*	*SB45-11*
Sample Identification			*Residential*	*Residential*	*Residential*	*Non-Residential*	*Non-Residential*	*Non-Residential*	*SO-17360-022211-DR-115*	*SO-17360-022211-DR-116*	*SO-17360-022211-DR-117*	*SO-17360-022111-DR-103*	*SO-17360-022111-DR-104*	*SO-17360-031511-DR-245*	*SO-17360-031511-DR-246*	*SO-17360-031511-DR-247*	*SO-17360-021711-DR-080*	*SO-17360-021711-DR-081*
Sample Date		*Statewide*	*Soil Volatilization*	*Particulate*	*Direct*	*Soil Volatilization*	*Particulate*	*Direct*	*2/22/2011*	*2/22/2011*	*2/22/2011*	*2/21/2011*	*2/21/2011*	*3/15/2011*	*3/15/2011*	*3/15/2011*	*2/17/2011*	*2/17/2011*
Sample Depth		*Default*	*to Indoor Air*	*Soil Inhalation*	*Contact*	*to Indoor Air*	*Soil Inhalation*	*Contact*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(18-20) ft BGS*	*(1-3) ft BGS*	*(18-20) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(13-15) ft BGS*	*(1-3) ft BGS*	*(18-20) ft BGS*
Area of Interest		*Background*	*Inhalation*			*Inhalation*			*AOI 4.1*	*AOI 4.1*	*AOI 4.1*	*AOI 4.1*	*AOI 4.1*	*AOI 4.3*	*AOI 4.3*	*AOI 4.3*	*AOI 7.1*	*AOI 7.1*
Sample Type	*Units*	*a*	*b*	*c*	*d*	*e*	*f*	*g*		*Duplicate*								
Metals																		
Antimony	mg/kg		NLV	13000	180	NLV	5900	670	0.065 J	0.19 J	0.16 UJ	0.15 J	0.16 UJ	0.11 J	0.058 J	0.17 UJ	0.16 UJ	0.032 J
Arsenic	mg/kg	5.8	NLV	720	7.6	NLV	910	37	1.4	1.2	3.1	1.9	1.2	2.8 J	4.1 J	0.76 J	1.6	2.1
Barium	mg/kg	75	NLV	330000	37000	NLV	150000	130000	24.6	23.8	4.7	23.5	5.6	25.8	19.0	4.0	5.9	4.6
Beryllium	mg/kg	--	NLV	1300	410	NLV	590	1600	0.17 U	0.17 U	0.16 U	0.16 U	0.16 U	0.26 U	0.31 U	0.18 U	0.16 U	0.16 U
Cadmium	mg/kg	1.2	NLV	1700	550	NLV	2200	2100	0.083 U	0.083 U	0.082 U	0.082 U	0.082 U	0.078 J	0.099	0.085 U	0.081 U	0.081 U
Chromium	mg/kg	18	NLV	260	2500	NLV	240	9200	5.4	5.2	3.0	4.9	6.2	8.6	6.5	3.9	4.7	3.7
Chromium III (trivalent)	mg/kg	18	NLV	330000	790000	NLV	150000	1000000	--	--	--	--	--	--	--	--	4.7	3.1
Chromium VI (hexavalent)	mg/kg	--	NLV	260	2500	NLV	240	9200	--	--	--	--	--	--	--	--	0.81 U	0.55 J
Cobalt	mg/kg	6.8	NLV	13000	2600	NLV	5900	9000	1.7	1.7	1.7	2.1	2.3	2.8	0.93	1.7	2.0	2.1
Copper	mg/kg	32	NLV	130000	20000	NLV	59000	73000	4.4	4.7	5.2	18.8	4.3	6.4	4.4	4.0	4.3 J	2.9 J
Lead	mg/kg	21	NLV	100000	400	NLV	44000	900	5.7	6.1	1.9	17.5	1.7	19.1	6.8	1.4	1.9	2.4
Manganese	mg/kg	440	NLV	3300	25000	NLV	1500	90000	109	124	110	152	155	196	28.5	51.2	134 J	96.8 J
Mercury	mg/kg	0.13	48	20000	160	89	8800	580	0.042 U	0.042 U	0.041 U	0.041 U	0.041 U	0.035 J	0.040 J	0.040 U	0.041 U	0.041 U
Nickel	mg/kg	20	NLV	13000	40000	NLV	16000	150000	3.5	3.6	3.4	4.8	5.5	7.1	3.1	4.2	4.3	4.1
Selenium	mg/kg	0.41	NLV	130000	2600	NLV	59000	9600	0.18 J	0.17 J	0.16 J	0.20 J	0.15 J	0.13 J	0.42 J	0.17 UJ	0.15 J	0.13 J
Silver	mg/kg	1	NLV	6700	2500	NLV	2900	9000	0.083 U	0.083 U	0.082 U	0.082 U	0.082 U	0.018 J	0.033 J	0.085 U	0.081 U	0.081 U
Thallium	mg/kg	--	NLV	13000	35	NLV	5900	130	0.083 U	0.083 U	0.082 U	0.082 U	0.082 U	0.082 U	0.095 U	0.085 U	0.081 U	0.081 U
Vanadium	mg/kg	--	NLV	ID	750	NLV	ID	5500	6.7	6.6	4.7	7.0	6.1	9.0	9.1	6.2	6.2	5.3
Zinc	mg/kg	47	NLV	ID	170000	NLV	ID	630000	14.7	13.3	7.8	25.6	8.6	27.0	10.1	7.0	9.7	6.8
PCBs																		
Aroclor-1016 (PCB-1016)	mg/kg	--	3000	5200	4	16000	6500	16	--	--	--	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/kg	--	3000	5200	4	16000	6500	16	--	--	--	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/kg	--	3000	5200	4	16000	6500	16	--	--	--	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/kg	--	3000	5200	4	16000	6500	16	--	--	--	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/kg	--	3000	5200	4	16000	6500	16	--	--	--	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/kg	--	3000	5200	4	16000	6500	16	--	--	--	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/kg	--	3000	5200	4	16000	6500	16	--	--	--	--	--	--	--	--	--	--
Total PCBs	mg/kg	--	3000	5200	4	16000	6500	16	--	--	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	NLV	23000000	23000	NLV	10000000	73000	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	NLV	1000000	710	NLV	1300000	3300	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	NLV	5100000	660	NLV	2300000	1800	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	NLV	4700000	11000	NLV	2100000	36000	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	NLV	16000	48	NLV	20000	220	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	ID	ID	56000	ID	ID	180000	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	430	1200000	1400	800	530000	4500	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	--	2700	670000	8100	4900	290000	26000	0.093 J	0.09 J	0.27 U	0.016 J	0.27 U	0.28 U	0.32 U	0.28 U	0.27 U	0.27 U
2-Methylphenol	mg/kg	--	NLV	6700000	11000	NLV	2900000	36000	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	NLV	ID	630	NLV	ID	2000	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	NLV	6500	6.6	NLV	8200	30	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	NLV	ID	79	NLV	ID	260	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	NLV	ID	4500	NLV	ID	15000	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	NLV	6700000	11000	NLV	2900000	36000	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	--	190000	14000000	41000	350000	6200000	130000	0.052 J	0.067 J	0.27 U	0.27 U	0.27 U	0.28 U	0.32 U	0.28 U	0.27 U	0.27 U
Acenaphthylene	mg/kg	--	1600	2300000	1600	3000	1000000	5200	1.4 U	1.4 U	0.27 U	0.27 U	0.27 U	0.28 U	0.32 U	0.28 U	0.27 U	0.27 U
Acetophenone	mg/kg	--	1100	33000000	1100	1100	14000000	1100	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	--	1000000	67000000	230000	1000000	29000000	730000	0.036 J	0.073 J	0.27 U	0.27 U	0.27 U	0.0075 J	0.32 U	0.28 U	0.27 U	0.27 U
Atrazine	mg/kg	--	NLV	ID	71	NLV	ID	330	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	--	NLV	ID	20	NLV	ID	80	0.069 J	0.13 J	0.27 U	0.015 J	0.27 U	0.042 J	0.022 J	0.28 U	0.27 U	0.27 U
Benzo(a)pyrene	mg/kg	--	NLV	1500	2	NLV	1900	8	0.05 J	0.094 J	0.27 U	0.012 J	0.27 U	0.042 J	0.025 J	0.28 U	0.27 U	0.27 U
Benzo(b)fluoranthene	mg/kg	--	ID	ID	20	ID	ID	80	0.078 J	0.13 J	0.27 U	0.025 J	0.27 U	0.071 J	0.039 J	0.28 U	0.27 U	0.27 U
Benzo(g,h,i)perylene	mg/kg	--	NLV	800000	2500	NLV	350000	7000	0.048 J	0.072 J	0.27 U	0.024 J	0.27 U	0.038 J	0.022 J	0.28 U	0.27 U	0.27 U
Benzo(k)fluoranthene	mg/kg	--	NLV	ID	200	NLV	ID	800	1.4 U	0.074 J	0.27 U	0.01 J	0.27 U	0.027 J	0.016 J	0.28 U	0.27 U	0.27 U
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	8.3	9400	13	44	12000	58	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	NLV	700000	2800	NLV	890000	10000	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	NLV	47000000	310	NLV	21000000	310	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	NLV	670000	53000	NLV	290000	310000	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	NLV	62000	530	NLV	78000	2400	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	--	ID	ID	2000	ID	ID	8000	0.072 J	0.12 J	0.27 U	0.023 J	0.27 U	0.066 J	0.031 J	0.28 U	0.27 U	0.27 U
Dibenz(a,h)anthracene	mg/kg	--	NLV	ID	2	NLV	ID	8	1.4 U	1.4 U	0.27 U	0.27 U	0.27 U	0.0072 J	0.32 U	0.28 U	0.27 U	0.27 U
Dibenzofuran	mg/kg	--	2000	6700	ID	3600	2900	ID	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	NLV	3300000	740	NLV	1500000	740	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	NLV	3300000	790	NLV	1500000	790	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	NLV	3300000	760	NLV	1500000	760	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	NLV	31000000	6900	NLV	14000000	20000	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	--	1000000	9300000	46000	1000000	4100000	130000	0.16 J	0.3 J	0.27 U	0.025 J	0.27 U	0.12 J	0.054 J	0.28 U	0.27 U	0.27 U

TABLE 3

ANALYTICAL RESULTS OF SOIL SAMPLES
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:* [1]						*SB41-11*	*SB41-11*	*SB41-11*	*SB42-11*	*SB42-11*	*SB43-11*	*SB43-11*	*SB43-11*	*SB45-11*	*SB45-11*
Sample Identification			*Residential*	*Residential*	*Residential*	*Non-Residential*	*Non-Residential*	*Non-Residential*	*SO-17360-022211-DR-115*	*SO-17360-022211-DR-116*	*SO-17360-022211-DR-117*	*SO-17360-022111-DR-103*	*SO-17360-022111-DR-104*	*SO-17360-031511-DR-245*	*SO-17360-031511-DR-246*	*SO-17360-031511-DR-247*	*SO-17360-021711-DR-080*	*SO-17360-021711-DR-081*
Sample Date		*Statewide*	*Soil Volatilization*	*Particulate*	*Direct*	*Soil Volatilization*	*Particulate*	*Direct*	*2/22/2011*	*2/22/2011*	*2/22/2011*	*2/21/2011*	*2/21/2011*	*3/15/2011*	*3/15/2011*	*3/15/2011*	*2/17/2011*	*2/17/2011*
Sample Depth		*Default*	*to Indoor Air*	*Soil Inhalation*	*Contact*	*to Indoor Air*	*Soil Inhalation*	*Contact*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(18-20) ft BGS*	*(1-3) ft BGS*	*(18-20) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(13-15) ft BGS*	*(1-3) ft BGS*	*(18-20) ft BGS*
Area of Interest		*Background*	*Inhalation*			*Inhalation*			*AOI 4.1*	*AOI 4.1*	*AOI 4.1*	*AOI 4.1*	*AOI 4.1*	*AOI 4.3*	*AOI 4.3*	*AOI 4.3*	*AOI 7.1*	*AOI 7.1*
Sample Type	*Units*	*a*	*b*	*c*	*d*	*e*	*f*	*g*		*Duplicate*								
Fluorene	mg/kg	--	580000	9300000	27000	1000000	4100000	87000	0.039 J	0.051 J	0.27 U	0.27 U	0.27 U	0.28 U	0.32 U	0.28 U	0.27 U	0.27 U
Hexachlorobenzene	mg/kg	--	41	6800	8.9	220	8500	37	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	130	140000	100	350	180000	350	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	30	13000	720	56	5900	720	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	40	230000	230	79	100000	730	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	--	NLV	ID	20	NLV	ID	80	1.4 U	0.058 J	0.27 U	0.01 J	0.27 U	0.03 J	0.017 J	0.28 U	0.27 U	0.27 U
Isophorone	mg/kg	--	NLV	12000000	2400	NLV	8200000	2400	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	--	250	200000	16000	470	88000	52000	0.081 J	0.084 J	0.27 U	0.009 J	0.27 U	0.28 U	0.32 U	0.28 U	0.27 U	0.27 U
Nitrobenzene	mg/kg	--	91	47000	100	170	21000	340	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	NLV	1600	1.2	NLV	2000	5.4	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	NLV	2200000	1700	NLV	2800000	7800	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	NLV	100000	90	NLV	130000	320	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	--	2800	6700	1600	5100	2900	5200	0.21 J	0.34 J	0.27 U	0.019 J	0.27 U	0.033 J	0.022 J	0.28 U	0.27 U	0.27 U
Phenol	mg/kg	--	NLV	40000000	12000	NLV	18000000	12000	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	--	1000000	6700000	29000	1000000	2900000	84000	0.11 J	0.2 J	0.27 U	0.022 J	0.27 U	0.11 J	0.044 J	0.28 U	0.27 U	0.27 U
Volatile Organic Compounds																		
1,1,1-Trichloroethane	mg/kg	--	250	67000000	460	460	29000000	460	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
1,1,2,2-Tetrachloroethane	mg/kg	--	4.3	54000	53	23	68000	240	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
1,1,2-Trichloroethane	mg/kg	--	4.6	190000	180	24	250000	840	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
1,1-Dichloroethane	mg/kg	--	230	33000000	890	430	15000000	890	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
1,1-Dichloroethene	mg/kg	--	0.062	62000	200	0.33	78000	570	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
1,2,4-Trichlorobenzene	mg/kg	--	1100	25000000	990	1100	11000000	1100	0.22 U	0.23 U	0.21 U	0.19 U	0.22 U	0.22 U	0.28 U	0.22 U	0.2 U	0.24 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	--	1.2	13000	1.2	1.2	5900	1.2	0.22 U	0.23 U	0.21 U	0.19 U	0.22 U	0.22 U	0.28 U	0.22 U	0.2 U	0.24 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	--	0.67	14000	0.092	3.6	18000	0.43	0.22 U	0.23 U	0.21 U	0.19 U	0.22 U	0.22 U	0.28 U	0.22 U	0.2 U	0.24 U
1,2-Dichlorobenzene	mg/kg	--	210	100000000	210	210	44000000	210	0.09 U	0.092 U	0.082 U	0.076 U	0.088 U	0.089 U	0.11 U	0.088 U	0.08 U	0.094 U
1,2-Dichloroethane	mg/kg	--	2.1	120000	91	11	150000	420	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
1,2-Dichloropropane	mg/kg	--	4	270000	140	7.4	120000	550	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
1,3-Dichlorobenzene	mg/kg	--	26	200000	170	48	8800	170	0.09 U	0.092 U	0.082 U	0.076 U	0.088 U	0.089 U	0.11 U	0.088 U	0.08 U	0.094 U
1,4-Dichlorobenzene	mg/kg	--	19	450000	400	100	570000	1900	0.09 U	0.092 U	0.082 U	0.076 U	0.088 U	0.089 U	0.11 U	0.088 U	0.08 U	0.094 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	--	27000	67000000	27000	27000	29000000	27000	0.67 U	0.69 U	0.62 U	0.57 U	0.66 U	0.67 U	0.85 U	0.66 U	0.6 U	0.71 U
2-Hexanone	mg/kg	--	990	2700000	2500	1800	1200000	2500	2.2 U	2.3 U	2.1 U	1.9 U	2.2 U	2.2 U	2.8 U	2.2 U	2 U	2.4 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	--	2700	140000000	2700	2700	60000000	2700	2.2 U	2.3 U	2.1 U	1.9 U	2.2 U	2.2 U	2.8 U	2.2 U	2 U	2.4 U
Acetone	mg/kg	--	110000	390000000	23000	110000	170000000	73000	0.67 U	0.69 U	0.62 U	0.57 U	0.66 U	0.67 U	0.85 U	0.66 U	0.6 U	0.71 U
Benzene	mg/kg	--	1.6	380000	180	8.4	470000	400	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
Bromodichloromethane	mg/kg	--	1.2	84000	110	6.4	110000	490	0.09 U	0.092 U	0.082 U	0.076 U	0.088 U	0.089 U	0.11 U	0.088 U	0.08 U	0.094 U
Bromoform	mg/kg	--	150	2800000	820	770	3600000	870	0.09 U	0.092 U	0.082 U	0.076 U	0.088 U	0.089 U	0.11 U	0.088 U	0.08 U	0.094 U
Bromomethane (Methyl bromide)	mg/kg	--	0.86	330000	320	1.6	150000	1000	0.22 UJ	0.23 UJ	0.21 UJ	0.19 U	0.22 U	0.22 U	0.28 U	0.22 U	0.2 U	0.24 U
Carbon disulfide	mg/kg	--	76	47000000	280	140	21000000	280	0.22 U	0.23 U	0.21 U	0.19 U	0.22 U	0.22 U	0.28 U	0.22 U	0.2 U	0.24 U
Carbon tetrachloride	mg/kg	--	0.19	130000	96	0.99	170000	390	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
Chlorobenzene	mg/kg	--	120	4700000	260	220	2100000	260	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
Chloroethane	mg/kg	--	950	670000000	950	950	290000000	950	0.22 U	0.23 U	0.21 U	0.19 U	0.22 U	0.22 U	0.28 U	0.22 U	0.2 U	0.24 U
Chloroform (Trichloromethane)	mg/kg	--	7.2	1300000	1200	38	1600000	1500	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
Chloromethane (Methyl chloride)	mg/kg	--	2.3	4900000	1100	10	2600000	1100	0.22 UJ	0.23 UJ	0.21 UJ	0.19 U	0.22 U	0.22 U	0.28 U	0.22 U	0.2 U	0.24 U
cis-1,2-Dichloroethene	mg/kg	--	22	2300000	640	41	1000000	640	0.023 J	0.019 J	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
cis-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
Cyclohexane	mg/kg	--	--	--	--	--	--	--	1.1 U	1.1 U	0.99 U	0.92 U	1.1 U	1.1 U	1.4 U	1.1 U	0.96 U	1.1 U
Dibromochloromethane	mg/kg	--	3.9	130000	110	21	160000	500	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
Dichlorodifluoromethane (CFC-12)	mg/kg	--	900	3300000000	1000	1700	1500000000	1000	0.09 U	0.092 U	0.082 U	0.076 U	0.088 U	0.089 U	0.11 U	0.088 U	0.08 U	0.094 U
Ethylbenzene	mg/kg	--	87	10000000	140	140	13000000	140	0.045 U	0.0073 J	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
Isopropyl benzene	mg/kg	--	390	5800000	390	390	2600000	390	0.22 U	0.23 U	0.21 U	0.19 U	0.22 U	0.22 U	0.28 U	0.22 U	0.2 U	0.24 U
Methyl acetate	mg/kg	--	--	--	--	--	--	--	0.076 J	1.1 U	0.041 J	0.92 U	1.1 U	1.1 U	0.039 J	1.1 U	0.96 U	0.036 J
Methyl cyclohexane	mg/kg	--	--	--	--	--	--	--	1.1 U	1.1 U	0.99 U	0.92 U	1.1 U	1.1 U	1.4 U	1.1 U	0.96 U	1.1 U
Methyl tert butyl ether (MTBE)	mg/kg	--	5900	200000000	1500	5900	88000000	5900	0.22 U	0.23 U	0.21 U	0.19 U	0.22 U	0.22 U	0.28 U	0.22 U	0.2 U	0.24 U
Methylene chloride	mg/kg	--	45	6600000	1300	240	8300000	2300	0.22 U	0.23 U	0.21 U	0.19 U	0.22 U	0.22 U	0.28 U	0.22 U	0.2 U	0.24 U
Styrene	mg/kg	--	250	5500000	400	520	6900000	520	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
Tetrachloroethene	mg/kg	--	11	5400000	88	60	6800000	88	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
Toluene	mg/kg	--	250	27000000	250	250	12000000	250	0.09 U	0.051 J	0.082 U	0.076 U	0.088 U	0.089 U	0.11 U	0.088 U	0.08 U	0.094 U
trans-1,2-Dichloroethene	mg/kg	--	23	4700000	1400	43	2100000	1400	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
trans-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	0.045 U	0.046 U	0.041 U	0.038 U	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
Trichloroethene	mg/kg	--	7.1	1800000	500	37	2300000	500	0.37	0.22	0.041 U	0.026 J	0.044 U	0.045 U	0.056 U	0.044 U	0.04 U	0.047 U
Trichlorofluoromethane (CFC-11)	mg/kg	--	560	3800000000	560	560	1700000000	560	0.09 U	0.092 U	0.082 U	0.076 U	0.088 U	0.089 U	0.11 U	0.088 U	0.08 U	0.094 U
Trifluorotrichloroethane (Freon 113)	mg/kg	--	550	5100000000	550	550	2300000000	550	0.22 U	0.23 U	0.21 U	0.19 U	0.22 U	0.22 U	0.28 U	0.22 U	0.2 U	0.24 U
Vinyl chloride	mg/kg	--	0.27	350000	3.8	2.8	890000	34	0.036 U	0.037 U	0.033 U	0.031 U	0.035 U	0.036 U	0.045 U	0.035 U	0.032 U	0.038 U
Xylenes (total)	mg/kg	--	150	290000000	150	150	130000000	150	0.031 J	0.071 J	0.12 U	0.11 U	0.13 U	0.13 U	0.17 U	0.13 U	0.12 U	0.14 U
General Chemistry																		
Cyanide (total)	mg/kg	0.39	NLV	250	12	NLV	250	250	--	--	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		*SB46-11*	*SB46-11*	*SB47-11*	*SB48-11*	*SB48-11*	*SB49-11*	*SB50-11*	*SB50-11*	*SB51-11*	*SB51-11*	*SB52-11*	*SB52-11*	*SB53-11*	*SB53-11*
Sample Identification		*SO-17360-021811-DR-092*	*SO-17360-021811-DR-093*	*SO-17360-021611-JY-067*	*SO-17360-021611-JY-065*	*SO-17360-021611-JY-066*	*SO-17360-021511-DR-058*	*SO-17360-021511-DR-059*	*SO-17360-021511-DR-060*	*SO-17360-030111-DR-147*	*SO-17360-030111-DR-148*	*SO-17360-022211-DR-109*	*SO-17360-022211-DR-110*	*SO-17360-021811-DR-090*	*SO-17360-021811-DR-091*
Sample Date		*2/18/2011*	*2/18/2011*	*2/16/2011*	*2/16/2011*	*2/16/2011*	*2/15/2011*	*2/15/2011*	*2/15/2011*	*3/1/2011*	*3/1/2011*	*2/22/2011*	*2/22/2011*	*2/18/2011*	*2/18/2011*
Sample Depth		*(1-3) ft BGS*	*(19-21) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(19-21) ft BGS*	*(1-3) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*
Area of Interest		*AOI 7.2*	*AOI 7.2*	*AOI 7.3*	*AOI 7.4*	*AOI 7.4*	*AOI 7.5*	*AOI 7.6*	*AOI 7.6*	*AOI 7.7*	*AOI 7.7*	*AOI 7.8*	*AOI 7.8*	*AOI 7.9*	*AOI 7.9*
Sample Type	*Units*														
Metals															
Antimony	mg/kg	0.034 J	0.16 UJ	0.13 J	0.17 UJ	0.028 J	0.17 UJ	0.16 UJ	0.17 UJ	0.17 UJ	0.040 J	0.031 J	0.16 UJ	0.036 J	0.17 UJ
Arsenic	mg/kg	0.99	1.3	2.0	1.1	3.7	1.8	1.2	1.8	1.1	1.8	2.0	1.8	1.4	2.0
Barium	mg/kg	10.1	3.6	29.4	39.1	10.6	5.0	26.6	5.9	19.9	7.4	16.3	4.9	16.3	6.3
Beryllium	mg/kg	0.16 U	0.16 U	0.17 U	0.17 U	0.17 U	0.17 U	0.16 U	0.17 U	0.17 U	0.16 U	0.17 U	0.16 U	0.17 U	0.17 U
Cadmium	mg/kg	0.19	0.081 U	0.10	0.084 U	0.084 U	0.083 U	0.081 U	0.087 U	0.083 U	0.082 U	0.085 U	0.082 U	0.096	0.083 U
Chromium	mg/kg	3.4	3.6	10.0	4.4	8.1	3.6	4.2	3.0	4.2	8.5	7.5	4.3	3.7	5.7
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	1.1	1.4	3.1	2.0	3.8	1.8	1.9	1.7	1.9	3.1	2.5	2.0	1.7	2.1
Copper	mg/kg	5.6 J	3.1 J	10 J	2.3 J	10.2 J	2.3 J	2.0 J	2.8 J	2.9	7.9	6.0	4.0	4.4 J	3.8 J
Lead	mg/kg	21.5	1.3	54.4	4.1	3.5	1.8	7.2	2.0	3.4	2.4	4.5	1.6	6.9	1.7
Manganese	mg/kg	65.3 J	79.8 J	168 J	210 J	273 J	162 J	143 J	90.6 J	127 J	142 J	156	150	101 J	113 J
Mercury	mg/kg	0.041 U	0.041 U	0.18	0.023 J	0.042 U	0.041 U	0.068	0.044 U	0.041 U	0.041 U	0.042 U	0.041 U	0.042 U	0.041 U
Nickel	mg/kg	2.5	3.4	6.5	4.2	7.9	4.2	3.7	3.7	3.7	7.0	5.9	3.8	3.6	4.0
Selenium	mg/kg	0.16 U	0.10 J	0.15 J	0.13 J	0.15 J	0.12 J	0.12 J	0.17 UJ	0.15 J	0.12 J	0.22 J	0.19 J	0.12 J	0.11 J
Silver	mg/kg	0.082 U	0.081 U	0.085 U	0.084 U	0.084 U	0.083 U	0.081 U	0.087 U	0.083 U	0.082 U	0.085 U	0.082 U	0.083 U	0.083 U
Thallium	mg/kg	0.082 U	0.081 U	0.085 U	0.084 U	0.084 U	0.083 U	0.081 U	0.087 U	0.083 U	0.082 U	0.085 U	0.082 U	0.083 U	0.083 U
Vanadium	mg/kg	5.1	3.8	10.0	7.0	14.6	5.4	6.7	5.0	7.5	8.8	8.5	5.9	6.2	6.8
Zinc	mg/kg	10.6	8.0	44.0	12.8	18.9	6.4	13.0	9.5	11.6	13.3	10.6	7.0	9.4	8.5
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															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	5.4 U	0.27 U	2.8 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.27 U	0.27 U	0.017 J	0.27 U	0.068 J	0.014 J
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	5.4 U	0.27 U	0.14 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.017 J	0.27 U	0.28 U	0.27 U	0.012 J	0.27 U
Acenaphthylene	mg/kg	5.4 U	0.27 U	2.8 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	5.4 U	0.27 U	0.34 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.038 J	0.27 U	0.28 U	0.27 U	0.031 J	0.27 U
Atrazine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	5.4 U	0.27 U	1.5 J	0.28 U	0.28 U	0.27 U	0.011 J	0.29 U	0.085 J	0.27 U	0.012 J	0.27 U	0.13 J	0.27 U
Benzo(a)pyrene	mg/kg	5.4 U	0.27 U	1.3 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.06 J	0.27 U	0.0096 J	0.27 U	0.11 J	0.27 U
Benzo(b)fluoranthene	mg/kg	5.4 U	0.013 J	2.3 J	0.28 U	0.28 U	0.27 U	0.017 J	0.29 U	0.095 J	0.27 U	0.02 J	0.27 U	0.16 J	0.018 J
Benzo(g,h,i)perylene	mg/kg	5.4 U	0.27 U	1.4 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.032 J	0.27 U	0.28 U	0.27 U	0.073 J	0.27 U
Benzo(k)fluoranthene	mg/kg	5.4 U	0.27 U	0.68 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.036 J	0.27 U	0.28 U	0.27 U	0.062 J	0.27 U
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	5.4 U	0.014 J	1.6 J	0.28 U	0.28 U	0.27 U	0.011 J	0.29 U	0.079 J	0.27 U	0.015 J	0.27 U	0.14 J	0.27 U
Dibenz(a,h)anthracene	mg/kg	5.4 U	0.27 U	2.8 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.0098 J	0.27 U	0.28 U	0.27 U	0.022 J	0.27 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	5.4 U	0.03 J	3.5	0.015 J	0.28 U	0.27 U	0.022 J	0.29 U	0.17 J	0.27 U	0.017 J	0.27 U	0.23 J	0.031 J

TABLE 3

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

Sample Location		*SB46-11*	*SB46-11*	*SB47-11*	*SB48-11*	*SB48-11*	*SB49-11*	*SB50-11*	*SB50-11*	*SB51-11*	*SB51-11*	*SB52-11*	*SB52-11*	*SB53-11*	*SB53-11*
Sample Identification		*SO-17360-021811-DR-092*	*SO-17360-021811-DR-093*	*SO-17360-021611-JY-067*	*SO-17360-021611-JY-065*	*SO-17360-021611-JY-066*	*SO-17360-021511-DR-058*	*SO-17360-021511-DR-059*	*SO-17360-021511-DR-060*	*SO-17360-030111-DR-147*	*SO-17360-030111-DR-148*	*SO-17360-022211-DR-109*	*SO-17360-022211-DR-110*	*SO-17360-021811-DR-090*	*SO-17360-021811-DR-091*
Sample Date		*2/18/2011*	*2/18/2011*	*2/16/2011*	*2/16/2011*	*2/16/2011*	*2/15/2011*	*2/15/2011*	*2/15/2011*	*3/1/2011*	*3/1/2011*	*2/22/2011*	*2/22/2011*	*2/18/2011*	*2/18/2011*
Sample Depth		*(1-3) ft BGS*	*(19-21) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(19-21) ft BGS*	*(1-3) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*
Area of Interest		*AOI 7.2*	*AOI 7.2*	*AOI 7.3*	*AOI 7.4*	*AOI 7.4*	*AOI 7.5*	*AOI 7.6*	*AOI 7.6*	*AOI 7.7*	*AOI 7.7*	*AOI 7.8*	*AOI 7.8*	*AOI 7.9*	*AOI 7.9*
Sample Type	*Units*														
Fluorene	mg/kg	5.4 U	0.27 U	0.12 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.016 J	0.27 U	0.28 U	0.27 U	0.014 J	0.27 U
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	5.4 U	0.27 U	1 J	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.028 J	0.27 U	0.28 U	0.27 U	0.059 J	0.27 U
Isophorone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	5.4 U	0.27 U	2.8 U	0.28 U	0.28 U	0.27 U	0.27 U	0.29 U	0.27 U	0.27 U	0.014 J	0.27 U	0.032 J	0.27 U
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	5.4 U	0.27 U	1.4 J	0.014 J	0.28 U	0.27 U	0.011 J	0.29 U	0.14 J	0.27 U	0.014 J	0.27 U	0.19 J	0.032 J
Phenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	5.4 U	0.013 J	2.8	0.013 J	0.28 U	0.27 U	0.017 J	0.29 U	0.13 J	0.27 U	0.014 J	0.27 U	0.17 J	0.023 J
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
1,1,2,2-Tetrachloroethane	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
1,1,2-Trichloroethane	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
1,1-Dichloroethane	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
1,1-Dichloroethene	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
1,2,4-Trichlorobenzene	mg/kg	0.23 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.23 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.23 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.23 U	0.22 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.23 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.23 U	0.22 U
1,2-Dichlorobenzene	mg/kg	0.091 U	0.086 U	0.088 U	0.09 U	0.093 U	0.093 U	0.084 U	0.092 U	0.094 U	0.082 U	0.091 U	0.09 U	0.091 U	0.089 U
1,2-Dichloroethane	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
1,2-Dichloropropane	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
1,3-Dichlorobenzene	mg/kg	0.091 U	0.086 U	0.088 U	0.09 U	0.093 U	0.093 U	0.084 U	0.092 U	0.094 U	0.082 U	0.091 U	0.09 U	0.091 U	0.089 U
1,4-Dichlorobenzene	mg/kg	0.091 U	0.086 U	0.088 U	0.09 U	0.093 U	0.093 U	0.084 U	0.092 U	0.094 U	0.082 U	0.091 U	0.09 U	0.091 U	0.089 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.68 U	0.65 U	0.66 U	0.68 U	0.7 U	0.7 U	0.63 U	0.69 U	0.7 U	0.62 U	0.68 U	0.68 U	0.69 U	0.67 U
2-Hexanone	mg/kg	2.3 U	2.2 U	2.2 U	2.3 U	2.3 U	2.3 U	2.1 U	2.3 U	2.3 U	2.1 U	2.3 U	2.3 U	2.3 U	2.2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.3 U	2.2 U	2.2 U	2.3 U	2.3 U	2.3 U	2.1 U	2.3 U	2.3 U	2.1 U	2.3 U	2.3 U	2.3 U	2.2 U
Acetone	mg/kg	0.68 U	0.65 U	0.66 U	0.68 U	0.7 U	0.7 U	0.63 U	0.69 U	0.7 U	0.62 U	0.68 U	0.68 U	0.69 U	0.67 U
Benzene	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
Bromodichloromethane	mg/kg	0.091 U	0.086 U	0.088 U	0.09 U	0.093 U	0.093 U	0.084 U	0.092 U	0.094 U	0.082 U	0.091 U	0.09 U	0.091 U	0.089 U
Bromoform	mg/kg	0.091 U	0.086 U	0.088 U	0.09 U	0.093 U	0.093 U	0.084 U	0.092 U	0.094 U	0.082 U	0.091 U	0.09 U	0.091 U	0.089 U
Bromomethane (Methyl bromide)	mg/kg	0.23 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.21 U	0.23 UJ	0.23 UJ	0.23 U	0.22 U
Carbon disulfide	mg/kg	0.23 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.23 U	0.22 U
Carbon tetrachloride	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
Chlorobenzene	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
Chloroethane	mg/kg	0.23 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.23 U	0.22 U
Chloroform (Trichloromethane)	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
Chloromethane (Methyl chloride)	mg/kg	0.23 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.21 U	0.23 UJ	0.23 UJ	0.23 U	0.22 U
cis-1,2-Dichloroethene	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
cis-1,3-Dichloropropene	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
Cyclohexane	mg/kg	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1 U	1.1 U	1.1 U	0.99 U	1.1 U	1.1 U	1.1 U	1.1 U
Dibromochloromethane	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.091 U	0.086 U	0.088 U	0.09 U	0.093 U	0.093 U	0.084 U	0.092 U	0.094 U	0.082 U	0.091 U	0.09 U	0.091 U	0.089 U
Ethylbenzene	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
Isopropyl benzene	mg/kg	0.23 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.23 U	0.22 U
Methyl acetate	mg/kg	0.039 J	1 U	0.078 J	0.052 J	1.1 U	1.1 U	1 U	1.1 U	1.1 U	0.99 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	1.1 U	1.1 U	1 U	1.1 U	1.1 U	0.99 U	1.1 U	1.1 U	1.1 U	1.1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.23 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.23 U	0.22 U
Methylene chloride	mg/kg	0.19 J	0.2 J	0.19 J	0.23 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.19 J	0.18 J
Styrene	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
Tetrachloroethene	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
Toluene	mg/kg	0.091 U	0.086 U	0.088 U	0.09 U	0.093 U	0.093 U	0.084 U	0.092 U	0.094 U	0.082 U	0.091 U	0.09 U	0.091 U	0.089 U
trans-1,2-Dichloroethene	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
trans-1,3-Dichloropropene	mg/kg	0.046 U	0.043 U	0.044 U	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.047 U	0.041 U	0.046 U	0.045 U	0.046 U	0.044 U
Trichloroethene	mg/kg	0.046 U	0.043 U	0.013 J	0.045 U	0.046 U	0.046 U	0.042 U	0.046 U	0.11	0.041 U	0.046 U	0.045 U	0.053	0.022 J
Trichlorofluoromethane (CFC-11)	mg/kg	0.091 U	0.086 U	0.088 U	0.09 U	0.093 U	0.093 U	0.084 U	0.092 U	0.094 U	0.082 U	0.091 U	0.09 U	0.091 U	0.089 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.23 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.23 U	0.22 U
Vinyl chloride	mg/kg	0.037 U	0.034 U	0.035 U	0.036 U	0.037 U	0.037 U	0.034 U	0.037 U	0.037 U	0.033 U	0.037 U	0.036 U	0.037 U	0.035 U
Xylenes (total)	mg/kg	0.14 U	0.13 U	0.13 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.12 U	0.14 U	0.14 U	0.14 U	0.13 U
General Chemistry															
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		SB54-11	SB54-11	SB55-11	SB55-11	SB56-11	SB56-11	SB57-11	SB57-11	SB58-11	SB58-11	SB60-11	SB60-11	SB61-11	SB61-11
Sample Identification		SO-17360-022111-DR-101	SO-17360-022811-DR-132	SO-17360-022111-DR-102	SO-17360-022811-DR-133	SO-17360-030411-DR-178	SO-17360-030411-DR-179	SO-17360-030211-DR-151	SO-17360-030211-DR-152	SO-17360-030211-DR-149	SO-17360-030211-DR-150	SO-17360-022811-DR-136	SO-17360-022811-DR-137	SO-17360-022811-DR-134	SO-17360-022811-DR-135
Sample Date		2/21/2011	2/28/2011	2/21/2011	2/28/2011	3/4/2011	3/4/2011	3/2/2011	3/2/2011	3/2/2011	3/2/2011	2/28/2011	2/28/2011	2/28/2011	2/28/2011
Sample Depth		(2-4) ft BGS	(17-19) ft BGS	(2-4) ft BGS	(15-17) ft BGS	(1-3) ft BGS	(12.5-14.5) ft BGS	(1-3) ft BGS	(16.5-18.5) ft BGS	(1-3) ft BGS	(16.5-18.5) ft BGS	(1-3) ft BGS	(18-20) ft BGS	(1-3) ft BGS	(18-20) ft BGS
Area of Interest		AOI 8.1	AOI 8.1	AOI 8.1	AOI 8.1	AOI 8.2	AOI 8.2	AOI 8.3	AOI 8.3	AOI 8.3	AOI 8.3	AOI 8.7	AOI 8.7	AOI 8.5	AOI 8.5
Sample Type	Units														
Metals															
Antimony	mg/kg	--	--	--	--	--	--	0.17 UJ	0.060 J	0.16 UJ	0.17 UJ	0.039 J	0.17 UJ	0.047 J	0.17 UJ
Arsenic	mg/kg	--	--	--	--	--	--	1.7 J	7.6 J	1.2 J	2.0 J	1.3	2.2	1.3	2.8
Barium	mg/kg	--	--	--	--	--	--	12.5	23.1	8.8	9.0	21.6	7.4	36.5	5.0
Beryllium	mg/kg	--	--	--	--	--	--	0.17 U	0.17 U	0.16 U	0.17 U	0.17 U	0.17 U	0.18 U	0.17 U
Cadmium	mg/kg	--	--	--	--	--	--	0.085 U	0.041 J	0.082 U	0.084 U	0.084 U	0.084 U	0.089 U	0.083 U
Chromium	mg/kg	--	--	--	--	--	--	4.6	4.5	4.9	4.5	4.1	4.0	5.7	2.8
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	--	--	--	--	--	--	2.0	4.0	1.7	2.0	2.0	2.7	2.5	1.9
Copper	mg/kg	--	--	--	--	--	--	5.9	12.7	3.9	5.2	3.8	5.8	4.2	5.5
Lead	mg/kg	--	--	--	--	--	--	41.4	5.7	4.0	4.1	7.6	2.8	16.6	4.1
Manganese	mg/kg	--	--	--	--	--	--	132 J	702 J	108 J	125 J	125 J	293 J	222 J	103 J
Mercury	mg/kg	--	--	--	--	--	--	0.043 U	0.043 U	0.041 U	0.042 U	0.042 U	0.042 U	0.044 U	0.041 U
Nickel	mg/kg	--	--	--	--	--	--	4.3	8.9	3.9	4.7	3.7	5.2	4.5	3.9
Selenium	mg/kg	--	--	--	--	--	--	0.12 J	0.12 J	0.16 UJ	0.20 J	0.11 J	0.12 J	0.15 J	0.17 UJ
Silver	mg/kg	--	--	--	--	--	--	0.085 U	0.086 U	0.082 U	0.084 U	0.084 U	0.084 U	0.089 U	0.083 U
Thallium	mg/kg	--	--	--	--	--	--	0.085 U	0.16	0.082 U	0.084 U	0.084 U	0.084 U	0.089 U	0.083 U
Vanadium	mg/kg	--	--	--	--	--	--	6.8	13.6	5.5	6.9	6.7	8.6	9.0	5.7
Zinc	mg/kg	--	--	--	--	--	--	12.6	28.8	9.1	9.5	17.5	10.1	24.1	13.2
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.27 U	0.27 U	0.27 U	0.28 U	--	--	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	2.9 U	0.27 U
Aroclor-1221 (PCB-1221)	mg/kg	0.27 U	0.27 U	0.27 U	0.28 U	--	--	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	2.9 U	0.27 U
Aroclor-1232 (PCB-1232)	mg/kg	0.27 U	0.27 U	0.27 U	0.28 U	--	--	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	2.9 U	0.27 U
Aroclor-1242 (PCB-1242)	mg/kg	0.27 U	0.27 U	0.27 U	0.28 U	--	--	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	2.9 U	0.27 U
Aroclor-1248 (PCB-1248)	mg/kg	0.27 U	0.27 U	0.27 U	0.28 U	--	--	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	2.9 U	0.27 U
Aroclor-1254 (PCB-1254)	mg/kg	0.27 U	0.27 U	0.27 U	0.28 U	--	--	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	**4.4[a]**	0.27 U
Aroclor-1260 (PCB-1260)	mg/kg	0.27 U	0.27 U	0.27 U	0.021 J	--	--	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	2.9 U	0.27 U
Total PCBs	mg/kg	ND	ND	ND	0.021 J	--	--	ND	ND	ND	ND	ND	ND	**4.4[a]**	ND
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	0.27 U	0.27 U	0.27 U	0.019 J	0.049 J	0.27 U	0.7 U	0.28 U	0.68 U	0.28 U	1.1 U	0.28 U	2.9 U	0.27 U
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	0.27 U	0.27 U	0.27 U	0.022 J	0.27 U	0.27 U	0.018 J	0.28 U	0.68 U	0.28 U	1.1 U	0.28 U	2.9 U	0.27 U
Acenaphthylene	mg/kg	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.04 J	0.28 U	0.68 U	0.28 U	1.1 U	0.28 U	2.9 U	0.27 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	0.27 U	0.27 U	0.27 U	0.052 J	0.27 U	0.27 U	0.044 J	0.009 J	0.68 U	0.28 U	1.1 U	0.28 U	2.9 U	0.27 U
Atrazine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	0.018 J	0.27 U	0.27 U	0.18 J	0.011 J	0.27 U	0.17 J	0.021 J	0.08 J	0.023 J	0.11 J	0.28 U	0.11 J	0.27 U
Benzo(a)pyrene	mg/kg	0.019 J	0.27 U	0.27 U	0.15 J	0.013 J	0.27 U	0.19 J	0.015 J	0.079 J	0.051 J	0.09 J	0.28 U	0.12 J	0.27 U
Benzo(b)fluoranthene	mg/kg	0.026 J	0.27 U	0.27 U	0.2 J	0.03 J	0.27 U	0.24 J	0.019 J	0.11 J	0.07 J	0.15 J	0.28 U	0.21 J	0.27 U
Benzo(g,h,i)perylene	mg/kg	0.014 J	0.27 U	0.27 U	0.11 J	0.015 J	0.27 U	0.28 J	0.0098 J	0.12 J	0.04 J	0.061 J	0.28 U	0.18 J	0.27 U
Benzo(k)fluoranthene	mg/kg	0.015 J	0.27 U	0.27 U	0.098 J	0.0094 J	0.27 U	0.14 J	0.0093 J	0.038 J	0.039 J	0.038 J	0.28 U	0.12 J	0.27 U
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.021 J	0.27 U	0.27 U	0.17 J	0.022 J	0.27 U	0.19 J	0.018 J	0.08 J	0.033 J	0.11 J	0.28 U	0.14 J	0.27 U
Dibenz(a,h)anthracene	mg/kg	0.27 U	0.27 U	0.27 U	0.029 J	0.27 U	0.27 U	0.039 J	0.28 U	0.68 U	0.28 U	1.1 U	0.28 U	2.9 U	0.27 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.027 J	0.27 U	0.27 U	0.36	0.016 J	0.27 U	0.32 J	0.041 J	0.13 J	0.02 J	0.17 J	0.28 U	0.14 J	0.27 U

TABLE 3

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

Sample Location		SB54-11	SB54-11	SB55-11	SB55-11	SB56-11	SB56-11	SB57-11	SB57-11	SB58-11	SB58-11	SB60-11	SB60-11	SB61-11	SB61-11
Sample Identification		SO-17360-022111-DR-101	SO-17360-022811-DR-132	SO-17360-022111-DR-102	SO-17360-022811-DR-133	SO-17360-030411-DR-178	SO-17360-030411-DR-179	SO-17360-030211-DR-151	SO-17360-030211-DR-152	SO-17360-030211-DR-149	SO-17360-030211-DR-150	SO-17360-022811-DR-136	SO-17360-022811-DR-137	SO-17360-022811-DR-134	SO-17360-022811-DR-135
Sample Date		2/21/2011	2/28/2011	2/21/2011	2/28/2011	3/4/2011	3/4/2011	3/2/2011	3/2/2011	3/2/2011	3/2/2011	2/28/2011	2/28/2011	2/28/2011	2/28/2011
Sample Depth		(2-4) ft BGS	(17-19) ft BGS	(2-4) ft BGS	(15-17) ft BGS	(1-3) ft BGS	(12.5-14.5) ft BGS	(1-3) ft BGS	(16.5-18.5) ft BGS	(1-3) ft BGS	(16.5-18.5) ft BGS	(1-3) ft BGS	(18-20) ft BGS	(1-3) ft BGS	(18-20) ft BGS
Area of Interest		AOI 8.1	AOI 8.1	AOI 8.1	AOI 8.1	AOI 8.2	AOI 8.2	AOI 8.3	AOI 8.3	AOI 8.3	AOI 8.3	AOI 8.7	AOI 8.7	AOI 8.5	AOI 8.5
Sample Type	Units														
Fluorene	mg/kg	0.27 U	0.27 U	0.27 U	0.018 J	0.27 U	0.27 U	0.7 U	0.28 U	0.68 U	0.28 U	1.1 U	0.28 U	2.9 U	0.27 U
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.013 J	0.27 U	0.27 U	0.088 J	0.011 J	0.27 U	0.18 J	0.0082 J	0.078 J	0.033 J	0.052 J	0.28 U	0.11 J	0.27 U
Isophorone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.27 U	0.27 U	0.27 U	0.015 J	0.019 J	0.27 U	0.7 U	0.28 U	0.68 U	0.28 U	1.1 U	0.28 U	2.9 U	0.27 U
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	0.011 J	0.27 U	0.27 U	0.21 J	0.033 J	0.27 U	0.13 J	0.038 J	0.055 J	0.0075 J	0.13 J	0.28 U	2.9 U	0.27 U
Phenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	0.023 J	0.27 U	0.27 U	0.27 J	0.014 J	0.27 U	0.27 J	0.03 J	0.11 J	0.019 J	0.12 J	0.28 U	0.11 J	0.27 U
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.21	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
1,1,2,2-Tetrachloroethane	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
1,1,2-Trichloroethane	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
1,1-Dichloroethane	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
1,1-Dichloroethene	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.072[2]	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
1,2,4-Trichlorobenzene	mg/kg	0.24 U	0.23 U	0.24 U	0.23 U	0.3 U	0.22 U	0.22 U	0.21 U	0.21 U	0.2 U	0.27 U	0.2 U	0.28 U	0.23 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.24 U	0.23 U	0.24 U	0.23 U	0.3 U	0.22 U	0.22 U	0.21 U	0.21 U	0.2 U	0.27 U	0.2 U	0.28 U	0.23 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.24 U	0.23 U	0.24 U	0.23 U	0.3 U	0.22 U	0.22 U	0.21 U	0.21 U	0.2 U	0.27 U	0.2 U	0.28 U	0.23 U
1,2-Dichlorobenzene	mg/kg	0.096 U	0.093 U	0.096 U	0.093 U	0.12 U	0.089 U	0.089 U	0.085 U	0.082 U	0.082 U	0.11 U	0.081 U	0.11 U	0.094 U
1,2-Dichloroethane	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
1,2-Dichloropropane	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
1,3-Dichlorobenzene	mg/kg	0.096 U	0.093 U	0.096 U	0.093 U	0.12 U	0.089 U	0.089 U	0.085 U	0.082 U	0.082 U	0.11 U	0.081 U	0.11 U	0.094 U
1,4-Dichlorobenzene	mg/kg	0.096 U	0.093 U	0.096 U	0.093 U	0.12 U	0.089 U	0.089 U	0.085 U	0.082 U	0.082 U	0.11 U	0.081 U	0.11 U	0.094 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.72 U	0.7 U	0.72 U	0.7 U	0.16 J	0.67 U	0.66 U	0.64 U	0.62 U	0.61 U	0.8 U	0.61 U	0.84 U	0.7 U
2-Hexanone	mg/kg	2.4 U	2.3 U	2.4 U	2.3 U	3 U	2.2 U	2.2 U	2.1 U	2.1 U	2 U	2.7 U	2 U	2.8 U	2.3 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.4 U	2.3 U	2.4 U	2.3 U	3 U	2.2 U	2.2 U	2.1 U	2.1 U	2 U	2.7 U	2 U	2.8 U	2.3 U
Acetone	mg/kg	0.72 U	0.7 U	0.72 U	0.7 U	0.9 U	0.67 U	0.66 U	0.64 U	0.62 U	0.61 U	0.8 U	0.61 U	0.84 U	0.7 U
Benzene	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
Bromodichloromethane	mg/kg	0.096 U	0.093 U	0.096 U	0.093 U	0.12 U	0.089 U	0.089 U	0.085 U	0.082 U	0.082 U	0.11 U	0.081 U	0.11 U	0.094 U
Bromoform	mg/kg	0.096 U	0.093 U	0.096 U	0.093 U	0.12 U	0.089 U	0.089 U	0.085 U	0.082 U	0.082 U	0.11 U	0.081 U	0.11 U	0.094 U
Bromomethane (Methyl bromide)	mg/kg	0.24 U	0.23 U	0.24 U	0.23 U	0.3 U	0.22 U	0.22 U	0.21 U	0.21 U	0.2 U	0.27 U	0.2 U	0.28 U	0.23 U
Carbon disulfide	mg/kg	0.24 U	0.23 U	0.24 U	0.23 U	0.3 U	0.22 U	0.22 U	0.21 U	0.21 U	0.2 U	0.27 U	0.2 U	0.28 U	0.23 U
Carbon tetrachloride	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
Chlorobenzene	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
Chloroethane	mg/kg	0.24 U	0.23 U	0.24 U	0.23 U	0.3 U	0.22 U	0.22 U	0.21 U	0.21 U	0.2 U	0.27 U	0.2 U	0.28 U	0.23 U
Chloroform (Trichloromethane)	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
Chloromethane (Methyl chloride)	mg/kg	0.24 U	0.23 U	0.24 U	0.23 U	0.3 U	0.22 U	0.22 U	0.21 U	0.21 U	0.2 U	0.27 U	0.2 U	0.28 U	0.23 U
cis-1,2-Dichloroethene	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
cis-1,3-Dichloropropene	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
Cyclohexane	mg/kg	1.1 U	1.1 U	1.2 U	1.1 U	0.34 J	1.1 U	1.1 U	1 U	0.99 U	0.98 U	1.3 U	0.97 U	1.3 U	1.1 U
Dibromochloromethane	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.096 U	0.093 U	0.096 U	0.093 U	0.12 U	0.089 U	0.089 U	0.085 U	0.082 U	0.082 U	0.11 U	0.081 U	0.11 U	0.094 U
Ethylbenzene	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.016 J	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
Isopropyl benzene	mg/kg	0.24 U	0.23 U	0.24 U	0.23 U	0.019 J	0.22 U	0.22 U	0.21 U	0.21 U	0.2 U	0.27 U	0.2 U	0.28 U	0.23 U
Methyl acetate	mg/kg	0.067 J	0.12 J	0.082 J	1.1 U	0.47 J	1.1 U	1.1 U	1 U	0.99 U	0.98 U	0.084 J	0.97 U	1.3 U	1.1 U
Methyl cyclohexane	mg/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.1 J	0.019 J	1.1 U	1 U	0.99 U	0.98 U	1.3 U	0.97 U	1.3 U	1.1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.24 U	0.23 U	0.24 U	0.23 U	0.3 U	0.22 U	0.22 U	0.21 U	0.21 U	0.2 U	0.27 U	0.2 U	0.28 U	0.23 U
Methylene chloride	mg/kg	0.24 U	0.23 U	0.24 U	0.23 U	0.3 U	0.22 U	0.22 U	0.21 U	0.21 U	0.2 U	0.27 U	0.2 U	0.28 U	0.23 U
Styrene	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
Tetrachloroethene	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
Toluene	mg/kg	0.096 U	0.093 U	0.096 U	0.093 U	0.051 J	0.089 U	0.089 U	0.085 U	0.082 U	0.082 U	0.11 U	0.081 U	0.11 U	0.094 U
trans-1,2-Dichloroethene	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
trans-1,3-Dichloropropene	mg/kg	0.048 U	0.046 U	0.048 U	0.047 U	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
Trichloroethene	mg/kg	0.048 U	0.046 U	0.048 U	0.016 J	0.06 U	0.045 U	0.044 U	0.043 U	0.041 U	0.041 U	0.053 U	0.041 U	0.056 U	0.047 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.096 U	0.093 U	0.096 U	0.093 U	0.12 U	0.089 U	0.089 U	0.085 U	0.082 U	0.082 U	0.11 U	0.081 U	0.11 U	0.094 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.24 U	0.23 U	0.24 U	0.23 U	0.3 U	0.22 U	0.22 U	0.21 U	0.21 U	0.2 U	0.27 U	0.2 U	0.28 U	0.23 U
Vinyl chloride	mg/kg	0.038 U	0.037 U	0.039 U	0.037 U	0.048 U	0.036 U	0.035 U	0.034 U	0.033 U	0.033 U	0.043 U	0.032 U	0.045 U	0.037 U
Xylenes (total)	mg/kg	0.14 U	0.14 U	0.14 U	0.013 J	0.25	0.13 U	0.01 J	0.13 U	0.12 U	0.12 U	0.16 U	0.12 U	0.17 U	0.14 U
General Chemistry															
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[2] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		SB62-11	SB62-11	SB63-11	SB63-11	SB64-11	SB64-11	SB65-11	SB65-11	SB66-11	SB67-11	SB67-11	SB67-11	SB68-11	SB69-11
Sample Identification		SO-17360-030311-DR-161	SO-17360-030311-DR-162	SO-17360-030311-DR-166	SO-17360-030311-DR-167	SO-17360-030211-DR-159	SO-17360-030211-DR-160	SO-17360-030311-DR-170	SO-17360-030311-DR-171	SO-17360-021411-DR-043	SO-17360-021411-DR-044	SO-17360-021411-DR-045	SO-17360-021411-DR-046	SO-17360-021411-DR-042	SO-17360-021411-DR-047
Sample Date		3/3/2011	3/3/2011	3/3/2011	3/3/2011	3/2/2011	3/2/2011	3/3/2011	3/3/2011	2/14/2011	2/14/2011	2/14/2011	2/14/2011	2/14/2011	2/14/2011
Sample Depth		(0.5-2.5) ft BGS	(11-13) ft BGS	(0.5-2.5) ft BGS	(14-16) ft BGS	(0.5-2.5) ft BGS	(12-14) ft BGS	(0.5-2.5) ft BGS	(13-15) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(20-22) ft BGS	(20-22) ft BGS	(1-3) ft BGS	(1-3) ft BGS
Area of Interest		AOI 9	AOI 9	AOI 9	AOI 9	AOI 9	AOI 9	AOI 9	AOI 9	AOI 10.2	AOI 10.2	AOI 10.2	AOI 10.2	AOI 10.2	AOI 11
Sample Type	Units												Duplicate		
Metals															
Antimony	mg/kg	0.071 J	0.18 UJ	0.18 UJ	0.17 UJ	0.033 J	0.11 J	0.041 J	0.17 UJ	0.055 J	0.048 J	0.17 UJ	0.17 UJ	0.37 J	0.10 J
Arsenic	mg/kg	1.5 J	1.7 J	0.80 J	2.3 J	1.4 J	5.9 J	2.1 J	1.2 J	1.7	1.8	0.60	0.63	4.0	1.8
Barium	mg/kg	28.8	9.7	49.2	4.1	13.3	13.8	48.6	4.8	13.2	24.3	3.3	3.1	13.9	14.8
Beryllium	mg/kg	0.17 U	0.18 U	0.18 U	0.17 U	0.17 U	0.16 U	0.18 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Cadmium	mg/kg	0.17	0.088 U	0.090 U	0.083 U	0.083 U	0.11	0.066 J	0.083 U	0.085 U	0.083 U	0.086 U	0.085 U	0.083 U	0.083 U
Chromium	mg/kg	8.4	5.0	7.7	4.6	5.6	11.7	6.8	3.8	8.8	7.0	8.1	4.9	10.8	4.6
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	2.3	3.4	1.9	2.0	2.6	4.6	2.6	1.6	3.0	2.3	1.1	1.3	3.3	2.0
Copper	mg/kg	9.2	5.8	2.4	3.3	5.3	20.7	6.2	3.1	22.9 J	10.0 J	2.8 J	2.9 J	26.6 J	8.2 J
Lead	mg/kg	25.8	2.4	2.9	2.5	3.5	12.9	22.4	2.0	11.6	12.3	1.4	1.4	14.0	10.9
Manganese	mg/kg	125 J	193 J	251 J	101 J	138 J	303 J	292 J	94.0 J	141 J	150 J	51.7 J	51.9 J	188 J	145 J
Mercury	mg/kg	0.043 U	0.044 U	0.045 U	0.042 U	0.042 U	0.040 J	0.045 U	0.041 U	0.042 U	0.041 U	0.043 U	0.042 U	0.041 U	0.041 U
Nickel	mg/kg	6.4	4.6	3.7	3.9	5.9	12.4	5.6	3.2	10.1	5.4	3.1	3.4	10.9	4.7
Selenium	mg/kg	0.16 J	0.18 UJ	0.11 J	0.17 UJ	0.15 J	0.18 J	0.18 J	0.17 UJ	0.15 J	0.14 J	0.097 J	0.11 J	0.17 J	0.16 J
Silver	mg/kg	0.086 U	0.088 U	0.090 U	0.083 U	0.083 U	0.082 U	0.091 U	0.083 U	0.037 J	0.083 U	0.086 U	0.085 U	0.022 J	0.083 U
Thallium	mg/kg	0.086 U	0.088 U	0.090 U	0.083 U	0.083 U	0.082 U	0.091 U	0.083 U	0.085 U	0.083 U	0.086 U	0.085 U	0.083 U	0.083 U
Vanadium	mg/kg	9.6	8.7	9.7	5.9	8.5	19.4	10.4	5.5	8.3	8.0	3.8	4.7	8.9	6.6
Zinc	mg/kg	48.3	12.0	13.9	9.0	13.9	63.2	19.9	9.3	19.2	16.8	5.5	6.4	24.2	16.6
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.28 U	0.29 U	0.3 U	0.27 U	0.28 U	0.27 U	0.3 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U
Aroclor-1221 (PCB-1221)	mg/kg	0.28 U	0.29 U	0.3 U	0.27 U	0.28 U	0.27 U	0.3 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U
Aroclor-1232 (PCB-1232)	mg/kg	0.28 U	0.29 U	0.3 U	0.27 U	0.28 U	0.27 U	0.3 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U
Aroclor-1242 (PCB-1242)	mg/kg	0.28 U	0.29 U	0.3 U	0.27 U	0.28 U	0.27 U	0.3 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.014 J
Aroclor-1248 (PCB-1248)	mg/kg	0.28 U	0.29 U	0.3 U	0.27 U	0.28 U	0.27 U	0.3 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U
Aroclor-1254 (PCB-1254)	mg/kg	0.28 U	0.29 U	0.3 U	0.27 U	0.28 U	0.27 U	0.3 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U
Aroclor-1260 (PCB-1260)	mg/kg	0.047 J	0.29 U	0.3 U	0.27 U	0.28 U	0.071 J	0.028 J	0.27 U	0.033 J	0.018 J	0.28 U	0.28 U	0.021 J	0.036 J
Total PCBs	mg/kg	0.047 J	ND	ND	ND	ND	0.071 J	0.028 J	ND	0.033 J	0.018 J	ND	ND	0.021 J	0.05 J
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	R	0.62 U	0.16 U	0.16 U	0.78 U	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
2-Methylnaphthalene	mg/kg	0.052 J	0.29 U	0.3 U	0.27 U	0.047 J	0.27 U	0.038 J	0.27 U	1.1 U	1.1 U	0.28 U	0.28 U	0.036 J	1.1 U
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	R	1.1 U	0.28 U	0.28 U	1.4 U	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	0.85 U	0.83 U	0.21 U	0.21 U	1 U	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	6.8 U	6.6 U	1.7 U	1.7 U	8.3 U	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	0.85 U	0.83 U	0.21 U	0.21 U	1 U	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	R	0.62 U	0.16 U	0.16 U	0.78 U	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	0.64 U	0.62 U	0.16 U	0.16 U	0.78 U	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	0.85 U	0.83 U	0.21 U	0.21 U	1 U	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	R	1.4 U	0.35 U	0.35 U	1.7 U	--
Acenaphthene	mg/kg	0.21 J	0.29 U	0.3 U	0.27 U	0.012 J	0.27 U	0.3 U	0.27 U	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	1.1 U
Acenaphthylene	mg/kg	0.14 J	0.29 U	0.3 U	0.27 U	0.28 U	0.27 U	0.3 U	0.27 U	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	1.1 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Anthracene	mg/kg	0.66 J	0.29 U	0.3 U	0.27 U	0.011 J	0.27 U	0.012 J	0.27 U	1.1 U	1.1 U	0.28 U	0.28 U	0.037 J	0.051 J
Atrazine	mg/kg	--	--	--	--	--	--	--	--	0.17 U	0.17 U	0.043 U	0.042 U	0.21 U	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Benzo(a)anthracene	mg/kg	3.4	0.29 U	0.3 U	0.27 U	0.029 J	0.017 J	0.032 J	0.27 U	0.066 J	1.1 U	0.28 U	0.28 U	0.13 J	0.21 J
Benzo(a)pyrene	mg/kg	3.7*	0.29 U	0.3 U	0.27 U	0.028 J	0.021 J	0.02 J	0.27 U	0.05 J	1.1 U	0.28 U	0.28 U	0.097 J	0.2 J
Benzo(b)fluoranthene	mg/kg	5.6	0.29 U	0.3 U	0.27 U	0.036 J	0.028 J	0.04 J	0.27 U	0.095 J	0.06 J	0.28 U	0.28 U	0.2 J	0.31 J
Benzo(g,h,i)perylene	mg/kg	2.9	0.29 U	0.3 U	0.27 U	0.024 J	0.026 J	0.3 U	0.27 U	0.05 J	1.1 U	0.28 U	0.28 U	1.4 U	0.15 J
Benzo(k)fluoranthene	mg/kg	2.8	0.29 U	0.3 U	0.27 U	0.018 J	0.016 J	0.3 U	0.27 U	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	0.13 J
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	0.34 U	0.33 U	0.086 U	0.085 U	0.41 U	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.049 J	0.037 J	1.4 U	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Chrysene	mg/kg	4.2	0.29 U	0.3 U	0.27 U	0.034 J	0.023 J	0.055 J	0.27 U	0.068 J	1.1 U	0.28 U	0.28 U	0.12 J	0.23 J
Dibenz(a,h)anthracene	mg/kg	0.45 J	0.29 U	0.3 U	0.27 U	0.28 U	0.27 U	0.3 U	0.27 U	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	1.1 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Fluoranthene	mg/kg	10	0.29 U	0.3 U	0.27 U	0.068 J	0.039 J	0.098 J	0.27 U	0.12 J	0.052 J	0.015 J	0.28 U	0.31 J	0.45 J

TABLE 3

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

Sample Location		SB62-11	SB62-11	SB63-11	SB63-11	SB64-11	SB64-11	SB65-11	SB65-11	SB66-11	SB67-11	SB67-11	SB67-11	SB68-11	SB69-11
Sample Identification		SO-17360-030311-DR-161	SO-17360-030311-DR-162	SO-17360-030311-DR-166	SO-17360-030311-DR-167	SO-17360-030211-DR-159	SO-17360-030211-DR-160	SO-17360-030311-DR-170	SO-17360-030311-DR-171	SO-17360-021411-DR-043	SO-17360-021411-DR-044	SO-17360-021411-DR-045	SO-17360-021411-DR-046	SO-17360-021411-DR-042	SO-17360-021411-DR-047
Sample Date		3/3/2011	3/3/2011	3/3/2011	3/3/2011	3/2/2011	3/2/2011	3/3/2011	3/3/2011	2/14/2011	2/14/2011	2/14/2011	2/14/2011	2/14/2011	2/14/2011
Sample Depth		(0.5-2.5) ft BGS	(11-13) ft BGS	(0.5-2.5) ft BGS	(14-16) ft BGS	(0.5-2.5) ft BGS	(12-14) ft BGS	(0.5-2.5) ft BGS	(13-15) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(20-22) ft BGS	(20-22) ft BGS	(1-3) ft BGS	(1-3) ft BGS
Area of Interest		AOI 9	AOI 9	AOI 9	AOI 9	AOI 9	AOI 9	AOI 9	AOI 9	AOI 10.2	AOI 10.2	AOI 10.2	AOI 10.2	AOI 10.2	AOI 11
Sample Type	Units												Duplicate		
Fluorene	mg/kg	0.18 J	0.29 U	0.3 U	0.27 U	0.28 U	0.27 U	0.3 U	0.27 U	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	1.1 U
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	0.17 U	0.17 U	0.043 U	0.042 U	0.21 U	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Indeno(1,2,3-cd)pyrene	mg/kg	2.5	0.29 U	0.3 U	0.27 U	0.018 J	0.018 J	0.3 U	0.27 U	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	1.1 U
Isophorone	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Naphthalene	mg/kg	1.9 U	0.29 U	0.3 U	0.27 U	0.18 J	0.27 U	0.015 J	0.27 U	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	1.1 U
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	0.64 U	0.62 U	0.16 U	0.16 U	0.78 U	--
Phenanthrene	mg/kg	4.6	0.29 U	0.3 U	0.27 U	0.042 J	0.022 J	0.1 J	0.27 U	0.042 J	1.1 U	0.031 J	0.01 J	0.18 J	0.19 J
Phenol	mg/kg	--	--	--	--	--	--	--	--	1.1 U	1.1 U	0.28 U	0.28 U	1.4 U	--
Pyrene	mg/kg	7.2	0.29 U	0.3 U	0.27 U	0.055 J	0.032 J	0.061 J	0.27 U	0.097 J	0.048 J	0.018 J	0.28 U	0.24 J	0.35 J
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
1,1,2,2-Tetrachloroethane	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
1,1,2-Trichloroethane	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
1,1-Dichloroethane	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
1,1-Dichloroethene	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
1,2,4-Trichlorobenzene	mg/kg	0.23 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.24 U	0.22 U	0.24 U	0.23 U	0.23 U	0.22 U	0.21 U	0.19 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.23 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.24 U	0.22 U	0.24 U	0.23 U	0.23 U	0.22 U	0.21 U	0.19 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.23 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.24 U	0.22 U	0.24 U	0.23 U	0.23 U	0.22 U	0.21 U	0.19 U
1,2-Dichlorobenzene	mg/kg	0.091 U	0.088 U	0.084 U	0.091 U	0.093 U	0.082 U	0.095 U	0.089 U	0.094 U	0.093 U	0.092 U	0.086 U	0.085 U	0.078 U
1,2-Dichloroethane	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
1,2-Dichloropropane	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
1,3-Dichlorobenzene	mg/kg	0.091 U	0.088 U	0.084 U	0.091 U	0.093 U	0.082 U	0.095 U	0.089 U	0.094 U	0.093 U	0.092 U	0.086 U	0.085 U	0.078 U
1,4-Dichlorobenzene	mg/kg	0.091 U	0.088 U	0.084 U	0.091 U	0.093 U	0.082 U	0.095 U	0.089 U	0.094 U	0.093 U	0.092 U	0.086 U	0.085 U	0.078 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.11 J	0.66 U	0.63 U	0.68 U	0.7 U	0.61 U	0.71 U	0.66 U	0.71 U	0.7 U	0.69 U	0.65 U	0.63 U	0.58 U
2-Hexanone	mg/kg	2.3 U	2.2 U	2.1 U	2.3 U	2.3 U	2 U	2.4 U	2.2 U	2.4 U	2.3 U	2.3 U	2.2 U	2.1 U	1.9 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.3 U	2.2 U	2.1 U	2.3 U	2.3 U	2 U	2.4 U	2.2 U	2.4 U	2.3 U	2.3 U	2.2 U	2.1 U	1.9 U
Acetone	mg/kg	0.19 J	0.66 U	0.63 U	0.19 J	0.7 U	0.17 J	0.71 U	0.66 U	0.71 U	0.7 U	0.69 U	0.65 U	0.63 U	0.58 U
Benzene	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
Bromodichloromethane	mg/kg	0.091 U	0.088 U	0.084 U	0.091 U	0.093 U	0.082 U	0.095 U	0.089 U	0.094 U	0.093 U	0.092 U	0.086 U	0.085 U	0.078 U
Bromoform	mg/kg	0.091 U	0.088 U	0.084 U	0.091 U	0.093 U	0.082 U	0.095 U	0.089 U	0.094 U	0.093 U	0.092 U	0.086 U	0.085 U	0.078 U
Bromomethane (Methyl bromide)	mg/kg	0.23 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.24 U	0.22 U	0.24 U	0.23 U	0.23 U	0.22 U	0.21 U	0.19 U
Carbon disulfide	mg/kg	0.23 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.24 U	0.22 U	0.24 U	0.23 U	0.23 U	0.22 U	0.21 U	0.19 U
Carbon tetrachloride	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
Chlorobenzene	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
Chloroethane	mg/kg	0.23 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.24 U	0.22 U	0.24 U	0.23 U	0.23 U	0.22 U	0.21 U	0.19 U
Chloroform (Trichloromethane)	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
Chloromethane (Methyl chloride)	mg/kg	0.23 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.24 U	0.22 U	0.24 U	0.23 U	0.23 U	0.22 U	0.21 U	0.19 U
cis-1,2-Dichloroethene	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
cis-1,3-Dichloropropene	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
Cyclohexane	mg/kg	1.1 U	1.1 U	1 U	1.1 U	1.1 U	0.98 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1 U	1 U	0.93 U
Dibromochloromethane	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.091 U	0.088 U	0.084 U	0.091 U	0.093 U	0.082 U	0.095 U	0.089 U	0.094 U	0.093 U	0.092 U	0.086 U	0.085 U	0.078 U
Ethylbenzene	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
Isopropyl benzene	mg/kg	0.23 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.24 U	0.22 U	0.24 U	0.23 U	0.23 U	0.22 U	0.21 U	0.19 U
Methyl acetate	mg/kg	0.24 J	1.1 U	1 U	1.1 U	1.1 U	0.98 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1 U	1 U	0.038 J
Methyl cyclohexane	mg/kg	1.1 U	1.1 U	1 U	1.1 U	1.1 U	0.98 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1 U	1 U	0.93 U
Methyl tert butyl ether (MTBE)	mg/kg	0.23 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.24 U	0.22 U	0.24 U	0.23 U	0.23 U	0.22 U	0.21 U	0.19 U
Methylene chloride	mg/kg	0.23 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.24 U	0.22 U	0.24 U	0.23 U	0.23 U	0.22 U	0.21 U	0.19 U
Styrene	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
Tetrachloroethene	mg/kg	0.065	0.044 U	0.042 U	0.045 U	0.021 J	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
Toluene	mg/kg	0.091 U	0.088 U	0.084 U	0.091 U	0.093 U	0.082 U	0.095 U	0.089 U	0.094 U	0.093 U	0.092 U	0.086 U	0.085 U	0.078 U
trans-1,2-Dichloroethene	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
trans-1,3-Dichloropropene	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
Trichloroethene	mg/kg	0.046 U	0.044 U	0.042 U	0.045 U	0.047 U	0.041 U	0.047 U	0.044 U	0.047 U	0.047 U	0.046 U	0.043 U	0.042 U	0.039 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.091 U	0.088 U	0.084 U	0.091 U	0.093 U	0.082 U	0.095 U	0.089 U	0.094 U	0.093 U	0.092 U	0.086 U	0.085 U	0.078 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.23 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.24 U	0.22 U	0.24 U	0.23 U	0.23 U	0.22 U	0.21 U	0.19 U
Vinyl chloride	mg/kg	0.036 U	0.035 U	0.033 U	0.036 U	0.037 U	0.033 U	0.038 U	0.035 U	0.038 U	0.037 U	0.037 U	0.035 U	0.034 U	0.031 U
Xylenes (total)	mg/kg	0.14 U	0.13 U	0.13 U	0.14 U	0.14 U	0.12 U	0.14 U	0.13 U	0.14 U	0.14 U	0.14 U	0.13 U	0.13 U	0.12 U
General Chemistry															
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	0.10 U

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		*SB69-11*	*SB70-11*	*SB70-11*	*SB71-11*	*SB71-11*	*SB72-11*	*SB72-11*	*SB73-11*	*SB73-11*	*SB73-11*	*SB74-11*	*SB74-11*	*SB75-11*	*SB77-11*
Sample Identification		*SO-17360-021411-DR-048*	*SO-17360-021411-DR-049*	*SO-17360-021411-DR-050*	*SO-17360-030411-DR-184*	*SO-17360-030411-DR-185*	*SO-17360-030411-DR-186*	*SO-17360-030411-DR-187*	*SO-17360-021511-DR-051*	*SO-17360-021511-DR-052*	*SO-17360-021511-DR-053*	*SO-17360-021511-DR-054*	*SO-17360-021511-DR-055*	*SO-17360-021711-DR-074*	*SO-17360-022211-DR-113*
Sample Date		*2/14/2011*	*2/14/2011*	*2/14/2011*	*3/4/2011*	*3/4/2011*	*3/4/2011*	*3/4/2011*	*2/15/2011*	*2/15/2011*	*2/15/2011*	*2/15/2011*	*2/15/2011*	*2/17/2011*	*2/22/2011*
Sample Depth		*(20-22) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(0.5-2.5) ft BGS*	*(15-17) ft BGS*	*(0.5-2.5) ft BGS*	*(13-15) ft BGS*	*(1-3) ft BGS*	*(12-14) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(12-14) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*
Area of Interest		*AOI 11*	*AOI 11*	*AOI 11*	*AOI 12*	*AOI 12*	*AOI 13*	*AOI 13*	*AOI 14*	*AOI 14*	*AOI 14*	*AOI 14*	*AOI 14*	*AOI 15.1*	*AOI 8.6*
Sample Type	***Units***														
Metals															
Antimony	mg/kg	0.18 UJ	0.19 J	0.17 UJ	1.6 J	0.17 UJ	0.18 UJ	0.17 UJ	0.051 J	0.29 J	0.17 UJ	0.025 J	0.090 J	0.040 J	0.030 J
Arsenic	mg/kg	1.9	2.0	0.72	2.3 J	1.3 J	1.5 J	0.45 J	1.7	1.5	0.75	1.3	1.0	2.5	1.6
Barium	mg/kg	7.6	14.6	6.7	63.6	2.8	11.4	3.3	10.9	27.3	11.0	14.5	1.3 J	41.9	17.1
Beryllium	mg/kg	0.18 U	0.17 U	0.17 U	0.17 U	0.17 U	0.18 U	0.17 U	0.17 U	0.21 U	0.17 U	0.16 U	0.27 J	0.18 U	0.17 U
Cadmium	mg/kg	0.088 U	0.083 U	0.084 U	1.0	0.083 U	0.090 U	0.085 U	0.083 U	0.14	0.086 U	0.082 U	0.15 U	0.088 U	0.083 U
Chromium	mg/kg	4.6	21.0	3.5	14.4	4.1	5.9	3.4	6.0	12.3	6.5	12.4	2.2 U	9.3	6.7
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	2.0	2.7	1.1	5.9	1.4	2.0	1.3	2.4	1.0	1.5	2.0	0.76 U	4.8	2.5
Copper	mg/kg	3.5 J	25.6 J	1.2 J	104	3.0	4.4	2.5	21.1 J	5.1 J	0.93 J	3.5 J	1.5 UJ	10.2 J	5.9
Lead	mg/kg	2.0	13.5	1.5	123	1.6	3.2	1.2	9.7	89.0	2.7	30.7	0.39 J	7.2	8.7
Manganese	mg/kg	35.2 J	133 J	16.5 J	203 J	50.4 J	117 J	44.6 J	116 J	127 J	25.3 J	119 J	4.4 J	411 J	153
Mercury	mg/kg	0.044 U	0.042 U	0.042 U	0.042 U	0.041 U	0.045 U	0.043 U	0.041 U	0.054 U	0.043 U	0.041 U	0.074 U	0.018 J	0.041 U
Nickel	mg/kg	4.2	13.7	2.8	19.9	2.9	4.2	3.1	7.0	7.9	3.6	3.7	5.4	7.8	6.4
Selenium	mg/kg	0.13 J	0.14 J	0.11 J	0.16 J	0.17 UJ	0.13 J	0.17 UJ	0.13 J	0.29 J	0.17 UJ	0.15 J	0.37 J	0.29	0.25 J
Silver	mg/kg	0.088 U	0.15	0.084 U	0.19	0.083 U	0.090 U	0.085 U	0.020 J	0.11 U	0.086 U	0.082 U	0.15 U	0.088 U	0.083 U
Thallium	mg/kg	0.088 U	0.083 U	0.084 U	2.1 U	0.083 U	0.090 U	0.085 U	0.083 U	0.11 U	0.086 U	0.082 U	0.15 U	0.088 U	0.083 U
Vanadium	mg/kg	8.2	9.0	4.2	8.8	4.3	7.2	3.7	7.6	31.4	7.5	6.0	16.3	16.9	7.9
Zinc	mg/kg	8.1	39.8	4.2	120	4.9	9.9	5.7	16.5	12.8	7.5	9.2	1.1 J	20.8	12.4
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.29 U	0.27 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	0.27 U	0.35 U	0.28 U	0.27 U	0.49 U	0.29 U	0.27 U
Aroclor-1221 (PCB-1221)	mg/kg	0.29 U	0.27 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	0.27 U	0.35 U	0.28 U	0.27 U	0.49 U	0.29 U	0.27 U
Aroclor-1232 (PCB-1232)	mg/kg	0.29 U	0.27 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	0.27 U	0.35 U	0.28 U	0.27 U	0.49 U	0.29 U	0.27 U
Aroclor-1242 (PCB-1242)	mg/kg	0.29 U	0.27 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	0.27 U	0.35 U	0.28 U	0.27 U	0.49 U	0.29 U	0.27 U
Aroclor-1248 (PCB-1248)	mg/kg	0.29 U	0.27 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	0.27 U	0.35 U	0.28 U	0.27 U	0.49 U	0.29 U	0.27 U
Aroclor-1254 (PCB-1254)	mg/kg	0.29 U	0.27 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	0.27 U	0.35 U	0.28 U	0.043 J	0.49 U	0.29 U	0.27 U
Aroclor-1260 (PCB-1260)	mg/kg	0.29 U	0.028 J	0.28 U	0.084 J	0.27 U	0.3 U	0.28 U	0.12 J	0.35 U	0.28 U	0.27 U	0.49 U	0.29 U	0.27 U
Total PCBs	mg/kg	ND	0.028 J	ND	0.084 J	ND	ND	ND	0.12 J	ND	ND	0.043 J	ND	ND	ND
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	0.29 U	1.1 U	0.28 U	1.1 U	0.27 U	0.3 U	0.28 U	0.011 J	0.088 J	0.28 U	0.27 U	24 U	0.06 J	7.5 J
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	0.29 U	1.1 U	0.28 U	1.1 U	0.27 U	0.3 U	0.28 U	0.27 U	1.4 U	0.28 U	0.27 U	24 U	0.1 J	31 J
Acenaphthylene	mg/kg	0.29 U	1.1 U	0.28 U	1.1 U	0.27 U	0.3 U	0.28 U	0.27 U	1.4 U	0.28 U	0.27 U	24 U	0.29 U	55 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	0.29 U	0.03 J	0.28 U	0.032 J	0.27 U	0.3 U	0.28 U	0.0093 J	1.4 U	0.28 U	0.0094 J	24 U	0.28 J	47 J
Atrazine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	0.29 U	0.11 J	0.28 U	0.19 J	0.27 U	0.3 U	0.28 U	0.078 J	0.097 J	0.28 U	0.053 J	24 U	0.45	65[a]
Benzo(a)pyrene	mg/kg	0.29 U	0.11 J	0.28 U	0.2 J	0.27 U	0.3 U	0.28 U	0.069 J	0.045 J	0.28 U	0.053 J	24 U	0.39	58[a][b]
Benzo(b)fluoranthene	mg/kg	0.29 U	0.17 J	0.28 U	0.32 J	0.27 U	0.012 J	0.28 U	0.11 J	0.086 J	0.28 U	0.077 J	24 U	0.46	77[a]
Benzo(g,h,i)perylene	mg/kg	0.29 U	0.079 J	0.28 U	0.2 J	0.27 U	0.3 U	0.28 U	0.066 J	1.4 U	0.28 U	0.05 J	24 U	0.26 J	32 J
Benzo(k)fluoranthene	mg/kg	0.29 U	1.1 U	0.28 U	0.13 J	0.27 U	0.3 U	0.28 U	0.029 J	1.4 U	0.28 U	0.023 J	24 U	0.21 J	36 J
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.29 U	0.11 J	0.28 U	0.22 J	0.27 U	0.0091 J	0.28 U	0.065 J	0.1 J	0.28 U	0.052 J	24 U	0.38	54 J
Dibenz(a,h)anthracene	mg/kg	0.29 U	1.1 U	0.28 U	0.059 J	0.27 U	0.3 U	0.28 U	0.27 U	1.4 U	0.28 U	0.27 U	24 U	0.059 J	55 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.29 U	0.22 J	0.28 U	0.28 J	0.27 U	0.021 J	0.28 U	0.12 J	0.11 J	0.28 U	0.091 J	24 U	1.3	160

TABLE 3

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

Sample Location		SB69-11	SB70-11	SB70-11	SB71-11	SB71-11	SB72-11	SB72-11	SB73-11	SB73-11	SB73-11	SB74-11	SB74-11	SB75-11	SB77-11
Sample Identification		SO-17360-021411-DR-048	SO-17360-021411-DR-049	SO-17360-021411-DR-050	SO-17360-030411-DR-184	SO-17360-030411-DR-185	SO-17360-030411-DR-186	SO-17360-030411-DR-187	SO-17360-021511-DR-051	SO-17360-021511-DR-052	SO-17360-021511-DR-053	SO-17360-021511-DR-054	SO-17360-021511-DR-055	SO-17360-021711-DR-074	SO-17360-022211-DR-113
Sample Date		2/14/2011	2/14/2011	2/14/2011	3/4/2011	3/4/2011	3/4/2011	3/4/2011	2/15/2011	2/15/2011	2/15/2011	2/15/2011	2/15/2011	2/17/2011	2/22/2011
Sample Depth		(20-22) ft BGS	(1-3) ft BGS	(20-22) ft BGS	(0.5-2.5) ft BGS	(15-17) ft BGS	(0.5-2.5) ft BGS	(13-15) ft BGS	(1-3) ft BGS	(12-14) ft BGS	(20-22) ft BGS	(1-3) ft BGS	(12-14) ft BGS	(1-3) ft BGS	(1-3) ft BGS
Area of Interest		AOI 11	AOI 11	AOI 11	AOI 12	AOI 12	AOI 13	AOI 13	AOI 14	AOI 14	AOI 14	AOI 14	AOI 14	AOI 15.1	AOI 8.6
Sample Type	Units														
Fluorene	mg/kg	0.29 U	1.1 U	0.28 U	1.1 U	0.27 U	0.3 U	0.28 U	0.27 U	1.4 U	0.28 U	0.27 U	24 U	0.13 J	22 J
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.29 U	1.1 U	0.28 U	0.16 J	0.27 U	0.3 U	0.28 U	0.0066 J	1.4 U	0.28 U	0.039 J	24 U	0.21 J	28 J[a]
Isophorone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.29 U	1.1 U	0.28 U	1.1 U	0.27 U	0.3 U	0.28 U	0.0071 J	0.066 J	0.28 U	0.27 U	24 U	0.14 J	31 J
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	0.29 U	0.11 J	0.28 U	0.12 J	0.27 U	0.028 J	0.28 U	0.045 J	0.11 J	0.28 U	0.04 J	24 U	1.1	150
Phenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	0.29 U	0.18 J	0.28 U	0.22 J	0.27 U	0.015 J	0.28 U	0.1 J	0.12 J	0.28 U	0.075 J	24 U	0.95	110
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
1,1,2,2-Tetrachloroethane	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
1,1,2-Trichloroethane	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
1,1-Dichloroethane	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
1,1-Dichloroethene	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
1,2,4-Trichlorobenzene	mg/kg	0.21 U	0.2 U	0.22 U	0.22 U	0.3 U	0.22 U	0.25 U	0.24 U	R	0.22 U	0.26 U	R	0.23 U	0.21 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.21 U	0.2 U	0.22 U	0.22 U	0.3 U	0.22 U	0.25 U	0.24 U	R	0.22 U	0.26 U	R	0.23 U	0.21 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.21 U	0.2 U	0.22 U	0.22 U	0.3 U	0.22 U	0.25 U	0.24 U	R	0.22 U	0.26 U	R	0.23 U	0.21 U
1,2-Dichlorobenzene	mg/kg	0.084 U	0.081 U	0.086 U	0.09 U	0.12 U	0.086 U	0.1 U	0.094 U	R	0.086 U	0.1 U	R	0.092 U	0.084 U
1,2-Dichloroethane	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
1,2-Dichloropropane	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
1,3-Dichlorobenzene	mg/kg	0.084 U	0.081 U	0.086 U	0.09 U	0.12 U	0.086 U	0.1 U	0.094 U	R	0.086 U	0.1 U	R	0.092 U	0.084 U
1,4-Dichlorobenzene	mg/kg	0.084 U	0.081 U	0.086 U	0.09 U	0.12 U	0.086 U	0.1 U	0.094 U	R	0.086 U	0.1 U	R	0.092 U	0.084 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.63 U	0.61 U	0.65 U	0.11 J	0.9 U	0.65 U	0.75 U	0.71 U	R	0.65 U	0.77 U	R	0.69 U	0.63 U
2-Hexanone	mg/kg	2.1 U	2 U	2.2 U	2.2 U	3 U	2.2 U	2.5 U	2.4 U	R	2.2 U	2.6 U	R	2.3 U	2.1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.1 U	2 U	2.2 U	2.2 U	3 U	2.2 U	2.5 U	2.4 U	R	2.2 U	2.6 U	R	2.3 U	2.1 U
Acetone	mg/kg	0.63 U	0.61 U	0.65 U	0.67 U	0.9 U	0.65 U	0.75 U	0.71 U	R	0.65 U	0.77 U	R	0.69 U	0.63 U
Benzene	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
Bromodichloromethane	mg/kg	0.084 U	0.081 U	0.086 U	0.09 U	0.12 U	0.086 U	0.1 U	0.094 U	R	0.086 U	0.1 U	R	0.092 U	0.084 U
Bromoform	mg/kg	0.084 U	0.081 U	0.086 U	0.09 U	0.12 U	0.086 U	0.1 U	0.094 U	R	0.086 U	0.1 U	R	0.092 U	0.084 U
Bromomethane (Methyl bromide)	mg/kg	0.21 U	0.2 U	0.22 U	0.22 U	0.3 U	0.22 U	0.25 U	0.24 U	R	0.22 U	0.26 U	R	0.23 U	0.21 UJ
Carbon disulfide	mg/kg	0.21 U	0.2 U	0.22 U	0.22 U	0.3 U	0.22 U	0.25 U	0.24 U	R	0.22 U	0.26 U	R	0.23 U	0.21 U
Carbon tetrachloride	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
Chlorobenzene	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
Chloroethane	mg/kg	0.21 U	0.2 U	0.22 U	0.22 U	0.3 U	0.22 U	0.25 U	0.24 U	R	0.22 U	0.26 U	R	0.23 U	0.21 U
Chloroform (Trichloromethane)	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
Chloromethane (Methyl chloride)	mg/kg	0.21 U	0.2 U	0.22 U	0.22 U	0.3 U	0.22 U	0.25 U	0.24 U	R	0.22 U	0.26 U	R	0.23 U	0.21 UJ
cis-1,2-Dichloroethene	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
cis-1,3-Dichloropropene	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
Cyclohexane	mg/kg	1 U	0.97 U	1 U	1.1 U	1.4 U	1 U	1.2 U	1.1 U	R	1 U	1.2 U	R	1.1 U	1 U
Dibromochloromethane	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.084 U	0.081 U	0.086 U	0.09 U	0.12 U	0.086 U	0.1 U	0.094 U	R	0.086 U	0.1 U	R	0.092 U	0.084 U
Ethylbenzene	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.0084 J
Isopropyl benzene	mg/kg	0.21 U	0.2 U	0.22 U	0.22 U	0.3 U	0.22 U	0.25 U	0.24 U	R	0.22 U	0.26 U	R	0.23 U	0.21 U
Methyl acetate	mg/kg	1 U	0.094 J	1 U	0.09 J	1.4 U	1 U	1.2 U	0.036 J	R	1 U	1.2 U	R	0.3 J	0.072 J
Methyl cyclohexane	mg/kg	1 U	0.97 U	1 U	1.1 U	1.4 U	1 U	1.2 U	1.1 U	R	1 U	1.2 U	R	1.1 U	1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.21 U	0.2 U	0.22 U	0.22 U	0.3 U	0.22 U	0.25 U	0.24 U	R	0.22 U	0.26 U	R	0.23 U	0.21 U
Methylene chloride	mg/kg	0.21 U	0.2 U	0.22 U	0.22 U	0.3 U	0.22 U	0.25 U	0.24 U	R	0.22 U	0.26 U	R	0.23 U	0.21 U
Styrene	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
Tetrachloroethene	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
Toluene	mg/kg	0.084 U	0.081 U	0.086 U	0.09 U	0.12 U	0.086 U	0.1 U	0.094 U	R	0.086 U	0.1 U	R	0.092 U	0.027 J
trans-1,2-Dichloroethene	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
trans-1,3-Dichloropropene	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.042 U
Trichloroethene	mg/kg	0.042 U	0.04 U	0.043 U	0.045 U	0.06 U	0.043 U	0.05 U	0.047 U	R	0.043 U	0.051 U	R	0.046 U	0.015 J
Trichlorofluoromethane (CFC-11)	mg/kg	0.084 U	0.081 U	0.086 U	0.09 U	0.12 U	0.086 U	0.1 U	0.094 U	R	0.086 U	0.1 U	R	0.092 U	0.084 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.21 U	0.2 U	0.22 U	0.22 U	0.3 U	0.22 U	0.25 U	0.24 U	R	0.22 U	0.26 U	R	0.23 U	0.21 U
Vinyl chloride	mg/kg	0.034 U	0.032 U	0.035 U	0.036 U	0.048 U	0.035 U	0.04 U	0.038 U	R	0.035 U	0.041 U	R	0.037 U	0.034 U
Xylenes (total)	mg/kg	0.13 U	0.12 U	0.13 U	0.13 U	0.18 U	0.13 U	0.15 U	0.14 U	R	0.13 U	0.15 U	R	0.14 U	0.056 J
General Chemistry															
Cyanide (total)	mg/kg	0.11 U	0.10 U	0.10 U	--	--	--	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[a] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		*SB77-11*	*SB78-11*	*SB78-11*	*SB79-11*	*SB79-11*	*SB80-11*	*SB80-11*	*SB81-11*	*SB82-11*	*SB82-11*	*SB83-11*	*SB83-11*	*SB84-11*	*SB84-11*
Sample Identification		*SO-17360-022211-DR-114*	*SO-17360-030211-DR-155*	*SO-17360-030211-DR-156*	*SO-17360-030211-DR-153*	*SO-17360-030211-DR-154*	*SO-17360-021611-JY-061*	*SO-17360-021611-JY-062*	*SO-17360-021611-JY-068*	*SO-17360-022511-DR-128*	*SO-17360-022511-DR-129*	*SO-17360-022211-DR-118*	*SO-17360-022211-DR-119*	*SO-17360-021811-DR-088*	*SO-17360-021811-DR-087*
Sample Date		*2/22/2011*	*3/2/2011*	*3/2/2011*	*3/2/2011*	*3/2/2011*	*2/16/2011*	*2/16/2011*	*2/16/2011*	*2/25/2011*	*2/25/2011*	*2/22/2011*	*2/22/2011*	*2/18/2011*	*2/18/2011*
Sample Depth		*(18-20) ft BGS*	*(1-3) ft BGS*	*(16-18) ft BGS*	*(1-3) ft BGS*	*(16.5-18.5) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(2-3) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*
Area of Interest		*AOI 8.6*	*AOI 15.3*	*AOI 15.3*	*AOI 15.3*	*AOI 15.3*	*AOI 16.1*	*AOI 16.1*	*AOI 16.2*	*AOI 16.3*	*AOI 16.3*	*AOI 16.4*	*AOI 16.4*	*AOI 17.1*	*AOI 17.1*
Sample Type	*Units*														
Metals															
Antimony	mg/kg	0.16 UJ	0.063 J	0.036 J	0.026 J	0.17 UJ	0.037 J	0.17 UJ	0.27 J	0.062 J	0.16 UJ	0.11 J	0.16 UJ	0.092 J	0.054 J
Arsenic	mg/kg	3.7	2.7 J	2.3 J	1.9 J	0.96 J	1.9	1.3	0.76	1.4 J	1.1 J	2.9	1.2	2.2	2.9
Barium	mg/kg	5.5	17.8	8.8	13.2	3.5	39.9	4.2	29.6	22.3	5.2	21.9	5.5	78.5	46.9
Beryllium	mg/kg	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.17 U	0.17 U	0.19 U	0.16 U	0.17 U	0.16 U	0.17 U	0.17 U
Cadmium	mg/kg	0.082 U	0.082 U	0.082 U	0.082 U	0.083 U	0.081 U	0.087 U	0.083 U	0.093 U	0.082 U	0.084 U	0.082 U	0.085 U	0.084 U
Chromium	mg/kg	5.0	5.0	15.9	6.5	2.1	5.3	2.2	4.9	11.7	3.5	6.1	5.4	5.5	7.5
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	2.4	2.1	2.4	2.6	1.0	2.3	1.2	1.3	2.6	1.6	2.3	2.3	2.4	3.5
Copper	mg/kg	4.1	6.3	11.1	5.7	3.0	2.8 J	1.8 J	2.1 J	5.9	6.1	7.1	4.5	8.5 J	12.5 J
Lead	mg/kg	1.7	9.6	4.2	6.3	1.2	7.3	1.4	1.3	9.8	1.7	12.3	2.4	14.0	12.7
Manganese	mg/kg	111	172 J	143 J	150 J	61.5 J	268 J	64.5 J	200 J	160	89.9	146	140	233 J	237 J
Mercury	mg/kg	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.021 J	0.043 U	0.041 U	0.047 U	0.041 U	0.042 U	0.041 U	0.042 U	0.042 U
Nickel	mg/kg	4.8	4.6	8.7	6.1	2.3	4.4	2.7	7.1	8.6	3.6	6.1	5.1	5.6	6.7
Selenium	mg/kg	0.27 J	0.14 J	0.16 UJ	0.099 J	0.17 UJ	0.15 J	0.17 UJ	0.14 J	0.18 J	0.16 UJ	0.24 J	0.11 J	0.17	0.21
Silver	mg/kg	0.082 U	0.082 U	0.082 U	0.082 U	0.083 U	0.081 U	0.087 U	0.083 U	0.052 J	0.082 U	0.084 U	0.082 U	0.085 U	0.084 U
Thallium	mg/kg	0.082 U	0.082 U	0.082 U	0.082 U	0.083 U	0.081 U	0.087 U	0.083 U	0.093 U	0.082 U	0.084 U	0.082 U	0.085 U	0.084 U
Vanadium	mg/kg	6.6	8.3	6.4	7.2	3.8	8.7	3.7	4.6	10.1	4.5	7.8	6.2	8.1	16.3
Zinc	mg/kg	9.4	13.3	13.7	12.9	6.7	17.2	7.2	4.7	14.5	6.5	15.9	9.1	18.1	21.5
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.27 U	0.27 U	2.7 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.31 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U
Aroclor-1221 (PCB-1221)	mg/kg	0.27 U	0.27 U	2.7 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.31 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U
Aroclor-1232 (PCB-1232)	mg/kg	0.27 U	0.27 U	2.7 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.31 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U
Aroclor-1242 (PCB-1242)	mg/kg	0.27 U	0.27 U	2.7 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.31 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U
Aroclor-1248 (PCB-1248)	mg/kg	0.27 U	0.27 U	2.7 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.31 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U
Aroclor-1254 (PCB-1254)	mg/kg	0.27 U	0.27 U	2.7 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.31 U	0.27 U	0.28 U	0.27 U	0.28 U	0.11 J
Aroclor-1260 (PCB-1260)	mg/kg	0.27 U	0.019 J	2.7 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.31 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U
Total PCBs	mg/kg	ND	0.019 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11 J
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	0.27 U	1.1 U	14 U	0.012 J	0.27 U	0.27 U	0.29 U	0.0082 J	0.15 J	0.27 U	0.042 J	0.27 U	0.1 J	29 J
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	0.27 U	1.1 U	14 U	0.27 U	0.27 U	0.27 U	0.29 U	0.013 J	0.31 U	0.27 U	0.28 U	0.27 U	0.045 J	95 J
Acenaphthylene	mg/kg	0.27 U	1.1 U	14 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.0089 J	0.27 U	0.28 U	0.27 U	0.28 U	140 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	0.27 U	1.1 U	14 U	0.27 U	0.27 U	0.27 U	0.29 U	0.024 J	0.015 J	0.27 U	0.0078 J	0.27 U	0.089 J	190
Atrazine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	0.27 U	0.13 J	14 U	0.031 J	0.27 U	0.27 U	0.29 U	0.11 J	0.062 J	0.27 U	0.023 J	0.27 U	0.15 J	**230**[vs]
Benzo(a)pyrene	mg/kg	0.27 U	0.14 J	14 U	0.034 J	0.27 U	0.27 U	0.29 U	0.042 J	0.052 J	0.27 U	0.021 J	0.27 U	0.12 J	**160**[vs]
Benzo(b)fluoranthene	mg/kg	0.27 U	0.16 J	14 U	0.048 J	0.27 U	0.016 J	0.29 U	0.094 J	0.092 J	0.27 U	0.032 J	0.27 U	0.23 J	**270**[vs]
Benzo(g,h,i)perylene	mg/kg	0.27 U	0.12 J	14 U	0.03 J	0.27 U	0.27 U	0.29 U	0.038 J	0.043 J	0.27 U	0.014 J	0.27 U	0.1 J	95 J
Benzo(k)fluoranthene	mg/kg	0.27 U	0.12 J	14 U	0.028 J	0.27 U	0.27 U	0.29 U	0.054 J	0.032 J	0.27 U	0.014 J	0.27 U	0.093 J	96 J
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.27 U	0.16 J	14 U	0.044 J	0.27 U	0.27 U	0.29 U	0.081 J	0.081 J	0.27 U	0.034 J	0.27 U	0.16 J	210
Dibenz(a,h)anthracene	mg/kg	0.27 U	1.1 U	14 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.012 J	0.27 U	0.28 U	0.27 U	0.028 J	140 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.013 J	0.27 J	14 U	0.054 J	0.27 U	0.015 J	0.29 U	0.4	0.096 J	0.27 U	0.04 J	0.27 U	0.38	640

TABLE 3

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

Sample Location		*SB77-11*	*SB78-11*	*SB78-11*	*SB79-11*	*SB79-11*	*SB80-11*	*SB80-11*	*SB81-11*	*SB82-11*	*SB82-11*	*SB83-11*	*SB83-11*	*SB84-11*	*SB84-11*
Sample Identification		*SO-17360-022211-DR-114*	*SO-17360-030211-DR-155*	*SO-17360-030211-DR-156*	*SO-17360-030211-DR-153*	*SO-17360-030211-DR-154*	*SO-17360-021611-JY-061*	*SO-17360-021611-JY-062*	*SO-17360-021611-JY-068*	*SO-17360-022511-DR-128*	*SO-17360-022511-DR-129*	*SO-17360-022211-DR-118*	*SO-17360-022211-DR-119*	*SO-17360-021811-DR-088*	*SO-17360-021811-DR-087*
Sample Date		*2/22/2011*	*3/2/2011*	*3/2/2011*	*3/2/2011*	*3/2/2011*	*2/16/2011*	*2/16/2011*	*2/16/2011*	*2/25/2011*	*2/25/2011*	*2/22/2011*	*2/22/2011*	*2/18/2011*	*2/18/2011*
Sample Depth		*(18-20) ft BGS*	*(1-3) ft BGS*	*(16-18) ft BGS*	*(1-3) ft BGS*	*(16.5-18.5) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(2-3) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*
Area of Interest		*AOI 8.6*	*AOI 15.3*	*AOI 15.3*	*AOI 15.3*	*AOI 15.3*	*AOI 16.1*	*AOI 16.1*	*AOI 16.2*	*AOI 16.3*	*AOI 16.3*	*AOI 16.4*	*AOI 16.4*	*AOI 17.1*	*AOI 17.1*
Sample Type	*Units*														
Fluorene	mg/kg	0.27 U	1.1 U	14 U	0.27 U	0.27 U	0.27 U	0.29 U	0.0087 J	0.31 U	0.27 U	0.28 U	0.27 U	0.046 J	95 J
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.27 U	0.092 J	14 U	0.025 J	0.27 U	0.27 U	0.29 U	0.031 J	0.032 J	0.27 U	0.013 J	0.27 U	0.09 J	**89 J**[*]
Isophorone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.27 U	1.1 U	14 U	0.0085 J	0.27 U	0.27 U	0.29 U	0.27 U	0.077 J	0.27 U	0.024 J	0.27 U	0.076 J	40 J
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	0.012 J	0.11 J	14 U	0.018 J	0.27 U	0.0071 J	0.29 U	0.25 J	0.18 J	0.27 U	0.045 J	0.27 U	0.43	770
Phenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	0.01 J	0.21 J	14 U	0.046 J	0.27 U	0.014 J	0.29 U	0.33	0.08 J	0.27 U	0.036 J	0.27 U	0.27 J	430
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
1,1,2,2-Tetrachloroethane	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
1,1,2-Trichloroethane	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
1,1-Dichloroethane	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
1,1-Dichloroethene	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
1,2,4-Trichlorobenzene	mg/kg	0.22 U	0.21 U	0.26 U	0.23 U	0.22 U	0.23 U	0.24 U	0.29 U	0.26 U	0.22 U	0.23 U	0.21 U	0.26 U	1 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.22 U	0.21 U	0.26 U	0.23 U	0.22 U	0.23 U	0.24 U	0.29 U	0.26 UJ	0.22 UJ	0.23 U	0.21 U	0.26 U	1 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.22 U	0.21 U	0.26 U	0.23 U	0.22 U	0.23 U	0.24 U	0.29 U	0.26 U	0.22 U	0.23 U	0.21 U	0.26 U	1 U
1,2-Dichlorobenzene	mg/kg	0.087 U	0.083 U	0.11 U	0.091 U	0.088 U	0.094 U	0.095 U	0.12 U	0.1 U	0.087 U	0.092 U	0.085 U	0.1 U	0.41 U
1,2-Dichloroethane	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
1,2-Dichloropropane	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
1,3-Dichlorobenzene	mg/kg	0.087 U	0.083 U	0.11 U	0.091 U	0.088 U	0.094 U	0.095 U	0.12 U	0.1 U	0.087 U	0.092 U	0.085 U	0.1 U	0.41 U
1,4-Dichlorobenzene	mg/kg	0.087 U	0.083 U	0.11 U	0.091 U	0.088 U	0.094 U	0.095 U	0.12 U	0.1 U	0.087 U	0.092 U	0.085 U	0.1 U	0.41 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.65 U	0.62 U	0.79 U	0.68 U	0.66 U	0.7 U	0.71 U	0.87 U	0.78 U	0.65 U	0.69 U	0.64 U	0.79 U	3.1 U
2-Hexanone	mg/kg	2.2 U	2.1 U	2.6 U	2.3 U	2.2 U	2.3 U	2.4 U	2.9 U	2.6 U	2.2 U	2.3 U	2.1 U	2.6 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.2 U	2.1 U	2.6 U	2.3 U	2.2 U	2.3 U	2.4 U	2.9 U	2.6 U	2.2 U	2.3 U	2.1 U	2.6 U	10 U
Acetone	mg/kg	0.65 U	0.62 U	0.79 U	0.68 U	0.66 U	0.7 U	0.71 U	0.87 U	0.78 UJ	0.65 UJ	0.69 U	0.64 U	0.79 U	3.1 U
Benzene	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.021 J	0.21 U
Bromodichloromethane	mg/kg	0.087 U	0.083 U	0.11 U	0.091 U	0.088 U	0.094 U	0.095 U	0.12 U	0.1 U	0.087 U	0.092 U	0.085 U	0.1 U	0.41 U
Bromoform	mg/kg	0.087 U	0.083 U	0.11 U	0.091 U	0.088 U	0.094 U	0.095 U	0.12 U	0.1 UJ	0.087 UJ	0.092 U	0.085 U	0.1 U	0.41 U
Bromomethane (Methyl bromide)	mg/kg	0.22 UJ	0.21 U	0.26 U	0.23 U	0.22 U	0.23 U	0.24 U	0.29 U	0.26 U	0.22 U	0.23 UJ	0.21 UJ	0.26 U	1 U
Carbon disulfide	mg/kg	0.22 U	0.21 U	0.26 U	0.23 U	0.22 U	0.23 U	0.24 U	0.29 U	0.26 U	0.22 U	0.23 U	0.21 U	0.26 U	1 U
Carbon tetrachloride	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
Chlorobenzene	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
Chloroethane	mg/kg	0.22 U	0.21 U	0.26 U	0.23 U	0.22 U	0.23 U	0.24 U	0.29 U	0.26 U	0.22 U	0.23 U	0.21 U	0.26 U	1 U
Chloroform (Trichloromethane)	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
Chloromethane (Methyl chloride)	mg/kg	0.22 UJ	0.21 U	0.26 U	0.23 U	0.22 U	0.23 U	0.24 U	0.29 U	0.26 U	0.22 U	0.23 UJ	0.21 UJ	0.26 U	1 U
cis-1,2-Dichloroethene	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
cis-1,3-Dichloropropene	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
Cyclohexane	mg/kg	1 U	0.99 U	1.3 U	1.1 U	1.1 U	1.1 U	1.1 U	1.4 U	1.3 U	1 U	1.1 U	1 U	0.18 J	4.9 U
Dibromochloromethane	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.087 U	0.083 U	0.11 U	0.091 U	0.088 U	0.094 U	0.095 U	0.12 U	0.1 U	0.087 U	0.092 U	0.085 U	0.1 U	0.41 U
Ethylbenzene	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.028 J	0.21 U
Isopropyl benzene	mg/kg	0.22 U	0.21 U	0.26 U	0.23 U	0.22 U	0.23 U	0.24 U	0.29 U	0.26 U	0.22 U	0.23 U	0.21 U	0.026 J	1 U
Methyl acetate	mg/kg	1 U	0.17 J	1.3 U	1.1 U	1.1 U	1.1 U	1.1 U	1.4 U	0.079 J	1 U	1.1 U	1 U	0.23 J	4.9 U
Methyl cyclohexane	mg/kg	1 U	0.99 U	1.3 U	1.1 U	1.1 U	1.1 U	1.1 U	1.4 U	1.3 U	1 U	1.1 U	1 U	0.25 J	4.9 U
Methyl tert butyl ether (MTBE)	mg/kg	0.22 U	0.21 U	0.26 U	0.23 U	0.22 U	0.23 U	0.24 U	0.29 U	0.26 U	0.22 U	0.23 U	0.21 U	0.26 U	1 U
Methylene chloride	mg/kg	0.22 U	0.21 U	0.26 U	0.26	0.15 J	0.23 U	0.24 U	0.29 U	0.26 U	0.22 U	0.23 U	0.21 U	0.23 J	0.82 J
Styrene	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
Tetrachloroethene	mg/kg	0.043 U	0.041 U	0.069	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
Toluene	mg/kg	0.087 U	0.083 U	0.11 U	0.091 U	0.088 U	0.094 U	0.095 U	0.12 U	0.1 U	0.087 U	0.092 U	0.085 U	0.11	0.41 U
trans-1,2-Dichloroethene	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
trans-1,3-Dichloropropene	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.052 U	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
Trichloroethene	mg/kg	0.043 U	0.041 U	0.053 U	0.045 U	0.044 U	0.047 U	0.047 U	0.058 U	0.14	0.044 U	0.046 U	0.043 U	0.052 U	0.21 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.087 U	0.083 U	0.11 U	0.091 U	0.088 U	0.094 U	0.095 U	0.12 U	0.1 U	0.087 U	0.092 U	0.085 U	0.1 U	0.41 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.22 U	0.21 U	0.26 U	0.23 U	0.22 U	0.23 U	0.24 U	0.29 U	0.26 U	0.22 U	0.23 U	0.21 U	0.26 U	1 U
Vinyl chloride	mg/kg	0.035 U	0.033 U	0.042 U	0.036 U	0.035 U	0.037 U	0.038 U	0.046 U	0.042 U	0.035 U	0.037 U	0.034 U	0.042 U	0.16 U
Xylenes (total)	mg/kg	0.13 U	0.12 U	0.16 U	0.14 U	0.13 U	0.14 U	0.14 U	0.17 U	0.16 U	0.13 U	0.02 J	0.13 U	0.22	0.62 U
General Chemistry															
Cyanide (total)	mg/kg	--	--	--	--	--	0.10 U	0.11 U	0.18	0.12 U	0.10 U	0.11 U	0.10 U	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[*] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		*SB84-11*	*SB85A-11*	*SB85A-11*	*SB85A-11*	*SB86-11*	*SB86-11*	*SB87-11*	*SB87-11*	*SB88-11*	*SB88-11*	*SB89-11*	*SB89-11*	*SB90-11*	*SB90-11*
Sample Identification		*SO-17360-021811-DR-089*	*SO-17360-022811-DR-138*	*SO-17360-022811-DR-139*	*SO-17360-022811-DR-140*	*SO-17360-022511-DR-130*	*SO-17360-022511-DR-131*	*SO-17360-021811-DR-085*	*SO-17360-021811-DR-086*	*SO-17360-030311-DR-176*	*SO-17360-030311-DR-177*	*SO-17360-030311-DR-174*	*SO-17360-030311-DR-175*	*SO-17360-030311-DR-172*	*SO-17360-030311-DR-173*
Sample Date		*2/18/2011*	*2/28/2011*	*2/28/2011*	*2/28/2011*	*2/25/2011*	*2/25/2011*	*2/18/2011*	*2/18/2011*	*3/3/2011*	*3/3/2011*	*3/3/2011*	*3/3/2011*	*3/3/2011*	*3/3/2011*
Sample Depth		*(19-21) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(19-21) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(18-20) ft BGS*	*(1-3) ft BGS*	*(12-14) ft BGS*	*(1-3) ft BGS*	*(12-14) ft BGS*	*(1-3) ft BGS*	*(12-14) ft BGS*
Area of Interest		*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 17.2*	*AOI 17.2*	*AOI 17.2*	*AOI 17.2*	*AOI 17.2*	*AOI 17.2*
Sample Type	*Units*			*Duplicate*											
Metals															
Antimony	mg/kg	0.18 UJ	0.16 UJ	0.16 UJ	0.16 UJ	0.16 UJ	0.19 UJ	0.028 J	0.17 UJ	0.063 J	0.16 UJ	0.17 UJ	0.16 UJ	0.027 J	0.16 UJ
Arsenic	mg/kg	1.5	1.4	1.6	1.6	1.7 J	0.30 J	1.3	1.1	2.1 J	1.1 J	1.1 J	1.4 J	1.1 J	1.0 J
Barium	mg/kg	5.0	16.6	16.3	4.8	9.0	12.3	24.8	9.7	31.5	4.8	12.3	5.7	19.2	8.0
Beryllium	mg/kg	0.18 U	0.16 U	0.16 U	0.16 U	0.16 U	0.19 U	0.17 U	0.17 U	0.17 U	0.16 U	0.17 U	0.16 U	0.16 U	0.16 U
Cadmium	mg/kg	0.088 U	0.082 U	0.082 U	0.082 U	0.082 U	0.083 J	0.083 U	0.083 U	0.30	0.082 U	0.083 U	0.082 U	0.082 U	0.082 U
Chromium	mg/kg	2.7	5.5	6.3	3.9	4.9	5.1	4.4	5.1	8.9	4.0	5.8	8.7	4.5	7.3
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	1.3	2.4	2.2	2.1	2.3	1.3	1.9	1.9	2.8	2.1	1.8	3.0	1.8	2.9
Copper	mg/kg	2.8 J	3.9	3.6	5.0	5.8	4.7	2.8 J	2.7 J	9.6	4.0	2.9	6.0	3.7	4.8
Lead	mg/kg	1.7	5.0	4.4	2.1	4.0	2.8	3.3	2.0	23.4	1.5	2.2	2.3	9.0	1.6
Manganese	mg/kg	79.2 J	96.8 J	92.3 J	102 J	146	22.8	158 J	44.8 J	190 J	92.0 J	54.2 J	140 J	84.7 J	102 J
Mercury	mg/kg	0.044 U	0.041 U	0.041 U	0.041 U	0.041 U	0.047 U	0.042 U	0.041 U	0.042 U	0.041 U	0.041 U	0.041 U	0.016 J	0.041 U
Nickel	mg/kg	2.9	4.7	4.4	3.8	4.9	2.9	3.6	4.2	6.5	4.4	4.9	6.9	4.0	6.2
Selenium	mg/kg	0.18 U	0.16 J	0.11 J	0.16 UJ	0.095 J	0.16 J	0.15 J	0.13 J	0.21 J	0.096 J	0.12 J	0.094 J	0.10 J	0.10 J
Silver	mg/kg	0.088 U	0.082 U	0.082 U	0.082 U	0.082 U	0.094 U	0.083 U	0.083 U	0.084 U	0.082 U	0.083 U	0.082 U	0.082 U	0.082 U
Thallium	mg/kg	0.088 U	0.082 U	0.082 U	0.082 U	0.082 U	0.094 U	0.083 U	0.083 U	0.084 U	0.082 U	0.083 U	0.082 U	0.082 U	0.082 U
Vanadium	mg/kg	4.4	9.5	7.6	6.2	6.4	4.7	7.1	6.8	11.2	5.8	7.4	10.2	7.4	7.1
Zinc	mg/kg	8.2	12.9	12.5	9.9	10.7	10.6	13.1	7.6	25.2	8.0	9.3	15.8	27.9	12.1
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.29 U	0.27 U	0.27 U	0.27 U	0.27 U	0.31 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1221 (PCB-1221)	mg/kg	0.29 U	0.27 U	0.27 U	0.27 U	0.27 U	0.31 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1232 (PCB-1232)	mg/kg	0.29 U	0.27 U	0.27 U	0.27 U	0.27 U	0.31 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1242 (PCB-1242)	mg/kg	0.29 U	0.27 U	0.27 U	0.27 U	0.27 U	0.31 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1248 (PCB-1248)	mg/kg	0.29 U	0.27 U	0.27 U	0.27 U	0.27 U	0.31 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1254 (PCB-1254)	mg/kg	0.29 U	0.2 J	0.35	0.27 U	0.27 U	0.31 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1260 (PCB-1260)	mg/kg	0.29 U	0.27 U	0.27 U	0.27 U	0.27 U	0.31 U	0.27 U	0.27 U	0.021 J	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Total PCBs	mg/kg	ND	0.2 J	0.35	ND	ND	ND	ND	ND	0.021 J	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	0.011 J	2.7 U	5.4 U	14 U	0.008 J	0.31 U	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	0.032 J	2.7 U	5.4 U	14 U	0.27 U	0.31 U	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Acenaphthylene	mg/kg	0.29 U	2.7 U	5.4 U	14 U	0.27 U	0.31 U	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	0.067 J	2.7 U	5.4 U	14 U	0.27 U	0.31 U	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Atrazine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	0.072 J	0.11 J	5.4 U	14 U	0.27 U	0.022 J	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Benzo(a)pyrene	mg/kg	0.05 J	0.12 J	5.4 U	14 U	0.27 U	0.016 J	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.011 J	0.27 U
Benzo(b)fluoranthene	mg/kg	0.071 J	0.18 J	0.14 J	14 U	0.27 U	0.027 J	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.02 J	0.27 U
Benzo(g,h,i)perylene	mg/kg	0.032 J	0.21 J	0.21 J	14 U	0.27 U	0.013 J	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Benzo(k)fluoranthene	mg/kg	0.027 J	2.7 U	5.4 U	14 U	0.27 U	0.011 J	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.066 J	0.18 J	0.17 J	14 U	0.27 U	0.024 J	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.013 J	0.27 U
Dibenz(a,h)anthracene	mg/kg	0.0087 J	2.7 U	5.4 U	14 U	0.27 U	0.31 U	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.2 J	0.22 J	0.19 J	14 U	0.015 J	0.06 J	0.018 J	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.02 J	0.27 U

TABLE 3

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

Sample Location		*SB84-11*	*SB85A-11*	*SB85A-11*	*SB85A-11*	*SB86-11*	*SB86-11*	*SB87-11*	*SB87-11*	*SB88-11*	*SB88-11*	*SB89-11*	*SB89-11*	*SB90-11*	*SB90-11*
Sample Identification		*SO-17360-021811-DR-089*	*SO-17360-022811-DR-138*	*SO-17360-022811-DR-139*	*SO-17360-022811-DR-140*	*SO-17360-022511-DR-130*	*SO-17360-022511-DR-131*	*SO-17360-021811-DR-085*	*SO-17360-021811-DR-086*	*SO-17360-030311-DR-176*	*SO-17360-030311-DR-177*	*SO-17360-030311-DR-174*	*SO-17360-030311-DR-175*	*SO-17360-030311-DR-172*	*SO-17360-030311-DR-173*
Sample Date		*2/18/2011*	*2/28/2011*	*2/28/2011*	*2/28/2011*	*2/25/2011*	*2/25/2011*	*2/18/2011*	*2/18/2011*	*3/3/2011*	*3/3/2011*	*3/3/2011*	*3/3/2011*	*3/3/2011*	*3/3/2011*
Sample Depth		*(19-21) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(19-21) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(18-20) ft BGS*	*(1-3) ft BGS*	*(12-14) ft BGS*	*(1-3) ft BGS*	*(12-14) ft BGS*	*(1-3) ft BGS*	*(12-14) ft BGS*
Area of Interest		*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 17.2*	*AOI 17.2*	*AOI 17.2*	*AOI 17.2*	*AOI 17.2*	*AOI 17.2*
Sample Type	*Units*			*Duplicate*											
Fluorene	mg/kg	0.034 J	2.7 U	5.4 U	14 U	0.27 U	0.31 U	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.027 J	0.14 J	5.4 U	14 U	0.27 U	0.0097 J	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Isophorone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.02 J	2.7 U	5.4 U	14 U	0.014 J	0.01 J	0.27 U	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	0.26 J	0.12 J	5.4 U	14 U	0.018 J	0.045 J	0.019 J	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.0078 J	0.27 U
Phenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	0.14 J	0.17 J	5.4 U	14 U	0.011 J	0.044 J	0.014 J	0.27 U	2.8 U	0.27 U	0.27 U	0.27 U	0.016 J	0.27 U
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
1,1,2,2-Tetrachloroethane	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
1,1,2-Trichloroethane	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
1,1-Dichloroethane	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
1,1-Dichloroethene	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
1,2,4-Trichlorobenzene	mg/kg	0.28 U	0.24 U	0.22 U	0.21 U	0.23 U	0.27 U	0.21 U	0.21 U	0.2 U	0.22 U	0.25 U	0.21 U	0.22 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.28 U	0.24 U	0.22 U	0.21 U	0.23 UJ	0.27 UJ	0.21 U	0.21 U	0.2 U	0.22 U	0.25 U	0.21 U	0.22 U	0.22 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.28 U	0.24 U	0.22 U	0.21 U	0.23 U	0.27 U	0.21 U	0.21 U	0.2 U	0.22 U	0.25 U	0.21 U	0.22 U	0.22 U
1,2-Dichlorobenzene	mg/kg	0.11 U	0.095 U	0.088 U	0.084 U	0.094 U	0.11 U	0.085 U	0.083 U	0.081 U	0.086 U	0.1 U	0.085 U	0.089 U	0.086 U
1,2-Dichloroethane	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
1,2-Dichloropropane	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
1,3-Dichlorobenzene	mg/kg	0.11 U	0.095 U	0.088 U	0.084 U	0.094 U	0.11 U	0.085 U	0.083 U	0.081 U	0.086 U	0.1 U	0.085 U	0.089 U	0.086 U
1,4-Dichlorobenzene	mg/kg	0.11 U	0.095 U	0.088 U	0.084 U	0.094 U	0.11 U	0.085 U	0.083 U	0.081 U	0.086 U	0.1 U	0.085 U	0.089 U	0.086 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.83 U	0.71 U	0.66 U	0.63 U	0.7 U	0.81 U	0.64 U	0.62 U	0.056 J	0.65 U	0.76 U	0.64 U	0.091 J	0.65 U
2-Hexanone	mg/kg	2.8 U	2.4 U	2.2 U	2.1 U	2.3 U	2.7 U	2.1 U	2.1 U	2 U	2.2 U	2.5 U	2.1 U	2.2 U	2.2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.8 U	2.4 U	2.2 U	2.1 U	2.3 U	2.7 U	2.1 U	2.1 U	2 U	2.2 U	2.5 U	2.1 U	2.2 U	2.2 U
Acetone	mg/kg	0.83 U	0.71 U	0.66 U	0.63 U	0.7 UJ	0.81 UJ	0.64 U	0.62 U	0.61 U	0.65 U	0.76 U	0.64 U	0.21 J	0.65 U
Benzene	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
Bromodichloromethane	mg/kg	0.11 U	0.095 U	0.088 U	0.084 U	0.094 U	0.11 U	0.085 U	0.083 U	0.081 U	0.086 U	0.1 U	0.085 U	0.089 U	0.086 U
Bromoform	mg/kg	0.11 U	0.095 U	0.088 U	0.084 U	0.094 UJ	0.11 UJ	0.085 U	0.083 U	0.081 U	0.086 U	0.1 U	0.085 U	0.089 U	0.086 U
Bromomethane (Methyl bromide)	mg/kg	0.28 U	0.24 U	0.22 U	0.21 U	0.23 U	0.27 U	0.21 U	0.21 U	0.2 U	0.22 U	0.25 U	0.21 U	0.22 U	0.22 U
Carbon disulfide	mg/kg	0.28 U	0.24 U	0.22 U	0.21 U	0.23 U	0.27 U	0.21 U	0.21 U	0.2 U	0.22 U	0.25 U	0.21 U	0.22 U	0.22 U
Carbon tetrachloride	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
Chlorobenzene	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
Chloroethane	mg/kg	0.28 U	0.24 U	0.22 U	0.21 U	0.23 U	0.27 U	0.21 U	0.21 U	0.2 U	0.22 U	0.25 U	0.21 U	0.22 U	0.22 U
Chloroform (Trichloromethane)	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
Chloromethane (Methyl chloride)	mg/kg	0.28 U	0.24 U	0.22 U	0.21 U	0.23 U	0.27 U	0.21 U	0.21 U	0.2 U	0.22 U	0.25 U	0.21 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
cis-1,3-Dichloropropene	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
Cyclohexane	mg/kg	1.3 U	1.1 U	1.1 U	1 U	1.1 U	1.3 U	1 U	0.99 U	0.98 U	1 U	1.2 U	1 U	1.1 U	1 U
Dibromochloromethane	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.11 U	0.095 U	0.088 U	0.084 U	0.094 U	0.11 U	0.085 U	0.083 U	0.081 U	0.086 U	0.1 U	0.085 U	0.089 U	0.086 U
Ethylbenzene	mg/kg	0.056 U	0.013 J	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
Isopropyl benzene	mg/kg	0.28 U	0.24 U	0.22 U	0.21 U	0.23 U	0.27 U	0.21 U	0.21 U	0.2 U	0.22 U	0.25 U	0.21 U	0.22 U	0.22 U
Methyl acetate	mg/kg	1.3 U	1.1 U	0.048 J	0.083 J	1.1 U	1.3 U	1 U	0.049 J	1	1 U	1.2 U	1 U	1.1 U	1 U
Methyl cyclohexane	mg/kg	1.3 U	1.1 U	1.1 U	1 U	1.1 U	1.3 U	1 U	0.99 U	0.025 J	1 U	1.2 U	1 U	1.1 U	1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.28 U	0.24 U	0.22 U	0.21 U	0.23 U	0.27 U	0.21 U	0.21 U	0.2 U	0.22 U	0.25 U	0.21 U	0.22 U	0.22 U
Methylene chloride	mg/kg	0.22 J	0.24 U	0.22 U	0.21 U	0.23 U	0.27 U	0.21 U	0.19 J	0.2 U	0.22 U	0.25 U	0.21 U	0.22 U	0.22 U
Styrene	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
Tetrachloroethene	mg/kg	0.056 U	0.047 U	0.044 U	0.026 J	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
Toluene	mg/kg	0.11 U	0.095 U	0.088 U	0.084 U	0.094 U	0.11 U	0.085 U	0.083 U	0.081 U	0.086 U	0.1 U	0.085 U	0.089 U	0.086 U
trans-1,2-Dichloroethene	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
trans-1,3-Dichloropropene	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
Trichloroethene	mg/kg	0.056 U	0.047 U	0.044 U	0.042 U	0.047 U	0.054 U	0.042 U	0.041 U	0.041 U	0.043 U	0.051 U	0.043 U	0.044 U	0.043 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.11 U	0.095 U	0.088 U	0.084 U	0.094 U	0.11 U	0.085 U	0.083 U	0.081 U	0.086 U	0.1 U	0.085 U	0.089 U	0.086 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.28 U	0.24 U	0.22 U	0.21 U	0.23 U	0.27 U	0.21 U	0.21 U	0.2 U	0.22 U	0.25 U	0.21 U	0.22 U	0.22 U
Vinyl chloride	mg/kg	0.044 U	0.038 U	0.035 U	0.034 U	0.038 U	0.043 U	0.034 U	0.033 U	0.033 U	0.035 U	0.041 U	0.034 U	0.035 U	0.035 U
Xylenes (total)	mg/kg	0.17 U	0.13 J	0.031 J	0.13 U	0.14 U	0.16 U	0.13 U	0.12 U	0.015 J	0.13 U	0.15 U	0.13 U	0.13 U	0.13 U
General Chemistry															
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		*SB91-11*	*SB91-11*	*SB92-11*	*SB92-11*	*SB93-11*	*SB93-11*	*SB94-11*	*SB94-11*	*SB96-11*	*SB96-11*	*SB97-11*	*SB97-11*	*SB98-11*	*SB98-11*
Sample Identification		*SO-17360-022111-DR-096*	*SO-17360-022111-DR-097*	*SO-17360-030111-DR-141*	*SO-17360-030111-DR-142*	*SO-17360-030111-DR-143*	*SO-17360-030111-DR-144*	*SO-17360-030111-DR-145*	*SO-17360-030111-DR-146*	*SO-17360-022311-DR-120*	*SO-17360-022311-DR-121*	*SO-17360-022311-DR-122*	*SO-17360-022311-DR-123*	*SO-17360-021711-DR-071*	*SO-17360-021711-DR-072*
Sample Date		*2/21/2011*	*2/21/2011*	*3/1/2011*	*3/1/2011*	*3/1/2011*	*3/1/2011*	*3/1/2011*	*3/1/2011*	*2/23/2011*	*2/23/2011*	*2/23/2011*	*2/23/2011*	*2/17/2011*	*2/17/2011*
Sample Depth		*(1-3) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(16-18) ft BGS*	*(1-3) ft BGS*	*(16-18) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*
Area of Interest		*AOI 18*	*AOI 18*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*
Sample Type	*Units*														*Duplicate*
Metals															
Antimony	mg/kg	0.040 J	0.037 J	0.16 UJ	0.16 UJ	0.17 UJ	0.16 UJ	0.17 UJ	0.16 UJ	0.18 UJ	0.18 UJ	0.19 UJ	0.18 UJ	0.034 J	0.028 J
Arsenic	mg/kg	1.5	1.1	1.7	1.5	1.5	1.1	1.6	0.96	1.3 J	0.85 J	1.3 J	0.63 J	1.1	1.1
Barium	mg/kg	23.0	4.9	17.4	5.7	19.6	4.1	14.4	3.4	8.7	6.4	8.8	4.7	22.9	24.2
Beryllium	mg/kg	0.17 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.17 U	0.16 U	0.18 U	0.18 U	0.19 U	0.18 U	0.17 U	0.17 U
Cadmium	mg/kg	0.091	0.045 J	0.082 U	0.082 U	0.083 U	0.082 U	0.083 U	0.082 U	0.091 U	0.092 U	0.094 U	0.092 U	0.083 U	0.083 U
Chromium	mg/kg	5.2	4.5	5.4	5.6	6.9	2.2	10.2	2.0	4.2	5.0	4.9	2.5	4.8	5.0
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	1.9	1.7	2.2	2.2	2.9	1.2	3.3	1.1	1.8	2.5	2.0	0.74	2.1	2.1
Copper	mg/kg	6.9	3.0	4.7	4.6	5.0	1.8	5.8	2.3	4.3	2.3	5.0	1.4	3.4 J	3.3 J
Lead	mg/kg	5.5	1.4	5.9	1.8	5.1	1.4	4.1	1.1	2.8	1.0	5.2	1.1	3.5	4.3
Manganese	mg/kg	139	87.1	148 J	115 J	163 J	64.8 J	158 J	55.9 J	118 J	83.7	129	56.7	161 J	155 J
Mercury	mg/kg	0.041 U	0.041 U	0.041 U	0.041 U	0.018 J	0.041 U	0.042 U	0.041 U	0.046 U	0.046 U	0.047 U	0.046 U	0.041 U	0.042 U
Nickel	mg/kg	4.4	3.8	4.6	5.4	6.0	2.2	7.3	2.3	3.9	4.8	4.6	1.7	4.0	4.1
Selenium	mg/kg	0.24 J	0.18 J	0.14 J	0.11 J	0.16 J	0.16 UJ	0.16 J	0.096 J	0.16 J	0.11 J	0.12 J	0.18 UJ	0.14 J	0.16 J
Silver	mg/kg	0.083 U	0.082 U	0.082 U	0.082 U	0.083 U	0.082 U	0.083 U	0.082 U	0.091 U	0.092 U	0.094 U	0.092 U	0.083 U	0.083 U
Thallium	mg/kg	0.083 U	0.082 U	0.082 U	0.082 U	0.083 U	0.082 U	0.083 U	0.082 U	0.091 U	0.092 U	0.094 U	0.092 U	0.083 U	0.083 U
Vanadium	mg/kg	6.2	4.9	8.1	7.4	10.1	4.8	11.2	3.8	5.9	5.8	6.2	2.6	7.4	7.9
Zinc	mg/kg	14.7	8.0	15.2	11.4	27.6	7.9	16.1	6.1	9.2	12.4	12.8	5.2	11.7	12.3
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.27 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
Aroclor-1221 (PCB-1221)	mg/kg	0.27 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
Aroclor-1232 (PCB-1232)	mg/kg	0.27 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
Aroclor-1242 (PCB-1242)	mg/kg	0.27 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
Aroclor-1248 (PCB-1248)	mg/kg	0.27 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
Aroclor-1254 (PCB-1254)	mg/kg	0.27 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
Aroclor-1260 (PCB-1260)	mg/kg	0.27 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	0.011 J	0.27 U	0.0073 J	0.27 U	0.28 U	0.27 U	0.014 J	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	0.27 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.009 J	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
Acenaphthylene	mg/kg	0.27 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.048 J	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	0.0076 J	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.03 J	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.0094 J	0.27 U
Atrazine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	0.025 J	0.27 U	0.01 J	0.27 U	0.04 J	0.27 U	0.26 J	0.27 U	0.008 J	0.3 U	0.024 J	0.3 U	0.039 J	0.038 J
Benzo(a)pyrene	mg/kg	0.027 J	0.27 U	0.007 J	0.27 U	0.041 J	0.27 U	0.27	0.27 U	0.0086 J	0.3 U	0.027 J	0.3 U	0.045 J	0.039 J
Benzo(b)fluoranthene	mg/kg	0.045 J	0.27 U	0.013 J	0.27 U	0.063 J	0.27 U	0.33	0.27 U	0.015 J	0.3 U	0.043 J	0.3 U	0.057 J	0.051 J
Benzo(g,h,i)perylene	mg/kg	0.027 J	0.27 U	0.0069 J	0.27 U	0.031 J	0.27 U	0.16 J	0.27 U	0.0078 J	0.3 U	0.023 J	0.3 U	0.061 J	0.062 J
Benzo(k)fluoranthene	mg/kg	0.022 J	0.27 U	0.27 U	0.27 U	0.029 J	0.27 U	0.2 J	0.27 U	0.3 U	0.3 U	0.013 J	0.3 U	0.03 J	0.026 J
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.038 J	0.27 U	0.012 J	0.27 U	0.048 J	0.27 U	0.24 J	0.27 U	0.0078 J	0.3 U	0.031 J	0.3 U	0.045 J	0.052 J
Dibenz(a,h)anthracene	mg/kg	0.27 U	0.27 U	0.27 U	0.27 U	0.0079 J	0.27 U	0.058 J	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.0091 J	0.27 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.067 J	0.27 U	0.025 J	0.27 U	0.087 J	0.27 U	0.35	0.27 U	0.013 J	0.3 U	0.054 J	0.3 U	0.091 J	0.076 J

TABLE 3

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

Sample Location		*SB91-11*	*SB91-11*	*SB92-11*	*SB92-11*	*SB93-11*	*SB93-11*	*SB94-11*	*SB94-11*	*SB96-11*	*SB96-11*	*SB97-11*	*SB97-11*	*SB98-11*	*SB98-11*
Sample Identification		*SO-17360-022111-DR-096*	*SO-17360-022111-DR-097*	*SO-17360-030111-DR-141*	*SO-17360-030111-DR-142*	*SO-17360-030111-DR-143*	*SO-17360-030111-DR-144*	*SO-17360-030111-DR-145*	*SO-17360-030111-DR-146*	*SO-17360-022311-DR-120*	*SO-17360-022311-DR-121*	*SO-17360-022311-DR-122*	*SO-17360-022311-DR-123*	*SO-17360-021711-DR-071*	*SO-17360-021711-DR-072*
Sample Date		*2/21/2011*	*2/21/2011*	*3/1/2011*	*3/1/2011*	*3/1/2011*	*3/1/2011*	*3/1/2011*	*3/1/2011*	*2/23/2011*	*2/23/2011*	*2/23/2011*	*2/23/2011*	*2/17/2011*	*2/17/2011*
Sample Depth		*(1-3) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(16-18) ft BGS*	*(1-3) ft BGS*	*(16-18) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*
Area of Interest		*AOI 18*	*AOI 18*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*	*AOI 19*
Sample Type	*Units*														*Duplicate*
Fluorene	mg/kg	0.27 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.011 J	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.02 J	0.27 U	0.27 U	0.27 U	0.026 J	0.27 U	0.16 J	0.27 U	0.3 U	0.3 U	0.019 J	0.3 U	0.033 J	0.03 J
Isophorone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.0079 J	0.27 U	0.0085 J	0.27 U	0.28 U	0.27 U	0.015 J	0.27 U	0.3 U	0.3 U	0.31 U	0.3 U	0.27 U	0.27 U
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	0.05 J	0.27 U	0.031 J	0.27 U	0.043 J	0.27 U	0.12 J	0.27 U	0.3 U	0.3 U	0.027 J	0.3 U	0.046 J	0.032 J
Phenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	0.052 J	0.27 U	0.019 J	0.27 U	0.068 J	0.27 U	0.32	0.27 U	0.011 J	0.3 U	0.044 J	0.3 U	0.07 J	0.06 J
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
1,1,2,2-Tetrachloroethane	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
1,1,2-Trichloroethane	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
1,1-Dichloroethane	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
1,1-Dichloroethene	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
1,2,4-Trichlorobenzene	mg/kg	0.23 U	0.21 U	0.25 U	0.21 U	0.22 U	0.22 U	0.24 U	0.29 U	0.25 U	0.23 U	0.23 U	0.23 U	0.21 U	0.24 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.23 U	0.21 U	0.25 U	0.21 U	0.22 U	0.22 U	0.24 U	0.29 U	0.25 UJ	0.23 UJ	0.23 UJ	0.23 UJ	0.21 U	0.24 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.23 U	0.21 U	0.25 U	0.21 U	0.22 U	0.22 U	0.24 U	0.29 U	0.25 U	0.23 U	0.23 U	0.23 U	0.21 U	0.24 U
1,2-Dichlorobenzene	mg/kg	0.092 U	0.086 U	0.1 U	0.084 U	0.088 U	0.087 U	0.095 U	0.12 U	0.098 U	0.092 U	0.093 U	0.09 U	0.085 U	0.096 U
1,2-Dichloroethane	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
1,2-Dichloropropane	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
1,3-Dichlorobenzene	mg/kg	0.092 U	0.086 U	0.1 U	0.084 U	0.088 U	0.087 U	0.095 U	0.12 U	0.098 U	0.092 U	0.093 U	0.09 U	0.085 U	0.096 U
1,4-Dichlorobenzene	mg/kg	0.092 U	0.086 U	0.1 U	0.084 U	0.088 U	0.087 U	0.095 U	0.12 U	0.098 U	0.092 U	0.093 U	0.09 U	0.085 U	0.096 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.69 U	0.64 U	0.76 U	0.63 U	0.66 U	0.65 U	0.71 U	0.88 U	0.74 U	0.69 U	0.7 U	0.68 U	0.64 U	0.72 U
2-Hexanone	mg/kg	2.3 U	2.1 U	2.5 U	2.1 U	2.2 U	2.2 U	2.4 U	2.9 U	2.5 U	2.3 U	2.3 U	2.3 U	2.1 U	2.4 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.3 U	2.1 U	2.5 U	2.1 U	2.2 U	2.2 U	2.4 U	2.9 U	2.5 U	2.3 U	2.3 U	2.3 U	2.1 U	2.4 U
Acetone	mg/kg	0.69 U	0.64 U	0.76 U	0.63 U	0.66 U	0.65 U	0.71 U	0.88 U	0.74 UJ	0.69 UJ	0.7 UJ	0.68 UJ	0.64 U	0.72 U
Benzene	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
Bromodichloromethane	mg/kg	0.092 U	0.086 U	0.1 U	0.084 U	0.088 U	0.087 U	0.095 U	0.12 U	0.098 U	0.092 U	0.093 U	0.09 U	0.085 U	0.096 U
Bromoform	mg/kg	0.092 U	0.086 U	0.1 U	0.084 U	0.088 U	0.087 U	0.095 U	0.12 U	0.098 UJ	0.092 UJ	0.093 UJ	0.09 UJ	0.085 U	0.096 U
Bromomethane (Methyl bromide)	mg/kg	0.23 U	0.21 U	0.25 U	0.21 U	0.22 U	0.22 U	0.24 U	0.29 U	0.25 U	0.23 U	0.23 U	0.23 U	0.21 U	0.24 U
Carbon disulfide	mg/kg	0.23 U	0.21 U	0.25 U	0.21 U	0.22 U	0.22 U	0.24 U	0.29 U	0.25 U	0.23 U	0.23 U	0.23 U	0.21 U	0.24 U
Carbon tetrachloride	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
Chlorobenzene	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
Chloroethane	mg/kg	0.23 U	0.21 U	0.25 U	0.21 U	0.22 U	0.22 U	0.24 U	0.29 U	0.25 U	0.23 U	0.23 U	0.23 U	0.21 U	0.24 U
Chloroform (Trichloromethane)	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
Chloromethane (Methyl chloride)	mg/kg	0.23 U	0.21 U	0.25 U	0.21 U	0.22 U	0.22 U	0.24 U	0.29 U	0.25 U	0.23 U	0.23 U	0.23 U	0.21 U	0.24 U
cis-1,2-Dichloroethene	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
cis-1,3-Dichloropropene	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
Cyclohexane	mg/kg	1.1 U	1 U	1.2 U	1 U	1.1 U	1 U	1.1 U	1.4 U	1.2 U	1.1 U	1.1 U	1.1 U	1 U	1.1 U
Dibromochloromethane	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.092 U	0.086 U	0.1 U	0.084 U	0.088 U	0.087 U	0.095 U	0.12 U	0.098 U	0.092 U	0.093 U	0.09 U	0.085 U	0.096 U
Ethylbenzene	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
Isopropyl benzene	mg/kg	0.23 U	0.21 U	0.25 U	0.21 U	0.22 U	0.22 U	0.24 U	0.29 U	0.25 U	0.23 U	0.23 U	0.23 U	0.21 U	0.24 U
Methyl acetate	mg/kg	1.1 U	1 U	0.13 J	1 U	1.1 U	1 U	1.1 U	1.4 U	1.2 U	1.1 U	0.034 J	1.1 U	1 U	0.062 J
Methyl cyclohexane	mg/kg	1.1 U	1 U	1.2 U	1 U	1.1 U	1 U	1.1 U	1.4 U	1.2 U	1.1 U	0.018 J	1.1 U	1 U	1.1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.23 U	0.21 U	0.25 U	0.21 U	0.22 U	0.22 U	0.24 U	0.29 U	0.25 U	0.23 U	0.23 U	0.23 U	0.21 U	0.24 U
Methylene chloride	mg/kg	0.23 U	0.21 U	0.25 U	0.21 U	0.22 U	0.22 U	0.24 U	0.29 U	0.25 U	0.23 U	0.23 U	0.23 U	0.21 U	0.24 U
Styrene	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
Tetrachloroethene	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
Toluene	mg/kg	0.092 U	0.086 U	0.1 U	0.084 U	0.088 U	0.087 U	0.095 U	0.12 U	0.098 U	0.092 U	0.093 U	0.09 U	0.085 U	0.096 U
trans-1,2-Dichloroethene	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
trans-1,3-Dichloropropene	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
Trichloroethene	mg/kg	0.046 U	0.043 U	0.051 U	0.042 U	0.044 U	0.043 U	0.047 U	0.058 U	0.049 U	0.046 U	0.047 U	0.045 U	0.043 U	0.048 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.092 U	0.086 U	0.1 U	0.084 U	0.088 U	0.087 U	0.095 U	0.12 U	0.098 U	0.092 U	0.093 U	0.09 U	0.085 U	0.096 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.23 U	0.21 U	0.25 U	0.21 U	0.22 U	0.22 U	0.24 U	0.29 U	0.25 U	0.23 U	0.23 U	0.23 U	0.21 U	0.24 U
Vinyl chloride	mg/kg	0.037 U	0.034 U	0.04 U	0.033 U	0.035 U	0.035 U	0.038 U	0.047 U	0.039 U	0.037 U	0.037 U	0.036 U	0.034 U	0.038 U
Xylenes (total)	mg/kg	0.14 U	0.13 U	0.15 U	0.13 U	0.13 U	0.13 U	0.14 U	0.18 U	0.15 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U
General Chemistry															
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		SB98-11	SB99-11	SB99-11	SB100-11	SB100-11	SB101-11	SB101-11	SB102-11	SB102-11	SB103-11	SB103-11	SB103-11	SB104-11	SB104-11
Sample Identification		SO-17360-021711-DR-073	SO-17360-022511-DR-126	SO-17360-022511-DR-127	SO-17360-031511-DR-243	SO-17360-031511-DR-244	SO-17360-021611-JY-069	SO-17360-021611-JY-070	SO-17360-021711-DR-075	SO-17360-021711-DR-076	SO-17360-021711-DR-082	SO-17360-021711-DR-083	SO-17360-021711-DR-084	SO-17360-021611-JY-063	SO-17360-021611-JY-064
Sample Date		2/17/2011	2/25/2011	2/25/2011	3/15/2011	3/15/2011	2/16/2011	2/16/2011	2/17/2011	2/17/2011	2/17/2011	2/17/2011	2/17/2011	2/16/2011	2/16/2011
Sample Depth		(20-22) ft BGS	(1-3) ft BGS	(20-22) ft BGS	(0.5-2.5) ft BGS	(8-10) ft BGS	(1-3) ft BGS	(20-22) ft BGS	(1-3) ft BGS	(19-21) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(18-20) ft BGS	(1-3) ft BGS	(20-22) ft BGS
Area of Interest		AOI 19	AOI 19	AOI 19	AOI 24	AOI 24	AOI 25	AOI 25	AOI 26.1	AOI 26.1	AOI 26.2	AOI 26.2	AOI 26.2	AOI 26.3	AOI 26.3
Sample Type	Units														
Metals															
Antimony	mg/kg	0.17 UJ	0.17 UJ	0.16 UJ	16.4 UJ	0.030 J	--	--	0.16 UJ	0.16 UJ	0.039 J	0.59 J	0.16 UJ	0.030 J	0.17 UJ
Arsenic	mg/kg	2.3	1.2 J	1.6 J	2.0 J	1.5 J	--	--	0.92	1.2	1.4	2.4	1.8	1.2	2.6
Barium	mg/kg	12.6	18.5	9.2	15.0	10.8	--	--	28.6	3.8	13.8	42.0	6.3	42.4	12.0
Beryllium	mg/kg	0.17 U	0.17 U	0.16 U	0.23 U	0.21 U	--	--	0.16 U	0.16 U	0.17 U	0.17 U	0.16 U	0.16 U	0.17 U
Cadmium	mg/kg	0.042 J	0.083 U	0.082 U	0.13	0.080 U	--	--	0.081 U	0.081 U	0.083 U	0.17	0.082 U	0.082 U	0.083 U
Chromium	mg/kg	5.3	4.2	6.1	6.8	4.6	--	--	4.7	3.2	4.2	9.4	4.2	6.4	9.9
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	2.9	1.7	2.4	2.2	1.9	--	--	1.8	1.4	2.1	3.2	2.3	2.7	3.9
Copper	mg/kg	7.6 J	2.7	6.1	7.7	4.9	--	--	2.1 J	2.8 J	4.2 J	19.8 J	5.7 J	2.8 J	9.4 J
Lead	mg/kg	2.3	3.5	2.0	27.9	5.6	--	--	2.7	1.7	4.3	27.3	2.6	4.9	3.5
Manganese	mg/kg	393 J	110	221	99.0	124	--	--	160 J	83.2 J	128 J	144 J	128 J	313 J	302 J
Mercury	mg/kg	0.043 U	0.042 U	0.041 U	0.041 U	0.039 U	--	--	0.041 U	0.041 U	0.041 U	0.043 U	0.041 U	0.041 U	0.042 U
Nickel	mg/kg	5.2	3.7	5.0	4.7	5.1	--	--	3.9	2.9	4.1	8.1	4.2	5.6	8.7
Selenium	mg/kg	0.098 J	0.16 J	0.096 J	0.12 J	0.096 J	--	--	0.11 J	0.10 J	0.15 J	0.27	0.11 J	0.13 J	0.15 J
Silver	mg/kg	0.086 U	0.083 U	0.082 U	0.082 U	0.080 U	--	--	0.081 U	0.081 U	0.083 U	0.052 J	0.082 U	0.082 U	0.083 U
Thallium	mg/kg	0.086 U	0.083 U	0.082 U	8.2 U	0.080 U	--	--	0.081 U	0.081 U	0.083 U	0.085 U	0.082 U	0.082 U	0.083 U
Vanadium	mg/kg	7.1	7.1	7.6	7.3	6.4	--	--	7.0	4.4	6.7	10.5	6.3	9.6	12.6
Zinc	mg/kg	8.6	10.7	9.6	22.0	10.7	--	--	11.2	5.7	11.4	36.4	11.3	15.8	17.5
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.28 U	0.27 U	0.27 U	0.68 U	0.28 U	--	--	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.55 U
Aroclor-1221 (PCB-1221)	mg/kg	0.28 U	0.27 U	0.27 U	0.68 U	0.28 U	--	--	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.55 U
Aroclor-1232 (PCB-1232)	mg/kg	0.28 U	0.27 U	0.27 U	0.68 U	0.28 U	--	--	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.55 U
Aroclor-1242 (PCB-1242)	mg/kg	0.28 U	0.27 U	0.27 U	0.68 U	0.28 U	--	--	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.55 U
Aroclor-1248 (PCB-1248)	mg/kg	0.28 U	0.27 U	0.27 U	0.68 U	0.28 U	--	--	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.55 U
Aroclor-1254 (PCB-1254)	mg/kg	0.28 U	0.27 U	0.27 U	0.68 U	0.28 U	--	--	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.55 U
Aroclor-1260 (PCB-1260)	mg/kg	0.28 U	0.27 U	0.27 U	3.3	0.28 U	--	--	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.27 U	0.55 U
Total PCBs	mg/kg	ND	ND	ND	3.3	ND	--	--	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	0.28 U	0.27 U	0.27 U	2.7 U	0.013 J	--	--	0.27 U	0.27 U	0.011 J	0.037 J	0.27 U	0.27 U	2.7 U
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	0.28 U	0.013 J	0.27 U	0.54 J	0.28 U	--	--	0.27 U	0.27 U	0.27 U	1.4 U	0.27 U	0.27 U	2.7 U
Acenaphthylene	mg/kg	0.28 U	0.27 U	0.27 U	2.7 U	0.28 U	--	--	0.27 U	0.27 U	0.27 U	1.4 U	0.27 U	0.27 U	2.7 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	0.28 U	0.044 J	0.27 U	1.6 J	0.28 U	--	--	0.27 U	0.27 U	0.27 U	0.07 J	0.27 U	0.27 U	2.7 U
Atrazine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	0.28 U	0.15 J	0.27 U	4.4	0.013 J	--	--	0.27 U	0.0071 J	0.014 J	0.27 J	0.27 U	0.27 U	2.7 U
Benzo(a)pyrene	mg/kg	0.28 U	0.19 J	0.27 U	3.9*	0.012 J	--	--	0.27 U	0.27 U	0.012 J	0.26 J	0.27 U	0.27 U	2.7 U
Benzo(b)fluoranthene	mg/kg	0.28 U	0.29	0.27 U	4.9	0.022 J	--	--	0.27 U	0.0069 J	0.021 J	0.44 J	0.27 U	0.27 U	2.7 U
Benzo(g,h,i)perylene	mg/kg	0.28 U	0.15 J	0.27 U	2.6 J	0.019 J	--	--	0.27 U	0.27 U	0.0094 J	0.24 J	0.27 U	0.27 U	2.7 U
Benzo(k)fluoranthene	mg/kg	0.28 U	0.085 J	0.27 U	2 J	0.015 J	--	--	0.27 U	0.27 U	0.011 J	0.18 J	0.27 U	0.27 U	2.7 U
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.28 U	0.15 J	0.27 U	4.1	0.021 J	--	--	0.27 U	0.27 U	0.017 J	0.39 J	0.27 U	0.27 U	2.7 U
Dibenz(a,h)anthracene	mg/kg	0.28 U	0.052 J	0.27 U	0.52 J	0.28 U	--	--	0.27 U	0.27 U	0.27 U	0.061 J	0.27 U	0.27 U	2.7 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.0084 J	0.24 J	0.27 U	10	0.027 J	--	--	0.0079 J	0.02 J	0.025 J	0.64 J	0.27 U	0.27 U	2.7 U

TABLE 3

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

Sample Location		*SB98-11*	*SB99-11*	*SB99-11*	*SB100-11*	*SB100-11*	*SB101-11*	*SB101-11*	*SB102-11*	*SB102-11*	*SB103-11*	*SB103-11*	*SB103-11*	*SB104-11*	*SB104-11*
Sample Identification		*SO-17360-021711-DR-073*	*SO-17360-022511-DR-126*	*SO-17360-022511-DR-127*	*SO-17360-031511-DR-243*	*SO-17360-031511-DR-244*	*SO-17360-021611-JY-069*	*SO-17360-021611-JY-070*	*SO-17360-021711-DR-075*	*SO-17360-021711-DR-076*	*SO-17360-021711-DR-082*	*SO-17360-021711-DR-083*	*SO-17360-021711-DR-084*	*SO-17360-021611-JY-063*	*SO-17360-021611-JY-064*
Sample Date		*2/17/2011*	*2/25/2011*	*2/25/2011*	*3/15/2011*	*3/15/2011*	*2/16/2011*	*2/16/2011*	*2/17/2011*	*2/17/2011*	*2/17/2011*	*2/17/2011*	*2/17/2011*	*2/16/2011*	*2/16/2011*
Sample Depth		*(20-22) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(0.5-2.5) ft BGS*	*(8-10) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*	*(1-3) ft BGS*	*(19-21) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(18-20) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*
Area of Interest		*AOI 19*	*AOI 19*	*AOI 19*	*AOI 24*	*AOI 24*	*AOI 25*	*AOI 25*	*AOI 26.1*	*AOI 26.1*	*AOI 26.2*	*AOI 26.2*	*AOI 26.2*	*AOI 26.3*	*AOI 26.3*
Sample Type	***Units***														
Fluorene	mg/kg	0.28 U	0.013 J	0.27 U	0.48 J	0.28 U	--	--	0.27 U	0.27 U	0.27 U	1.4 U	0.27 U	0.27 U	2.7 U
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.28 U	0.13 J	0.27 U	2.2 J	0.013 J	--	--	0.27 U	0.27 U	0.008 J	0.19 J	0.27 U	0.27 U	2.7 U
Isophorone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.28 U	0.27 U	0.27 U	2.7 U	0.0084 J	--	--	0.27 U	0.27 U	0.27 U	1.4 U	0.27 U	0.27 U	2.7 U
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	0.28 U	0.15 J	0.27 U	5.9	0.013 J	--	--	0.27 U	0.021 J	0.012 J	0.3 J	0.27 U	0.27 U	2.7 U
Phenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	0.0079 J	0.18 J	0.27 U	8.2	0.022 J	--	--	0.27 U	0.015 J	0.02 J	0.45 J	0.27 U	0.27 U	2.7 U
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
1,1,2,2-Tetrachloroethane	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
1,1,2-Trichloroethane	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
1,1-Dichloroethane	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
1,1-Dichloroethene	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
1,2,4-Trichlorobenzene	mg/kg	0.22 U	0.24 U	0.19 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	0.19 U	0.21 U	0.3 U	0.2 U	0.2 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.22 U	0.24 UJ	0.19 UJ	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	0.19 U	0.21 U	0.3 U	0.2 U	0.2 U	0.22 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.22 U	0.24 U	0.19 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	0.19 U	0.21 U	0.3 U	0.2 U	0.2 U	0.22 U
1,2-Dichlorobenzene	mg/kg	0.088 U	0.095 U	0.076 U	0.088 U	0.084 U	0.089 U	0.088 U	0.084 U	0.077 U	0.085 U	0.12 U	0.081 U	0.081 U	0.09 U
1,2-Dichloroethane	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
1,2-Dichloropropane	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
1,3-Dichlorobenzene	mg/kg	0.088 U	0.095 U	0.076 U	0.088 U	0.084 U	0.089 U	0.088 U	0.084 U	0.077 U	0.085 U	0.12 U	0.081 U	0.081 U	0.09 U
1,4-Dichlorobenzene	mg/kg	0.088 U	0.095 U	0.076 U	0.088 U	0.084 U	0.089 U	0.088 U	0.084 U	0.077 U	0.085 U	0.12 U	0.081 U	0.081 U	0.09 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.66 U	0.71 U	0.57 U	0.66 U	0.63 U	0.67 U	0.66 U	0.63 U	0.57 U	0.082 J	0.89 U	0.61 U	0.61 U	0.67 U
2-Hexanone	mg/kg	2.2 U	2.4 U	1.9 U	2.2 U	2.1 U	2.2 U	2.2 U	2.1 U	1.9 U	2.1 U	3 U	2 U	2 U	2.2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.2 U	2.4 U	1.9 U	2.2 U	2.1 U	2.2 U	2.2 U	2.1 U	1.9 U	2.1 U	3 U	2 U	2 U	2.2 U
Acetone	mg/kg	0.66 U	0.71 UJ	0.57 UJ	0.66 U	0.63 U	0.67 U	0.66 U	0.63 U	0.57 U	0.64 U	0.89 U	0.61 U	0.61 U	0.67 U
Benzene	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
Bromodichloromethane	mg/kg	0.088 U	0.095 U	0.076 U	0.088 U	0.084 U	0.089 U	0.088 U	0.084 U	0.077 U	0.085 U	0.12 U	0.081 U	0.081 U	0.09 U
Bromoform	mg/kg	0.088 U	0.095 UJ	0.076 UJ	0.088 U	0.084 U	0.089 U	0.088 U	0.084 U	0.077 U	0.085 U	0.12 U	0.081 U	0.081 U	0.09 U
Bromomethane (Methyl bromide)	mg/kg	0.22 U	0.24 U	0.19 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	0.19 U	0.21 U	0.3 U	0.2 U	0.2 U	0.22 U
Carbon disulfide	mg/kg	0.22 U	0.24 U	0.19 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	0.19 U	0.21 U	0.3 U	0.2 U	0.2 U	0.22 U
Carbon tetrachloride	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
Chlorobenzene	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
Chloroethane	mg/kg	0.22 U	0.24 U	0.19 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	0.19 U	0.21 U	0.3 U	0.2 U	0.2 U	0.22 U
Chloroform (Trichloromethane)	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
Chloromethane (Methyl chloride)	mg/kg	0.22 U	0.24 U	0.19 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	0.19 U	0.21 U	0.3 U	0.2 U	0.2 U	0.22 U
cis-1,2-Dichloroethene	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
cis-1,3-Dichloropropene	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
Cyclohexane	mg/kg	1.1 U	1.1 U	0.92 U	1.1 U	1 U	1.1 U	0.1 J	1 U	0.92 U	1 U	0.064 J	0.97 U	0.97 U	1.1 U
Dibromochloromethane	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.088 U	0.095 U	0.076 U	0.088 U	0.084 U	0.089 U	0.088 U	0.084 U	0.077 U	0.085 U	0.12 U	0.081 U	0.081 U	0.09 U
Ethylbenzene	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.0097 J	0.042 U	0.038 U	0.043 U	0.0086 J	0.04 U	0.04 U	0.045 U
Isopropyl benzene	mg/kg	0.22 U	0.24 U	0.19 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	0.19 U	0.21 U	0.011 J	0.2 U	0.2 U	0.22 U
Methyl acetate	mg/kg	1.1 U	1.1 U	0.92 U	0.041 J	1 U	1.1 U	0.66 J	1 U	0.92 U	1 U	0.14 J	0.97 U	0.97 U	1.1 U
Methyl cyclohexane	mg/kg	1.1 U	1.1 U	0.92 U	0.021 J	1 U	1.1 U	0.064 J	1 U	0.92 U	1 U	0.22 J	0.97 U	0.97 U	1.1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.22 U	0.24 U	0.19 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	0.19 U	0.21 U	0.3 U	0.2 U	0.2 U	0.22 U
Methylene chloride	mg/kg	0.22 U	0.24 U	0.19 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	0.19 U	0.21 U	0.3 U	0.2 U	0.2 U	0.22 U
Styrene	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
Tetrachloroethene	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.029 J	0.04 U	0.04 U	0.045 U
Toluene	mg/kg	0.088 U	0.095 U	0.076 U	0.088 U	0.084 U	0.089 U	0.063 J	0.084 U	0.077 U	0.085 U	0.037 J	0.081 U	0.081 U	0.09 U
trans-1,2-Dichloroethene	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
trans-1,3-Dichloropropene	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.044 U	0.044 U	0.042 U	0.038 U	0.043 U	0.059 U	0.04 U	0.04 U	0.045 U
Trichloroethene	mg/kg	0.044 U	0.047 U	0.038 U	0.044 U	0.042 U	0.042 J	1.8	0.042 U	0.038 U	0.038 J	0.3	0.04 U	0.04 U	0.045 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.088 U	0.095 U	0.076 U	0.088 U	0.084 U	0.089 U	0.088 U	0.084 U	0.077 U	0.085 U	0.12 U	0.081 U	0.081 U	0.09 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.22 U	0.24 U	0.19 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	0.19 U	0.21 U	0.3 U	0.2 U	0.2 U	0.22 U
Vinyl chloride	mg/kg	0.035 U	0.038 U	0.031 U	0.035 U	0.033 U	0.035 U	0.035 U	0.033 U	0.031 U	0.034 U	0.047 U	0.032 U	0.032 U	0.036 U
Xylenes (total)	mg/kg	0.13 U	0.14 U	0.11 U	0.13 U	0.13 U	0.13 U	0.079 J	0.13 U	0.11 U	0.13 U	0.11 J	0.12 U	0.12 U	0.13 U
General Chemistry															
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		*SB105-11*	*SB105-11*	*SB106-11*	*SB106-11*	*SB106-11*	*SB106-11*	*SB106-11*	*SB106-11*	*SB107-11*	*SB107-11*	*SB107-11*	*SB107-11*	*SB107-11*	*SB108-11*
Sample Identification		*SO-17360-022211-DR-111*	*SO-17360-022211-DR-112*	*SO-17360-031411-DR-211*	*SO-17360-031411-DR-212*	*SO-17360-031411-DR-213*	*SO-17360-031411-DR-214*	*SO-17360-031411-DR-215*	*SO-17360-031411-DR-216*	*SO-17360-031411-DR-217*	*SO-17360-031411-DR-218*	*SO-17360-031411-DR-219*	*SO-17360-031411-DR-220*	*SO-17360-031411-DR-221*	*SO-17360-031411-DR-222*
Sample Date		*2/22/2011*	*2/22/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*
Sample Depth		*(1-3) ft BGS*	*(17.5-19.5) 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 26.4*	*AOI 26.4*	*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*				*Duplicate*										
Metals															
Antimony	mg/kg	0.073 J	0.16 UJ	0.51 J	0.47 J	0.21 J	0.17 UJ	0.035 J	0.15 UJ	0.50 J	0.075 J	1.4 J	0.11 J	0.086 J	0.51 J
Arsenic	mg/kg	1.5	1.5	5.9 J	5.4 J	2.6 J	0.41 J	0.37 J	0.50 J	6.5 J	1.4 J	3.9 J	1.8 J	2.1 J	4.6 J
Barium	mg/kg	21.7	4.7	25.8	53.1	68.9	8.6	8.7	5.2	53.7	25.1	57.7	16.8	7.5	22.8
Beryllium	mg/kg	0.17 U	0.16 U	0.34 U	0.36 U	0.35 U	0.23 U	0.24 U	0.17 U	0.79	0.22 U	0.60 U	0.27 U	0.25 U	0.40 U
Cadmium	mg/kg	0.084 U	0.082 U	0.14	0.14	0.48	0.085 U	0.083 U	0.075 U	0.17	0.062 J	0.56	0.10	0.089 U	0.067 J
Chromium	mg/kg	5.4	2.6	200	23.4	6.2	5.8	5.8	3.3	23.0 J	22.4	**291**[a]	6.9	5.6	17.6
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	2.2	1.9	4.3	3.0	3.4	1.9	2.0	1.7	5.9	3.6	5.3	1.3	1.4	3.0
Copper	mg/kg	12.1	3.4	53.2	35.2	10.6	2.4	3.9	3.7	63.9 J	7.0	55.5	5.1	4.5	27.7
Lead	mg/kg	6.6	1.9	27.4	23.7	22.9	1.7	1.7	1.2	49.9 J	21.0	52.8	3.2	1.5	39.8
Manganese	mg/kg	132	99.9	244	142	61.0	33.6	30.0	23.5	189 J	30.1	1190	28.6	22.1	82.6
Mercury	mg/kg	0.042 U	0.041 U	0.019 J	0.021 J	0.045 U	0.040 U	0.040 U	0.038 U	0.023 J	0.054 U	0.064	0.023 J	0.045 U	0.023 J
Nickel	mg/kg	4.7	3.2	117	21.5	16.5	4.5	5.1	3.5	26.0 J	7.6	172	4.8	4.3	14.9
Selenium	mg/kg	0.16 J	0.13 J	0.24 J	0.29 J	0.37 J	0.11 J	0.13 J	0.15 J	0.40 J	0.22 UJ	1.6 J	1.1 J	0.34 J	0.23 J
Silver	mg/kg	0.084 U	0.082 U	0.17	0.24	4.0	0.085 U	0.083 U	0.075 U	0.14	0.022 J	0.17	0.10 U	0.089 U	0.098
Thallium	mg/kg	0.084 U	0.082 U	0.11 U	0.088 U	0.10 U	0.085 U	0.083 U	0.075 U	0.12 U	0.11 U	0.12 U	0.10 U	0.15 U	0.088 U
Vanadium	mg/kg	7.3	6.5	6.6	5.7	10.1	9.0	10.4	7.3	18.3	6.9	21.8	14.1	8.3	6.7
Zinc	mg/kg	13.9	8.7	57.6	44.3	8.6	7.0	8.1	6.5	55.0	35.4	71.7	10.2	6.3	47.2
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.28 U	0.27 U	0.29 U	0.29 U	0.34 U	0.28 U	0.29 U	0.28 U	0.3 U	0.36 U	0.39 U	0.35 U	0.29 U	0.3 U
Aroclor-1221 (PCB-1221)	mg/kg	0.28 U	0.27 U	0.29 U	0.29 U	0.34 U	0.28 U	0.29 U	0.28 U	0.3 U	0.36 U	0.39 U	0.35 U	0.29 U	0.3 U
Aroclor-1232 (PCB-1232)	mg/kg	0.28 U	0.27 U	0.29 U	0.29 U	0.34 U	0.28 U	0.29 U	0.28 U	0.3 U	0.36 U	0.39 U	0.35 U	0.29 U	0.3 U
Aroclor-1242 (PCB-1242)	mg/kg	0.28 U	0.27 U	0.29 U	0.29 U	0.34 U	0.28 U	0.29 U	0.28 U	0.3 U	0.36 U	0.39 U	0.35 U	0.29 U	0.3 U
Aroclor-1248 (PCB-1248)	mg/kg	0.28 U	0.27 U	0.29 U	0.29 U	0.34 U	0.28 U	0.29 U	0.28 U	0.3 U	0.36 U	0.39 U	0.35 U	0.29 U	0.3 U
Aroclor-1254 (PCB-1254)	mg/kg	0.28 U	0.27 U	0.29 U	0.29 U	0.34 U	0.28 U	0.29 U	0.28 U	0.3 U	0.36 U	0.22 J	0.35 U	0.29 U	0.3 U
Aroclor-1260 (PCB-1260)	mg/kg	0.28 U	0.27 U	0.29 U	0.29 U	0.34 U	0.28 U	0.29 U	0.28 U	0.3 U	0.36 U	0.39 U	0.35 U	0.29 U	0.3 U
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22 J	ND	ND	ND
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	0.04 J	0.27 U	0.079 J	0.066 J	0.024 J	0.28 U	0.29 U	0.28 U	0.11 J	0.36 U	0.61 J	0.35 U	0.29 U	0.066 J
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	0.015 J	0.27 U	0.0088 J	0.29 U	0.34 U	0.28 U	0.29 U	0.28 U	0.07 J	0.36 U	1.6 J	0.35 U	0.29 U	0.74 U
Acenaphthylene	mg/kg	0.28 U	0.27 U	0.29 U	0.29 U	0.34 U	0.28 U	0.29 U	0.28 U	1.2 U	0.36 U	9.8 U	0.35 U	0.29 U	0.74 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	0.045 J	0.27 U	0.022 J	0.0095 J	0.34 U	0.28 U	0.29 U	0.28 U	0.17 J	0.36 U	3.1 J	0.35 U	0.29 U	0.02 J
Atrazine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	0.12 J	0.27 U	0.12 J	0.083 J	0.016 J	0.28 U	0.29 U	0.28 U	0.37 J	0.015 J	9.4 J	0.022 J	0.29 U	0.11 J
Benzo(a)pyrene	mg/kg	0.13 J	0.27 U	0.14 J	0.086 J	0.009 J	0.28 U	0.29 U	0.28 U	0.3 J	0.015 J	**8.9 J**[a,b]	0.019 J	0.29 U	0.095 J
Benzo(b)fluoranthene	mg/kg	0.19 J	0.27 U	0.2 J	0.14 J	0.024 J	0.28 U	0.29 U	0.28 U	0.49 J	0.024 J	14	0.029 J	0.29 U	0.18 J
Benzo(g,h,i)perylene	mg/kg	0.098 J	0.27 U	0.14 J	0.076 J	0.34 U	0.28 U	0.29 U	0.28 U	0.21 J	0.014 J	6.2 J	0.015 J	0.29 U	0.1 J
Benzo(k)fluoranthene	mg/kg	0.085 J	0.27 U	0.12 J	0.073 J	0.0092 J	0.28 U	0.29 U	0.28 U	0.31 J	0.011 J	4.5 J	0.018 J	0.29 U	0.088 J
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.13 J	0.27 U	0.19 J	0.13 J	0.031 J	0.28 U	0.29 U	0.28 U	0.65 J	0.02 J	12	0.029 J	0.29 U	0.17 J
Dibenz(a,h)anthracene	mg/kg	0.28 U	0.27 U	0.032 J	0.023 J	0.34 U	0.28 U	0.29 U	0.28 U	1.2 U	0.36 U	1.8 J	0.35 U	0.29 U	0.032 J
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.27 J	0.27 U	0.24 J	0.15 J	0.038 J	0.28 U	0.29 U	0.28 U	1.5	0.031 J	23	0.058 J	0.29 U	0.31 J

TABLE 3

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

Sample Location		*SB105-11*	*SB105-11*	*SB106-11*	*SB106-11*	*SB106-11*	*SB106-11*	*SB106-11*	*SB106-11*	*SB107-11*	*SB107-11*	*SB107-11*	*SB107-11*	*SB107-11*	*SB108-11*
Sample Identification		*SO-17360-022211-DR-111*	*SO-17360-022211-DR-112*	*SO-17360-031411-DR-211*	*SO-17360-031411-DR-212*	*SO-17360-031411-DR-213*	*SO-17360-031411-DR-214*	*SO-17360-031411-DR-215*	*SO-17360-031411-DR-216*	*SO-17360-031411-DR-217*	*SO-17360-031411-DR-218*	*SO-17360-031411-DR-219*	*SO-17360-031411-DR-220*	*SO-17360-031411-DR-221*	*SO-17360-031411-DR-222*
Sample Date		*2/22/2011*	*2/22/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*	*3/14/2011*
Sample Depth		*(1-3) ft BGS*	*(17.5-19.5) 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 26.4*	*AOI 26.4*	*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*				*Duplicate*										
Fluorene	mg/kg	0.013 J	0.27 U	0.29 U	0.29 U	0.34 U	0.28 U	0.29 U	0.28 U	0.031 J	0.36 U	2 J	0.35 U	0.29 U	0.74 U
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.08 J	0.27 U	0.1 J	0.059 J	0.34 U	0.28 U	0.29 U	0.28 U	0.13 J	0.011 J	5.2 J	0.011 J	0.29 U	0.063 J
Isophorone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.024 J	0.27 U	0.039 J	0.033 J	0.013 J	0.28 U	0.29 U	0.28 U	0.14 J	0.36 U	0.72 J	0.35 U	0.29 U	0.034 J
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	0.18 J	0.27 U	0.14 J	0.088 J	0.045 J	0.28 U	0.29 U	0.28 U	1.4	0.015 J	18	0.041 J	0.29 U	0.11 J
Phenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	0.21 J	0.27 U	0.18 J	0.11 J	0.029 J	0.28 U	0.29 U	0.28 U	0.96 J	0.023 J	17	0.039 J	0.29 U	0.23 J
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/kg	0.25 U	0.22 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.25 U	0.22 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.25 U	0.22 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	0.1 U	0.09 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	0.1 U	0.09 U	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	0.1 U	0.09 U	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.75 U	0.67 U	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	2.5 U	2.2 U	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.5 U	2.2 U	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	mg/kg	0.75 U	0.67 U	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/kg	0.1 U	0.09 U	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/kg	0.1 U	0.09 U	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	mg/kg	0.25 UJ	0.22 UJ	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	mg/kg	0.25 U	0.22 U	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	mg/kg	0.25 U	0.22 U	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	mg/kg	0.25 UJ	0.22 UJ	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	1.2 U	1.1 U	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	mg/kg	0.1 U	0.09 U	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl benzene	mg/kg	0.25 U	0.22 U	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	mg/kg	0.071 J	1.1 U	--	--	--	--	--	--	--	--	--	--	--	--
Methyl cyclohexane	mg/kg	1.2 U	1.1 U	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	mg/kg	0.25 U	0.22 U	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	mg/kg	0.25 U	0.22 U	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	mg/kg	0.025 J	0.09 U	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	0.05 U	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	0.015 J	0.045 U	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	mg/kg	0.1 U	0.09 U	--	--	--	--	--	--	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	mg/kg	0.25 U	0.22 U	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	mg/kg	0.04 U	0.036 U	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	mg/kg	0.026 J	0.13 U	--	--	--	--	--	--	--	--	--	--	--	--
General Chemistry															
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		SB108-11	SB108-11	SB108-11	SB108-11	SB109-11	SB109-11	SB109-11	SB109-11	SB109-11	SB109-11	SB110-11	SB110-11	SB110-11	SB110-11
Sample Identification		SO-17360-031411-DR-223	SO-17360-031411-DR-224	SO-17360-031411-DR-225	SO-17360-031411-DR-226	SO-17360-031411-DR-227	SO-17360-031411-DR-228	SO-17360-031411-DR-229	SO-17360-031411-DR-230	SO-17360-031411-DR-231	SO-17360-031411-DR-232	SO-17360-031411-DR-233	SO-17360-031411-DR-234	SO-17360-031411-DR-235	SO-17360-031411-DR-236
Sample Date		3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011
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	(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										Duplicate				
Metals															
Antimony	mg/kg	0.65 J	0.57 J	0.23 J	0.16 UJ	2.2 J	22.8 J	27.2 J	2.8 J	0.074 J	0.071 J	1.2 J	0.47 J	0.74 J	0.32 J
Arsenic	mg/kg	0.47 J	0.65 J	1.7 J	1.4 J	**36.6 J[a]**	1.9 J	**8.0 J[a]**	5.8 J	1.5 J	1.7 J	2.6 J	2.5 J	3.8 J	2.3 J
Barium	mg/kg	0.60 J	4.5	33.3	8.2	81.8	9.8	29.3	48.7	4.2	4.0	78.2	5.3	33.4	57.7
Beryllium	mg/kg	0.15 U	0.16 U	0.37 U	0.27 U	0.88	0.16 U	0.20 U	0.60 U	0.20 U	0.22 U	0.39 U	0.16 U	0.31 U	0.65 U
Cadmium	mg/kg	0.073 U	0.082 U	0.35	0.081 U	0.16	0.16	0.34	0.58	0.081 U	0.081 U	0.41	0.25	0.59	1.1
Chromium	mg/kg	16.9	14.3	10.6	4.8	10.1	11.6	27.8	13.0	4.0	4.6	6.9	16.9	13.5	12.6
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	0.51	0.55	1.3	1.4	3.6	1.0	2.2	1.7	1.9	2.2	2.4	1.4	2.8	1.3
Copper	mg/kg	5.0	5.7	10.1	3.5	34.1	8.4	20.1	13.6	5.0	5.8	71.3	4.9	9.7	13.6
Lead	mg/kg	80.5	14.4	10.7	1.9	17.5	19.4	29.8	11.7	1.5	1.5	70.8	7.3	11.1	7.7
Manganese	mg/kg	65.8	46.8	200	52.2	51.1	47.3	153	69.5	27.6	35.2	99.2	69.5	56.1	18.1
Mercury	mg/kg	0.030 J	0.035 U	0.042 J	0.043 U	0.038 J	0.036 U	0.045 U	0.11	0.042 U	0.039 U	0.045 U	0.041 U	0.043 U	0.14
Nickel	mg/kg	13.7	9.4	29.5	3.1	13.1	10.8	27.5	10.7	4.4	5.4	7.4	14.7	17.7	8.1
Selenium	mg/kg	0.15 UJ	0.16 UJ	0.79 J	0.23 J	0.53 J	0.16 UJ	0.19 J	2.7 J	0.16 J	0.17 J	0.30 J	0.16 UJ	0.43 J	3.6 J
Silver	mg/kg	0.21	0.10	0.12	0.081 U	0.076 J	0.082	0.31	0.15 U	0.081 U	0.081 U	0.074 J	3.9	2.0	0.50
Thallium	mg/kg	0.073 U	0.082 U	0.11 U	0.081 U	0.31	0.081 U	0.085 U	0.16 U	0.084 U	0.081 U	0.45 U	0.081 U	0.089 U	0.19 U
Vanadium	mg/kg	0.73 U	0.65 J	9.5	8.2	8.4	1.9	4.8	20.0	7.5	7.2	8.0	2.2	5.7	40.2
Zinc	mg/kg	5.0	7.6	30.5	8.1	15.3	14.4	27.7	25.2	7.5	8.1	62.0	9.2	15.5	14.9
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.28 U	0.28 U	0.37 U	0.29 U	0.31 U	0.27 U	0.29 U	0.5 U	0.28 U	0.28 U	0.3 U	0.28 U	0.31 U	0.68 U
Aroclor-1221 (PCB-1221)	mg/kg	0.28 U	0.28 U	0.37 U	0.29 U	0.31 U	0.27 U	0.29 U	0.5 U	0.28 U	0.28 U	0.3 U	0.28 U	0.31 U	0.68 U
Aroclor-1232 (PCB-1232)	mg/kg	0.28 U	0.28 U	0.37 U	0.29 U	0.31 U	0.27 U	0.29 U	0.5 U	0.28 U	0.28 U	0.3 U	0.28 U	0.31 U	0.68 U
Aroclor-1242 (PCB-1242)	mg/kg	0.28 U	0.28 U	0.37 U	0.29 U	0.31 U	0.27 U	0.29 U	0.5 U	0.28 U	0.28 U	0.3 U	0.28 U	0.31 U	0.68 U
Aroclor-1248 (PCB-1248)	mg/kg	0.28 U	0.28 U	0.37 U	0.29 U	0.31 U	0.27 U	0.29 U	0.5 U	0.28 U	0.28 U	0.3 U	0.28 U	0.31 U	0.68 U
Aroclor-1254 (PCB-1254)	mg/kg	0.28 U	0.28 U	0.37 U	0.29 U	0.31 U	0.27 U	0.29 U	0.5 U	0.28 U	0.28 U	0.3 U	0.28 U	0.31 U	0.68 U
Aroclor-1260 (PCB-1260)	mg/kg	0.28 U	0.28 U	0.37 U	0.29 U	0.31 U	0.27 U	0.048 J	0.5 U	0.28 U	0.28 U	0.3 U	0.28 U	0.027 J	0.68 U
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	0.048 J	ND	ND	ND	ND	ND	0.027 J	ND
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	0.28 U	0.28 U	0.038 J	0.29 U	0.11 J	0.27 U	29 U	0.12 J	0.28 U	0.28 U	0.95 J	0.28 U	0.056 J	0.13 J
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	0.28 U	0.28 U	0.37 U	0.29 U	0.016 J	0.27 U	6.3 J	0.032 J	0.28 U	0.28 U	1.5 U	0.28 U	0.31 U	0.68 U
Acenaphthylene	mg/kg	0.28 U	0.28 U	0.37 U	0.29 U	0.015 J	0.27 U	29 U	0.5 U	0.28 U	0.28 U	1.5 U	0.28 U	0.31 U	0.68 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	0.28 U	0.28 U	0.011 J	0.29 U	0.055 J	0.27 U	16 J	0.087 J	0.28 U	0.019 J	1.5 U	0.28 U	0.31 U	0.68 U
Atrazine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	0.28 U	0.021 J	0.032 J	0.29 U	0.19 J	0.02 J	**35[a]**	0.24 J	0.014 J	0.038 J	0.12 J	0.28 U	0.022 J	0.031 J
Benzo(a)pyrene	mg/kg	0.0073 J	0.022 J	0.032 J	0.29 U	0.2 J	0.024 J	**27 J[a]**	0.22 J	0.012 J	0.035 J	0.094 J	0.28 U	0.023 J	0.027 J
Benzo(b)fluoranthene	mg/kg	0.011 J	0.041 J	0.056 J	0.29 U	0.31	0.036 J	**42[a]**	0.33 J	0.017 J	0.049 J	0.15 J	0.0087 J	0.042 J	0.043 J
Benzo(g,h,i)perylene	mg/kg	0.015 J	0.037 J	0.025 J	0.29 U	0.23 J	0.056 J	17 J	0.13 J	0.0082 J	0.024 J	0.11 J	0.28 U	0.02 J	0.02 J
Benzo(k)fluoranthene	mg/kg	0.28 U	0.015 J	0.018 J	0.29 U	0.079 J	0.015 J	15 J	0.13 J	0.0077 J	0.018 J	0.054 J	0.28 U	0.013 J	0.68 U
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.0073 J	0.037 J	0.047 J	0.29 U	0.27 J	0.026 J	37	0.25 J	0.02 J	0.046 J	0.16 J	0.28 U	0.037 J	0.042 J
Dibenz(a,h)anthracene	mg/kg	0.28 U	0.28 U	0.37 U	0.29 U	0.066 J	0.27 U	**4.9 J[a]**	0.032 J	0.28 U	0.28 U	1.5 U	0.28 U	0.31 U	0.68 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.0077 J	0.064 J	0.093 J	0.29 U	0.43	0.034 J	93	0.57	0.035 J	0.12 J	0.19 J	0.011 J	0.055 J	0.083 J

TABLE 3

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

Sample Location		SB108-11	SB108-11	SB108-11	SB108-11	SB109-11	SB109-11	SB109-11	SB109-11	SB109-11	SB109-11	SB110-11	SB110-11	SB110-11	SB110-11
Sample Identification		SO-17360-031411-DR-223	SO-17360-031411-DR-224	SO-17360-031411-DR-225	SO-17360-031411-DR-226	SO-17360-031411-DR-227	SO-17360-031411-DR-228	SO-17360-031411-DR-229	SO-17360-031411-DR-230	SO-17360-031411-DR-231	SO-17360-031411-DR-232	SO-17360-031411-DR-233	SO-17360-031411-DR-234	SO-17360-031411-DR-235	SO-17360-031411-DR-236
Sample Date		3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011
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	(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										Duplicate				
Fluorene	mg/kg	0.28 U	0.28 U	0.01 J	0.29 U	0.013 J	0.27 U	7.6 J	0.042 J	0.28 U	0.0079 J	1.5 U	0.28 U	0.31 U	0.68 U
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.0073 J	0.019 J	0.019 J	0.29 U	0.16 J	0.028 J	16 J	0.11 J	0.28 U	0.02 J	0.048 J	0.28 U	0.016 J	0.68 U
Isophorone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.28 U	0.28 U	0.022 J	0.29 U	0.042 J	0.27 U	0.82 J	0.054 J	0.28 U	0.28 U	0.42 J	0.28 U	0.027 J	0.069 J
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	0.28 U	0.022 J	0.078 J	0.29 U	0.41	0.011 J	74	0.45 J	0.026 J	0.084 J	0.47 J	0.0078 J	0.059 J	0.08 J
Phenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	0.28 U	0.049 J	0.064 J	0.29 U	0.36	0.028 J	63	0.41 J	0.025 J	0.081 J	0.16 J	0.0075 J	0.035 J	0.052 J
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 (Ethylene dibromide)	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 (Methyl ethyl ketone) (MEK)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	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															
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		SB110-11	SB111-11	SB111-11	SB111-11	SB111-11	SB111-11	SB112-11	SB112-11	SB112-11	SB114-11	SB114-11	SB115-11	SB115-11	SB116-11
Sample Identification		SO-17360-031411-DR-237	SO-17360-031411-DR-238	SO-17360-031411-DR-239	SO-17360-031411-DR-240	SO-17360-031411-DR-241	SO-17360-031411-DR-242	SO-17360-031511-DR-248	SO-17360-031511-DR-249	SO-17360-031511-DR-250	SO-17360-022111-DR-094	SO-17360-022111-DR-095	SO-17360-022311-DR-124	SO-17360-022311-DR-125	SO-17360-030311-DR-163
Sample Date		3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/15/2011	3/15/2011	3/15/2011	2/21/2011	2/21/2011	2/23/2011	2/23/2011	3/3/2011
Sample Depth		(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(2-4) ft BGS	(12-14) ft BGS	(12-14) ft BGS	(1-3) ft BGS	(17-19) ft BGS	(2-4) ft BGS	(20-22) ft BGS	(2-4) ft BGS
Area of Interest		AOI 27	AOI 27	AOI 27	AOI 27	AOI 27	AOI 27	AOI 29.1	AOI 29.1	AOI 29.1	AOI 32	AOI 32	AOI 33	AOI 33	AOI 33
Sample Type	Units									Duplicate					
Metals															
Antimony	mg/kg	0.061 J	0.20 J	0.13 J	0.16 J	0.83 J	0.071 J	0.27 J	0.17 UJ	0.17 UJ	0.075 J	0.16 UJ	0.17 UJ	0.17 UJ	0.17 UJ
Arsenic	mg/kg	1.4 J	6.3 J	4.5 J	2.8 J	5.0 J	2.6 J	3.5 J	0.93 J	1.0 J	1.1	1.1	1.4 J	0.65 J	1.5 J
Barium	mg/kg	5.5	66.7	24.3	73.3	41.1	8.3	32.1	2.8	3.5	11.4	3.6	9.1	2.9	13.6
Beryllium	mg/kg	0.23 U	0.47 U	0.35 U	0.57 U	0.57 U	0.21 U	0.36 U	0.17 U	0.18 U	0.16 U	0.16 U	0.17 U	0.17 U	0.17 U
Cadmium	mg/kg	0.081 U	0.22	0.060 J	0.10 U	1.0	0.097 U	0.14	0.084 U	0.083 U	0.056 J	0.082 U	0.087 U	0.083 U	0.085 U
Chromium	mg/kg	4.5	8.6	11.9	15.8	17.0	5.8	11.6	3.0	5.6	3.3	3.7	3.8	2.0	6.9
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	1.8	3.0	3.2	2.5	0.98 J	1.5	2.8	1.1	1.6	1.2	1.6	1.7	0.88	2.6
Copper	mg/kg	3.2	54.2	18.3	12.0	24.1	4.4	18.2	2.4	3.1	6.3	3.1	5.0	1.4	4.9
Lead	mg/kg	1.6	30.1	8.8	8.2	3.4	1.7	15.6	0.95	1.2	9.4	1.1	4.5	0.95	2.3
Manganese	mg/kg	37.6	80.0	131	88.0	19.4	40.0	220	71.1	87.2	57.9	82.3	144	58.4	131 J
Mercury	mg/kg	0.040 U	0.024 J	0.045 U	0.055 U	0.12 J	0.046 U	0.042 U	0.042 U	0.039 U	0.020 J	0.041 U	0.043 U	0.041 U	0.043 U
Nickel	mg/kg	4.2	9.8	12.5	13.5	12.2	4.1	9.3	3.0	4.3	2.7	3.6	4.4	2.0	5.9
Selenium	mg/kg	0.14 J	0.40 J	0.15 J	0.56 J	11.9 J	0.30 J	0.21 J	0.17 UJ	0.17 UJ	0.27 J	0.15 J	0.15 J	0.10 J	0.13 J
Silver	mg/kg	0.028 J	0.10	0.090	0.087 J	0.27 U	0.097 U	0.083	0.084 U	0.083 U	0.017 J	0.082 U	0.027 J	0.083 U	0.085 U
Thallium	mg/kg	0.081 U	0.10 U	0.10 U	0.10 U	0.27 U	0.097 U	0.081 U	0.084 U	0.083 U	0.082 U	0.082 U	0.087 U	0.083 U	0.085 U
Vanadium	mg/kg	7.1	8.9	10.8	32.1	48.7	7.0	10.1	3.3	5.0	4.2	4.1	8.2	2.3	9.7
Zinc	mg/kg	7.7	29.0	16.3	24.1	16.1 U	12.9	29.9	6.1	8.4	12.7	5.9	9.7	4.3	10.7
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.28 U	0.3 U	0.3 U	0.37 U	0.89 U	0.33 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.28 U
Aroclor-1221 (PCB-1221)	mg/kg	0.28 U	0.3 U	0.3 U	0.37 U	0.89 U	0.33 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.28 U
Aroclor-1232 (PCB-1232)	mg/kg	0.28 U	0.3 U	0.3 U	0.37 U	0.89 U	0.33 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.28 U
Aroclor-1242 (PCB-1242)	mg/kg	0.28 U	0.3 U	0.3 U	0.37 U	0.89 U	0.33 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.28 U
Aroclor-1248 (PCB-1248)	mg/kg	0.28 U	0.3 U	0.3 U	0.37 U	0.89 U	0.33 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.28 U
Aroclor-1254 (PCB-1254)	mg/kg	0.28 U	0.3 U	0.3 U	0.37 U	0.89 U	0.33 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.28 U
Aroclor-1260 (PCB-1260)	mg/kg	0.28 U	0.3 U	0.3 U	0.37 U	0.89 U	0.33 U	0.021 J	0.28 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.28 U
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	0.021 J	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	0.28 U	0.053 J	0.028 J	0.024 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.28 U
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	0.28 U	0.028 J	0.3 U	0.019 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.0082 J	0.27 U	0.29 U	0.27 U	0.28 U
Acenaphthylene	mg/kg	0.28 U	0.6 U	0.3 U	0.37 U	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.28 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	0.28 U	0.11 J	0.3 U	0.062 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.018 J	0.27 U	0.027 J	0.27 U	0.28 U
Atrazine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	0.28 U	0.34 J	0.024 J	0.17 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.042 J	0.27 U	0.16 J	0.27 U	0.28 U
Benzo(a)pyrene	mg/kg	0.28 U	0.26 J	0.024 J	0.13 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.036 J	0.27 U	0.15 J	0.27 U	0.28 U
Benzo(b)fluoranthene	mg/kg	0.28 U	0.49 J	0.045 J	0.23 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.042 J	0.27 U	0.22 J	0.27 U	0.28 U
Benzo(g,h,i)perylene	mg/kg	0.28 U	0.19 J	0.023 J	0.077 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.026 J	0.27 U	0.11 J	0.27 U	0.28 U
Benzo(k)fluoranthene	mg/kg	0.28 U	0.2 J	0.016 J	0.077 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.024 J	0.27 U	0.096 J	0.27 U	0.28 U
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.28 U	0.5 J	0.044 J	0.24 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.04 J	0.27 U	0.17 J	0.27 U	0.28 U
Dibenz(a,h)anthracene	mg/kg	0.28 U	0.0096 J	0.3 U	0.023 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.27 U	0.27 U	0.027 J	0.27 U	0.28 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.28 U	1.1	0.044 J	0.61	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.1 J	0.27 U	0.31	0.27 U	0.28 U

TABLE 3

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

Sample Location		SB110-11	SB111-11	SB111-11	SB111-11	SB111-11	SB111-11	SB112-11	SB112-11	SB112-11	SB114-11	SB114-11	SB115-11	SB115-11	SB116-11
Sample Identification		SO-17360-031411-DR-237	SO-17360-031411-DR-238	SO-17360-031411-DR-239	SO-17360-031411-DR-240	SO-17360-031411-DR-241	SO-17360-031411-DR-242	SO-17360-031511-DR-248	SO-17360-031511-DR-249	SO-17360-031511-DR-250	SO-17360-022111-DR-094	SO-17360-022111-DR-095	SO-17360-022311-DR-124	SO-17360-022311-DR-125	SO-17360-030311-DR-163
Sample Date		3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/14/2011	3/15/2011	3/15/2011	3/15/2011	2/21/2011	2/21/2011	2/23/2011	2/23/2011	3/3/2011
Sample Depth		(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(2-4) ft BGS	(12-14) ft BGS	(12-14) ft BGS	(1-3) ft BGS	(17-19) ft BGS	(2-4) ft BGS	(20-22) ft BGS	(2-4) ft BGS
Area of Interest		AOI 27	AOI 27	AOI 27	AOI 27	AOI 27	AOI 27	AOI 29.1	AOI 29.1	AOI 29.1	AOI 32	AOI 32	AOI 33	AOI 33	AOI 33
Sample Type	Units									Duplicate					
Fluorene	mg/kg	0.28 U	0.031 J	0.3 U	0.018 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.0081 J	0.27 U	0.29 U	0.27 U	0.28 U
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.28 U	0.17 J	0.017 J	0.071 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.02 J	0.27 U	0.098 J	0.27 U	0.28 U
Isophorone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.28 U	0.03 J	0.013 J	0.015 J	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.27 U	0.27 U	0.29 U	0.27 U	0.28 U
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	0.28 U	0.79	0.05 J	0.41	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.08 J	0.27 U	0.098 J	0.27 U	0.28 U
Phenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	0.28 U	0.8	0.035 J	0.45	4.5 U	0.33 U	14 U	0.28 U	0.27 U	0.083 J	0.27 U	0.26 J	0.27 U	0.28 U
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
1,1,2,2-Tetrachloroethane	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
1,1,2-Trichloroethane	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
1,1-Dichloroethane	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
1,1-Dichloroethene	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
1,2,4-Trichlorobenzene	mg/kg	--	--	--	--	--	--	0.22 U	0.23 U	0.23 U	0.22 U	0.23 U	0.23 U	0.2 U	0.24 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	--	--	--	--	--	--	0.22 U	0.23 U	0.23 U	0.22 U	0.23 U	0.23 UJ	0.2 UJ	0.24 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	--	--	--	--	--	--	0.22 U	0.23 U	0.23 U	0.22 U	0.23 U	0.23 U	0.2 U	0.24 U
1,2-Dichlorobenzene	mg/kg	--	--	--	--	--	--	0.09 U	0.093 U	0.092 U	0.088 U	0.091 U	0.093 U	0.082 U	0.098 U
1,2-Dichloroethane	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
1,2-Dichloropropane	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
1,3-Dichlorobenzene	mg/kg	--	--	--	--	--	--	0.09 U	0.093 U	0.092 U	0.088 U	0.091 U	0.093 U	0.082 U	0.098 U
1,4-Dichlorobenzene	mg/kg	--	--	--	--	--	--	0.09 U	0.093 U	0.092 U	0.088 U	0.091 U	0.093 U	0.082 U	0.098 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	--	--	--	--	--	--	0.67 U	0.7 U	0.69 U	0.66 U	0.68 U	0.7 U	0.61 U	0.11 J
2-Hexanone	mg/kg	--	--	--	--	--	--	2.2 U	2.3 U	2.3 U	2.2 U	2.3 U	2.3 U	2 U	2.4 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	--	--	--	--	--	--	2.2 U	2.3 U	2.3 U	2.2 U	2.3 U	2.3 U	2 U	2.4 U
Acetone	mg/kg	--	--	--	--	--	--	0.67 U	0.7 U	0.69 U	0.66 U	0.68 U	0.7 UJ	0.61 UJ	0.24 J
Benzene	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
Bromodichloromethane	mg/kg	--	--	--	--	--	--	0.09 U	0.093 U	0.092 U	0.088 U	0.091 U	0.093 U	0.082 U	0.098 U
Bromoform	mg/kg	--	--	--	--	--	--	0.09 U	0.093 U	0.092 U	0.088 U	0.091 U	0.093 UJ	0.082 UJ	0.098 U
Bromomethane (Methyl bromide)	mg/kg	--	--	--	--	--	--	0.22 U	0.23 U	0.23 U	0.22 U	0.23 U	0.23 U	0.2 U	0.24 U
Carbon disulfide	mg/kg	--	--	--	--	--	--	0.22 U	0.23 U	0.23 U	0.22 U	0.23 U	0.23 U	0.2 U	0.24 U
Carbon tetrachloride	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
Chlorobenzene	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
Chloroethane	mg/kg	--	--	--	--	--	--	0.22 U	0.23 U	0.23 U	0.22 U	0.23 U	0.23 U	0.2 U	0.24 U
Chloroform (Trichloromethane)	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
Chloromethane (Methyl chloride)	mg/kg	--	--	--	--	--	--	0.22 U	0.23 U	0.23 U	0.22 U	0.23 U	0.23 U	0.2 U	0.24 U
cis-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
cis-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
Cyclohexane	mg/kg	--	--	--	--	--	--	0.13 J	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.98 U	1.2 U
Dibromochloromethane	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
Dichlorodifluoromethane (CFC-12)	mg/kg	--	--	--	--	--	--	0.09 U	0.093 U	0.092 U	0.088 U	0.091 U	0.093 U	0.082 U	0.098 U
Ethylbenzene	mg/kg	--	--	--	--	--	--	0.023 J	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
Isopropyl benzene	mg/kg	--	--	--	--	--	--	0.017 J	0.23 U	0.23 U	0.22 U	0.23 U	0.23 U	0.2 U	0.24 U
Methyl acetate	mg/kg	--	--	--	--	--	--	2.4	1.1 U	1.1 U	1.1 U	0.053 J	1.1 U	0.98 U	1.2 U
Methyl cyclohexane	mg/kg	--	--	--	--	--	--	0.19 J	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.98 U	1.2 U
Methyl tert butyl ether (MTBE)	mg/kg	--	--	--	--	--	--	0.22 U	0.23 U	0.23 U	0.22 U	0.23 U	0.23 U	0.2 U	0.24 U
Methylene chloride	mg/kg	--	--	--	--	--	--	0.22 U	0.23 U	0.23 U	0.22 U	0.23 U	0.23 U	0.2 U	0.24 U
Styrene	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
Tetrachloroethene	mg/kg	--	--	--	--	--	--	0.046	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
Toluene	mg/kg	--	--	--	--	--	--	0.073 J	0.093 U	0.092 U	0.088 U	0.091 U	0.093 U	0.082 U	0.098 U
trans-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
trans-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	0.045 U	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
Trichloroethene	mg/kg	--	--	--	--	--	--	0.11	0.046 U	0.046 U	0.044 U	0.045 U	0.046 U	0.041 U	0.049 U
Trichlorofluoromethane (CFC-11)	mg/kg	--	--	--	--	--	--	0.09 U	0.093 U	0.092 U	0.088 U	0.091 U	0.093 U	0.082 U	0.098 U
Trifluorotrichloroethane (Freon 113)	mg/kg	--	--	--	--	--	--	0.22 U	0.23 U	0.23 U	0.22 U	0.23 U	0.23 U	0.2 U	0.24 U
Vinyl chloride	mg/kg	--	--	--	--	--	--	0.036 U	0.037 U	0.037 U	0.035 U	0.036 U	0.037 U	0.033 U	0.039 U
Xylenes (total)	mg/kg	--	--	--	--	--	--	0.16	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.12 U	0.15 U
General Chemistry															
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		SB116-11	SB116-11	SB117-11	SB117-11	SB118-11	SB118-11	SB119-11	SB119-11	SB120-11	SB121-11	SB121-11	SB121-11	SB122-11	SB122-11
Sample Identification		SO-17360-030311-DR-164	SO-17360-030311-DR-165	SO-17360-021711-DR-077	SO-17360-021711-DR-078	SO-17360-030411-DR-182	SO-17360-030411-DR-183	SO-17360-030211-DR-157	SO-17360-030211-DR-158	SO-17360-021711-DR-079	SO-17360-022111-DR-098	SO-17360-022111-DR-099	SO-17360-022111-DR-100	SO-17360-022211-DR-107	SO-17360-022211-DR-108
Sample Date		3/3/2011	3/3/2011	2/17/2011	2/17/2011	3/4/2011	3/4/2011	3/2/2011	3/2/2011	2/17/2011	2/21/2011	2/21/2011	2/21/2011	2/22/2011	2/22/2011
Sample Depth		(2-4) ft BGS	(16-18) ft BGS	(1-3) ft BGS	(18-20) ft BGS	(0-2) ft BGS	(12.5-14.5) ft BGS	(0.5-2.5) ft BGS	(12-14) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(17-19) ft BGS	(1-3) ft BGS	(17-19) ft BGS
Area of Interest		AOI 33	AOI 33	AOI 33	AOI 33	AOI 33	AOI 33	AOI 33	AOI 33	AOI 36	AOI 36	AOI 36	AOI 36	AOI 36	AOI 36
Sample Type	Units	Duplicate										Duplicate			
Metals															
Antimony	mg/kg	0.17 UJ	0.16 UJ	0.17 UJ	0.17 UJ	0.12 J	0.17 UJ	0.17 UJ	0.17 UJ	0.040 J	0.048 J	0.16 UJ	0.16 UJ	0.17 UJ	0.16 UJ
Arsenic	mg/kg	1.6 J	0.64 J	1.0	1.3	1.5 J	1.0 J	0.97 J	1.4 J	2.0	1.8	1.5	1.4	2.4	1.4
Barium	mg/kg	12.6	2.3	8.7	4.6	18.9	3.6	13.8	5.1	18.1	10	9.5	4.5	11.7	5.2
Beryllium	mg/kg	0.17 U	0.16 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U
Cadmium	mg/kg	0.084 U	0.082 U	0.083 U	0.083 U	0.39	0.083 U	0.085 U	0.084 U	0.083 U	0.082 U	0.082 U	0.082 U	0.083 U	0.081 U
Chromium	mg/kg	5.6	2.0	2.9	5.4	11.2	2.6	3.9	5.0	5.6	6.9	5.6	6.2	5.8	4.4
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	2.8	0.86	1.2	2.0	3.1	1.3	1.6	2.1	2.6	2.4	2.0	2.3	2.2	2.2
Copper	mg/kg	4.7	1.3	2.1 J	4.1 J	21.8	2.6	3.6	5.0	8.1 J	5.7	4.1	4.1	5.9	3.8
Lead	mg/kg	2.4	0.74	2.0	1.7	16.5	1.1	5.4	2.1	5.9	3.2	2.6	1.7	3.3	2.1
Manganese	mg/kg	138 J	52.0 J	69.5 J	112 J	249 J	70.6 J	79.0 J	113 J	138 J	124	111	106	137	107
Mercury	mg/kg	0.042 U	0.041 U	0.041 U	0.041 U	0.042 U	0.042 U	0.042 U	0.042 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U
Nickel	mg/kg	5.7	1.8	2.5	4.1	7.3	2.7	3.4	4.8	5.5	6.4	4.7	5.5	5.0	4.1
Selenium	mg/kg	0.15 J	0.16 UJ	0.12 J	0.17	0.14 J	0.17 UJ	0.11 J	0.11 J	0.21	0.24 J	0.20 J	0.16 J	0.21 J	0.15 J
Silver	mg/kg	0.084 U	0.082 U	0.083 U	0.083 U	0.084 U	0.083 U	0.085 U	0.084 U	0.083 U	0.082 U	0.082 U	0.082 U	0.083 U	0.081 U
Thallium	mg/kg	0.084 U	0.082 U	0.083 U	0.083 U	0.084 U	0.083 U	0.085 U	0.084 U	0.083 U	0.082 U	0.082 U	0.082 U	0.083 U	0.081 U
Vanadium	mg/kg	10.4	2.8	4.6	5.3	10.0	4.0	5.7	6.5	8.7	7.8	7.6	6.0	7.4	5.7
Zinc	mg/kg	11.3	5.0	6.5	7.2	52.7	5.7	9.1	9.0	15.4	12.0	10.6	7.5	10.6	7.7
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1221 (PCB-1221)	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1232 (PCB-1232)	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1242 (PCB-1242)	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1248 (PCB-1248)	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1254 (PCB-1254)	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Aroclor-1260 (PCB-1260)	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.031 J	0.16 J	0.24 J	0.27 U	0.017 J	0.27 U
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.0086 J	0.27 U	0.27 U	0.27 U
Acenaphthylene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.0088 J	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.02 J	0.27 U	0.28 U	0.28 U	0.014 J	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Atrazine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.11 J	0.27 U	0.037 J	0.28 U	0.11 J	0.008 J	0.0075 J	0.27 U	0.023 J	0.27 U
Benzo(a)pyrene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.15 J	0.27 U	0.047 J	0.28 U	0.11 J	0.27 U	0.27 U	0.27 U	0.02 J	0.27 U
Benzo(b)fluoranthene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.25 J	0.27 U	0.069 J	0.28 U	0.15 J	0.0092 J	0.0093 J	0.27 U	0.034 J	0.27 U
Benzo(g,h,i)perylene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.17 J	0.27 U	0.049 J	0.28 U	0.072 J	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Benzo(k)fluoranthene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.093 J	0.27 U	0.03 J	0.28 U	0.072 J	0.27 U	0.27 U	0.27 U	0.017 J	0.27 U
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.15 J	0.27 U	0.052 J	0.28 U	0.13 J	0.0095 J	0.013 J	0.27 U	0.028 J	0.27 U
Dibenz(a,h)anthracene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.031 J	0.27 U	0.28 U	0.28 U	0.021 J	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.2 J	0.27 U	0.077 J	0.28 U	0.23 J	0.022 J	0.031 J	0.27 U	0.049 J	0.27 U

TABLE 3

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

Sample Location		SB116-11	SB116-11	SB117-11	SB117-11	SB118-11	SB118-11	SB119-11	SB119-11	SB120-11	SB121-11	SB121-11	SB121-11	SB122-11	SB122-11
Sample Identification		SO-17360-030311-DR-164	SO-17360-030311-DR-165	SO-17360-021711-DR-077	SO-17360-021711-DR-078	SO-17360-030411-DR-182	SO-17360-030411-DR-183	SO-17360-030211-DR-157	SO-17360-030211-DR-158	SO-17360-021711-DR-079	SO-17360-022111-DR-098	SO-17360-022111-DR-099	SO-17360-022111-DR-100	SO-17360-022211-DR-107	SO-17360-022211-DR-108
Sample Date		3/3/2011	3/3/2011	2/17/2011	2/17/2011	3/4/2011	3/4/2011	3/2/2011	3/2/2011	2/17/2011	2/21/2011	2/21/2011	2/21/2011	2/22/2011	2/22/2011
Sample Depth		(2-4) ft BGS	(16-18) ft BGS	(1-3) ft BGS	(18-20) ft BGS	(0-2) ft BGS	(12.5-14.5) ft BGS	(0.5-2.5) ft BGS	(12-14) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(17-19) ft BGS	(1-3) ft BGS	(17-19) ft BGS
Area of Interest		AOI 33	AOI 33	AOI 33	AOI 33	AOI 33	AOI 33	AOI 33	AOI 33	AOI 36	AOI 36	AOI 36	AOI 36	AOI 36	AOI 36
Sample Type	Units	Duplicate										Duplicate			
Fluorene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.12 J	0.27 U	0.037 J	0.28 U	0.061 J	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Isophorone	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U	0.28 U	0.28 U	0.018 J	0.038 J	0.045 J	0.27 U	0.0096 J	0.27 U
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.049 J	0.27 U	0.024 J	0.28 U	0.11 J	0.034 J	0.044 J	0.27 U	0.031 J	0.27 U
Phenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	mg/kg	0.28 U	0.27 U	0.27 U	0.27 U	0.18 J	0.27 U	0.061 J	0.28 U	0.18 J	0.017 J	0.023 J	0.27 U	0.036 J	0.27 U
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
1,1,2,2-Tetrachloroethane	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
1,1,2-Trichloroethane	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
1,1-Dichloroethane	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
1,1-Dichloroethene	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
1,2,4-Trichlorobenzene	mg/kg	0.21 U	0.26 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U	0.22 U	0.22 U	0.24 U	0.21 U	0.2 U	0.23 U	0.21 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.21 U	0.26 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U	0.22 U	0.22 U	0.24 U	0.21 U	0.2 U	0.23 U	0.21 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.21 U	0.26 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U	0.22 U	0.22 U	0.24 U	0.21 U	0.2 U	0.23 U	0.21 U
1,2-Dichlorobenzene	mg/kg	0.083 U	0.1 U	0.088 U	0.093 U	0.092 U	0.093 U	0.078 U	0.087 U	0.089 U	0.097 U	0.085 U	0.081 U	0.09 U	0.084 U
1,2-Dichloroethane	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
1,2-Dichloropropane	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
1,3-Dichlorobenzene	mg/kg	0.083 U	0.1 U	0.088 U	0.093 U	0.092 U	0.093 U	0.078 U	0.087 U	0.089 U	0.097 U	0.085 U	0.081 U	0.09 U	0.084 U
1,4-Dichlorobenzene	mg/kg	0.083 U	0.1 U	0.088 U	0.093 U	0.092 U	0.093 U	0.078 U	0.087 U	0.089 U	0.097 U	0.085 U	0.081 U	0.09 U	0.084 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.62 U	0.79 U	0.66 U	0.69 U	0.69 U	0.1 J	0.59 U	0.65 U	0.67 U	0.72 U	0.64 U	0.61 U	0.68 U	0.63 U
2-Hexanone	mg/kg	2.1 U	2.6 U	2.2 U	2.3 U	2.3 U	2.3 U	2 U	2.2 U	2.2 U	2.4 U	2.1 U	2 U	2.3 U	2.1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.1 U	2.6 U	2.2 U	2.3 U	2.3 U	2.3 U	2 U	2.2 U	2.2 U	2.4 U	2.1 U	2 U	2.3 U	2.1 U
Acetone	mg/kg	0.22 J	0.23 J	0.66 U	0.69 U	0.69 U	0.7 U	0.17 J	0.2 J	0.67 U	0.72 U	0.64 U	0.61 U	0.68 U	0.63 U
Benzene	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
Bromodichloromethane	mg/kg	0.083 U	0.1 U	0.088 U	0.093 U	0.092 U	0.093 U	0.078 U	0.087 U	0.089 U	0.097 U	0.085 U	0.081 U	0.09 U	0.084 U
Bromoform	mg/kg	0.083 U	0.1 U	0.088 U	0.093 U	0.092 U	0.093 U	0.078 U	0.087 U	0.089 U	0.097 U	0.085 U	0.081 U	0.09 U	0.084 U
Bromomethane (Methyl bromide)	mg/kg	0.21 U	0.26 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U	0.22 U	0.22 U	0.24 U	0.21 U	0.2 U	0.23 UJ	0.21 UJ
Carbon disulfide	mg/kg	0.21 U	0.26 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U	0.22 U	0.22 U	0.24 U	0.21 U	0.2 U	0.23 U	0.21 U
Carbon tetrachloride	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
Chlorobenzene	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
Chloroethane	mg/kg	0.21 U	0.26 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U	0.22 U	0.22 U	0.24 U	0.21 U	0.2 U	0.23 U	0.21 U
Chloroform (Trichloromethane)	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
Chloromethane (Methyl chloride)	mg/kg	0.21 U	0.26 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U	0.22 U	0.22 U	0.24 U	0.21 U	0.2 U	0.23 UJ	0.21 UJ
cis-1,2-Dichloroethene	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
cis-1,3-Dichloropropene	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
Cyclohexane	mg/kg	0.99 U	1.3 U	1.1 U	1.1 U	1.1 U	1.1 U	0.94 U	1 U	1.1 U	1.2 U	1 U	0.97 U	1.1 U	1 U
Dibromochloromethane	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.083 U	0.1 U	0.088 U	0.093 U	0.092 U	0.093 U	0.078 U	0.087 U	0.089 U	0.097 U	0.085 U	0.081 U	0.09 U	0.084 U
Ethylbenzene	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.011 J	0.043 U	0.04 U	0.045 U	0.042 U
Isopropyl benzene	mg/kg	0.21 U	0.26 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U	0.22 U	0.22 U	0.24 U	0.21 U	0.2 U	0.23 U	0.21 U
Methyl acetate	mg/kg	0.99 U	1.3 U	1.1 U	1.1 U	1.1 U	1.1 U	0.94 U	1 U	1.1 U	1.2 U	0.22 J	0.97 U	1.1 U	1 U
Methyl cyclohexane	mg/kg	0.99 U	1.3 U	1.1 U	1.1 U	1.1 U	1.1 U	0.94 U	1 U	1.1 U	1.2 U	1 U	0.97 U	1.1 U	1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.21 U	0.26 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U	0.22 U	0.22 U	0.24 U	0.21 U	0.2 U	0.23 U	0.21 U
Methylene chloride	mg/kg	0.21 U	0.26 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U	0.22 U	0.22 U	0.24 U	0.21 U	0.2 U	0.23 U	0.21 U
Styrene	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
Tetrachloroethene	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.072	0.024 J	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
Toluene	mg/kg	0.083 U	0.1 U	0.088 U	0.093 U	0.092 U	0.093 U	0.078 U	0.087 U	0.025 J	0.041 J	0.085 U	0.081 U	0.09 U	0.084 U
trans-1,2-Dichloroethene	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
trans-1,3-Dichloropropene	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.043 U	0.04 U	0.045 U	0.042 U
Trichloroethene	mg/kg	0.041 U	0.052 U	0.044 U	0.046 U	0.046 U	0.047 U	0.039 U	0.043 U	0.045 U	0.048 U	0.01 J	0.04 U	0.045 U	0.042 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.083 U	0.1 U	0.088 U	0.093 U	0.092 U	0.093 U	0.078 U	0.087 U	0.089 U	0.097 U	0.085 U	0.081 U	0.09 U	0.084 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.21 U	0.26 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U	0.22 U	0.22 U	0.24 U	0.21 U	0.2 U	0.23 U	0.21 U
Vinyl chloride	mg/kg	0.033 U	0.042 U	0.035 U	0.037 U	0.037 U	0.037 U	0.031 U	0.035 U	0.036 U	0.039 U	0.034 U	0.032 U	0.036 U	0.033 U
Xylenes (total)	mg/kg	0.12 U	0.16 U	0.13 U	0.14 U	0.14 U	0.14 U	0.12 U	0.13 U	0.13 U	0.067 J	0.033 J	0.12 U	0.034 J	0.13 U
General Chemistry															
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 3

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

Sample Location		*SB124-11*	*SB124-11*	*SB125-11*	*SB125-11*	*SB126-11*	*SB126-11*	*SB127-11*	*SB127-11*
Sample Identification		*SO-17360-022111-DR-105*	*SO-17360-022111-DR-106*	*SO-17360-030311-DR-168*	*SO-17360-030311-DR-169*	*SO-17360-030411-DR-180*	*SO-17360-030411-DR-181*	*SO-17360-021511-DR-056*	*SO-17360-021511-DR-057*
Sample Date		*2/21/2011*	*2/21/2011*	*3/3/2011*	*3/3/2011*	*3/4/2011*	*3/4/2011*	*2/15/2011*	*2/15/2011*
Sample Depth		*(1-3) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(13-15) ft BGS*	*(1-3) ft BGS*	*(12.5-14.5) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*
Area of Interest		*AOI 37.1*	*AOI 37.1*	*AOI 37.2*	*AOI 37.2*	*AOI 37.3*	*AOI 37.3*	*AOI 38.1*	*AOI 38.1*
Sample Type	***Units***								
Metals									
Antimony	mg/kg	0.16 UJ	0.16 UJ	0.17 UJ	0.16 UJ	0.036 J	0.16 UJ	0.17 J	0.17 UJ
Arsenic	mg/kg	2.3	1.0	1.1 J	2.2 J	1.5 J	1.4 J	1.9	0.38
Barium	mg/kg	8.5	4.4	16.2	8.8	7.7	6.5	62.8	2.9
Beryllium	mg/kg	0.16 U	0.16 U	0.17 U	0.16 U	0.17 U	0.16 U	0.17 U	0.17 U
Cadmium	mg/kg	0.082 U	0.082 U	0.085 U	0.082 U	0.083 U	0.082 U	0.084 U	0.083 U
Chromium	mg/kg	4.2	3.4	7.8	3.1	3.1	10.8	9.5	4.3
Chromium III (trivalent)	mg/kg	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--
Cobalt	mg/kg	1.7	1.5	2.5	3.3	1.7	3.1	2.7	1.4
Copper	mg/kg	5.4	4.0	2.7	10.8	4.6	5.2	10.6 J	1.3 J
Lead	mg/kg	3.1	1.5	2.3	1.9	4.0	1.8	18.2	1.9
Manganese	mg/kg	156	88.6	67.2 J	189 J	70.8 J	168 J	141 J	18.1 J
Mercury	mg/kg	0.041 U	0.041 U	0.042 U	0.041 U	0.042 U	0.041 U	0.042 U	0.041 U
Nickel	mg/kg	3.9	3.5	5.5	4.6	3.3	10.3	6.2	2.9
Selenium	mg/kg	0.19 J	0.13 J	0.11 J	0.16 UJ	0.12 J	0.10 J	0.30 J	0.11 J
Silver	mg/kg	0.082 U	0.082 U	0.085 U	0.082 U	0.083 U	0.082 U	0.019 J	0.083 U
Thallium	mg/kg	0.082 U	0.082 U	0.085 U	0.082 U	0.083 U	0.082 U	0.084 U	0.083 U
Vanadium	mg/kg	5.4	4.0	10.0	11.9	5.3	6.9	10.8	4.0
Zinc	mg/kg	12.6	6.8	9.3	14.2	14.3	8.5	24.8	7.8
PCBs									
Aroclor-1016 (PCB-1016)	mg/kg	0.34 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U
Aroclor-1221 (PCB-1221)	mg/kg	0.34 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U
Aroclor-1232 (PCB-1232)	mg/kg	0.34 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U
Aroclor-1242 (PCB-1242)	mg/kg	0.34 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U
Aroclor-1248 (PCB-1248)	mg/kg	0.34 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U
Aroclor-1254 (PCB-1254)	mg/kg	1.3	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U
Aroclor-1260 (PCB-1260)	mg/kg	0.34 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U
Total PCBs	mg/kg	1.3	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	mg/kg	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	mg/kg	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	mg/kg	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	--	--	--	--	--	--	--
2-Chlorophenol	mg/kg	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.21 J	0.27 U	0.013 J	0.27 U
2-Methylphenol	mg/kg	--	--	--	--	--	--	--	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	mg/kg	--	--	--	--	--	--	--	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	--	--	--	--	--	--	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--
4-Methylphenol	mg/kg	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.013 J	0.27 U
Acenaphthylene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.28 U	0.27 U
Acetophenone	mg/kg	--	--	--	--	--	--	--	--
Anthracene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.028 J	0.27 U
Atrazine	mg/kg	--	--	--	--	--	--	--	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.033 J	0.27 U	0.21 J	0.27 U
Benzo(a)pyrene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.038 J	0.27 U	0.23 J	0.27 U
Benzo(b)fluoranthene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.082 J	0.27 U	0.38	0.27 U
Benzo(g,h,i)perylene	mg/kg	0.13 J	0.27 U	0.28 U	0.27 U	0.034 J	0.27 U	0.26 J	0.27 U
Benzo(k)fluoranthene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.022 J	0.27 U	0.11 J	0.27 U
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	mg/kg	--	--	--	--	--	--	--	--
Caprolactam	mg/kg	--	--	--	--	--	--	--	--
Carbazole	mg/kg	--	--	--	--	--	--	--	--
Chrysene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.054 J	0.27 U	0.2 J	0.27 U
Dibenz(a,h)anthracene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.0089 J	0.27 U	0.28 U	0.27 U
Dibenzofuran	mg/kg	--	--	--	--	--	--	--	--
Diethyl phthalate	mg/kg	--	--	--	--	--	--	--	--
Dimethyl phthalate	mg/kg	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	mg/kg	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	--	--	--	--	--	--	--	--
Fluoranthene	mg/kg	0.046 J	0.27 U	0.28 U	0.27 U	0.05 J	0.27 U	0.37	0.27 U

TABLE 3

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

Sample Location		*SB124-11*	*SB124-11*	*SB125-11*	*SB125-11*	*SB126-11*	*SB126-11*	*SB127-11*	*SB127-11*
Sample Identification		*SO-17360-022111-DR-105*	*SO-17360-022111-DR-106*	*SO-17360-030311-DR-168*	*SO-17360-030311-DR-169*	*SO-17360-030411-DR-180*	*SO-17360-030411-DR-181*	*SO-17360-021511-DR-056*	*SO-17360-021511-DR-057*
Sample Date		*2/21/2011*	*2/21/2011*	*3/3/2011*	*3/3/2011*	*3/4/2011*	*3/4/2011*	*2/15/2011*	*2/15/2011*
Sample Depth		*(1-3) ft BGS*	*(17-19) ft BGS*	*(1-3) ft BGS*	*(13-15) ft BGS*	*(1-3) ft BGS*	*(12.5-14.5) ft BGS*	*(1-3) ft BGS*	*(20-22) ft BGS*
Area of Interest		*AOI 37.1*	*AOI 37.1*	*AOI 37.2*	*AOI 37.2*	*AOI 37.3*	*AOI 37.3*	*AOI 38.1*	*AOI 38.1*
Sample Type	***Units***								
Fluorene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.27 U	0.27 U	0.0089 J	0.27 U
Hexachlorobenzene	mg/kg	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	mg/kg	--	--	--	--	--	--	--	--
Hexachloroethane	mg/kg	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.028 J	0.27 U	0.19 J	0.27 U
Isophorone	mg/kg	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.12 J	0.27 U	0.0084 J	0.27 U
Nitrobenzene	mg/kg	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	mg/kg	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	mg/kg	--	--	--	--	--	--	--	--
Pentachlorophenol	mg/kg	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.082 J	0.27 U	0.12 J	0.27 U
Phenol	mg/kg	--	--	--	--	--	--	--	--
Pyrene	mg/kg	1.3 U	0.27 U	0.28 U	0.27 U	0.05 J	0.27 U	0.33	0.27 U
Volatile Organic Compounds									
1,1,1-Trichloroethane	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
1,1,2,2-Tetrachloroethane	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
1,1,2-Trichloroethane	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
1,1-Dichloroethane	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
1,1-Dichloroethene	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
1,2,4-Trichlorobenzene	mg/kg	0.2 U	0.25 U	0.25 U	0.25 U	0.24 U	0.2 U	0.39 U	0.25 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.2 U	0.25 U	0.25 U	0.25 U	0.24 U	0.2 U	0.39 U	0.25 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.2 U	0.25 U	0.25 U	0.25 U	0.24 U	0.2 U	0.39 U	0.25 U
1,2-Dichlorobenzene	mg/kg	0.082 U	0.1 U	0.1 U	0.099 U	0.097 U	0.081 U	0.16 U	0.1 U
1,2-Dichloroethane	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
1,2-Dichloropropane	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
1,3-Dichlorobenzene	mg/kg	0.082 U	0.1 U	0.1 U	0.099 U	0.097 U	0.081 U	0.16 U	0.1 U
1,4-Dichlorobenzene	mg/kg	0.082 U	0.1 U	0.1 U	0.099 U	0.097 U	0.081 U	0.16 U	0.1 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.61 U	0.75 U	0.75 U	0.74 U	0.31 J	0.61 U	1.2 U	0.75 U
2-Hexanone	mg/kg	2 U	2.5 U	2.5 U	2.5 U	2.4 U	2 U	3.9 U	2.5 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2 U	2.5 U	2.5 U	2.5 U	2.4 U	2 U	3.9 U	2.5 U
Acetone	mg/kg	0.61 U	0.75 U	0.75 U	0.74 U	0.72 U	0.61 U	1.2 U	0.75 U
Benzene	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	1.3	0.041 U	0.078 U	0.05 U
Bromodichloromethane	mg/kg	0.082 U	0.1 U	0.1 U	0.099 U	0.097 U	0.081 U	0.16 U	0.1 U
Bromoform	mg/kg	0.082 U	0.1 U	0.1 U	0.099 U	0.097 U	0.081 U	0.16 U	0.1 U
Bromomethane (Methyl bromide)	mg/kg	0.2 U	0.25 U	0.25 U	0.25 U	0.24 U	0.2 U	0.39 U	0.25 U
Carbon disulfide	mg/kg	0.2 U	0.25 U	0.25 U	0.25 U	0.24 U	0.2 U	0.39 U	0.25 U
Carbon tetrachloride	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
Chlorobenzene	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
Chloroethane	mg/kg	0.2 U	0.25 U	0.25 U	0.25 U	0.24 U	0.2 U	0.39 U	0.25 U
Chloroform (Trichloromethane)	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
Chloromethane (Methyl chloride)	mg/kg	0.2 U	0.25 U	0.25 U	0.25 U	0.24 U	0.2 U	0.39 U	0.25 U
cis-1,2-Dichloroethene	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
cis-1,3-Dichloropropene	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
Cyclohexane	mg/kg	0.98 U	1.2 U	1.2 U	1.2 U	0.66 J	0.98 U	1.9 U	1.2 U
Dibromochloromethane	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.082 U	0.1 U	0.1 U	0.099 U	0.097 U	0.081 U	0.21	0.1 U
Ethylbenzene	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.97	0.041 U	0.078 U	0.05 U
Isopropyl benzene	mg/kg	0.2 U	0.25 U	0.25 U	0.25 U	0.44	0.2 U	0.39 U	0.25 U
Methyl acetate	mg/kg	0.063 J	1.2 U	1.2 U	1.2 U	0.15 J	0.98 U	1.9 U	1.2 U
Methyl cyclohexane	mg/kg	0.98 U	1.2 U	1.2 U	1.2 U	2	0.043 J	1.9 U	1.2 U
Methyl tert butyl ether (MTBE)	mg/kg	0.2 U	0.25 U	0.25 U	0.25 U	0.24 U	0.2 U	0.39 U	0.25 U
Methylene chloride	mg/kg	0.2 U	0.25 U	0.25 U	0.25 U	0.24 U	0.2 U	0.39 U	0.25 U
Styrene	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
Tetrachloroethene	mg/kg	0.021 J	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
Toluene	mg/kg	0.082 U	0.1 U	0.1 U	0.099 U	5.1	0.081 U	0.16 U	0.1 U
trans-1,2-Dichloroethene	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
trans-1,3-Dichloropropene	mg/kg	0.041 U	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
Trichloroethene	mg/kg	0.053	0.05 U	0.05 U	0.049 U	0.048 U	0.041 U	0.078 U	0.05 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.082 U	0.1 U	0.1 U	0.099 U	0.097 U	0.081 U	0.16 U	0.1 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.2 U	0.25 U	0.25 U	0.25 U	0.24 U	0.2 U	0.39 U	0.25 U
Vinyl chloride	mg/kg	0.033 U	0.04 U	0.04 U	0.039 U	0.039 U	0.033 U	0.062 U	0.04 U
Xylenes (total)	mg/kg	0.016 J	0.15 U	0.15 U	0.15 U	3.9	0.12 U	0.23 U	0.15 U
General Chemistry									
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
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: (1)					85-1	85-2	85-5B	85-6	85-7	86-1
Sample Identification		Residential Drinking Water	Non-Residential Drinking Water	Groundwater Surface Water Interface	Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Groundwater Contact	GW-17360-020911-DR-002	GW-17360-031011-DR-209	GW-17360-021411-JY-038	GW-17360-021111-DR-030	GW-17360-021111-DR-029	GW-17360-021511-JY-041
Sample Date							2/9/2011	3/10/2011	2/14/2011	2/11/2011	2/11/2011	2/15/2011
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
Sample Type		a	b	c	d	e						
Metals	***Units***											
Antimony	mg/L	0.006	0.006	0.13	NLV	68	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.01	0.01	0.01	NLV	4.3	0.0063	0.005 U	0.0066	0.005 U	0.00046 J	0.00046 J
Barium	mg/L	2	2	0.67	NLV	14000	0.0572 J	0.117	0.0942 J	0.0406 J	0.0788 J	0.0431 J
Beryllium	mg/L	0.004	0.004	0.0067	NLV	290	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.005	0.005	0.0025	NLV	190	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium	mg/L	0.1	0.1	0.011	NLV	460	0.005 U	0.005 U	0.005 U	0.00076 J	0.005 U	**0.0249**[c]
Chromium III (trivalent)	mg/L	0.1	0.1	0.1	NLV	290000	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/L	0.1	0.1	0.011	NLV	460	--	--	--	--	--	--
Cobalt	mg/L	0.04	0.1	0.1	NLV	2400	0.001 J	0.00095 J	0.00018 J	0.007 U	0.00015 J	0.0011 J
Copper	mg/L	1	1	0.013	NLV	7400	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lead	mg/L	0.004	0.004	0.014	NLV	ID	0.0002 J	0.00028 J	0.003 U	0.003 U	0.0017 J	0.003 U
Manganese	mg/L	0.05	0.05	1.3	NLV	9100	**0.326**[ab]	**0.0764**[ab]	**0.0519**[ab]	0.0016 J	0.0322	0.0082 J
Mercury	mg/L	0.002	0.002	0.0000013	0.056	0.056	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.1	0.1	0.073	NLV	74000	0.0009 J	0.002 J	0.00047 J	0.00026 J	0.00069 J	**0.134**[abc]
Selenium	mg/L	0.05	0.05	0.005	NLV	970	0.005 U	0.0012 J	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.034	0.098	0.0002	NLV	1500	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Thallium	mg/L	0.002	0.002	0.0037	NLV	13	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.0045	0.062	0.012	NLV	970	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	2.4	5	0.17	NLV	110000	0.0243 U	0.0351 U	0.02 U	0.0618	**0.358**[c]	0.02 U
PCBs												
Aroclor-1016 (PCB-1016)	mg/L	0.0005	0.0005	0.0002	0.045	0.0033	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/L	0.0005	0.0005	0.0002	0.045	0.0033	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/L	0.0005	0.0005	0.0002	0.045	0.0033	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/L	0.0005	0.0005	0.0002	0.045	0.0033	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/L	0.0005	0.0005	0.0002	0.045	0.0033	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/L	0.0005	0.0005	0.0002	0.045	0.0033	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/L	0.0005	0.0005	0.0002	0.045	0.0033	--	--	--	--	--	--
Total PCBs	mg/L	0.0005	0.0005	0.0002	0.045	0.0033	--	--	--	--	--	--
TPH												
Total Petroleum Hydrocarbons - Purgeable (GRO)	mg/L	--	--	--	--	--	--	--	0.1 U	0.1 UJ	--	0.1 U
Total Petroleum Hydrocarbons (C10-C20)	mg/L	--	--	--	--	--	--	--	0.6 J	0.2 U	--	0.2 UJ
Total Petroleum Hydrocarbons (C20-C34)	mg/L	--	--	--	--	--	--	--	0.54 J	0.2 U	--	0.2 UJ
Semi-Volatile Organic Compounds												
2-Methylnaphthalene	mg/L	0.26	0.75	0.019	25	25	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
Acenaphthene	mg/L	1.3	3.8	0.038	4.2	4.2	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
Acenaphthylene	mg/L	0.052	0.15	ID	3.9	3.9	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
Anthracene	mg/L	0.043	0.043	ID	0.043	0.043	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
Benzo(a)anthracene	mg/L	0.0021	0.0085	ID	NLV	0.0094	0.001 U	0.001 U	0.001 U	R	0.001 U	0.001 UJ
Benzo(a)pyrene	mg/L	0.005	0.005	ID	NLV	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ
Benzo(b)fluoranthene	mg/L	0.0015	0.0015	ID	ID	0.0015	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ
Benzo(g,h,i)perylene	mg/L	0.001	0.001	--	NLV	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ
Benzo(k)fluoranthene	mg/L	0.001	0.001	--	NLV	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ
Chrysene	mg/L	0.0016	0.0016	ID	ID	0.0016	0.001 U	0.001 U	0.001 U	R	0.001 U	0.001 UJ
Dibenz(a,h)anthracene	mg/L	0.002	0.002	ID	NLV	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 UJ
Fluoranthene	mg/L	0.21	0.21	0.0016	0.21	0.21	0.001 U	0.001 U	0.00085 J	0.001 U	0.001 U	0.001 UJ
Fluorene	mg/L	0.88	2	0.012	2	2	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
Indeno(1,2,3-cd)pyrene	mg/L	0.002	0.002	ID	NLV	0.002	0.002 U	0.002 U	0.002 U	R	0.002 U	0.002 UJ
Naphthalene	mg/L	0.52	1.5	0.011	31	31	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
Phenanthrene	mg/L	0.052	0.15	0.002	1	1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 UJ
Pyrene	mg/L	0.14	0.14	ID	0.14	0.14	0.005 U	0.005 U	0.00072 J	R	0.005 U	0.005 UJ
Volatile Organic Compounds												
1,1,1-Trichloroethane	mg/L	0.2	0.2	0.089	1300	1300	0.001 U	0.0084	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.0085	0.035	0.078	77	4.7	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.005	0.005	0.33	110	21	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
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: (1)					85-1	85-2	85-5B	85-6	85-7	86-1
Sample Identification		Residential	Non-Residential	Groundwater	Non-Residential Groundwater	Groundwater	GW-17360-020911-DR-002	GW-17360-031011-DR-209	GW-17360-021411-JY-038	GW-17360-021111-DR-030	GW-17360-021111-DR-029	GW-17360-021511-JY-041
Sample Date		Drinking Water	Drinking Water	Surface Water	Volatilization to	Contact	2/9/2011	3/10/2011	2/14/2011	2/11/2011	2/11/2011	2/15/2011
Area of Interest				Interface	Indoor Air Inhalation		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
Sample Type		a	b	c	d	e						
1,1-Dichloroethane	mg/L	0.88	2.5	0.74	2300	2400	0.001 U	0.0012	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.007	0.007	0.13	1.3	11	0.001 U	0.00037 J	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.07	0.07	0.099	300	19	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.0002	0.0002		1.2	0.39	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.00005	0.00005	0.0057	15	0.025	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.6	0.6	0.013	160	160	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.005	0.005	0.36	59	19	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.005	0.005	0.23	36	16	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0066	0.019	0.028	41	2	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.075	0.075	0.017	74	6.4	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	13	38	2.2	240000	240000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
2-Hexanone	mg/L	1	2.9	ID	8700	5200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	1.8	5.2	ID	20000	13000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Acetone	mg/L	0.73	2.1	1.7	1000000	31000	0.025 U	0.025 U	0.025 U	0.025 U	0.0012 J	0.025 U
Benzene	mg/L	0.005	0.005	0.2	35	11	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.08	0.08	ID	37	14	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.08	0.08	ID	3100	140	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.01	0.029	0.035	9	70	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.8	2.3	ID	550	1200	0.005 U	0.005 U	0.00042 J	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.005	0.005	0.045	2.4	4.6	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.1	0.1	0.025	470	86	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.43	1.7	1.1	5700	440	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.08	0.08	0.35	180	150	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00021 J
Chloromethane (Methyl chloride)	mg/L	0.26	1.1	ID	45	490	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.07	0.07	0.62	210	200	0.00046 J	0.001 U	0.0005 J	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
Cyclohexane	mg/L	--	--	--	--	--	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.08	0.08	ID	110	18	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	1.7	4.8	ID	300	300	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.074	0.074	0.018	170	170	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.8	2.3	0.028	56	56	0.005 U	0.005 U	0.00022 J	0.005 U	0.005 U	0.005 U
Methyl acetate	mg/L	--	--	--	--	--	0.01 U	0.01 U	0.01 U	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
Methyl tert butyl ether (MTBE)	mg/L	0.04	0.04	7.1	47000	610	0.005 U	0.005 U	0.00026 J	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.005	0.005	1.5	1400	220	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.1	0.1	0.08	310	9.7	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.005	0.005	0.06	170	12	0.001 U	0.001 U	0.0011	0.0039	0.001 U	0.001 U
Toluene	mg/L	0.79	0.79	0.27	530	530	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.1	0.1	1.5	200	220	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
Trichloroethene	mg/L	0.005	0.005	0.2	97	22	0.001 U	0.0016	0.00045 J	0.001 U	0.0017	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	2.6	7.3	--	1100	1100	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	170	170	0.032	170	170	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.002	0.002	0.013	13	1	0.00026 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.28	0.28	0.041	190	190	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
General Chemistry												
Cyanide (amenable)	mg/L	--	--	--	--	--	--	--	--	--	--	--
Cyanide (total)	mg/L	0.2	0.2	0.0052	NLV	57	--	--	--	--	--	--

Notes

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

Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.

U - Not present at or above the associated value.

J - Estimated concentration.

UJ - Estimated reporting limit.

R - Rejected.

'--' - Criteria not available or chemical not analyzed for

TABLE 4

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

Sample Location		*86-2*	*86-3*	*87-1*	*87-2*	*87-4*	*87-5*	*87-8*	*87-9*	*87-10*	*87-10*
Sample Identification		*GW-17360-021411-JY-031*	*GW-17360-021111-DR-027*	*GW-17360-021411-JY-039*	*GW-17360-021411-JY-032*	*GW-17360-021411-JY-033*	*GW-17360-021411-JY-034*	*GW-17360-021111-DR-028*	*GW-17360-021111-DR-026*	*GW-17360-021011-DR-016*	*GW-17360-021011-DR-017*
Sample Date		*2/14/2011*	*2/11/2011*	*2/14/2011*	*2/14/2011*	*2/14/2011*	*2/14/2011*	*2/11/2011*	*2/11/2011*	*2/10/2011*	*2/10/2011*
Area of Interest		*AOI 25, AOI 4.1*	*AOI 25, AOI 4.3*	*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											*Duplicate*
Metals	***Units***										
Antimony	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	0.002 U	0.002 U
Arsenic	mg/L	0.00069 J	0.005 U	0.00055 J	0.00066 J	0.005 U	0.005 U	0.00064 J	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.0535 J	0.0397 J	0.143	0.144	0.0513 J	0.11	0.0694 J	0.0494 J	0.0711 J	0.0722 J
Beryllium	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	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.00028 J	0.00023 J	0.001 U	0.001 U	0.00022 J	0.00036 J	0.00013 J	0.001 U	0.001 U
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.0013 J	0.005 U	0.00091 J	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	--	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/L	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/L	0.007 U	0.0001 J	0.00098 J	0.00017 J	0.007 U	0.00011 J	0.00031 J	0.007 U	0.00028 J	0.00029 J
Copper	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	0.002 U	0.002 U
Lead	mg/L	0.0028 J	**0.0089**[ab]	0.00036 J	0.00023 J	0.003 U	**0.0138**[ab]	0.003 U	0.0002 J	0.0014 J	0.001 J
Manganese	mg/L	0.004 J	0.0017 J	**0.418**[ab]	**0.0851**[ab]	0.0132 J	0.0329	0.015 U	0.015 U	0.031	0.0316
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.00032 J	0.00053 J	0.0018 J	0.00053 J	0.00042 J	0.00059 J	0.00098 J	0.00046 J	0.00096 J	0.001 J
Selenium	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	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Thallium	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	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.0294	**0.652**[c]	**0.331**[c]	0.103	**0.39**[c]	**1.12**[c]	0.113	0.0909	0.0883	0.0686
PCBs											
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	--	--	--	--	--	--	--	--	--	--
TPH											
Total Petroleum Hydrocarbons - Purgeable (GRO)	mg/L	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (C10-C20)	mg/L	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (C20-C34)	mg/L	--	--	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds											
2-Methylnaphthalene	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	0.005 U	0.005 U
Acenaphthene	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	0.005 U	0.005 U
Acenaphthylene	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	0.005 U	0.005 U
Anthracene	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	0.005 U	0.005 U
Benzo(a)anthracene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(a)pyrene	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	0.001 U	0.001 U
Benzo(b)fluoranthene	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	0.001 U	0.001 U
Benzo(g,h,i)perylene	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	0.001 U	0.001 U
Benzo(k)fluoranthene	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	0.001 U	0.001 U
Chrysene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibenz(a,h)anthracene	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	0.002 U	0.002 U
Fluoranthene	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	0.001 U	0.001 U
Fluorene	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	0.005 U	0.005 U
Indeno(1,2,3-cd)pyrene	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	0.002 U	0.002 U
Naphthalene	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	0.005 U	0.005 U
Phenanthrene	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	0.002 U	0.002 U
Pyrene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.005 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	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	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	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	0.001 U	0.001 U

TABLE 4

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

Sample Location		*86-2*	*86-3*	*87-1*	*87-2*	*87-4*	*87-5*	*87-8*	*87-9*	*87-10*	*87-10*
Sample Identification		*GW-17360-021411-JY-031*	*GW-17360-021111-DR-027*	*GW-17360-021411-JY-039*	*GW-17360-021411-JY-032*	*GW-17360-021411-JY-033*	*GW-17360-021411-JY-034*	*GW-17360-021111-DR-028*	*GW-17360-021111-DR-026*	*GW-17360-021011-DR-016*	*GW-17360-021011-DR-017*
Sample Date		*2/14/2011*	*2/11/2011*	*2/14/2011*	*2/14/2011*	*2/14/2011*	*2/14/2011*	*2/11/2011*	*2/11/2011*	*2/10/2011*	*2/10/2011*
Area of Interest		*AOI 25, AOI 4.1*	*AOI 25, AOI 4.3*	*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											*Duplicate*
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001	0.001 U	0.001 U	0.0022	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.0012	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00022 J	0.001 U
1,2,4-Trichlorobenzene	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	0.005 U	0.005 U
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	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	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	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	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	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	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	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	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
2-Hexanone	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Acetone	mg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.0012 J	0.0015 J	0.025 U	0.025 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	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	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	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	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.00071 J	0.005 U	0.00063 J	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	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	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	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.00056 J	0.00039 J	0.001 U	0.001 U	0.0012	0.001 U	0.0002 J	0.0017	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	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.00038 J	0.021	0.014	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 J	0.00051 J
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	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	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	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	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	0.001 U	0.001 U
Isopropyl benzene	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	0.005 U	0.005 U
Methyl acetate	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	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	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	0.00046 J	0.005 U	0.0031 J	0.003 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	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	0.001 U	0.001 U
Tetrachloroethene	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	0.00048 J	0.0005 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	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.00021 J	0.0044	0.0026	0.001 U	0.0017	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	0.001 U	0.001 U
Trichloroethene	mg/L	0.0033	**0.0072**[ab]	**0.021**[ab]	**0.01**[ab]	0.0043	0.00073 J	0.001 U	0.0022	**0.0071**[ab]	**0.0075**[ab]
Trichlorofluoromethane (CFC-11)	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	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	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.002	**0.01**[ab]	0.001 U	**0.027**[abc]	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
General Chemistry											
Cyanide (amenable)	mg/L	--	--	--	--	0.0050 U	--	--	--	--	--
Cyanide (total)	mg/L	--	--	--	--	0.0050 U	--	--	--	--	--

Notes

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

Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.

U - Not present at or above the associated value.

J - Estimated concentration.

UJ - Estimated reporting limit.

R - Rejected.

'--' - Criteria not available or chemical not analyzed for

TABLE 4

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

Sample Location		*87-11*	*87-13*	*88-2*	*88-3*	*88-4*	*C-1*	*C-2*	*C-3*	*MW1-03*
Sample Identification		*GW-17360-021011-DR-018*	*GW-17360-021011-DR-012*	*GW-17360-020911-DR-004*	*GW-17360-020911-DR-005*	*GW-17360-020911-DR-006*	*GW-17360-020911-DR-010*	*GW-17360-020911-DR-009*	*GW-17360-021011-DR-015*	*GW-17360-021011-DR-023*
Sample Date		*2/10/2011*	*2/10/2011*	*2/9/2011*	*2/9/2011*	*2/9/2011*	*2/9/2011*	*2/9/2011*	*2/10/2011*	*2/10/2011*
Area of Interest		*AOI 25*	*AOI 25*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25, AOI 1, AOI 4.1*
Sample Type										
Metals	***Units***									
Antimony	mg/L	0.0003 J	--	--	--	--	--	--	--	--
Arsenic	mg/L	0.00075 J	--	--	--	--	--	--	--	--
Barium	mg/L	0.118	--	--	--	--	--	--	--	--
Beryllium	mg/L	0.001 U	--	--	--	--	--	--	--	--
Cadmium	mg/L	0.00048 J	--	--	--	--	--	--	--	--
Chromium	mg/L	0.005 U	--	--	--	--	--	--	--	--
Chromium III (trivalent)	mg/L	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/L	--	--	--	--	--	--	--	--	--
Cobalt	mg/L	0.00054 J	--	--	--	--	--	--	--	--
Copper	mg/L	0.002 U	--	--	--	--	--	--	--	--
Lead	mg/L	0.0014 J	--	--	--	--	--	--	--	--
Manganese	mg/L	**0.115**[ab]	--	--	--	--	--	--	--	--
Mercury	mg/L	0.0002 U	--	--	--	--	--	--	--	--
Nickel	mg/L	0.002 J	--	--	--	--	--	--	--	--
Selenium	mg/L	0.005 U	--	--	--	--	--	--	--	--
Silver	mg/L	0.0002 U	--	--	--	--	--	--	--	--
Thallium	mg/L	0.001 U	--	--	--	--	--	--	--	--
Vanadium	mg/L	0.004 U	--	--	--	--	--	--	--	--
Zinc	mg/L	**1.07**[c]	--	--	--	--	--	--	--	--
PCBs										
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	--	--	--	--	--	--	--	--	--
TPH										
Total Petroleum Hydrocarbons - Purgeable (GRO)	mg/L	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (C10-C20)	mg/L	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (C20-C34)	mg/L	--	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds										
2-Methylnaphthalene	mg/L	0.005 U	--	--	--	--	--	--	--	--
Acenaphthene	mg/L	0.005 U	--	--	--	--	--	--	--	--
Acenaphthylene	mg/L	0.005 U	--	--	--	--	--	--	--	--
Anthracene	mg/L	0.005 U	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/L	0.001 U	--	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/L	0.001 U	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/L	0.001 U	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	mg/L	0.001 U	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/L	0.001 U	--	--	--	--	--	--	--	--
Chrysene	mg/L	0.001 U	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/L	0.002 U	--	--	--	--	--	--	--	--
Fluoranthene	mg/L	0.001 U	--	--	--	--	--	--	--	--
Fluorene	mg/L	0.005 U	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/L	0.002 U	--	--	--	--	--	--	--	--
Naphthalene	mg/L	0.005 U	--	--	--	--	--	--	--	--
Phenanthrene	mg/L	0.002 U	--	--	--	--	--	--	--	--
Pyrene	mg/L	0.005 U	--	--	--	--	--	--	--	--
Volatile Organic Compounds										
1,1,1-Trichloroethane	mg/L	0.0017	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.01 U
1,1,2,2-Tetrachloroethane	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	0.01 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	0.01 U

TABLE 4

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

Sample Location		*87-11*	*87-13*	*88-2*	*88-3*	*88-4*	*C-1*	*C-2*	*C-3*	*MW1-03*
Sample Identification		*GW-17360-021011-DR-018*	*GW-17360-021011-DR-012*	*GW-17360-020911-DR-004*	*GW-17360-020911-DR-005*	*GW-17360-020911-DR-006*	*GW-17360-020911-DR-010*	*GW-17360-020911-DR-009*	*GW-17360-021011-DR-015*	*GW-17360-021011-DR-023*
Sample Date		*2/10/2011*	*2/10/2011*	*2/9/2011*	*2/9/2011*	*2/9/2011*	*2/9/2011*	*2/9/2011*	*2/10/2011*	*2/10/2011*
Area of Interest		*AOI 25*	*AOI 25*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25, AOI 3*	*AOI 25*	*AOI 25*	*AOI 25*	*AOI 25, AOI 1, AOI 4.1*
Sample Type										
1,1-Dichloroethane	mg/L	0.00086 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.01 U
1,1-Dichloroethene	mg/L	0.00029 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.01 U
1,2,4-Trichlorobenzene	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	0.05 U
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	0.01 U
1,2-Dibromoethane (Ethylene dibromide)	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	0.01 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	0.01 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	0.01 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	0.01 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	0.01 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	0.01 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.25 U
2-Hexanone	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U
Acetone	mg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.25 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	0.01 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.00059 J	0.001 U	0.001 U	0.00043 J	0.0013	0.01 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	0.00079 J	0.01 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	0.01 U
Carbon disulfide	mg/L	0.00031 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.05 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	0.01 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	0.01 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	0.01 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.001 U	0.0014	0.001 U	0.001 U	0.00042 J	0.001	0.01 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	0.01 U
cis-1,2-Dichloroethene	mg/L	0.015	0.001 U	0.001 U	0.001 U	0.001 U	0.00042 J	0.001	0.0014	0.01 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	0.01 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	0.01 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00042 J	0.0012	0.01 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	0.01 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	0.01 U
Isopropyl benzene	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	0.05 U
Methyl acetate	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	0.1 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	0.01 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.00031 J	0.005 U	0.005 U	0.005 U	0.005 U	0.00027 J	0.005 U	0.05 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	0.05 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	0.01 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00066 J	0.0018	**0.3**[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	0.001 U	0.01 U
trans-1,2-Dichloroethene	mg/L	0.00026 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.01 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	0.01 U
Trichloroethene	mg/L	**0.036**[ab]	0.00053 J	0.001 U	0.001 U	0.001 U	0.0004 J	0.00059 J	0.00057 J	0.0035 J
Trichlorofluoromethane (CFC-11)	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	0.01 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	0.01 U
Vinyl chloride	mg/L	**0.0031**[ab]	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00034 J	0.00052 J	0.01 U
Xylenes (total)	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.03 U
General Chemistry										
Cyanide (amenable)	mg/L	--	--	--	--	--	--	--	--	--
Cyanide (total)	mg/L	--	--	--	--	--	--	--	--	--

Notes

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

[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.

U - Not present at or above the associated value.

J - Estimated concentration.

UJ - Estimated reporting limit.

R - Rejected.

'--' - Criteria not available or chemical not analyzed for

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
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*	*MW8-04*	*MW9-04*	*MW10-04*
Sample Identification		*GW-17360-021011-DR-024*	*GW-17360-020911-DR-001*	*GW-17360-020911-DR-008*	*GW-17360-021011-DR-014*	*GW-17360-021011-DR-011*	*GW-17360-021111-DR-025*	*GW-17360-021011-DR-013*	*GW-17360-020911-DR-007*	*GW-17360-021011-DR-019*
Sample Date		*2/10/2011*	*2/9/2011*	*2/9/2011*	*2/10/2011*	*2/10/2011*	*2/11/2011*	*2/10/2011*	*2/9/2011*	*2/10/2011*
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 25*	*AOI 25*
Sample Type										
Metals	***Units***									
Antimony	mg/L	--	0.002 U	--	--	--	--	--	--	--
Arsenic	mg/L	--	0.005 U	--	--	--	--	--	--	--
Barium	mg/L	--	0.0382 J	--	--	--	--	--	--	--
Beryllium	mg/L	--	0.001 U	--	--	--	--	--	--	--
Cadmium	mg/L	--	0.001 U	--	--	--	--	--	--	--
Chromium	mg/L	--	0.0011 J	--	--	--	--	--	--	--
Chromium III (trivalent)	mg/L	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/L	--	--	--	--	--	--	--	--	--
Cobalt	mg/L	--	0.000085 J	--	--	--	--	--	--	--
Copper	mg/L	--	0.002 U	--	--	--	--	--	--	--
Lead	mg/L	--	0.003 U	--	--	--	--	--	--	--
Manganese	mg/L	--	0.0012 J	--	--	--	--	--	--	--
Mercury	mg/L	--	0.0002 U	--	--	--	--	--	--	--
Nickel	mg/L	--	0.00038 J	--	--	--	--	--	--	--
Selenium	mg/L	--	0.005 U	--	--	--	--	--	--	--
Silver	mg/L	--	0.0002 U	--	--	--	--	--	--	--
Thallium	mg/L	--	0.001 U	--	--	--	--	--	--	--
Vanadium	mg/L	--	0.004 U	--	--	--	--	--	--	--
Zinc	mg/L	--	0.02 U	--	--	--	--	--	--	--
PCBs										
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	--	--	--	--	--	--	--	--	--
TPH										
Total Petroleum Hydrocarbons - Purgeable (GRO)	mg/L	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (C10-C20)	mg/L	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (C20-C34)	mg/L	--	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds										
2-Methylnaphthalene	mg/L	--	0.005 U	--	--	--	--	--	--	--
Acenaphthene	mg/L	--	0.005 U	--	--	--	--	--	--	--
Acenaphthylene	mg/L	--	0.005 U	--	--	--	--	--	--	--
Anthracene	mg/L	--	0.005 U	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/L	--	0.001 U	--	--	--	--	--	--	--
Benzo(a)pyrene	mg/L	--	0.001 U	--	--	--	--	--	--	--
Benzo(b)fluoranthene	mg/L	--	0.001 U	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	mg/L	--	0.001 U	--	--	--	--	--	--	--
Benzo(k)fluoranthene	mg/L	--	0.001 U	--	--	--	--	--	--	--
Chrysene	mg/L	--	0.001 U	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	mg/L	--	0.002 U	--	--	--	--	--	--	--
Fluoranthene	mg/L	--	0.001 U	--	--	--	--	--	--	--
Fluorene	mg/L	--	0.005 U	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	mg/L	--	0.002 U	--	--	--	--	--	--	--
Naphthalene	mg/L	--	0.005 U	--	--	--	--	--	--	--
Phenanthrene	mg/L	--	0.002 U	--	--	--	--	--	--	--
Pyrene	mg/L	--	0.005 U	--	--	--	--	--	--	--
Volatile Organic Compounds										
1,1,1-Trichloroethane	mg/L	0.001 U	0.00022 J	0.001 U	0.001 U	0.001 U	0.00023 J	0.001 U	0.001 U	0.00031 J
1,1,2,2-Tetrachloroethane	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	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	0.001 U

TABLE 4

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
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*	*MW8-04*	*MW9-04*	*MW10-04*
Sample Identification		*GW-17360-021011-DR-024*	*GW-17360-020911-DR-001*	*GW-17360-020911-DR-008*	*GW-17360-021011-DR-014*	*GW-17360-021011-DR-011*	*GW-17360-021111-DR-025*	*GW-17360-021011-DR-013*	*GW-17360-020911-DR-007*	*GW-17360-021011-DR-019*
Sample Date		***2/10/2011***	***2/9/2011***	***2/9/2011***	***2/10/2011***	***2/10/2011***	***2/11/2011***	***2/10/2011***	***2/9/2011***	***2/10/2011***
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 25*	*AOI 25*
Sample Type										
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	0.00043 J
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	0.001 U
1,2,4-Trichlorobenzene	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	0.005 U
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	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	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	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	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	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	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	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	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
2-Hexanone	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Acetone	mg/L	0.0011 J	0.025 U	0.025 U	0.025 U	0.025 U	0.0012 J	0.025 U	0.025 U	0.025 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	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.0003 J	0.00042 J	0.0024	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 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	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	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	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	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	0.001 U
Chloroform (Trichloromethane)	mg/L	0.00044 J	0.00096 J	0.0013	0.018	0.00018 J	0.00067 J	0.00018 J	0.003	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	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.00098 J	0.001 U	0.001 U	0.001 U	0.00048 J	0.001 U	0.001 U	0.0029
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	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	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.00023 J	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 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	0.001 U
Isopropyl benzene	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	0.005 U
Methyl acetate	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	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	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.005 U	0.00044 J	0.00051 J	0.00022 J	0.005 U	0.00047 J	0.001 J	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	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	0.001 U
Tetrachloroethene	mg/L	**0.0069[ab]**	**0.022[ab]**	0.001 U	0.00047 J	0.001 U	0.001 U	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	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	0.0006 J
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	0.001 U
Trichloroethene	mg/L	0.001 U	0.0019	0.00058 J	0.0009 J	0.001 U	0.0018	0.001 U	0.00049 J	0.0021
Trichlorofluoromethane (CFC-11)	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	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	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	0.001 U
Xylenes (total)	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
General Chemistry										
Cyanide (amenable)	mg/L	--	--	--	--	--	--	--	--	--
Cyanide (total)	mg/L	--	--	--	--	--	--	--	--	--

Notes

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

[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.

U - Not present at or above the associated value.

J - Estimated concentration.

UJ - Estimated reporting limit.

R - Rejected.

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TABLE 4

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

Sample Location		*MW11D-04*	*MW11D-04*	*MW11S-05*	*MW13-04*	*MW13-04*	*MW14-04*	*MW15-04*	*MW17-06*	*MW18-10*
Sample Identification		*GW-17360-021011-DR-020*	*GW-17360-021011-DR-021*	*GW-17360-021011-DR-022*	*GW-17360-021411-JY-040*	*GW-17360-021511-JY-040*	*GW-17360-021411-JY-035*	*GW-17360-031011-DR-210*	*GW-17360-020911-DR-003*	*GW-17360-021411-JY-036*
Sample Date		*2/10/2011*	*2/10/2011*	*2/10/2011*	*2/15/2011*	*2/15/2011*	*2/14/2011*	*3/10/2011*	*2/9/2011*	*2/14/2011*
Area of Interest		*AOI 25, AOI 3*	*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 4.1*	*AOI 25, AOI 3*	*AOI 4.1, AOI 6, AOI 17.1, AOI 19*
Sample Type			*Duplicate*							
Metals	***Units***									
Antimony	mg/L	--	--	--	--	0.002 U	0.002 U	0.002 U	--	0.002 U
Arsenic	mg/L	--	--	--	--	0.00066 J	0.0004 J	0.00051 J	--	0.0027 J
Barium	mg/L	--	--	--	--	0.0576 J	0.0534 J	0.0867 J	--	0.102
Beryllium	mg/L	--	--	--	--	0.001 U	0.001 U	0.001 U	--	0.001 U
Cadmium	mg/L	--	--	--	--	0.001 U	0.001 U	0.001 U	--	0.001 U
Chromium	mg/L	--	--	--	--	0.0038 J	0.005 U	0.00081 J	--	0.005 U
Chromium III (trivalent)	mg/L	--	--	--	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/L	--	--	--	--	--	--	--	--	--
Cobalt	mg/L	--	--	--	--	0.00013 J	0.007 U	0.00012 J	--	0.00049 J
Copper	mg/L	--	--	--	--	0.002 U	0.002 U	0.002 U	--	0.002 U
Lead	mg/L	--	--	--	--	0.003 U	0.003 U	0.00074 J	--	0.003 U
Manganese	mg/L	--	--	--	--	0.008 J	0.015 U	0.015 U	--	**0.356**[ab]
Mercury	mg/L	--	--	--	--	0.0002 U	0.0002 U	0.0002 U	--	0.0002 U
Nickel	mg/L	--	--	--	--	0.00076 J	0.02 U	0.02 U	--	0.00073 J
Selenium	mg/L	--	--	--	--	0.005 U	0.005 U	0.005 U	--	0.005 U
Silver	mg/L	--	--	--	--	0.0002 U	0.0002 U	0.0002 U	--	0.0002 U
Thallium	mg/L	--	--	--	--	0.001 U	0.001 U	0.001 U	--	0.001 U
Vanadium	mg/L	--	--	--	--	0.004 U	0.004 U	0.004 U	--	0.004 U
Zinc	mg/L	--	--	--	--	0.02 U	0.02 U	0.02 U	--	0.02 U
PCBs										
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	--	--	--	--	--	--	--	--	--
TPH										
Total Petroleum Hydrocarbons - Purgeable (GRO)	mg/L	--	--	--	--	--	--	--	--	0.028 J
Total Petroleum Hydrocarbons (C10-C20)	mg/L	--	--	--	--	--	--	--	--	1 J
Total Petroleum Hydrocarbons (C20-C34)	mg/L	--	--	--	--	--	--	--	--	1.2 J
Semi-Volatile Organic Compounds										
2-Methylnaphthalene	mg/L	--	--	--	--	0.005 U	0.005 UJ	0.005 U	--	0.005 U
Acenaphthene	mg/L	--	--	--	--	0.005 U	0.005 UJ	0.005 U	--	0.005 U
Acenaphthylene	mg/L	--	--	--	--	0.005 U	0.005 UJ	0.005 U	--	0.005 U
Anthracene	mg/L	--	--	--	--	0.005 U	0.005 UJ	0.005 U	--	0.005 U
Benzo(a)anthracene	mg/L	--	--	--	--	0.001 U	0.001 UJ	0.001 U	--	0.001 U
Benzo(a)pyrene	mg/L	--	--	--	--	0.001 U	0.001 UJ	0.001 U	--	0.001 U
Benzo(b)fluoranthene	mg/L	--	--	--	--	0.001 U	0.001 UJ	0.001 U	--	0.001 U
Benzo(g,h,i)perylene	mg/L	--	--	--	--	0.001 U	0.001 UJ	0.001 U	--	0.001 U
Benzo(k)fluoranthene	mg/L	--	--	--	--	0.001 U	0.001 UJ	0.001 U	--	0.001 U
Chrysene	mg/L	--	--	--	--	0.001 U	0.001 UJ	0.001 U	--	0.001 U
Dibenz(a,h)anthracene	mg/L	--	--	--	--	0.002 U	0.002 UJ	0.002 U	--	0.002 U
Fluoranthene	mg/L	--	--	--	--	0.001 U	0.001 UJ	0.001 U	--	0.001 U
Fluorene	mg/L	--	--	--	--	0.005 U	0.005 UJ	0.005 U	--	0.005 U
Indeno(1,2,3-cd)pyrene	mg/L	--	--	--	--	0.002 U	0.002 UJ	0.002 U	--	0.002 U
Naphthalene	mg/L	--	--	--	--	0.005 U	0.005 UJ	0.005 U	--	0.005 U
Phenanthrene	mg/L	--	--	--	--	0.002 U	0.002 UJ	0.002 U	--	0.002 U
Pyrene	mg/L	--	--	--	--	0.005 U	0.005 UJ	0.005 U	--	0.005 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	0.0036	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	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-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

TABLE 4

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

Sample Location		*MW11D-04*	*MW11D-04*	*MW11S-05*	*MW13-04*	*MW13-04*	*MW14-04*	*MW15-04*	*MW17-06*	*MW18-10*
Sample Identification		*GW-17360-021011-DR-020*	*GW-17360-021011-DR-021*	*GW-17360-021011-DR-022*	*GW-17360-021411-JY-040*	*GW-17360-021511-JY-040*	*GW-17360-021411-JY-035*	*GW-17360-031011-DR-210*	*GW-17360-020911-DR-003*	*GW-17360-021411-JY-036*
Sample Date		*2/10/2011*	*2/10/2011*	*2/10/2011*	*2/15/2011*	*2/15/2011*	*2/14/2011*	*3/10/2011*	*2/9/2011*	*2/14/2011*
Area of Interest		*AOI 25, AOI 3*	*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 4.1*	*AOI 25, AOI 3*	*AOI 4.1, AOI 6, AOI 17.1, AOI 19*
Sample Type			*Duplicate*							
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	0.005 U	0.005 U	0.005 U	--	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
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 (Ethylene dibromide)	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 (Methyl ethyl ketone) (MEK)	mg/L	0.025 U	0.025 U	0.025 U	--	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
2-Hexanone	mg/L	0.05 U	0.05 U	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.05 U	0.05 U	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Acetone	mg/L	0.025 U	0.0013 J	0.0012 J	--	0.025 U	0.025 U	0.025 U	0.025 U	0.025 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 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	0.00069 J
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	--	0.00031 J	0.0018	0.00068 J	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	0.032	0.036	0.001 U	--	0.001 U	0.001 U	0.001 U	0.029	0.00094 J
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 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	0.005 U	0.005 U	0.005 U	--	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methyl acetate	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
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	0.00044 J	0.00052 J	0.005 U	--	0.005 U	0.005 U	0.005 U	0.005 U	0.00025 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	0.00062 J	0.00062 J	0.001 U	--	0.001 U	0.001 U	0.001 U	**0.027 J[ab]**	0.00051 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	0.0018	0.0021	0.001 U	--	0.001 U	0.001 U	0.001 U	0.00066 J	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	0.0025	0.0027	0.00029 J	--	0.001 U	0.002	0.0013	**0.0056[ab]**	0.00051 J
Trichlorofluoromethane (CFC-11)	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
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	0.003 U	0.003 U	0.003 U	--	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
General Chemistry										
Cyanide (amenable)	mg/L	--	--	--	--	--	--	--	--	--
Cyanide (total)	mg/L	--	--	--	--	--	--	--	--	--

Notes

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

[ ] Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.

U - Not present at or above the associated value.

J - Estimated concentration.

UJ - Estimated reporting limit.

R - Rejected.

'--' - Criteria not available or chemical not analyzed for

TABLE 4

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

Sample Location		*MW18-10*	*MW19-11*	*MW19-11*	*MW20-11*	*MW21-11*	*MW22-11*	*MW23-11*	*MW24-11*	*MW24-11*
Sample Identification		*GW-17360-021411-JY-037*	*GW-17360-030911-DR-201*	*GW-17360-031611-DR-201*	*GW-17360-030911-DR-200*	*GW-17360-030911-DR-202*	*GW-17360-031011-DR-205*	*GW-17360-031011-DR-208*	*GW-17360-030911-DR-203*	*GW-17360-030911-DR-204*
Sample Date		*2/14/2011*	*3/9/2011*	*3/16/2011*	*3/9/2011*	*3/9/2011*	*3/10/2011*	*3/10/2011*	*3/9/2011*	*3/9/2011*
Area of Interest		*AOI 4.1, AOI 6, AOI 17.1, AOI 19*	*AOI 7.1, AOI 26.2*	*AOI 7.1, AOI 26.2*	*AOI 11*	*AOI 15.3*	*AOI 16.1*	*AOI 16.3*	*AOI 16.4*	*AOI 16.4*
Sample Type		*Duplicate*								*Duplicate*
Metals	***Units***									
Antimony	mg/L	0.002 U	0.002 U	--	0.002 U	0.002 U	0.002 U	0.00016 J	0.002 U	0.002 U
Arsenic	mg/L	0.0028 J	0.005 U	--	0.0021 J	0.005 U	0.005 U	**0.0152[abc]**	0.005 U	0.005 U
Barium	mg/L	0.0992 J	0.032 J	--	0.124	0.0335 J	0.0481 J	0.204	0.0364 J	0.0389 J
Beryllium	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
Cadmium	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
Chromium	mg/L	0.005 U	0.0012 J	0.0013 J	0.005 U	0.0012 J	0.005 U	0.005 U	0.0012 J	0.0013 J
Chromium III (trivalent)	mg/L	--	0.020 UJ	0.020 U	--	--	--	--	--	--
Chromium VI (hexavalent)	mg/L	--	0.005 UJ	0.005 U	--	--	--	--	--	--
Cobalt	mg/L	0.00041 J	0.000083 J	--	0.00067 J	0.00018 J	0.00078 J	0.00027 J	0.000094 J	0.00012 J
Copper	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
Lead	mg/L	0.003 U	0.003 U	--	0.003 U	0.003 U	0.003 U	0.0003 J	0.003 U	0.003 U
Manganese	mg/L	**0.335[ab]**	0.015 U	--	**0.593[ab]**	0.015 U	**0.175[ab]**	**0.141[ab]**	0.015 U	0.015 U
Mercury	mg/L	0.0002 U	0.0002 U	--	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.00064 J	0.02 U	--	0.0035 J	0.02 U	0.002 J	0.0019 J	0.02 U	0.02 U
Selenium	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
Silver	mg/L	0.0002 U	0.0002 U	--	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Thallium	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
Vanadium	mg/L	0.004 U	0.004 U	--	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.02 U	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
PCBs										
Aroclor-1016 (PCB-1016)	mg/L	--	--	--	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1221 (PCB-1221)	mg/L	--	--	--	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1232 (PCB-1232)	mg/L	--	--	--	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1242 (PCB-1242)	mg/L	--	--	--	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1248 (PCB-1248)	mg/L	--	--	--	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1254 (PCB-1254)	mg/L	--	--	--	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Aroclor-1260 (PCB-1260)	mg/L	--	--	--	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Total PCBs	mg/L	--	--	--	ND	ND	ND	ND	ND	ND
TPH										
Total Petroleum Hydrocarbons - Purgeable (GRO)	mg/L	0.1 U	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (C10-C20)	mg/L	0.86 J	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (C20-C34)	mg/L	1.1 J	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds										
2-Methylnaphthalene	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
Acenaphthene	mg/L	0.005 U	0.005 U	--	0.005 U	0.005 U	0.005 U	0.0066	0.005 U	0.005 U
Acenaphthylene	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
Anthracene	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
Benzo(a)anthracene	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
Benzo(a)pyrene	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
Benzo(b)fluoranthene	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
Benzo(g,h,i)perylene	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
Benzo(k)fluoranthene	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
Chrysene	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
Dibenz(a,h)anthracene	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
Fluoranthene	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
Fluorene	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
Indeno(1,2,3-cd)pyrene	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
Naphthalene	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
Phenanthrene	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
Pyrene	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
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 U	0.001 U	0.001 U	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

TABLE 4

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

Sample Location		*MW18-10*	*MW19-11*	*MW19-11*	*MW20-11*	*MW21-11*	*MW22-11*	*MW23-11*	*MW24-11*	*MW24-11*
Sample Identification		*GW-17360-021411-JY-037*	*GW-17360-030911-DR-201*	*GW-17360-031611-DR-201*	*GW-17360-030911-DR-200*	*GW-17360-030911-DR-202*	*GW-17360-031011-DR-205*	*GW-17360-031011-DR-208*	*GW-17360-030911-DR-203*	*GW-17360-030911-DR-204*
Sample Date		*2/14/2011*	*3/9/2011*	*3/16/2011*	*3/9/2011*	*3/9/2011*	*3/10/2011*	*3/10/2011*	*3/9/2011*	*3/9/2011*
Area of Interest		*AOI 4.1, AOI 6, AOI 17.1, AOI 19*	*AOI 7.1, AOI 26.2*	*AOI 7.1, AOI 26.2*	*AOI 11*	*AOI 15.3*	*AOI 16.1*	*AOI 16.3*	*AOI 16.4*	*AOI 16.4*
Sample Type		*Duplicate*								*Duplicate*
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	--	0.001 U	0.001 U	0.001 U	0.00041 J	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	0.00058 J	0.001 U	0.001 U
1,2,4-Trichlorobenzene	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
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 (Ethylene dibromide)	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 (Methyl ethyl ketone) (MEK)	mg/L	0.025 U	0.025 U	--	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
2-Hexanone	mg/L	0.05 U	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.05 U	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Acetone	mg/L	0.025 U	0.025 U	--	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 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 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	0.00058 J	0.005 U	--	0.005 U	0.005 U	0.005 U	0.003 J	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	0.0015	--	0.00028 J	0.00079 J	0.001 U	0.001 U	0.0014	0.0014
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	0.00098 J	0.001 U	--	0.001 U	0.0011	0.001 U	0.013	0.00034 J	0.00031 J
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 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	0.005 U	0.005 U	--	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methyl acetate	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
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	0.00027 J	0.005 U	--	0.005 U	0.005 U	0.00033 J	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	0.0005 J	0.0013	--	0.001 U	**0.027**[ab]	0.00062 J	0.001 U	0.0037	0.0036
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	0.00054 J	0.0005 J	--	0.001 U	0.0026	0.001 U	0.00088 J	0.00071 J	0.00071 J
Trichlorofluoromethane (CFC-11)	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
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	0.00097 J	0.001 U	0.001 U
Xylenes (total)	mg/L	0.003 U	0.003 U	--	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
General Chemistry										
Cyanide (amenable)	mg/L	--	--	--	0.0050 U	--	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Cyanide (total)	mg/L	--	--	--	0.0050 U	--	0.0050 U	0.0050 U	0.0050 U	0.0050 U

Notes

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

0.027 Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.

U - Not present at or above the associated value.

J - Estimated concentration.

UJ - Estimated reporting limit.

R - Rejected.

'--' - Criteria not available or chemical not analyzed for

TABLE 4

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

Sample Location		*MW25-11*	*MW26-11*	*MW27-11*
Sample Identification		*GW-17360-031011-DR-206*	*GW-17360-031011-DR-207*	*GW-17360-031611-DR-251*
Sample Date		*3/10/2011*	*3/10/2011*	*3/16/2011*
Area of Interest		*AOI 17.1*	*AOI 19*	*AOI 27*
Sample Type				
Metals	***Units***			
Antimony	mg/L	0.002 U	0.002 U	0.0016 J
Arsenic	mg/L	0.00062 J	0.0066	0.005 U
Barium	mg/L	0.0526 J	0.155	0.098 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.001 U	0.001 U
Chromium	mg/L	0.005 U	0.005 U	0.0012 J
Chromium III (trivalent)	mg/L	--	--	--
Chromium VI (hexavalent)	mg/L	--	--	--
Cobalt	mg/L	0.00022 J	0.0012 J	0.00035 J
Copper	mg/L	0.002 U	0.002 U	0.0023
Lead	mg/L	0.003 U	0.003 U	0.003 U
Manganese	mg/L	**0.0972**[ab]	**0.602**[ab]	0.0065 J
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.0024 J	0.00086 J
Selenium	mg/L	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U
Thallium	mg/L	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.02 U	0.02 U
PCBs				
Aroclor-1016 (PCB-1016)	mg/L	0.0002 U	0.0002 U	0.0002 U
Aroclor-1221 (PCB-1221)	mg/L	0.0002 U	0.0002 U	0.0002 U
Aroclor-1232 (PCB-1232)	mg/L	0.0002 U	0.0002 U	0.0002 U
Aroclor-1242 (PCB-1242)	mg/L	0.0002 U	0.0002 U	0.0002 U
Aroclor-1248 (PCB-1248)	mg/L	0.0002 U	0.0002 U	0.0002 U
Aroclor-1254 (PCB-1254)	mg/L	0.0002 U	0.0002 U	0.0002 U
Aroclor-1260 (PCB-1260)	mg/L	0.0002 U	0.0002 U	0.0002 U
Total PCBs	mg/L	ND	ND	ND
TPH				
Total Petroleum Hydrocarbons - Purgeable (GRO)	mg/L	--	--	--
Total Petroleum Hydrocarbons (C10-C20)	mg/L	--	--	--
Total Petroleum Hydrocarbons (C20-C34)	mg/L	--	--	--
Semi-Volatile Organic Compounds				
2-Methylnaphthalene	mg/L	0.005 U	0.005 U	0.005 U
Acenaphthene	mg/L	0.005 U	0.005 U	0.005 U
Acenaphthylene	mg/L	0.005 U	0.005 U	0.005 U
Anthracene	mg/L	0.005 U	0.005 U	0.005 U
Benzo(a)anthracene	mg/L	0.001 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.001 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.001 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.001 U	0.001 U	0.001 U
Benzo(k)fluoranthene	mg/L	0.001 U	0.001 U	0.001 U
Chrysene	mg/L	0.001 U	0.001 U	0.001 U
Dibenz(a,h)anthracene	mg/L	0.002 U	0.002 U	0.002 U
Fluoranthene	mg/L	0.001 U	0.001 U	0.001 U
Fluorene	mg/L	0.005 U	0.005 U	0.005 U
Indeno(1,2,3-cd)pyrene	mg/L	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.005 U	0.005 U	0.005 U
Phenanthrene	mg/L	0.002 U	0.002 U	0.002 U
Pyrene	mg/L	0.005 U	0.005 U	0.005 U
Volatile Organic Compounds				
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.0018
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U

TABLE 4

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

Sample Location		*MW25-11*	*MW26-11*	*MW27-11*
Sample Identification		*GW-17360-031011-DR-206*	*GW-17360-031011-DR-207*	*GW-17360-031611-DR-251*
Sample Date		*3/10/2011*	*3/10/2011*	*3/16/2011*
Area of Interest		*AOI 17.1*	*AOI 19*	*AOI 27*
Sample Type				
1,1-Dichloroethane	mg/L	0.001 U	0.00047 J	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.00063 J	0.00021 J
1,2,4-Trichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.025 U	0.025 U	0.025 U
2-Hexanone	mg/L	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.05 U	0.05 U	0.05 U
Acetone	mg/L	0.025 U	0.025 U	0.025 U
Benzene	mg/L	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.00034 J	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.00017 J
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.0027	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.005 U	0.005 U	0.005 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	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
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.0012	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.00028 J	0.0023	0.0011
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.0014	0.001 U
Xylenes (total)	mg/L	0.003 U	0.003 U	0.003 U
General Chemistry				
Cyanide (amenable)	mg/L	--	--	--
Cyanide (total)	mg/L	--	--	--

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 5

ANALYTICAL RESULTS OF BOREHOLE SAMPLES
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:* [1]					*SB56-11*	*SB57-11*	*SB60-11*	*SB61-11*	*SB61-11*	*SB64-11*	*SB67-11*	*SB71-11*	*SB88-11*
Sample Identification		*Residential*	*Non-Residential*	*Groundwater*	*Non-Residential Groundwater*	*Groundwater*	*GW-17360-030811-DR-195*	*GW-17360-030911-DR-197*	*GW-17360-030811-DR-193*	*GW-17360-030811-DR-191*	*GW-17360-030811-DR-192*	*GW-17360-030811-DR-196*	*GW-17360-030911-DR-199*	*GW-17360-030911-DR-198*	*GW-17360-030811-DR-194*
Sample Date		*Drinking Water*	*Drinking Water*	*Surface Water*	*Volatilization to*	*Contact*	*3/8/2011*	*3/9/2011*	*3/8/2011*	*3/8/2011*	*3/8/2011*	*3/8/2011*	*3/9/2011*	*3/9/2011*	*3/8/2011*
Sample Depth				*Interface*	*Indoor Air Inhalation*		*(15.5-15.5) ft BGS*	*(20.5-20.5) ft BGS*	*(23.2-23.2) ft BGS*	*(23-23) ft BGS*	*(23-23) ft BGS*	*(15.5-15.5) ft BGS*	*(24-24) ft BGS*	*(20-20) ft BGS*	*(16-16) ft BGS*
Area of Interest		*a*	*b*	*c*	*d*	*e*	*AOI 8.2*	*AOI 8.3*	*AOI 8.7*	*AOI 8.5*	*AOI 8.5*	*AOI 9*	*AOI 10.2*	*AOI 12*	*AOI 17.2*
Sample Type	*Units*										*Duplicate*				
Metals															
Antimony (dissolved)	mg/L	0.006	0.006	0.13	NLV	68	--	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	--	0.002 U	0.002 U
Arsenic (dissolved)	mg/L	0.01	0.01	0.01	NLV	4.3	--	0.005 U	0.00047 J	0.005 U	0.005 U	0.005 U	--	0.005 U	0.00085 J
Barium (dissolved)	mg/L	2	2	0.67	NLV	14000	--	0.0307 J	0.0447 J	0.0466 J	0.0464 J	0.032 J	--	0.0197 J	0.0134 J
Beryllium (dissolved)	mg/L	0.004	0.004	0.0067	NLV	290	--	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	--	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	0.005	0.005	0.0025	NLV	190	--	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	--	0.001 U	0.001 U
Chromium Total (dissolved)	mg/L	0.1	0.1	0.011	NLV	460	--	0.0021 J	0.005 U	0.0012 J	0.0011 J	0.001 J	--	0.0029 J	0.0011 J
Cobalt (dissolved)	mg/L	0.04	0.1	0.1	NLV	2400	--	0.00023 J	0.0034 J	0.00012 J	0.000099 J	0.00038 J	--	0.000092 J	0.00018 J
Copper (dissolved)	mg/L	1	1	0.013	NLV	7400	--	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	--	0.002 U	0.002 U
Lead (dissolved)	mg/L	0.004	0.004	0.014	NLV	ID	--	0.003 U	0.003 U	0.0012 J	0.0014 J	0.003 U	--	0.003 U	0.003 U
Manganese (dissolved)	mg/L	0.05	0.05	1.3	NLV	9100	--	0.0305	**0.544**[ab]	0.0258	0.0247	**0.0668**[ab]	--	0.0268	0.0241
Mercury (dissolved)	mg/L	0.002	0.002	0.0000013	0.056	0.056	--	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	--	0.0002 U	0.0002 U
Nickel (dissolved)	mg/L	0.1	0.1	0.073	NLV	74000	--	0.02 U	0.0045 J	0.00057 J	0.00073 J	0.02 U	--	0.02 U	0.00026 J
Selenium (dissolved)	mg/L	0.05	0.05	0.005	NLV	970	--	0.005 U	0.005 U	0.005 U	0.005 U	0.0013 J	--	0.005 U	0.0023 J
Silver (dissolved)	mg/L	0.034	0.098	0.0002	NLV	1500	--	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	--	0.0002 U	0.0002 U
Thallium (dissolved)	mg/L	0.002	0.002	0.0037	NLV	13	--	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	--	0.001 U	0.001 U
Vanadium (dissolved)	mg/L	0.0045	0.062	0.012	NLV	970	--	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	--	0.004 U	0.004 U
Zinc (dissolved)	mg/L	2.4	5	0.17	NLV	110000	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	--	0.02 U	0.02 U
Semi-Volatile Organic Compounds															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L						--	--	--	--	--	--	0.005 U	--	--
2,4,5-Trichlorophenol	mg/L	0.73	2.1	--	NLV	170	--	--	--	--	--	--	0.005 U	--	--
2,4,6-Trichlorophenol	mg/L	0.12	0.47	0.005	NLV	10	--	--	--	--	--	--	0.004 U	--	--
2,4-Dichlorophenol	mg/L	0.073	0.21	0.011	NLV	48	--	--	--	--	--	--	0.01 U	--	--
2,4-Dimethylphenol	mg/L	0.37	1	0.38	NLV	520	--	--	--	--	--	--	0.005 U	--	--
2,4-Dinitrophenol	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.02 UJ	--	--
2,4-Dinitrotoluene	mg/L	0.0077	0.032	--	NLV	8.6	--	--	--	--	--	--	0.005 U	--	--
2,6-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.005 U	--	--
2-Chloronaphthalene	mg/L	1.8	5.2	--	ID	6.7	--	--	--	--	--	--	0.005 U	--	--
2-Chlorophenol	mg/L	0.045	0.13	0.018	ID	94	--	--	--	--	--	--	0.005 U	--	--
2-Methylnaphthalene	mg/L	0.26	0.75	0.019	25	25	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Methylphenol	mg/L	0.37	1	0.03	NLV	810	--	--	--	--	--	--	0.005 U	--	--
2-Nitroaniline	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--
2-Nitrophenol	mg/L	0.02	0.058	ID	NLV	79	--	--	--	--	--	--	0.005 U	--	--
3,3'-Dichlorobenzidine	mg/L	0.0011	0.0043	0.0003	NLV	0.18	--	--	--	--	--	--	0.001 U	--	--
3-Nitroaniline	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--
4,6-Dinitro-2-methylphenol	mg/L	0.02	0.02	--	NLV	9.5	--	--	--	--	--	--	0.02 U	--	--
4-Bromophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.005 U	--	--
4-Chloro-3-methylphenol	mg/L	0.15	0.42	0.0074	NLV	79	--	--	--	--	--	--	0.005 U	--	--
4-Chloroaniline	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.01 U	--	--
4-Chlorophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.005 U	--	--
4-Methylphenol	mg/L	0.37	1	0.03	NLV	810	--	--	--	--	--	--	0.005 U	--	--
4-Nitroaniline	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--
4-Nitrophenol	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--
Acenaphthene	mg/L	1.3	3.8	0.038	4.2	4.2	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Acenaphthylene	mg/L	0.052	0.15	ID	3.9	3.9	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Acetophenone	mg/L	1.5	4.4		6100	6100	--	--	--	--	--	--	0.005 U	--	--
Anthracene	mg/L	0.043	0.043	ID	0.043	0.043	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Atrazine	mg/L	0.003	0.003	0.0073	NLV	5.4	--	--	--	--	--	--	0.003 U	--	--
Benzaldehyde	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.005 UJ	--	--
Benzo(a)anthracene	mg/L	0.0021	0.0085	ID	NLV	0.0094	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.005	0.005	ID	NLV	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.0015	0.0015	ID	ID	0.0015	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.001	0.001		NLV	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(k)fluoranthene	mg/L	0.001	0.001		NLV	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.005 U	--	--
bis(2-Chloroethoxy)methane	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.005 U	--	--
bis(2-Chloroethyl)ether	mg/L	0.002	0.0083	0.001	210	5.7	--	--	--	--	--	--	0.001 U	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.006	0.006	0.025	NLV	0.32	--	--	--	--	--	--	0.005 U	--	--
Butyl benzylphthalate (BBP)	mg/L	1.2	2.7	0.067	NLV	2.7	--	--	--	--	--	--	0.005 U	--	--
Caprolactam	mg/L	5.8	17		NLV	390000	--	--	--	--	--	--	0.01 U	--	--
Carbazole	mg/L	0.085	0.35	0.01	NLV	7.4	--	--	--	--	--	--	0.01 U	--	--
Chrysene	mg/L	0.0016	0.0016	ID	ID	0.0016	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibenz(a,h)anthracene	mg/L	0.002	0.002	ID	NLV	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Dibenzofuran	mg/L	ID	ID	0.004	10	ID	--	--	--	--	--	--	0.004 U	--	--
Diethyl phthalate	mg/L	5.5	16	0.11	NLV	1100	--	--	--	--	--	--	0.005 U	--	--
Dimethyl phthalate	mg/L	73	210		NLV	4200	--	--	--	--	--	--	0.005 U	--	--
Di-n-butylphthalate (DBP)	mg/L	0.88	2.5	0.0097	NLV	11	--	--	--	--	--	--	0.005 U	--	--
Di-n-octyl phthalate (DnOP)	mg/L	0.13	0.38	ID	NLV	0.4	--	--	--	--	--	--	0.005 U	--	--
Fluoranthene	mg/L	0.21	0.21	0.0016	0.21	0.21	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Fluorene	mg/L	0.88	2	0.012	2	2	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Hexachlorobenzene	mg/L	0.001	0.001	0.0002	3	0.0046	--	--	--	--	--	--	0.0002 U	--	--
Hexachlorobutadiene	mg/L	0.015	0.042	0.000053	3.2	0.4	--	--	--	--	--	--	0.001 U	--	--
Hexachlorocyclopentadiene	mg/L	0.05	0.05	ID	0.42	1.6	--	--	--	--	--	--	0.005 U	--	--
Hexachloroethane	mg/L	0.0073	0.021	0.0067	50	1.9	--	--	--	--	--	--	0.005 U	--	--

TABLE 5

ANALYTICAL RESULTS OF BOREHOLE SAMPLES
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:* [1]					*SB56-11*	*SB57-11*	*SB60-11*	*SB61-11*	*SB61-11*	*SB64-11*	*SB67-11*	*SB71-11*	*SB88-11*
Sample Identification		*Residential*	*Non-Residential*	*Groundwater*	*Non-Residential Groundwater*	*Groundwater*	*GW-17360-030811-DR-195*	*GW-17360-030911-DR-197*	*GW-17360-030811-DR-193*	*GW-17360-030811-DR-191*	*GW-17360-030811-DR-192*	*GW-17360-030811-DR-196*	*GW-17360-030911-DR-199*	*GW-17360-030911-DR-198*	*GW-17360-030811-DR-194*
Sample Date		*Drinking Water*	*Drinking Water*	*Surface Water*	*Volatilization to*	*Contact*	*3/8/2011*	*3/9/2011*	*3/8/2011*	*3/8/2011*	*3/8/2011*	*3/8/2011*	*3/9/2011*	*3/9/2011*	*3/8/2011*
Sample Depth				*Interface*	*Indoor Air Inhalation*		*(15.5-15.5) ft BGS*	*(20.5-20.5) ft BGS*	*(23.2-23.2) ft BGS*	*(23-23) ft BGS*	*(23-23) ft BGS*	*(15.5-15.5) ft BGS*	*(24-24) ft BGS*	*(20-20) ft BGS*	*(16-16) ft BGS*
Area of Interest		*a*	*b*	*c*	*d*	*e*	*AOI 8.2*	*AOI 8.3*	*AOI 8.7*	*AOI 8.5*	*AOI 8.5*	*AOI 9*	*AOI 10.2*	*AOI 12*	*AOI 17.2*
Sample Type	*Units*										*Duplicate*				
Indeno(1,2,3-cd)pyrene	mg/L	0.002	0.002	ID	NLV	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Isophorone	mg/L	0.77	3.1	1.3	NLV	990	--	--	--	--	--	--	0.005 U	--	--
Naphthalene	mg/L	0.52	1.5	0.011	31	31	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.0034	0.0096	0.18	550	11	--	--	--	--	--	--	0.003 U	--	--
N-Nitrosodi-n-propylamine	mg/L	0.005	0.005		NLV	0.36	--	--	--	--	--	--	0.005 U	--	--
N-Nitrosodiphenylamine	mg/L	0.27	1.1		NLV	35	--	--	--	--	--	--	0.005 UJ	--	--
Pentachlorophenol	mg/L	0.001	0.001	0.0018	NLV	0.2	--	--	--	--	--	--	0.005 U	--	--
Phenanthrene	mg/L	0.052	0.15	0.002	1	1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Phenol	mg/L	4.4	13	0.45	NLV	29000	--	--	--	--	--	--	0.005 U	--	--
Pyrene	mg/L	0.14	0.14	ID	0.14	0.14	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Volatile Organic Compounds															
1,1,1-Trichloroethane	mg/L	0.2	0.2	0.089	1300	1300	0.001 U	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	0.0085	0.035	0.078	77	4.7	0.001 U	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-Trichloroethane	mg/L	0.005	0.005	0.33	110	21	0.001 U	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	0.88	2.5	0.74	2300	2400	0.001 U	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	0.007	0.007	0.13	1.3	11	0.001 U	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	0.07	0.07	0.099	300	19	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.0002	0.0002	--	1.2	0.39	0.001 U	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 (Ethylene dibromide)	mg/L	0.00005	0.00005	0.0057	15	0.025	0.001 U	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	0.6	0.6	0.013	160	160	0.001 U	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	0.005	0.005	0.36	59	19	0.001 U	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	0.005	0.005	0.23	36	16	0.001 U	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	0.0066	0.019	0.028	41	2	0.001 U	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	0.075	0.075	0.017	74	6.4	0.001 U	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 (Methyl ethyl ketone) (MEK)	mg/L	13	38	2.2	240000	240000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.0011 J
2-Hexanone	mg/L	1	2.9	ID	8700	5200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	1.8	5.2	ID	20000	13000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Acetone	mg/L	0.73	2.1	1.7	1000000	31000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.0046 J
Benzene	mg/L	0.005	0.005	0.2	35	11	0.001 U	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	0.08	0.08	ID	37	14	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0055	0.001 U
Bromoform	mg/L	0.08	0.08	ID	3100	140	0.001 U	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	0.01	0.029	0.035	9	70	0.001 U	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	0.8	2.3	ID	550	1200	0.005 U	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	0.005	0.005	0.045	2.4	4.6	0.001 U	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	0.1	0.1	0.025	470	86	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00077 J	0.001 U
Chloroethane	mg/L	0.43	1.7	1.1	5700	440	0.001 U	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	0.08	0.08	0.35	180	150	0.0013	0.00074 J	0.001 U	0.00037 J	0.00034 J	0.00082 J	0.00018 J	0.018	0.00017 J
Chloromethane (Methyl chloride)	mg/L	0.26	1.1	ID	45	490	0.001 U	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	0.07	0.07	0.62	210	200	0.001 U	0.0011	0.00041 J	0.001 U	0.001 U	0.00072 J	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	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	0.001 U
Dibromochloromethane	mg/L	0.08	0.08	ID	110	18	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	1.7	4.8	ID	300	300	0.001 U	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	0.074	0.074	0.018	170	170	0.001 U	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	0.8	2.3	0.028	56	56	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methyl acetate	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	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	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.04	0.04	7.1	47000	610	0.005 U	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	0.005	1.5	1400	220	0.005 U	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	0.1	0.1	0.08	310	9.7	0.001 U	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	0.005	0.06	170	12	0.001 U	**0.029**[ab]	0.00067 J	0.0014	0.0014	**0.03**[ab]	0.001 U	0.001 U	**0.019**[ab]
Toluene	mg/L	0.79	0.79	0.27	530	530	0.001 U	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	0.1	0.1	1.5	200	220	0.001 U	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	0.001 U
Trichloroethene	mg/L	0.005	0.005	0.2	97	22	0.001 U	0.0023	0.002	0.001	0.001	0.0024	0.001 U	0.001 U	0.00074 J
Trichlorofluoromethane (CFC-11)	mg/L	2.6	7.3	--	1100	1100	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	170	170	0.032	170	170	0.001 U	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	0.002	0.002	0.013	13	1	0.001 U	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	0.28	0.28	0.041	190	190	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

TABLE 5

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

Sample Location		*SB102-11*	*SB104-11*	*SB105-11*
Sample Identification		*GW-17360-030811-DR-189*	*GW-17360-030811-DR-188*	*GW-17360-030811-DR-190*
Sample Date		*3/8/2011*	*3/8/2011*	*3/8/2011*
Sample Depth		*(23.5-23.5) ft BGS*	*(25-25) ft BGS*	*(22.2-22.2) ft BGS*
Area of Interest		*AOI 26.1*	*AOI 26.3*	*AOI 26.4*
Sample Type	*Units*			
Metals				
Antimony (dissolved)	mg/L	0.002 U	0.002 U	0.002 U
Arsenic (dissolved)	mg/L	0.005 U	0.005 U	0.005 U
Barium (dissolved)	mg/L	0.034 J	0.0983 J	0.0448 J
Beryllium (dissolved)	mg/L	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	0.001 U	0.001 U	0.001 U
Chromium Total (dissolved)	mg/L	0.001 J	0.0012 J	0.0012 J
Cobalt (dissolved)	mg/L	0.007 U	0.00026 J	0.000096 J
Copper (dissolved)	mg/L	0.002 U	0.002 U	0.002 U
Lead (dissolved)	mg/L	0.003 U	0.003 U	0.003 U
Manganese (dissolved)	mg/L	0.0059 J	0.0225	0.0228
Mercury (dissolved)	mg/L	0.0002 U	0.0002 U	0.0002 U
Nickel (dissolved)	mg/L	0.00082 J	0.00052 J	0.00057 J
Selenium (dissolved)	mg/L	0.005 U	0.005 U	0.005 U
Silver (dissolved)	mg/L	0.0002 U	0.0002 U	0.0002 U
Thallium (dissolved)	mg/L	0.001 U	0.001 U	0.001 U
Vanadium (dissolved)	mg/L	0.004 U	0.004 U	0.004 U
Zinc (dissolved)	mg/L	0.02 U	0.02 U	0.02 U
Semi-Volatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	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	0.005 U	0.005 U
2-Methylphenol	mg/L	--	--	--
2-Nitroaniline	mg/L	--	--	--
2-Nitrophenol	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-Methylphenol	mg/L	--	--	--
4-Nitroaniline	mg/L	--	--	--
4-Nitrophenol	mg/L	--	--	--
Acenaphthene	mg/L	0.005 U	0.005 U	0.005 U
Acenaphthylene	mg/L	0.005 U	0.005 U	0.005 U
Acetophenone	mg/L	--	--	--
Anthracene	mg/L	0.005 U	0.005 U	0.005 U
Atrazine	mg/L	--	--	--
Benzaldehyde	mg/L	--	--	--
Benzo(a)anthracene	mg/L	0.001 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.001 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.001 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.001 U	0.001 U	0.001 U
Benzo(k)fluoranthene	mg/L	0.001 U	0.001 U	0.001 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	0.001 U	0.001 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	0.001 U	0.001 U
Fluorene	mg/L	0.005 U	0.005 U	0.005 U
Hexachlorobenzene	mg/L	--	--	--
Hexachlorobutadiene	mg/L	--	--	--
Hexachlorocyclopentadiene	mg/L	--	--	--
Hexachloroethane	mg/L	--	--	--

TABLE 5

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

Sample Location		*SB102-11*	*SB104-11*	*SB105-11*
Sample Identification		*GW-17360-030811-DR-189*	*GW-17360-030811-DR-188*	*GW-17360-030811-DR-190*
Sample Date		*3/8/2011*	*3/8/2011*	*3/8/2011*
Sample Depth		*(23.5-23.5) ft BGS*	*(25-25) ft BGS*	*(22.2-22.2) ft BGS*
Area of Interest		*AOI 26.1*	*AOI 26.3*	*AOI 26.4*
Sample Type	*Units*			
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	0.005 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	0.005 U	0.005 U
Volatile Organic Compounds				
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.025 U	0.025 U	0.025 U
2-Hexanone	mg/L	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.05 U	0.05 U	0.05 U
Acetone	mg/L	0.025 U	0.025 U	0.025 U
Benzene	mg/L	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0011	0.00043 J	0.0012
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.00054 J	0.00031 J
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.005 U	0.005 U	0.005 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	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
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.002
Toluene	mg/L	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.00047 J	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.0012	**0.0071**[1b]	0.00069 J
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.003 U	0.003 U	0.003 U

Notes
(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
Exceeds Part 201 Cleanup Criteria. Superscript notes the criterion exceeded.
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.
'--' - Criteria not available or chemical not analyzed for

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
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB41-11
DATE COMPLETED: February 22, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510965.37
EASTING: 1277471.76

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.19						
0	CONCRETE							
	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, medium brown, moist	680.39		1-3' -115 -116 1MC		80		0.7
2	- dark brown at 1.5ft BGS							
	- light orange brown at 2.0ft BGS							0.5
4	- fine grained, no gravel, brown at 4.0ft BGS							
	- light brown at 5.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.5
6								
				2MC		75		
8								0.6
10								
	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	670.19						1.1
12				3MC		70		
								1.0
14	- with fine gravel at 14.8ft BGS							
	- trace fine gravel, fine grained, tan/beige at 15.2ft BGS							0.6
16								
	- fine to medium grained, trace coarse grained at 17.5ft BGS			4MC		70		
18								
	- fine to coarse grained, with fine gravel at 18.8ft BGS			18-20' -117				0.8
20								
	- fine to medium grained, trace coarse grained, trace fine gravel, wet at 20.5ft BGS							0.9
22				5MC		75		
								1.0
24	- fine grained at 24.2ft BGS							
	END OF BOREHOLE @ 25.0ft BGS	656.19						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB42-11
DATE COMPLETED: February 21, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510664.64
EASTING: 12773494.55

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.12						
0	CONCRETE (0.4ft)							
	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine to coarse grained, poorly graded, medium brown, moist	680.32		1-3' -103				0.3
2				1MC		80		
	- dark brown at 3.3ft BGS							0.3
4	- trace silt and fine gravel, fine grained, brown at 3.5ft BGS							
	- no gravel, light brown at 5.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.3
6								
	- fine to medium grained at 7.5ft BGS			2MC		80		
8	- fine grained, tan/beige at 8.0ft BGS							0.2
	SP-SAND (native), trace to with fine gravel, compact, fine grained, poorly graded, brown, moist	671.82						
10	- with fine to coarse grained at 10.0ft BGS							0.2
12								
	SP/GP-SAND AND GRAVEL, compact, fine to coarse sand, fine gravel, poorly graded, medium brown, moist	668.62		3MC		70		
14		666.62						0.1
	SP-GRAVELLY SAND, compact, fine to coarse grained, fine gravel, light brown, moist							
16								0.3
				4MC		65		
18								
	- trace fine gravel at 19.0ft BGS			18-20' -104				0.4
	- with fine gravel at 19.5ft BGS							
20	- trace fine gravel, wet at 20.0ft BGS							
								0.2
22	- fine grained, trace medium to coarse grained, trace fine gravel at 22.5ft BGS			5MC		65		
								0.2
24								
	END OF BOREHOLE @ 25.0ft BGS	656.12						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB43-11
DATE COMPLETED: March 15, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512576.44
EASTING: 12773108.81

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	673.86						
0	ASPHALT	673.46						
0	SP-SAND (FILL), trace silt and fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	671.86		0.5-2.5' -245				0.0
2				1MC		75		
2	CL-SILTY CLAY (FILL), trace fine to coarse sand and fine gravel, firm, low plasticity, brown, moist	669.26						0.0
4								
4	SP-SAND (FILL), trace fine gravel, compact, fine grained, poorly graded, medium brown, moist		BACKFILLED WITH BENTONITE CHIPS					
6	- fine to coarse grained at 5.0ft BGS			6-8' -246				0.0
6	- fine grained, dark brown to black at 7.3ft BGS			2MC		65		
8		665.86						
8	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, brown, moist							0.0
10								
10								0.0
12	- light brown at 11.8ft BGS			3MC		70		
12								
14				13-15' -247				0.0
14	- brown, wet at 15.4ft BGS							
16	- no gravel at 16.0ft BGS							0.0
16				4MC		70		
18								0.0
18								
20		653.86						
20	END OF BOREHOLE @ 20.0ft BGS							
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 6/2/11

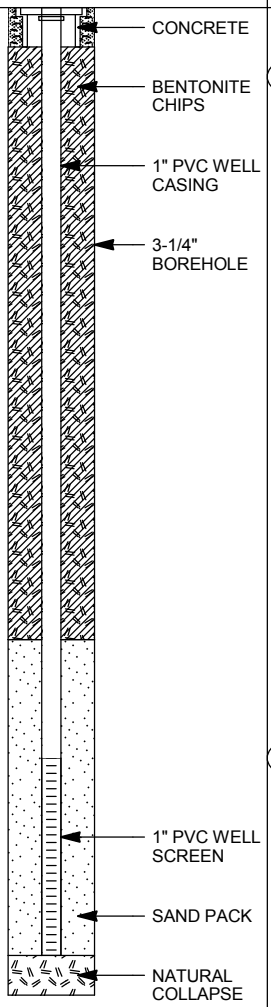
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB45-11/MW19-11
DATE COMPLETED: February 17, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511246.59
EASTING: 12773302.29

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
	GROUND SURFACE	681.08
	WOOD BLOCK FLOOR	680.88
	CONCRETE	680.38
	- tan/beige at 1.0ft BGS	
2	SP-SAND (FILL), with silt, trace fine gravel, compact, fine grained, poorly graded, light brown, moist	
4	- fine to coarse grained, brown at 4.0ft BGS	
6		
8	- fine grained, no gravel at 7.8ft BGS	
10	- fine to coarse gravel, brown at 10.0ft BGS	671.28
12	SP-GRAVELLY SAND (native), compact, fine to coarse grained, fine gravel, poorly graded, light brown, moist	
14	- fine grained sand, trace medium to coarse grained sand, fine gravel, tan/beige at 13.0ft BGS	
16	- with fine gravel at 16.5ft BGS	
18		
20	- trace fine gravel, wet at 20.0ft BGS	
22		
24		
	END OF BOREHOLE @ 25.0ft BGS	656.08
26		
28		
30		
32		
34		



WELL DETAILS
Screened interval:
662.08 to 657.08ft
19.00 to 24.00ft BGS
Length: 5ft
Diameter: 1in
Slot Size: 0.010
Material: PVC
Seal:
680.08 to 665.08ft
1.00 to 16.00ft BGS
Material: BENTONITE CHIPS
Sand Pack:
665.08 to 657.08ft
16.00 to 24.00ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1-3' -080				0.0
1MC		75		
				0.0
				0.1
2MC		85		
				0.0
				0.0
3MC		75		
				0.0
				0.0
4MC		75		
18-20' -081				0.0
				0.0
5MC				
				0.0

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB46-11
DATE COMPLETED: February 18, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511063.99
EASTING: 12773525.11

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.11					
	WOOD BLOCK FLOOR	680.91					
	CONCRETE	680.41					
0	SP-SAND (FILL), trace to with silt, compact, fine grained, poorly graded, medium brown, moist		1-3' -092				0.2
2			1MC		90		
	- brown at 2.0ft BGS						0.2
4	- dark brown at 3.0ft BGS						
	- trace silt, brown at 3.4ft BGS						
6							0.1
			2MC		75		
8	- trace fine gravel, orange/brown at 8.5ft BGS						0.0
	- brown at 8.7ft BGS						
10							
	SP-SAND (native), trace silt and fine gravel, compact, fine to medium grained, trace coarse grained, poorly graded, tan/beige, moist	670.11					0.2
12			3MC		75		
							0.2
14							
	- fine to coarse grained, trace fine to coarse gravel at 16.0ft BGS						0.2
16							
			4MC		75		
18							0.1
			19-21' -093				
20							
	- brown, wet at 21.0ft BGS						0.9
	- fine grained, no gravel, brown at 21.8ft BGS						
22			5MC				
	SM-SILTY SAND, compact, fine grained, poorly graded, brown, wet	657.11					1.1
24		656.11					
	END OF BOREHOLE @ 25.0ft BGS						
26							
28							
30							
32							
34							

BOREHOLE: BACKFILLED WITH BENTONITE CHIPS

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB47-11
DATE COMPLETED: February 16, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS/J. YORK

NORTHING: 511876.63
EASTING: 12773310.34
GROUND SURFACE ELEV. ft: 681.01

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.11	BACKFILLED WITH BENTONITE CHIPS	1-3' -067 1MC		60		0.7
2	SP-SAND (FILL), trace fine gravel and silt, compact, fine to coarse grained, poorly graded, brown, moist - dark brown to black at 2.5ft BGS							
4	- REFUSAL at 4.5ft BGS	676.51						0.5
	END OF BOREHOLE @ 4.5ft BGS							
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

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB48-11
DATE COMPLETED: February 16, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS/J. YORK

NORTHING: 511962.59
EASTING: 12773530.91

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	WOOD BLOCK FLOOR	680.84						
	CONCRETE	680.34						
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown, moist			1-3' -065				0.7
				1MC		50		
4	- dark brown at 1.5ft BGS							0.5
	- orange brown to light brown at 3.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6								0.5
				2MC		50		
8								0.5
10								0.5
				3MC		60		
12								
14	- with silt at 14.0ft BGS							0.5
	SP-SAND (native), with fine to coarse gravel, compact, fine to coarse grained, poorly graded, light brown to dark brown, moist	666.54						
16								0.6
				4MC		10		
18								--
20								
				20-22' -066				0.5
22	- brown/gray, wet at 22.5ft BGS			5MC		60		
24								0.4
	END OF BOREHOLE @ 25.0ft BGS	656.04						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB49-11
DATE COMPLETED: February 15, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512123.4
EASTING: 12773262.03
GROUND SURFACE 680.96

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.46						
	VOID SPACE	679.96						
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine grained, orange/brown, moist			1MC		0		
4			BACKFILLED WITH BENTONITE CHIPS					
6								0.0
8	- no gravel, gray at 7.5ft BGS - trace fine to coarse gravel, orange/brown at 7.6ft BGS			2MC		70		0.0
10	- 0.5' gravelly sand, fine to coarse grained, fine gravel at 10.0ft BGS - fine grained, no gravel, dark brown at 10.5ft BGS							0.7
12	- trace coarse sand to fine gravel, orange/brown at 11.0ft BGS			3MC		70		
14	- light brown at 14.0ft BGS							0.0
	SP-SAND (native), trace silt, compact, fine grained, poorly graded, light brown	665.96						
16								0.0
18	- orange/brown at 18.0ft BGS			4MC		80		
20	- light brown at 20.0ft BGS							0.0
	- tan/beige at 21.0ft BGS			20-22' -058				0.0
22	- brown/gray, wet at 22.8ft BGS			5MC		85		
24								0.0
	END OF BOREHOLE @ 25.0ft BGS	655.96						
26								
28								
30								
32								
34								

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

CHEMICAL ANALYSIS (20-22' -058)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB50-11
DATE COMPLETED: February 15, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512179.01
EASTING: 12773418.33

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	WOOD BLOCK FLOOR	680.84						
	CONCRETE	680.34						2.2
2	SP-SAND (FILL), with silt, trace fine to coarse gravel, compact, fine grained, poorly graded, orange/brown, moist			1-3' -059 1MC		70		
4	- trace silt at 3.5ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.5
6								0.0
8	- brown/orange at 8.2ft BGS			2MC		90		0.0
10								0.0
12				3MC		70		7.2
14	SP-SAND (native), trace silt, compact, fine to coarse grained, poorly graded, light brown, moist	667.04						
16	- fine grained, tan/beige at 14.4ft BGS - orange/brown at 16.0ft BGS							0.0
18	- tan/beige at 16.8ft BGS			4MC		70		0.0
20								
22	- brown, wet at 22.0ft BGS			20-22' -060 5MC		80		0.0
24								0.0
26	END OF BOREHOLE @ 25.0ft BGS	656.04						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB51-11
DATE COMPLETED: March 1, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511678.31
EASTING: 12773528.9

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.03						
0	WOOD BLOCK FLOOR	680.83						
	CONCRETE	680.13						0.6
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, trace medium to coarse grained, poorly graded, orange brown, moist			1-3' -090 1MC		80		
4	- light orange brown at 2.3ft BGS							0.7
	- dark brown at 3.0ft BGS							
	- orange brown at 3.6ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6	- fine to medium grained, trace coarse grained, no gravel at 4.5ft BGS							0.3
				2MC		75		
8	- fine grained, tan/beige at 8.5ft BGS							0.3
10								
	- orange brown at 11.3ft BGS	669.53						0.4
12	SP/GP-SAND AND GRAVEL (native), compact, fine to coarse grained sand, fine gravel, light brown to brown, moist			3MC		60		
14								0.6
16								0.5
	- fine to coarse grained sand, fine to coarse gravel at 17.5ft BGS			4MC		75		
18								0.6
20								
				20-22' -091				0.3
22	SW-GRAVELLY SAND, compact, fine to coarse grained, fine gravel, well graded, multicolored, wet	659.53		5MC		75		
24								0.5
	END OF BOREHOLE @ 25.0ft BGS	656.03						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB52-11
DATE COMPLETED: February 22, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510788.43
EASTING: 12773585.77

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.01						
0	CONCRETE							
	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine to coarse grained, poorly graded, medium brown, moist	680.21		1-3' -109				0.4
2				1MC		75		
4	- fine grained, no gravel, light orange brown at 3.8ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.4
6								0.4
8				2MC		80		0.5
10	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	671.71						0.8
12	- with fine to coarse gravel at 11.0ft BGS			3MC		65		
14	SP/GP-SAND AND GRAVEL, compact, fine to coarse grained sand, fine gravel, light brown, moist	668.51						0.7
	SP-SAND, with fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	667.01						
16								0.6
18				4MC 17-19' -110		70		
	- trace fine gravel, fine to medium grained, trace coarse grained, wet at 19.0ft BGS							0.5
20	- fine to coarse grained, with fine gravel at 19.5ft BGS							
	- trace fine gravel at 20.5ft BGS							0.7
22				5MC		70		
24	- fine grained, trace medium to coarse grained, trace fine gravel at 23.5ft BGS							0.8
	END OF BOREHOLE @ 25.0ft BGS	656.01						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB53-11
DATE COMPLETED: February 18, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511564.44
EASTING: 12773590.52
GROUND SURFACE ELEV. ft: 681.15

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.25					
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown, moist - medium brown at 1.5ft BGS - dark brown at 3.5ft BGS - orange brown at 4.0ft BGS		1-3' -090 1MC		80		0.6 0.7
6	BACKFILLED WITH BENTONITE CHIPS						0.3
8	- increase in silt content, no gravel, brown at 8.0ft BGS		2MC		75		0.3
12	SP-SAND (native), with fine gravel, trace silt, compact, fine to coarse grained, poorly graded, brown, moist	669.15	3MC		60		0.4
14	- trace fine gravel, light brown at 12.8ft BGS - gravelly sand, fine to coarse sand, fine gravel at 13.5ft BGS						0.6
16	- with fine gravel at 15.0ft BGS						0.5
18	- trace fine gravel, fine grained, trace medium to coarse grained at 18.8ft BGS		4MC		75		0.6
20			20-22' -091				0.3
22	- wet at 22.0ft BGS	658.65	5MC		75		0.5
24	SM-SILTY SAND, compact, fine grained, poorly graded, brown, wet						
26	END OF BOREHOLE @ 25.0ft BGS	656.15					
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB54-11
DATE COMPLETED: February 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510615.89
EASTING: 12773446.77

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.17						
0	CONCRETE							0.0
2	SP-SAND (FILL), with silt, compact, fine grained, poorly graded, tan/beige, moist	679.17		1MC (2-4' -101)		80		0.1
4	- medium brown, trace fine gravel and silt, fine to coarse grained at 4.2ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6								0.5
8				2MC		80		0.7
10	- fine grained, trace medium to coarse grained, trace to with fine gravel, orange brown at 10.0ft BGS							0.5
12				3MC		70		0.4
14	- brown at 14.0ft BGS							
16	SP-SAND (native), with fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist	666.67						0.1
18				4MC (17-19' -132)		70		
20	- brown, wet at 19.3ft BGS - trace fine gravel at 20.0ft BGS							0.2
22	- fine grained, trace medium to coarse grained at 21.8ft BGS			5MC		75		0.4
24								0.4
26	END OF BOREHOLE @ 25.0ft BGS	656.17						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB55-11
DATE COMPLETED: February 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510630.23
EASTING: 12773468.9
GROUND SURFACE 681.12

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE							0.1
2	SP-SAND (FILL), with silt, compact, fine grained, poorly graded, tan/beige, moist	679.32		1MC 2-4' -102		75		0.1
4	- medium brown, trace fine gravel and silt, fine to coarse grained at 4.3ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6								0.2
8				2MC		80		0.2
10	- fine grained, trace medium to coarse grained, trace to with fine gravel, brown at 10.0ft BGS							0.5
12				3MC		75		
14	- trace fine gravel at 14.0ft BGS							0.5
16	- REFUSAL- CONCRETE at 17.0ft BGS	664.12		4MC 15-17' -133		85		0.5
18	END OF BOREHOLE @ 17.0ft BGS							
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB56-11
DATE COMPLETED: March 4, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510224.56
EASTING: 12772839.48

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	676.47					
0	CONCRETE	675.77					
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, light orange brown, moist		1-3' -178				0.1
	- with fine to coarse gravel, dark brown at 1.3ft BGS		1MC		75		
4	- trace fine gravel, light orange brown at 1.8ft BGS	672.47					0.0
	- fine to medium grained, light brown at 3.7ft BGS						
6	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist						0.0
8	- with fine gravel, brown at 6.0ft BGS		2MC		75		
	- trace fine gravel, light brown at 7.7ft BGS						0.1
10	- with fine gravel, brown at 8.5ft BGS						
	- with fine to coarse gravel at 10.0ft BGS						0.1
12	- trace fine gravel, light brown at 12.5ft BGS		3MC		65		
			12.5-14.5' -179				0.0
14	- brown, wet at 14.5ft BGS						
16							0.1
	- gravelly sand, fine gravel at 17.3ft BGS		4MC		65		
18	- fine to medium grained, trace coarse grained, no gravel at 18.0ft BGS						0.1
20	END OF BOREHOLE @ 20.0ft BGS	656.47					
22	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS						
24							
26							
28							
30							
32							
34							

TEMP MONITORING WELL

WELL DETAILS
Screened interval:
661.47 to 656.47ft
15.00 to 20.00ft BGS
Length: 5ft

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

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB57-11
DATE COMPLETED: March 2, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510482.24
EASTING: 12773824.23

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	680.89					
0	CONCRETE						
	SP-SAND (FILL), trace silt and fine gravel, compact, fine to coarse grained, poorly graded, medium brown, moist	679.69	1-3' -151				0.0
2	- fine grained, trace coarse grained and fine gravel, brown at 2.5ft BGS		1MC		80		
4							0.3
6							0.5
8	- fine to coarse grained, trace fine gravel, orange brown at 8.5ft BGS		2MC		60		0.6
10	- trace fine to coarse gravel, brown at 10.0ft BGS						
	- 0.1' piece of red brick debris at 10.5ft BGS						0.3
12			3MC		60		
14							0.0
	SP-GRAVELLY SAND (native), compact, fine to coarse grained, poorly graded, brown, moist	665.89					
16							0.2
18	- fine grained, no gravel, light brown, wet at 18.5ft BGS		4MC 16.5-18.5' -152		65		
	- 0.1' gravel at 19.1ft BGS						0.2
20	- fine to coarse grained, trace fine to coarse gravel, brown at 19.2ft BGS						
22			5MC		70		0.1
24	SM-SAND, some silt, compact, fine grained, poorly graded, light brown, wet	657.09					0.1
	END OF BOREHOLE @ 25.0ft BGS	655.89					
26	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS						
28							
30							
32							
34							

TEMP MONITORING WELL

WELL DETAILS
Screened interval:
663.89 to 658.89ft
17.00 to 22.00ft BGS
Length: 5ft

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB58-11
DATE COMPLETED: March 2, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510481.92
EASTING: 12773864.1

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	680.85						
0	CONCRETE							
	SP-SAND (FILL), trace silt and fine gravel, compact, fine to coarse grained, poorly graded, medium brown, moist	679.65		1-3' -147				0.4
2				1MC		80		
	- no gravel, fine grained, tan/beige at 2.5ft BGS							0.5
4	- brown at 3.0ft BGS							
	- trace coarse sand and fine gravel, light brown at 3.8ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6								0.4
	- fine to coarse grained, trace fine to coarse gravel, orange brown at 7.5ft BGS			2MC		80		
8								0.4
	- brown at 9.5ft BGS							
10								0.6
12				3MC		70		
								0.5
14								
16								0.8
				4MC		65		
18								
	SP-SAND (native), trace silt, compact, fine grained, poorly graded, light brown, wet	662.25						0.9
20	- fine to coarse grained, trace fine gravel, rust brown at 19.6ft BGS			19-21' -148				
	- brown at 20.0ft BGS							0.8
22	- with fine to coarse gravel at 22.1ft BGS			5MC		65		
	SM-SAND, some silt, compact, fine grained, poorly graded, light brown, wet	658.35						0.7
24								
	END OF BOREHOLE @ 25.0ft BGS	655.85						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB60-11
DATE COMPLETED: February 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511272.27
EASTING: 12773582.27

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.08					
	WOOD BLOCK FLOOR	680.88					
	CONCRETE	680.38					
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown, moist		1-3' -136				0.5
			1MC		70		
4	- light brown at 4.0ft BGS						0.4
6	- red brick debris at 6.0ft BGS						0.2
			2MC		90		
8							
	SP-SAND (native), with fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist	672.58					0.5
10							
							0.5
12	- with clay, trace fine gravel, orange brown at 12.5ft BGS		3MC		60		
14	- no clay, with fine gravel at 13.2ft BGS						0.6
16	- fine to medium grained, no gravel, tan/beige at 16.5ft BGS						0.6
			4MC		75		
18	- fine to coarse grained, with fine to coarse gravel at 18.3ft BGS						
	- trace fine gravel at 19.0ft BGS		18-20' -137				0.6
20	- brown, wet at 20.0ft BGS						
	- fine grained, no gravel, trace to with silt at 21.2ft BGS						0.6
22			5MC				
	SM-SAND, some silt, compact, fine grained, poorly graded, brown, wet	657.38					0.5
24		656.08					
	END OF BOREHOLE @ 25.0ft BGS						
26	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS						
28							
30							
32							
34							

TEMP MONITORING WELL

WELL DETAILS
Screened interval:
661.08 to 656.08ft
20.00 to 25.00ft BGS
Length: 5ft

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB61-11
DATE COMPLETED: February 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511113.56
EASTING: 12773581.31

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.06					
	WOOD BLOCK FLOOR	680.86					
	CONCRETE	680.36					
0	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, brown, moist						0.2
2	- trace fine gravel, dark brown at 1.9ft BGS		1-3' -134				
	- orange brown at 3.0ft BGS		1MC		85		
4							0.2
6	- light brown at 6.0ft BGS						0.2
8	- fine to medium grained, trace coarse grained, brown at 8.1ft BGS		2MC		75		
							0.2
10							0.2
12	SP-SAND (native), trace fine gravel, compact, fine to medium grained, trace coarse grained, poorly graded, tan/beige, moist	669.56	3MC		70		
14	- with fine gravel at 13.5ft BGS						0.3
16	- fine grained, trace medium to coarse grained at 16.1ft BGS						0.5
18	- fine to medium grained, trace coarse grained, trace fine to coarse gravel at 17.3ft BGS		4MC		90		
	- with fine gravel, fine to coarse grained at 18.4ft BGS		18-20' -135				0.5
20	- trace fine gravel at 18.9ft BGS						
	- wet at 20.0ft BGS						0.4
22	SM-SAND, some silt, compact, fine grained, poorly graded, brown, wet	658.76	5MC		80		
24	SP-SAND, trace silt, with fine gravel, compact, fine to coarse grained, poorly graded, brown, wet	657.16					0.5
		656.06					
26	END OF BOREHOLE @ 25.0ft BGS						
28	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS						
30							
32							
34							

TEMP MONITORING WELL

WELL DETAILS
Screened interval:
661.06 to 656.06ft
20.00 to 25.00ft BGS
Length: 5ft

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB62-11
DATE COMPLETED: March 3, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510271.24
EASTING: 12773771.95

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	677.20						
0	SP/GP-SAND AND GRAVEL (FILL), trace silt, (frozen) compact, fine to coarse grained sand, fine to coarse gravel, poorly graded, white gray, moist	676.60		0.5-2.5' -161				0.0
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine grained, poorly graded, dark brown, moist - fine to coarse grained, trace fine gravel, brown at 1.2ft BGS			1MC		60		0.1
4								
6	- moist to wet (surface melt off) at 3.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.1
8	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist	669.00		2MC		60		0.0
10	- with fine to coarse grained, brown at 10.0ft BGS							0.1
12	- some oxidation, moist to wet at 13.0ft BGS			11-13' -162 3MC		60		
14	- wet at 14.0ft BGS							0.1
16	END OF BOREHOLE @ 15.0ft BGS	662.20						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB63-11
DATE COMPLETED: March 3, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510175.75
EASTING: 12773841.47

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	679.76						
0	ASPHALT	679.46						
2	SP-SAND (FILL), trace silt, compact, fine grained, trace medium to coarse grained, poorly graded, dark brown, moist - trace fine grained, brown at 1.3ft BGS			0.5-2.5' -166				0.4
4	- fine to medium grained, trace coarse grained, orange brown at 4.2ft BGS		BACKFILLED WITH BENTONITE CHIPS	1MC		75		0.4
6		673.26						0.5
8	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist			2MC		75		0.6
10								
12	- with fine to coarse gravel at 12.3ft BGS - no gravel, fine to coarse grained, tan/beige at 12.7ft BGS			3MC		75		0.5
14	- with fine gravel at 14.5ft BGS - trace fine gravel at 15.2ft BGS			14-16' -167				0.4
16								0.3
18	- brown, wet at 17.0ft BGS			4MC		75		0.4
20	- no gravel, fine grained, trace silt, light brown at 19.0ft BGS	659.76						
22	END OF BOREHOLE @ 20.0ft BGS							
24								
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB64-11
DATE COMPLETED: March 2, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510274.3
EASTING: 12773679.37

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	676.96					
0	SM/GM-SILTY SAND AND GRAVEL (FILL), compact, fine to coarse sand, fine to coarse angular gravel, poorly graded, brown, dark brown and black, moist	676.46	(0.5-2.5' -159)				0.0
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown, moist - orange brown at 1.0ft BGS		1MC		70		
4	- light brown at 4.2ft BGS						0.0
6	- orange brown at 4.8ft BGS - fine grained, trace medium to coarse grained, trace fine gravel at 5.0ft BGS						0.1
8	SP-SAND (native), trace silt and fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist	669.46	2MC		60		
10	- with fine to coarse gravel at 10.0ft BGS						0.1
12							0.0
14	- orange brown, wet at 14.5ft BGS - trace fine to coarse gravel, brown at 15.0ft BGS		3MC (12-14' -160)		50		0.1
16							0.0
18			4MC		50		0.0
20	END OF BOREHOLE @ 20.0ft BGS	656.96					
22	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS						
24							
26							
28							
30							
32							
34							

TEMP MONITORING WELL

WELL DETAILS
Screened interval:
661.96 to 656.96ft
15.00 to 20.00ft BGS
Length: 5ft

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

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB65-11
DATE COMPLETED: March 3, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510184.37
EASTING: 12773696.95

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	679.12						
0	ASPHALT	678.82						
2	SP-SAND (FILL), with coarse gravel, trace silt, compact, fine grained, poorly graded, dark brown, moist			0.5-2.5' -170				0.4
	- no gravel, trace coarse grained, orange brown at 1.7ft BGS			1MC		75		
4	- fine to medium grained, trace coarse grained, trace fine gravel, light orange brown at 4.5ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.5
6								0.7
8				2MC		75		
	- fine to coarse grained, with fine gravel at 8.7ft BGS							0.6
10		669.62						
	SP-SAND (native), with fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist							0.4
12				3MC		80		
	- 0.3' clayey silt seam, soft, non plastic, medium brown, moist at 13.4ft BGS			13-15' -171				0.5
14								
	- brown, wet at 15.5ft BGS							0.4
16								
18				4MC		75		0.2
20	END OF BOREHOLE @ 20.0ft BGS	659.12						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB66-11
DATE COMPLETED: February 14, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. DRIVERS

NORTHING: 511762.51
EASTING: 12773013.9

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	680.97						
0	CONCRETE	680.17						
2	SP-SAND, trace silt and fine to coarse gravel, compact, fine grained, trace medium to coarse grained, poorly graded, brown, moist			1-3' -043				0.0
				1MC		85		
4								0.0
	- medium brown at 5.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6								0.0
8	- fine grained, light brown, no gravel at 7.8ft BGS			2MC		85		
	- trace fine gravel, dark brown at 9.4ft BGS							0.1
10	END OF BOREHOLE @ 10.2ft BGS	670.77						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB67-11
DATE COMPLETED: February 14, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511693.61
EASTING: 12773014.49
GROUND SURFACE 681.05

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.15					
2	SP-SAND, trace silt and fine to coarse gravel, compact, fine grained, trace medium to coarse grained, poorly graded, brown, moist		1-3' -044				0.0
			1MC		85		
4							0.0
	- dark brown at 5.0ft BGS						
6	- fine grained, light brown, no gravel at 5.8ft BGS						0.7
			2MC		85		
8							0.1
	- 0.5' concrete debris at 9.0ft BGS						
10	- trace fine gravel, trace silt, medium brown at 9.5ft BGS						0.1
12		668.55	3MC		75		
	SP-SAND (native), compact, fine grained, poorly graded, light brown, moist, trace oxidation						0.0
14							
16							0.0
18			4MC		65		
							0.0
20							
			20-22' -045 -046				0.0
22	- wet at 22.5ft BGS		5MC		70		
24							0.0
	END OF BOREHOLE @ 25.0ft BGS	656.05					
26	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS						
28							
30							
32							
34							

TEMP MONITORING WELL

WELL DETAILS
Screened interval:
660.05 to 655.05ft
21.00 to 26.00ft BGS
Length: 5ft

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

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB68-11
DATE COMPLETED: February 14, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511734.17
EASTING: 12773074.87

GROUND SURFACE 681.08

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.28						
2	SP-SAND, trace silt and fine to coarse gravel, compact, fine grained, trace medium to coarse grained, poorly graded, brown, moist			1-3' -042 1MC		75		0.0
4								0.0
6	- dark brown at 6.0ft BGS - with fine to coarse gravel at 6.5ft BGS		BACKFILLED WITH BENTONITE CHIPS	2MC		100		0.0
8	- no gravel, fine grained, light brown at 7.0ft BGS - REFUSAL - CONCRETE at 7.5ft BGS	673.58						
10	END OF BOREHOLE @ 7.5ft BGS							
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 (1-3' -042)

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB69-11
DATE COMPLETED: February 14, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511866.52
EASTING: 12773118.87

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.06						
0	CONCRETE	680.16						
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine to coarse grained, trace medium to coarse grained, poorly graded, brown, moist			1-3' -047				0.1
				1MC		80		
4	- 0.2' asphalt, no gravel, fine grained, light brown at 4.2ft BGS							0.0
6			BACKFILLED WITH BENTONITE CHIPS					0.0
8	- trace fine to coarse gravel, brown at 7.8ft BGS			2MC		70		
								0.0
10								
								0.0
12								
	- no gravel, fine grained, light brown at 12.9ft BGS			3MC		65		
14								0.0
	- dark brown at 14.8ft BGS	666.06						
16	SP-SAND (native), compact, fine grained, poorly graded, light brown, moist							0.1
	PT-PEAT, trace rootlets, soft to firm, dark brown to black, moist	664.46						
18				4MC		85		
		662.26						0.2
20	CL-SILTY CLAY, firm, low plasticity, gray, moist	662.16						
	SP-SAND, compact, fine grained, poorly graded, brown, moist			20-22' -048				0.2
22	- brown/gray, wet at 21.5ft BGS			5MC		65		
24								0.1
	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 (20-22' -048)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

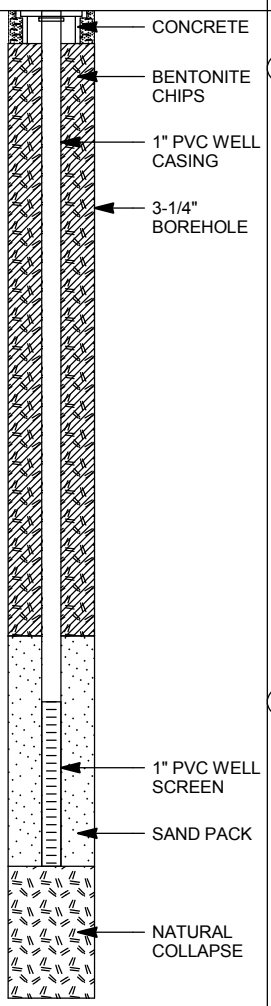
HOLE DESIGNATION: SB70-11/MW20-11
DATE COMPLETED: February 14, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511890.12
EASTING: 12773076.27

GROUND SURFACE 680.92

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	CONCRETE (FILL)	680.12
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine to coarse grained, trace medium to coarse grained, poorly graded, brown, moist	
4		
6		
8		
10		
12	- 0.2' peat seam at 11.2ft BGS	
14	- 0.2' peat seam at 13.8ft BGS	
16	SP-SAND (native), some fine gravel, compact, fine grained, poorly graded, light brown, moist	665.92
18	- 0.1' peat seam at 17.0ft BGS - 0.4' peat seam at 17.8ft BGS - 0.1' silty clay seam, firm, low plasticity, gray, moist at 18.2ft BGS	
20	- fine grained, no gravel, tan/beige at 18.3ft BGS	
22	- brown/gray, wet at 22.5ft BGS	
24		
26		
28		
30	END OF BOREHOLE @ 30.0ft BGS	650.92
32		
34		
36		
38		
40		

MONITORING WELL



WELL DETAILS
Screened interval:
659.92 to 654.92ft
21.00 to 26.00ft BGS
Length: 5ft
Diameter: 1in
Slot Size: 0.010
Material: PVC
Seal:
679.92 to 661.92ft
1.00 to 19.00ft BGS
Material: BENTONITE CHIPS
Sand Pack:
661.92 to 654.92ft
19.00 to 26.00ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1-3' -049 1MC		80		0.1
				0.1
				0.0
2MC		80		
				0.0
				0.1
3MC		60		
				0.0
				0.2
4MC		40		
				0.1
20-22' -050				0.1
5MC		75		
				0.0
				0.0
6MC		75		
				0.0

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

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB71-11
DATE COMPLETED: March 4, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511811.08
EASTING: 12772961.11
GROUND SURFACE ELEV. ft: 676.83

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	676.33					
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, dark brown, moist		0.5-2.5' -184				0.2
	- dark brown and orange brown at 1.0ft BGS		1MC		65		
4	- orange brown at 3.0ft BGS						0.1
6	- medium brown and orange brown at 6.0ft BGS						0.2
8			2MC		70		
	- dark brown at 9.0ft BGS						0.1
10	- orange brown at 9.5ft BGS						
12							0.2
	- fine to coarse grained at 13.0ft BGS		3MC		60		
14	SP-SAND (native), trace fine gravel, compact, fine to medium grained, poorly graded, light brown, moist	663.33					0.2
16			15-17' -185				0.2
	- gray brown, wet at 17.5ft BGS		4MC		70		
18							0.2
20	END OF BOREHOLE @ 20.0ft BGS	656.83					
22	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS						
24							
26							
28							
30							
32							
34							

TEMP MONITORING WELL

WELL DETAILS
Screened interval:
661.83 to 656.83ft
15.00 to 20.00ft BGS
Length: 5ft

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB72-11
DATE COMPLETED: March 4, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511949
EASTING: 12772842.13
GROUND SURFACE 674.09

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	ASPHALT	673.89						
0	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown and light brown, moist			0.5-2.5' -186				0.1
2	- medium brown and orange brown at 2.5ft BGS			1MC		75		
4	- orange brown at 4.5ft BGS							0.1
6			BACKFILLED WITH BENTONITE CHIPS					0.1
8				2MC		75		
8	- light orange brown at 9.0ft BGS							0.1
10	SP-SAND (native), trace fine gravel, fine to coarse grained, poorly graded, light brown, moist	664.09						0.2
12	- fine to medium grained, no gravel at 13.0ft BGS			3MC		65		
14	- brown, wet at 15.0ft BGS			13-15' -187				0.2
16								0.1
18				4MC		65		
18	- fine to coarse grained, trace gravel at 19.0ft BGS							0.1
20	END OF BOREHOLE @ 20.0ft BGS	654.09						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB73-11
DATE COMPLETED: February 15, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511898.33
EASTING: 12773013.06

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	680.72						
0	CONCRETE	679.82						
2	SP-SAND (FILL), with fine gravel, trace silt, compact, fine to coarse grained, poorly graded, medium brown, moist			1-3' -051				0.4
				1MC		80		
4								0.4
	- dark brown at 5.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6	- trace fine to coarse gravel, trace silt, medium brown at 5.5ft BGS							0.2
	- fine grained, no gravel, brown at 7.0ft BGS							
8	- trace fine gravel, dark brown at 7.8ft BGS			2MC		85		
								0.0
10	- dark brown and medium brown at 10.0ft BGS							
								0.2
12								
	- 0.8' white debris seam, silt to fine gravel size, paint-like odor, moist at 12.8ft BGS			3MC		60		
				12-14' -052				
14	- dark brown at 13.6ft BGS							0.1
	- medium brown at 14.0ft BGS							
16								0.0
	PT-PEAT, trace rootlets, soft to firm, dark brown to black, moist	663.72						
18				4MC		60		
								0.0
20		660.62						
	SP-SAND (native), trace silt, compact, fine grained, trace medium to coarse grained, brown, moist			20-22' -053				0.0
22	- brown/gray, wet at 22.5ft BGS			5MC		75		
24								0.0
	END OF BOREHOLE @ 25.0ft BGS	655.72						
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
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB74-11
DATE COMPLETED: February 15, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511930.9
EASTING: 12772988.53

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	680.96						
	WOOD BLOCK FLOOR	680.76						
	CONCRETE	679.96						0.4
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine grained, poorly graded, brown, moist			1-3' -054 1MC		65		
4	- 0.2' concrete debris at 4.5ft BGS - dark brown at 4.7ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.0
6	- brown at 4.9ft BGS - 0.3' coarse gravel, white at 5.0ft BGS							0.2
8				2MC		70		
10	- no gravel at 9.0ft BGS							0.2
12								0.6
	SLUDGE-LIKE DEBRIS, silt size, firm	668.96		3MC 12-14' -055		70		
14		667.16						0.7
	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine grained, poorly graded, dark brown, moist	666.46						
16	- REFUSAL - CONCRETE at 14.5ft BGS END OF BOREHOLE @ 14.5ft BGS							
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB75-11
DATE COMPLETED: February 17, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 511776.86 EASTING: 12773521.21 GROUND SURFACE	681.00						
0	CONCRETE (FILL)	680.10						
2	SP-SAND, with fine to coarse gravel, compact, fine to coarse grained, poorly graded, brown, moist, slight solvent-like odor		BACKFILLED WITH BENTONITE CHIPS	1-3' -074 1MC		50		6.0
4								5.3
6	- REFUSAL - CONCRETE at 6.0ft BGS	675.00		2MC		10		0.2
	END OF BOREHOLE @ 6.0ft BGS							
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 ( )

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB77-11
DATE COMPLETED: February 22, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510958.77
EASTING: 12773563.61
GROUND SURFACE 681.17

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	WOOD BLOCK FLOOR	680.97						
	CONCRETE	680.67						
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine grained, poorly graded, medium brown, moist			1-3' -113				2.3
				1MC		75		
4	- orange brown at 1.5ft BGS - dark brown at 2.0ft BGS							1.1
6	- trace fine gravel, orange brown at 2.7ft BGS - light orange brown at 3.5ft BGS		BACKFILLED WITH BENTONITE CHIPS					1.1
	- no gravel, light brown at 5.0ft BGS			2MC		70		
8								0.9
	- fine to medium grained, rust brown at 8.5ft BGS	671.97						
10	SP-SAND (native), with fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist							0.9
12	- trace fine gravel, brown at 10.8ft BGS - with fine gravel, light brown at 11.6ft BGS			3MC		70		
14	SP/GP-SAND AND GRAVEL, compact, fine to coarse grained sand, fine gravel, brown, moist	667.17						1.2
16								0.8
18				4MC		70		
		662.37		18-20' -114				1.0
20	SP-SAND, trace fine gravel, compact, fine to medium grained, trace coarse grained, poorly graded, light brown, moist - brown, wet at 20.0ft BGS							0.9
22	SP/GP-SAND AND GRAVEL, compact, fine to coarse grained sand, fine to coarse gravel and orange brown, wet	659.67		5MC		60		
24								0.8
	END OF BOREHOLE @ 25.0ft BGS	656.17						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

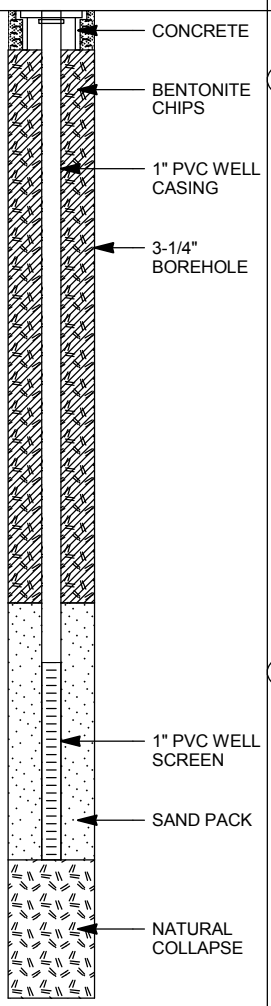
HOLE DESIGNATION: SB78-11/MW21-11
DATE COMPLETED: March 2, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510371.26
EASTING: 12773702.12

GROUND SURFACE 680.56

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	CONCRETE	679.76
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	
4		
6		
8		
10		
12	- light brown at 11.0ft BGS - brown and orange brown at 11.8ft BGS	
14		666.16
16	SP-SAND (native), with fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist - fine grained, trace fine to coarse gravel, tan/beige at 15.8ft BGS	
18	- fine to coarse grained, brown at 16.2ft BGS - trace fine gravel, wet at 18.0ft BGS	
20	- no gravel at 20.0ft BGS	
22	- trace fine to coarse gravel at 22.5ft BGS	
24		
26	END OF BOREHOLE @ 25.0ft BGS	655.56
28		
30		
32		
34		

MONITORING WELL



WELL DETAILS
Screened interval:
664.06 to 659.06ft
16.50 to 21.50ft BGS
Length: 5ft
Diameter: 1in
Slot Size: 0.010
Material: PVC
Seal:
679.56 to 665.56ft
1.00 to 15.00ft BGS
Material: BENTONITE CHIPS
Sand Pack:
665.56 to 659.06ft
15.00 to 21.50ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1-3' -155 1MC		80		0.0
				0.0
				0.1
2MC		85		
				0.0
				0.0
3MC		80		
				0.1
16-18' -156 4MC		70		0.0
				0.0
				0.0
5MC		70		
				0.0

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

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB79-11
DATE COMPLETED: March 2, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510365.28
EASTING: 12773631.5

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.58						
0	CONCRETE							
	SP-SAND (FILL), trace silt and fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	680.78		1-3' -153				0.1
2				1MC		70		
4								0.0
6			BACKFILLED WITH BENTONITE CHIPS					0.0
8				2MC		85		
	- 0.2" clay nodule firm, low plasticity, brown, moist at 8.7ft BGS							0.1
10								0.0
12				3MC		75		
	- medium brown at 13.5ft BGS							0.1
14	- brown at 14.3ft BGS							
	SP-SAND (native), with fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist	666.58						0.1
16	- fine grained, no gravel, tan/beige at 15.8ft BGS							
18	- with fine gravel, fine to coarse gravel at 18.3ft BGS			4MC 16.5-18.5' -154		75		0.0
	- trace fine to coarse grained, wet at 18.8ft BGS							
20	- trace fine gravel at 19.2ft BGS							0.1
	- trace fine to coarse gravel at 21.2ft BGS							
22				5MC		85		
24								0.0
	END OF BOREHOLE @ 25.0ft BGS	656.58						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

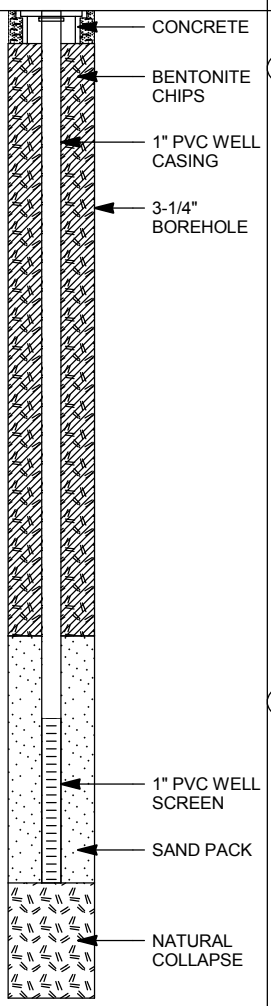
HOLE DESIGNATION: SB80-11/MW22-11
DATE COMPLETED: February 16, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS/J. YORK

NORTHING: 512179.8
EASTING: 12773526.71

GROUND SURFACE 681.09

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	WOOD BLOCK FLOOR	680.89
	CONCRETE	680.39
2	SP-SAND (FILL), trace fine gravel, compact, fine grained, trace medium to coarse grained, poorly graded, brown, moist	
4		
6		
8	- fine grained, no gravel, light brown at 7.0ft BGS	
10		
12		
14		
16		
18		663.09
	SP-SAND (native), trace silt, compact, fine grained, poorly graded, tan/beige, moist	
20		
22	- brown/gray, wet at 22.5ft BGS	
24		
26	- fine to coarse grained, with fine gravel at 26.0ft BGS	
	- trace fine gravel at 27.5ft BGS	
28		
30	END OF BOREHOLE @ 30.0ft BGS	651.09
32		
34		
36		
38		
40		

MONITORING WELL



WELL DETAILS
Screened interval:
659.59 to 654.59ft
21.50 to 26.50ft BGS
Length: 5ft
Diameter: 1in
Slot Size: 0.010
Material: PVC
Seal:
680.09 to 662.09ft
1.00 to 19.00ft BGS
Material: BENTONITE CHIPS
Sand Pack:
662.09 to 654.59ft
19.00 to 26.50ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1-3' -061 1MC		50		0.5
				0.8
				0.3
2MC		80		0.2
				0.3
3MC		70		0.2
				0.2
4MC		65		0.4
20-22' -062				0.9
5MC		60		0.7
				0.6
6MC		65		0.7

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB81-11
DATE COMPLETED: February 16, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS/J. YORK

NORTHING: 511571.63
EASTING: 12773311.83
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)
	WOOD BLOCK FLOOR	680.86						
	CONCRETE	680.36						
	VOID, below concrete	679.86		1-3' -068				0.5
2	SP-SAND (FILL), trace fine gravel, compact, fine grained, poorly graded, light brown, moist			1MC		40		
4	- rust brown oxidation at 3.0ft BGS - brown at 3.1ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.4
6								0.3
8				2MC		50		
	- fine grained, trace coarse grained, dark brown to black at 9.0ft BGS							0.3
10	- REFUSAL at 9.8ft BGS	671.26						
	END OF BOREHOLE @ 9.8ft BGS							
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 (1-3' -068)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

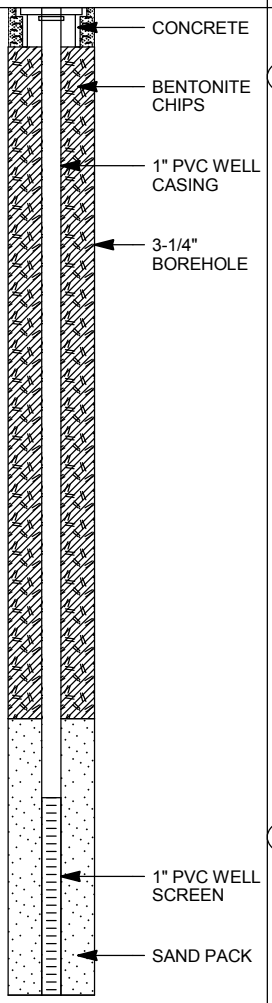
PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB82-11/MW23-11
DATE COMPLETED: February 25, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511466.9
EASTING: 12773620.39

GROUND SURFACE 681.15

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	WOOD BLOCK FLOOR	680.95
	CONCRETE	680.15
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown, moist	
4	- dark brown to black, trace slag debris at 2.5ft BGS - brown at 2.7ft BGS - dark brown at 3.0ft BGS	
6	- orange brown at 3.5ft BGS - no gravel, fine grained, trace coarse grained, brown at 5.0ft BGS	
8	- fine to coarse grained, trace fine gravel, tan/beige at 6.6ft BGS - fine grained, no gravel, tan/beige at 7.9ft BGS	
10		
12	SP-SAND (native), with fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist - gravelly sand, fine to coarse gravel at 12.5ft BGS	670.15
14	- some fine to coarse gravel at 14.0ft BGS	
16	- fine grained, trace silt, no gravel, tan/beige at 15.7ft BGS - fine to medium grained, trace coarse grained, trace fine gravel, light brown at 16.5ft BGS	
18		
20	- fine grained, trace medium to coarse grained, no gravel at 20.5ft BGS	
22	- wet at 22.0ft BGS - trace fine gravel at 22.3ft BGS	
24	SM-SAND, some silt, compact, fine grained, poorly graded, medium brown, wet - brown gray at 24.7ft BGS	658.05
26	END OF BOREHOLE @ 25.0ft BGS	656.15
28		
30		
32		
34		



WELL DETAILS
Screened interval:
661.15 to 656.15ft
20.00 to 25.00ft BGS
Length: 5ft
Diameter: 1in
Slot Size: 0.010
Material: PVC
Seal:
680.15 to 663.15ft
1.00 to 18.00ft BGS
Material: BENTONITE CHIPS
Sand Pack:
663.15 to 656.15ft
18.00 to 25.00ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1-3' -128				0.8
1MC		75		0.7
				0.6
2MC		80		0.7
				0.7
3MC		65		0.9
				0.9
4MC		60		1.0
20-22' -129				1.0
5MC		75		1.4

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

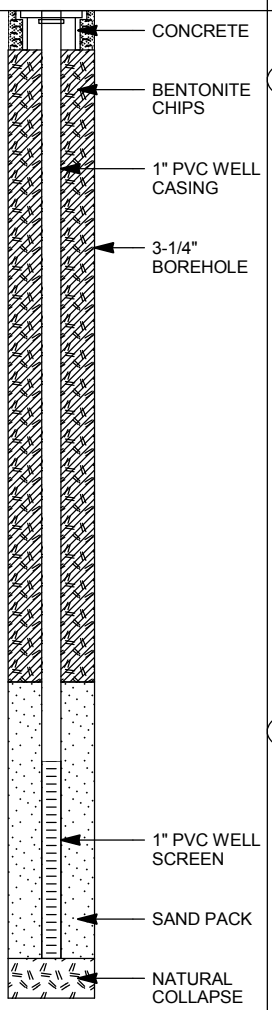
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB83-11/MW24-11
DATE COMPLETED: February 22, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510854.46
EASTING: 12773577.39

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
	GROUND SURFACE	681.05
	WOOD BLOCK FLOOR	680.85
	CONCRETE	680.35
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine to coarse grained, poorly graded, medium brown, moist	
	- dark brown at 2.5ft BGS	
4	- fine grained, orange brown at 2.6ft BGS	
	- no gravel, light orange brown at 3.5ft BGS	
6		
8		
	- trace fine gravel, orange brown at 8.6ft BGS	
	- fine to medium grained, rust brown at 8.9ft BGS	
10		671.05
	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	669.55
12	SP/GP-SAND AND GRAVEL, compact, fine to coarse grained sand, fine gravel, light brown, moist	
14		666.55
	SP-GRAVELLY SAND, compact, fine to coarse grained, fine gravel, poorly graded, brown, moist	
16	- with fine gravel at 15.2ft BGS	664.55
	GP-GRAVEL, with coarse sand, trace fine to medium sand, compact, fine gravel, poorly graded, multicolored, moist	663.85
18		
	SP-SAND, with fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	
20	- wet at 19.5ft BGS	
	- trace fine gravel at 20.0ft BGS	
22	- fine to medium grained, trace coarse grained, no gravel at 21.2ft BGS	
	- trace fine to coarse gravel at 21.5ft BGS	657.75
24	SP/GP-SAND AND GRAVEL, compact, fine to coarse grained sand, fine to coarse gravel, brown, wet	656.05
26	END OF BOREHOLE @ 25.0ft BGS	
28		
30		
32		
34		



WELL DETAILS
Screened interval:
662.05 to 657.05ft
19.00 to 24.00ft BGS
Length: 5ft
Diameter: 1in
Slot Size: 0.010
Material: PVC
Seal:
680.05 to 664.05ft
1.00 to 17.00ft BGS
Material: BENTONITE CHIPS
Sand Pack:
664.05 to 657.05ft
17.00 to 24.00ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1-3' -118				0.7
1MC		75		0.8
				0.8
2MC		75		0.6
				0.6
3MC		60		0.6
				0.8
4MC 17-19' -119		70		0.8
				0.8
5MC		60		0.8

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB84-11
DATE COMPLETED: February 18, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512232.16
EASTING: 12773941.62
GROUND SURFACE 681.13

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.23						
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, trace medium to coarse grained, poorly graded, dark brown, moist			1-3' -088				0.1
				1MC		75		
4	- 0.2' silty clay seam, firm, low plasticity, brown, moist at 2.8ft BGS - dark brown to black, slight tar-like odor at 4.2ft BGS			3-5' -087				0.4
6	- fine grained, trace fine gravel, brown at 5.5ft BGS - no gravel, light brown at 6.2ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.2
				2MC		75		
8								0.2
10	- fine to medium grained, orange/brown at 10.0ft BGS							
12	- brown at 11.5ft BGS							0.1
				3MC		75		
14								0.1
16	SP-SAND (native), trace silt, compact, fine grained, poorly graded, tan/beige, moist	666.13						0.1
				4MC		80		
18								0.1
20	- brown at 20.0ft BGS			19-21' -089				
22	- wet at 21.0ft BGS - with silt at 22.0ft BGS							0.2
				5MC		80		
24	- trace silt at 24.0ft BGS							0.1
26	END OF BOREHOLE @ 25.0ft BGS	656.13						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB85A-11
DATE COMPLETED: February 28, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512064.6
EASTING: 12773903.07
GROUND SURFACE 681.10

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	WOOD BLOCK FLOOR	680.90						
	CONCRETE - light brown at 1.2ft BGS	680.20		1-3' -138 -139 1MC		80		0.2
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown, moist							
4	- dark brown at 3.5ft BGS							0.3
6	- fine to coarse grained, with fine gravel, light orange brown at 4.1ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.2
8	- fine grained, trace medium to coarse grained, no gravel, tan/beige at 7.5ft BGS			2MC		75		0.4
10	- fine grained, trace to with silt, light brown at 10.0ft BGS							0.6
12				3MC		75		
14	- medium brown at 13.7ft BGS - light brown at 14.1ft BGS							0.7
	SP/GP-SAND AND GRAVEL (native), loose, fine to coarse grained sand, fine to coarse gravel, poorly graded, multicolored, moist	666.10						
16								0.5
18				4MC		50		0.5
20		661.10		19-21' -140				
	SP-SAND, trace to with fine gravel, compact, fine to coarse grained, poorly graded, brown, moist							0.5
22	- wet, slight petroleum-like odor at 22.0ft BGS - gray/brown, moderate petroleum-like odor at 23.0ft BGS			5MC		70		
24	- brown, slight petroleum-like odor at 23.5ft BGS							6.3
		656.10						
26	END OF BOREHOLE @ 25.0ft BGS							
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB86-11
DATE COMPLETED: February 25, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512235.86
EASTING: 12773704.43

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.03						
	WOOD BLOCK FLOOR	680.83						
	CONCRETE	680.13						
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown, moist			1-3' -130				0.5
				1MC		75		
4								0.6
6			BACKFILLED WITH BENTONITE CHIPS					0.4
	SM-SAND (FILL, topsoil), with silt, trace clay, compact, fine grained, poorly graded, dark brown, moist	674.33						
8				2MC		80		0.5
10	SP-SAND (FILL), trace silt, compact, fine to medium grained, poorly graded, orange brown, moist	671.53						0.4
	- trace silt and fine gravel at 10.0ft BGS							
12	- brown at 12.6ft BGS			3MC		70		
	- brown gray at 13.6ft BGS							0.5
14	- brown at 14.5ft BGS							
16								0.3
18				4MC		70		0.7
	- light brown at 19.2ft BGS							
20	- brown at 20.0ft BGS							
	- medium brown at 20.8ft BGS			20-22' -131				0.8
22	- wet at 22.0ft BGS							
	- fine to coarse grained, dark brown at 23.0ft BGS			5MC		70		0.7
24								
	END OF BOREHOLE @ 25.0ft BGS	656.03						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

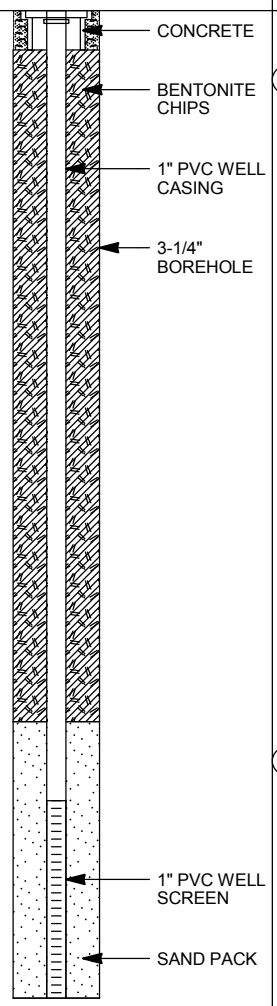
PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB87-11/MW25-11
DATE COMPLETED: February 8, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512130.68
EASTING: 12773706.51

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
	GROUND SURFACE	681.05
	WOOD BLOCK FLOOR	680.85
	CONCRETE	680.05
2	- dark brown at 1.3ft BGS	
	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, trace medium to coarse grained, poorly graded, brown, moist	
4	- brown at 1.5ft BGS	
6		
	- light brown at 7.0ft BGS	
8	- brown at 7.8ft BGS	
10		
12		
14	- light brown at 14.0ft BGS	
	- brown at 15.0ft BGS	
16		
18		
	- tan/beige at 19.5ft BGS	
20	- brown, gray, wet, slight petroleum-like odor at 20.5ft BGS	
22		658.55
	SP/GP-SAND AND GRAVEL, compact, fine to coarse grained sand, fine gravel, brown/gray, wet, slight petroleum-like odor	657.05
24	GP-SANDY GRAVEL, compact, fine gravel, fine to coarse grained sand, gray, wet, moderate petroleum-like odor	656.05
26	END OF BOREHOLE @ 25.0ft BGS	
28		
30		
32		
34		

MONITORING WELL



WELL DETAILS
Screened interval:
661.05 to 656.05ft
20.00 to 25.00ft BGS
Length: 5ft
Diameter: 1in
Slot Size: 0.010
Material: PVC
Seal:
680.05 to 663.05ft
1.00 to 18.00ft BGS
Material: BENTONITE CHIPS
Sand Pack:
663.05 to 656.05ft
18.00 to 25.00ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1-3' -085				0.1
1MC		80		0.0
				0.0
2MC		80		0.0
				0.0
3MC		75		0.1
				0.0
4MC		75		0.0
18-20' -086				66.0
5MC		75		98.7

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB88-11
DATE COMPLETED: March 3, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 509911.71
EASTING: 12772973.08
GROUND SURFACE 676.87

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	676.17					
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine to medium grained, poorly graded, medium brown, moist		1-3' -176				0.6
			1MC		75		
4	- fine grained, trace medium to coarse grained, trace fine gravel, light orange brown at 2.2ft BGS						0.7
6							0.3
8	- fine to coarse grained at 7.9ft BGS	668.57	2MC		75		
	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist						0.2
10	- with fine gravel at 10.5ft BGS						0.7
12			3MC		70		
			12-14' -177				
14	- trace fine gravel at 13.7ft BGS						0.7
	- medium brown and brown, wet at 14.5ft BGS						
16	- fine to medium grained, trace coarse grained, trace fine gravel at 15.0ft BGS						0.7
18	- fine to coarse grained, trace fine gravel at 18.0ft BGS		4MC		75		
	- with fine gravel at 19.0ft BGS						0.6
20	END OF BOREHOLE @ 20.0ft BGS	656.87					
	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS						
22							
24							
26							
28							
30							
32							
34							

TEMP MONITORING WELL

WELL DETAILS
Screened interval:
661.87 to 656.87ft
15.00 to 20.00ft BGS
Length: 5ft

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

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB89-11
DATE COMPLETED: March 3, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 509670.44
EASTING: 12772964.85
GROUND SURFACE 677.17

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	676.47						
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown - light orange brown at 1.5ft BGS		BACKFILLED WITH BENTONITE CHIPS	1-3' -174 1MC		75		0.8 0.7
4								
6								0.5
8	- fine to coarse grained at 7.8ft BGS	668.87		2MC		80		0.4
10	SP-SAND (native), with fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist - with fine gravel at 8.9ft BGS							0.4
12	- gravelly sand, fine gravel at 12.0ft BGS - with fine gravel at 13.2ft BGS			3MC 12-14' -175		75		
14	- gravelly sand, fine gravel at 13.8ft BGS - brown, wet at 14.1ft BGS							0.5
16	- trace fine gravel at 15.5ft BGS							0.4
18	- fine to medium grained, no gravel, medium brown at 17.0ft BGS - brown at 17.5ft BGS			4MC		75		0.4
20	END OF BOREHOLE @ 20.0ft BGS	657.17						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB90-11
DATE COMPLETED: March 3, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 509584.44
EASTING: 12772953.79

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	677.16						
0	CONCRETE							
	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown, moist	676.46		1-3' -172				0.7
2	- light orange brown at 1.5ft BGS			1MC		75		
4								0.6
6			BACKFILLED WITH BENTONITE CHIPS					0.7
8	- fine to coarse grained at 8.3ft BGS			2MC		80		
	SP-SAND (native), with fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist	668.46						0.6
10	- gravelly sand, fine gravel at 9.1ft BGS							
	- with fine gravel at 11.1ft BGS							0.5
12	- trace fine gravel at 11.8ft BGS			3MC		75		
	- with fine gravel at 13.0ft BGS			12-14' -173				0.4
14	- gravelly sand, fine gravel, brown, wet at 14.2ft BGS							
16	- with fine gravel at 16.2ft BGS							0.4
				4MC		65		
18	- gravelly sand, fine gravel at 18.5ft BGS							0.5
	- with fine gravel at 19.6ft BGS							
20	END OF BOREHOLE @ 20.0ft BGS	657.16						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB91-11
DATE COMPLETED: February 21, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510686.16
EASTING: 12773267.61

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.11						
	WOOD BLOCK FLOOR	680.91						
	CONCRETE	680.21						0.0
2	SP-SAND (FILL), trace silt and fine to coarse grave, compact, fine grained, poorly graded, brown, moist			1-3' -096				
				1MC		80		
4	- dark brown at 4.3ft BGS							0.1
	- medium brown, no gravel at 5.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6	- brown at 6.0ft BGS							0.1
				2MC		70		
8	- tan/beige at 7.8ft BGS							
	- medium brown at 8.8ft BGS							0.2
	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, tan/beige, moist	671.81						
10	- trace fine to coarse gravel at 10.0ft BGS							0.1
12				3MC		25		
14								0.1
	SP/GP-SAND AND GRAVEL, compact, fine to coarse grained sand, fine gravel, brown, moist	666.11						
16		664.61						0.3
	SP-SAND, trace fine gravel, compact, fine grained, trace medium to coarse grained, poorly graded, light brown, moist			4MC		80		
18	- fine to medium grained, trace coarse grained at 18.0ft BGS			17-19' -097				0.3
20	- brown, wet at 19.5ft BGS							
	- fine to coarse grained, trace fine gravel at 20.0ft BGS							0.2
22	- fine grained, no gravel at 22.5ft BGS			5MC		80		
24								0.2
	END OF BOREHOLE @ 25.0ft BGS	656.11						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB92-11
DATE COMPLETED: March 1, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511861.71
EASTING: 12773986.21
GROUND SURFACE 681.13

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.23						
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine grained, poorly graded, brown, moist			1-3' -141				0.5
				1MC		85		
4	- no gravel, dark brown at 3.2ft BGS - trace fine to coarse gravel, brown at 3.9ft BGS							0.6
6	- fine to coarse grained, orange brown at 5.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.5
8	- fine to medium grained, tan/beige at 7.3ft BGS			2MC		75		
	- medium and dark brown at 8.5ft BGS							0.4
10	- tan/beige at 9.0ft BGS - fine grained, with silt, no gravel, orange brown at 9.4ft BGS							
12	- fine grained, trace medium to coarse grained, brown at 10.9ft BGS	669.03						0.5
	SP-SAND (native), trace silt and fine gravel, compact, fine grained, poorly graded, light brown, moist			3MC		80		
14	- fine to coarse grained, with fine gravel at 12.8ft BGS							0.6
16	- fine grained, no gravel at 14.3ft BGS - fine to coarse grained, trace fine gravel at 14.6ft BGS							0.5
18	- fine grained, trace coarse grained, no gravel at 15.5ft BGS			4MC		85		
	- fine to coarse grained, trace fine gravel at 16.7ft BGS			17-19' -142				0.5
20	- fine grained, no gravel, brown, wet at 19.0ft BGS - with silt at 20.2ft BGS							
22								0.5
				5MC		80		
24	- fine to coarse grained, with fine gravel at 23.7ft BGS							0.4
26	END OF BOREHOLE @ 25.0ft BGS	656.13						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB93-11
DATE COMPLETED: March 1, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511626.19
EASTING: 12773970.85

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	679.90						
0	CONCRETE	678.90						
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine grained, poorly graded, brown, moist - dark brown at 3.0ft BGS - trace fine gravel, brown at 3.4ft BGS			1-3' -143 1MC		75		0.4 0.5
4								
6	- fine to coarse grained, trace fine to coarse gravel, tan/beige at 5.0ft BGS - fine grained, no gravel at 6.5ft BGS - trace to with silt, orange brown at 7.1ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.5
8	SP-SAND (native), trace silt and fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist - with fine gravel at 8.5ft BGS - trace fine gravel, tan/beige at 9.0ft BGS	672.30		2MC		85		0.6
10								
12	- fine grained, trace medium to coarse grained at 9.5ft BGS - fine to coarse grained, with fine gravel at 10.8ft BGS - gravelly sand, fine to coarse gravel, brown at 12.1ft BGS			3MC		60		0.8
14								0.7
16	- trace fine gravel, fine to medium grained at 15.9ft BGS - fine grained, no gravel at 17.5ft BGS			16-18' -144 4MC		85		0.5
18	- brown, wet at 18.5ft BGS							0.6
20	END OF BOREHOLE @ 20.0ft BGS	659.90						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB94-11
DATE COMPLETED: March 1, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511420.28
EASTING: 12773982.38

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	680.10						
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine to coarse grained, poorly graded, orange brown, moist			1-3' -145 1MC		80		0.6
4								0.5
6			BACKFILLED WITH BENTONITE CHIPS					0.7
8	- fine to medium grained, light brown at 7.1ft BGS			2MC		80		0.8
10	- fine to coarse grained, light brown at 9.0ft BGS	671.80						0.8
12	SP-SAND (native), with fine gravel, trace silt, compact, fine to coarse grained, poorly graded, light brown, moist - fine grained, no gravel, tan/beige at 10.7ft BGS			3MC		75		0.7
14	- trace fine gravel, fine grained at 11.5ft BGS - fine to coarse grained, with fine gravel, brown and light brown at 12.0ft BGS							
16	- fine grained, no gravel, tan/beige at 15.2ft BGS			16-18' -146 4MC		90		0.7
18	- fine to coarse gravel, trace fine gravel, brown at 16.5ft BGS - fine grained, trace fine gravel, tan/beige at 17.3ft BGS							0.8
20	- fine to coarse grained, with fine gravel, brown, wet at 18.6ft BGS - trace fine gravel at 19.1ft BGS	661.10						
22	END OF BOREHOLE @ 20.0ft BGS							
24								
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB96-11
DATE COMPLETED: February 23, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511030.03
EASTING: 12773984.51

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.27						
0	CONCRETE							0.4
		679.77						
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown, moist			1MC (1.5-3.5' -120)		50		
4	- with silt, no gravel, light brown at 2.0ft BGS - trace silt and fine gravel, orange brown at 2.7ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.6
6	- light brown at 6.0ft BGS							1.0
8	- fine to coarse grained, brown at 7.0ft BGS			2MC		80		0.5
10	- light brown at 9.0ft BGS - trace fine to coarse gravel, brown to light brown at 10.0ft BGS							0.9
12				3MC		10		
14								--
16								1.0
		664.27						
18	SP-SAND (native), with fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist			4MC		90		
20	- brown, wet at 19.0ft BGS							0.7
22				20-22' (-121)				1.0
24				5MC		80		1.1
		656.27						
26	END OF BOREHOLE @ 25.0ft BGS							
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB97-11
DATE COMPLETED: February 23, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS/J. YORK

NORTHING: 510869.73
EASTING: 12773979.51
GROUND SURFACE 681.08

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	WOOD BLOCK FLOOR	680.88						
	CONCRETE	679.88						0.7
2	SP-SAND (FILL), trace fine gravel, compact, fine to coarse grained, poorly graded, brown, moist			1-3' -122				
				1MC		50		
4	- dark brown at 3.5ft BGS							0.7
	- trace silt, light brown at 4.3ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6	- fine grained, orange brown at 6.2ft BGS							1.2
				2MC		90		
8								1.0
10								
	- fine to coarse gravel, light brown at 11.0ft BGS							0.6
12				3MC		60		
14								0.8
16	SP-SAND (native), compact, fine to coarse grained, poorly graded, light brown, moist	665.08						0.6
	- tan/beige at 16.5ft BGS			4MC		80		
18								
20								1.0
				20-22' -123				0.7
22				5MC		75		
	- trace fine gravel, brown gray, wet at 23.0ft BGS							0.9
24	- with silt, fine grained, no gravel, brown at 24.0ft BGS	656.08						
	END OF BOREHOLE @ 25.0ft BGS							
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB98-11
DATE COMPLETED: February 17, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511858.58
EASTING: 12773625.19

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							
	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, trace medium to coarse grained, poorly graded, orange brown, moist	680.14		1-3' -071 -072 1MC		75		0.0
4								0.0
6			BACKFILLED WITH BENTONITE CHIPS					0.1
8				2MC		80		0.1
10	- light brown, no gravel at 9.5ft BGS - with silt, tan/beige at 11.0ft BGS							0.1
12				3MC		75		0.2
14	SP-GRAVELLY SAND (native), trace silt, compact, fine to coarse grained, fine gravel, brown, moist	668.04						0.0
16								
18				4MC		25		0.0
20	- fine to coarse gravel at 20.0ft BGS			20-22' -073				0.1
22	- wet at 22.5ft BGS			5MC		25		0.0
24								
26	END OF BOREHOLE @ 25.0ft BGS	656.04						
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 6/2/11

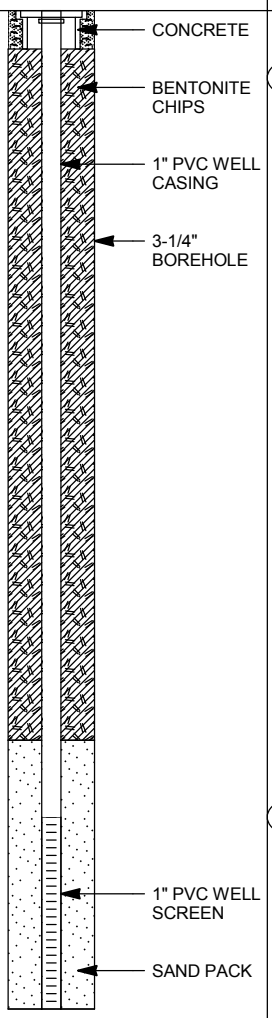
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB99-11/MW26-11
DATE COMPLETED: February 25, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511623.41
EASTING: 12773722.3
GROUND SURFACE 681.13

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
	WOOD BLOCK FLOOR	680.93
	CONCRETE	680.13
2	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, brown, moist	
	- trace fine gravel, light brown at 1.7ft BGS	
4	- brown and light brown at 2.3ft BGS	
	- dark brown at 3.5ft BGS	
	- orange brown at 4.5ft BGS	
6	- fine to coarse grained, brown at 6.0ft BGS	
8	- fine grained, no gravel, tan/beige at 8.0ft BGS	
10	- fine to coarse grained, brown at 11.0ft BGS	
12		
		668.13
14	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, light brown to beige, moist	
	- with fine gravel at 14.0ft BGS	
16	- fine grained, trace fine gravel, tan/beige at 15.5ft BGS	
	- gravelly sand, fine to coarse grained, brown at 17.0ft BGS	
18		
	- with fine gravel, light brown at 19.0ft BGS	
20	- gravelly sand, fine to coarse gravel at 20.0ft BGS	
22		659.13
	SP/GP-SAND AND GRAVEL, compact, fine to coarse grained sand, fine gravel, poorly graded, brown, moist to wet	658.13
24	- wet at 22.5ft BGS	
	SM-SAND, some silt, compact, fine grained, poorly graded, brown, wet	
26	END OF BOREHOLE @ 26.0ft BGS	655.13
28		
30		
32		
34		



WELL DETAILS
Screened interval:
660.13 to 655.13ft
21.00 to 26.00ft BGS
Length: 5ft
Diameter: 1in
Slot Size: 0.010
Material: PVC
Seal:
680.13 to 662.13ft
1.00 to 19.00ft BGS
Material: BENTONITE CHIPS
Sand Pack:
662.13 to 655.13ft
19.00 to 26.00ft BGS
Material: SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1-3' -126				0.0
1MC		80		
				0.0
				0.1
2MC		85		
				0.2
				0.1
3MC		75		
				0.1
				0.1
4MC		65		
				0.1
20-22' -127				0.1
5MC		60		
				0.7

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB100-11
DATE COMPLETED: March 15, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510516.94
EASTING: 12772958.34
GROUND SURFACE ELEV. ft: 676.90

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	676.40		0.5-2.5' -243				0.0
2	SP-SAND (FILL), trace fine gravel, compact, fine grained, trace medium to coarse grained, poorly graded, brown, moist - orange brown at 2.0ft BGS			1MC		65		
4								0.0
6	- brown at 6.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.0
8				2MC		70		
10	SP-SAND (native), with fine to coarse gravel, compact, fine to coarse grained, poorly graded, light brown, moist	666.90		8-10' -244				0.0
12				3MC		70		0.0
14	- wet at 14.2ft BGS							0.0
15	END OF BOREHOLE @ 15.0ft BGS	661.90						
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
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB101-11
DATE COMPLETED: February 16, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS/J. YORK

NORTHING: 511514.25
EASTING: 12773386.99
GROUND SURFACE 681.11

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	WOOD BLOCK FLOOR	680.91						0.3
	CONCRETE	680.41						
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown, moist			1-3' -069 1MC		60		0.7
4	- brown/gray at 2.0ft BGS - orange/brown at 3.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6								0.3
8				2MC		80		0.3
10	- fine to coarse grained, brown/gray at 9.5ft BGS							0.2
12				3MC		60		
14	SP-SAND (native), compact, fine grained, trace medium to coarse grained, poorly graded, tan/beige, moist	667.61						0.2
16								0.1
18				4MC		70		
20								0.2
22	- trace fine to coarse gravel, fine to coarse grained, brown/gray, wet at 22.0ft BGS			20-22' -070				0.3
24				5MC		70		0.4
26	END OF BOREHOLE @ 25.0ft BGS	656.11						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB102-11
DATE COMPLETED: February 17, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 511277.31
EASTING: 12773303.05

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.12					
	CONCRETE						
	SP-SAND (FILL), with silt, compact, fine grained, poorly graded, dark brown, moist	680.32					
2	- light brown at 1.1ft BGS		1-3' -075				0.1
			1MC		75		
4	- trace silt, tan/beige at 3.8ft BGS						0.1
6	- trace medium grained sand, light brown at 6.0ft BGS						0.4
8	- brown, trace oxidation at 8.0ft BGS		2MC		80		
							0.2
10	- medium brown at 9.7ft BGS	671.12					
	SP-GRAVELLY SAND (native), trace silt, compact, fine to coarse grained, fine to coarse gravel, poorly graded, light brown, moist						0.2
12	- trace fine to coarse gravel at 11.0ft BGS		3MC		75		
14	- with fine to coarse gravel at 13.5ft BGS						0.2
16							0.2
	- trace fine gravel, fine grained, trace medium to coarse grained, tan/beige at 17.0ft BGS		4MC		75		
18							0.1
20			19-21' -076				
	- gravelly sand, fine to coarse grained, fine to coarse gravel at 21.0ft BGS						0.0
22	- wet at 21.5ft BGS		5MC		75		
24							0.0
		656.12					
26	END OF BOREHOLE @ 25.0ft BGS						
	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS						
28							
30							
32							
34							

TEMP MONITORING WELL

WELL DETAILS
Screened interval:
661.12 to 656.12ft
20.00 to 25.00ft BGS
Length: 5ft

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

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB103-11
DATE COMPLETED: February 17, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510821.61
EASTING: 12773346.84
GROUND SURFACE 681.21

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	680.41		0-2' -082				0.2
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, dark brown, moist - brown at 1.2ft BGS - dark brown to black at 3.0ft BGS			1MC		85		
4	- no gravel, light orange/brown at 3.8ft BGS			2-7' -083				0.2
6	- light brown at 5.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.1
8				2MC		85		
10	- fine to medium grained, brown at 9.0ft BGS							0.1
12	SP-SAND (native), trace fine gravel, compact, fine to medium grained, trace coarse grained, poorly graded, light brown, moist	669.21						0.1
14	- fine to coarse grained at 12.8ft BGS			3MC		75		0.0
16	- fine to medium grained, trace coarse grained, no gravel, tan/beige at 15.5ft BGS							0.0
18	- gravelly sand, fine to coarse grained, fine gravel at 17.5ft BGS			4MC		60		
20				18-20' -084				0.0
22	- fine to medium grained, no gravel, brown, wet at 20.5ft BGS			5MC		60		0.1
24								0.0
26	END OF BOREHOLE @ 25.0ft BGS	656.21						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB104-11
DATE COMPLETED: February 16, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS/J. YORK

NORTHING: 512076.99
EASTING: 12773450.85

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.12					
	WOOD BLOCK FLOOR	680.92					
	CONCRETE	680.42					0.7
2	SP-SAND (FILL), trace fine gravel and silt, compact, fine grained, poorly graded, dark brown, moist		1-3' -063				
			1MC		50		
4	- brown at 1.5ft BGS						0.6
6							0.6
			2MC		70		
8							0.6
10							0.7
12			3MC		70		
	- orange/brown at 13.0ft BGS						
14	SP-SAND (native), trace silt, compact, fine grained, poorly graded, tan/beige, moist	667.12					0.6
16							0.6
18	- fine to coarse grained at 18.0ft BGS		4MC		80		
							0.7
20			20-22' -064				
22	- trace fine gravel, brown/gray, wet at 22.5ft BGS		5MC		30		0.6
24							0.6
	END OF BOREHOLE @ 25.0ft BGS	656.12					
26	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS						
28							
30							
32							
34							

TEMP MONITORING WELL

WELL DETAILS
Screened interval:
659.12 to 654.12ft
22.00 to 27.00ft BGS
Length: 5ft

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

CHEMICAL ANALYSIS (1-3' -063, 20-22' -064)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB105-11
DATE COMPLETED: February 22, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510916.79
EASTING: 12773584.79

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	680.90					
	WOOD BLOCK FLOOR	680.70					
	CONCRETE	680.10					
	VOID, no soil	679.90	1-3' -111				0.8
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, trace medium to coarse grained, poorly graded, medium brown, moist		1MC		75		
4	- light brown at 4.7ft BGS						0.8
6	- light orange brown at 6.2ft BGS						0.7
8			2MC		70		
							0.8
10	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, medium brown, moist	671.30					
	- with fine gravel, brown at 10.0ft BGS						0.6
12	SP/GP-SAND AND GRAVEL, compact, fine to coarse grained sand, fine to coarse gravel, brown and light brown, moist	668.90	3MC		70		
14							0.6
16	SP-SAND, trace silt, compact, fine grained, poorly graded, tan/beige, moist	665.40					0.9
			4MC		70		
18	- fine to coarse grained, trace fine gravel at 18.5ft BGS		17.5-19.5' -112				0.8
20	- wet at 19.8ft BGS						
22	- fine to medium grained, trace coarse grained, trace fine to coarse gravel at 22.0ft BGS		5MC		65		1.2
24	- medium to coarse grained, trace fine grained, trace to with fine gravel at 22.8ft BGS						1.3
	END OF BOREHOLE @ 25.0ft BGS	655.90					
26	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS						
28							
30							
32							
34							

WELL DETAILS
Screened interval:
660.90 to 655.90ft
20.00 to 25.00ft BGS
Length: 5ft

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB106-11
DATE COMPLETED: March 14, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512134.38
EASTING: 12772835.73

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	673.03						
0	CONCRETE	672.53		0-2' -211 -212				0.0
2	FILL-SILTY SAND AND SLAG DEBRIS, compact, fine sand, slag is sand to coarse gravel size, dark brown to black, moist	670.53		1MC 2-4' -213		60		0.0
4	BRICK DEBRIS, compact, sand to coarse gravel size, red and yellow, moist	669.53		4-6' -214				0.0
6	SP-SAND (FILL), compact, fine grained, poorly graded, yellow brown, moist - brown at 5.0ft BGS		BACKFILLED WITH BENTONITE CHIPS	6-8' -215				0.0
8	SP-SAND (native), compact, fine to coarse grained, poorly graded, brown, moist	665.03		2MC		60		
10	END OF BOREHOLE @ 10.0ft BGS	663.03		8-10' -216				0.0
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB107-11
DATE COMPLETED: March 14, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512134.51
EASTING: 12772814.27

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	672.39						
0	ASPHALT	672.09		0-2' -217				0.0
2	FILL-SILTY SAND AND SLAG DEBRIS, compact, fine sand, slag is sand to coarse gravel size, dark brown to black, moist	669.89		1MC 2-4' -218		60		0.0
4	BRICK DEBRIS, compact, sand to coarse gravel size, red and yellow, moist	668.39		4-6' -219				0.0
6	FILL-SAND AND BRICK DEBRIS, compact, fine to coarse sand, brick is sand to coarse gravel size, brown, red and yellow, moist	667.39	BACKFILLED WITH BENTONITE CHIPS	6-8' -220				0.0
8	PT-PEAT (native), trace woody material, soft to firm, dark brown to black, moist	664.89		2MC		60		
10	SP-SAND (native), compact, fine to coarse grained, poorly graded, brown, moist	662.39		8-10' -221				0.0
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 ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB108-11
DATE COMPLETED: March 14, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512106.88
EASTING: 1277814.95

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	672.51						
0	ASPHALT	672.31		0-2' -222				0.0
2	FILL-SILTY SAND AND SLAG DEBRIS, compact, fine sand, slag is sand to coarse gravel size, dark brown to black, moist	670.51		1MC 2-4' -223		60		0.0
4	SP-SAND (FILL), compact, fine grained, poorly graded, yellow brown, moist		BACKFILLED WITH BENTONITE CHIPS	4-6' -224				
6	PT-PEAT (native), trace woody material, soft to firm, dark brown to black, moist	666.51		6-8' -225				0.0
8	SP-SAND (native), compact, fine to coarse grained, poorly graded, brown, moist	664.51		2MC		65		
10	END OF BOREHOLE @ 10.0ft BGS	662.51		8-10' -226				0.0

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

CHEMICAL ANALYSIS

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB109-11
DATE COMPLETED: March 14, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512069.07
EASTING: 12772792.33

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	672.10						
0	ASPHALT	671.80		0-2' -227				0.0
2	FILL-SILTY SAND AND SLAG DEBRIS, compact, fine sand, slag is sand to coarse gravel size, dark brown to black, moist	670.30		1MC 2-4' -228		50		0.0
4	SP-SAND (FILL), compact, fine grained, poorly graded, yellow brown, moist		BACKFILLED WITH BENTONITE CHIPS	4-6' -229				
6	PT-PEAT (native), trace woody material, soft to firm, dark brown to black, moist	666.60		6-8' -230				0.0
8	SP-SAND (native), compact, fine to coarse grained, poorly graded, brown, moist	664.60		2MC		65		0.0
10	END OF BOREHOLE @ 10.0ft BGS	662.10		8-10' -231 -232				
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB110-11
DATE COMPLETED: March 14, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512107.84
EASTING: 12772789.05

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	671.73						
0	ASPHALT	671.43		0-2' -233				0.0
2	SP-SAND (FILL), with fine gravel, compact, fine grained, poorly graded, brown, moist	670.53						
	- trace fine gravel at 0.5ft BGS	669.73		1MC 2-4' -234		60	50	0.0
4	FILL-SILTY SAND AND SLAG DEBRIS, compact, fine sand, slag is sand to coarse gravel size, dark brown to black, moist							
6	SP-SAND (FILL), compact, fine grained, poorly graded, yellow brown, moist	666.73	BACKFILLED WITH BENTONITE CHIPS	4-6' -235				0.0
	PT-PEAT (native), trace woody material, soft to firm, dark brown to black, moist			6-8' -236				
8	SP-SAND (native), compact, fine to coarse grained, poorly graded, brown, moist	664.23		2MC		60	65	0.0
10	END OF BOREHOLE @ 10.0ft BGS	661.73		8-10' -237				

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

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB111-11/MW27-11
DATE COMPLETED: March 14, 2011
DRILLING METHOD: DIRECT PUSH/HSA
FIELD PERSONNEL: D. RIVERS

NORTHING: 512134.67
EASTING: 12772787.4

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
	GROUND SURFACE	671.71
0	ASPHALT	671.41
2	FILL-SILTY SAND AND SLAG DEBRIS, compact, fine sand, slag is sand to coarse gravel size, dark brown to black, moist	669.21
4	BRICK DEBRIS (FILL), sand to coarse gravel size, yellow, moist, trace slag debris	667.21
6	WHITE DEBRIS (FILL), porous, light, pumice-like sand to coarse gravel size, white, moist	665.71
8	PT-PEAT (native), trace woody material, soft to firm, dark brown to black, moist	663.21
10	SP-SAND (native), compact, fine to coarse grained, poorly graded, brown, moist	
12		
14	- wet at 14.2ft BGS	
16		
18		
20	END OF BOREHOLE @ 20.0ft BGS	651.71
22		
24		
26		
28		
30		
32		
34		

MONITORING WELL

CONCRETE
BENTONITE CHIPS
2" PVC WELL CASING
8-1/4" BOREHOLE
2" PVC WELL SCREEN
SAND PACK
NATURAL COLLAPSE

WELL DETAILS
Screened interval:
659.21 to 654.21ft
12.50 to 17.50ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Seal:
670.71 to 661.21ft
1.00 to 10.50ft BGS
Material: BENTONITE CHIPS
Sand Pack:
661.21 to 653.71ft
10.50 to 18.00ft BGS
Material: SAND PACK

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0-2' -238				0.0
1MC 2-4' -239		60		0.0
4-6' -240				0.0
2MC 6-8' -241		65		0.0
8-10' -242				0.0
3MC		70		0.0
				0.0
4MC		60		0.0
				0.0

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

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB112-11
DATE COMPLETED: March 15, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510907.56
EASTING: 12772803.09
GROUND SURFACE 675.98

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE	675.18						0.0
	CRUSHED STONE (FILL), compact, fine sand to gravel size, white to light gray, moist	673.98						
2	SP-SAND (FILL), trace fine gravel, compact, fine to coarse grained, poorly graded, dark brown, moist			1MC (2-4' -248)		100		
4	- brown at 4.0ft BGS							0.0
	- fine grained, light brown at 5.0ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6								0.0
8				2MC		50		0.0
10	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, tan/beige, moist	665.98						0.0
12				3MC (12-14' -249 -250)		70		
14	- light brown, wet at 14.3ft BGS							0.0
	END OF BOREHOLE @ 15.0ft BGS	660.98						
16								
18								
20								
22								
24								
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB114-11
DATE COMPLETED: February 21, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510627.56
EASTING: 12773255.22
GROUND SURFACE 681.13

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	WOOD BLOCK FLOOR	680.93					
	CONCRETE	680.13					0.1
2	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, light brown, moist		1-3' -094				
			1MC		70		
4							0.1
6	- concrete debris, white at 6.0ft BGS						0.1
	- slag debris, dark brown to black at 6.2ft BGS						
	- no concrete or slag debris, brown at 6.4ft BGS		2MC		75		
8	- tan/beige at 6.7ft BGS						0.3
		671.63					
10	SP-SAND (native), with fine gravel, compact, fine to coarse grained, poorly graded, brown, moist						
							0.3
12	- trace fine to coarse gravel, fine gravel at 10.5ft BGS						
	- fine to medium grained, trace fine gravel at 11.0ft BGS		3MC		75		
		667.93					
14	- with fine gravel at 12.5ft BGS						0.3
	GP-SANDY GRAVEL, compact, fine gravel, fine to coarse grained sand, poorly graded, brown, moist	665.53					
16							0.3
	SP-SAND, with silt, compact, fine grained, poorly graded, tan/beige, moist						
			4MC		75		
18	- trace silt, fine gravel, trace medium to coarse grained, trace fine gravel at 17.0ft BGS		17-19'				0.1
	- trace fine to coarse gravel, brown at 19.0ft BGS						
20	- fine to coarse grained, with fine gravel, wet at 19.5ft BGS	661.13					
	END OF BOREHOLE @ 20.0ft BGS						
22							
24							
26							
28							
30							
32							
34							

BOREHOLE: BACKFILLED WITH BENTONITE CHIPS

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

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB115-11
DATE COMPLETED: February 23, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS/J. YORK

NORTHING: 510903.69
EASTING: 12774003.64
GROUND SURFACE ELEV. ft: 680.95

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	CONCRETE							0.9
2	SP-SAND (FILL), trace fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	678.95		1MC (2-4' -124)		30		--
4	- dark brown at 3.0ft BGS - fine grained, trace coarse grained, orange brown at 3.5ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6								0.4
8	- fine to coarse grained, brown at 8.1ft BGS - fine grained, trace coarse grained at 8.5ft BGS			2MC		60		0.5
10	- fine to coarse grained at 9.5ft BGS							0.6
12	- light brown at 11.5ft BGS			3MC		60		
14								0.5
16	SP-SAND (native), compact, fine to coarse grained, poorly graded, tan/beige, moist	665.95						0.8
18				4MC		70		
20								0.7
22				20-22' (-125)				0.6
24	- trace fine gravel, brown gray, wet at 23.0ft BGS - orange brown at 24.0ft BGS			5MC		70		0.8
26	END OF BOREHOLE @ 25.0ft BGS	655.95						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB116-11
DATE COMPLETED: March 3, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510345.66
EASTING: 12774007.03

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	680.02						
0	ASPHALT	679.82						0.0
	CONCRETE							
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	677.82		1MC (2-4' -163 -164)		75		0.1
4								
6	SP-SAND (native), with fine to coarse gravel, compact, fine to coarse grained, poorly graded, light brown, moist	674.22	BACKFILLED WITH BENTONITE CHIPS					0.1
8	- with fine gravel at 8.0ft BGS			2MC		75		0.2
10	- trace fine gravel at 9.6ft BGS - with fine to coarse gravel at 10.0ft BGS - fine grained, no gravel, trace to with silt, tan/beige at 10.5ft BGS							0.0
12				3MC		80		
14	- fine to medium grained, trace coarse grained at 15.0ft BGS							0.0
16				(16-18' -165) 4MC		75		0.2
18	- trace coarse gravel at 17.5ft BGS - fine to coarse grained, trace fine to coarse gravel at 17.8ft BGS - brown, wet at 18.0ft BGS							0.2
20	- 0.1' gravel at 18.2ft BGS - fine grained, trace medium to coarse grained at 18.3ft BGS	660.02						
22	END OF BOREHOLE @ 20.0ft BGS							
24								
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB117-11
DATE COMPLETED: February 17, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510929.67
EASTING: 12773012.82

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	681.01						
0	CONCRETE	680.21						
2	SM-SILTY SAND (FILL), compact, fine grained, poorly graded, light brown, moist			1-3' -090				0.1
				1MC		90		
4	- with silt, dark brown at 4.5ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.1
6	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, orange/brown, moist	675.01						0.1
				2MC		85		
8	- light brown at 9.0ft BGS							0.1
10	- tan/beige at 11.0ft BGS							0.1
12				3MC		75		
14	SP-SAND (native), trace silt and fine gravel, compact, fine grained, trace medium to coarse grained, poorly graded, brown, moist, trace oxidation	667.01						0.0
16	- fine to coarse grained, with fine gravel at 16.0ft BGS							0.1
18	- fine grained, trace medium to coarse grained, trace fine gravel at 17.2ft BGS			4MC		75		0.1
20	- fine to coarse grained, with fine gravel, wet at 20.5ft BGS			20-22' -091				0.1
22				5MC		75		
24	- fine grained, trace medium to coarse grained at 23.8ft BGS							0.5
26	END OF BOREHOLE @ 25.0ft BGS	656.01						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB118-11
DATE COMPLETED: March 4, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510342.76
EASTING: 12772995.15

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	676.42						
0	SM-SILTY SAND (FILL), trace fine to coarse gravel, compact, fine grained, poorly graded, dark brown, moist	675.92		0-2' -182				0.2
2	GP-SANDY GRAVEL (FILL), loose, fine gravel, fine to coarse sand, poorly graded, brown and multicolored, moist	673.92		1MC		60		0.1
4	SP-SAND (FILL), compact, fine grained, poorly graded, light orange brown, moist	672.62	BACKFILLED WITH BENTONITE CHIPS					
6	SP-SAND (native), fine to coarse grained, poorly graded, light brown, moist - trace fine to coarse grained at 4ft BGS							0.2
8	- fine to medium grained, no gravel, light and orange brown at 8.0ft BGS			2MC		85		0.1
10	- fine to coarse grained, trace fine gravel, brown at 9.0ft BGS - with fine to coarse gravel, light brown at 9.5ft BGS							0.2
12	- fine grained, trace medium to coarse grained, no gravel, tan/beige at 11.2ft BGS			3MC		75		
14	- fine to medium grained, trace coarse grained, light brown at 13.0ft BGS - fine to coarse grained, trace fine gravel at 14.0ft BGS			12.5-14.5' -183				0.2
16	- brown, wet at 14.8ft BGS							0.1
18				4MC		75		0.1
20	END OF BOREHOLE @ 20.0ft BGS	656.42						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB119-11
DATE COMPLETED: March 2, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510273.61
EASTING: 12773570.34
GROUND SURFACE 677.14

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SM/GM-SILTY SAND AND GRAVEL (FILL), compact, fine to coarse sand, fine to coarse angular gravel, poorly graded, brown, dark brown and black, moist	676.34		0.5-2.5' -157				0.0
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, brown, moist			1MC		60		
4	- fine to coarse grained, orange brown at 4.5ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.0
6	- fine to medium grained, trace coarse grained, no gravel, light brown at 6.0ft BGS							0.0
8	- fine to coarse grained, trace fine gravel, brown at 7.5ft BGS			2MC		80		
10	SP-SAND (native), trace silt and fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist	668.44						0.0
12	- with fine gravel, trace coarse gravel at 9.5ft BGS							0.0
14	- brown, wet at 14.3ft BGS			3MC 12-14' -158		75		0.1
16	END OF BOREHOLE @ 15.0ft BGS	662.14						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB120-11
DATE COMPLETED: February 17, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 510915.2 EASTING: 12773197.03 GROUND SURFACE	681.10						
	CONCRETE							
	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine grained, trace medium to coarse grained, poorly graded, medium brown, moist	680.20	BACKFILLED WITH BENTONITE CHIPS	1MC (1-3' -079)		75		0.0
4	- REFUSAL at 4.0ft BGS	677.10						
	END OF BOREHOLE @ 4.0ft BGS							

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

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB121-11
DATE COMPLETED: February 21, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 510698.08 EASTING: 12773348.96 GROUND SURFACE	681.11						
0	CONCRETE							
	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine grained, poorly graded, brown, moist	680.31		1-3' -098 -099 1MC		80		0.1
2								
	- dark brown at 3.5ft BGS							0.1
4	- light brown, no gravel at 4.2ft BGS							
			BACKFILLED WITH BENTONITE CHIPS					0.1
6								
	- with silt at 7.5ft BGS			2MC		80		
8	- fine to medium grained, brown at 8.0ft BGS							0.0
	SP-SAND (native), trace silt and fine gravel, compact, fine to medium grained, trace coarse grained, poorly graded, brown, moist	671.81						
10								0.2
	- fine to coarse grained at 11.0ft BGS							
12	- with fine gravel at 11.5ft BGS			3MC		75		
								0.2
14	SP/GP-SAND AND GRAVEL, compact, fine to coarse grained sand, fine gravel, brown, moist	666.91						
16								0.2
	SP-SAND, with fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	664.11		4MC 17-19' -100		75		
18								0.1
	- wet at 19.5ft BGS							
20	END OF BOREHOLE @ 20.0ft BGS	661.11						
22								
24								
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB122-11
DATE COMPLETED: February 22, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510779.38
EASTING: 12773538.69

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	680.30						
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine to coarse grained, poorly graded, brown, moist - medium brown at 1.5ft BGS			1-3' -107 1MC		85		0.0
4	- fine grained, no gravel, light orange brown at 3.8ft BGS		BACKFILLED WITH BENTONITE CHIPS					0.0
6								0.0
8				2MC		80		0.1
10	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	671.90						0.2
12	- with fine gravel, tan/beige at 10.0ft BGS			3MC		65		
14	SP/GP-SAND AND GRAVEL, compact, fine to coarse grained sand, fine gravel, poorly graded, brown, moist	668.10						0.3
16	SP-SAND, with fine gravel, compact, fine to coarse grained, poorly graded, brown, moist	666.10						0.7
18				4MC 17-19' -108		75		
20	- fine grained, no gravel, wet at 19.0ft BGS - fine to coarse grained, trace fine gravel at 19.5ft BGS							0.6
22				5MC		70		0.7
24	- trace fine to coarse gravel at 23.0ft BGS - coarse grained, trace fine to medium grained, trace fine gravel at 24.2ft BGS	656.10						0.8
26	END OF BOREHOLE @ 25.0ft BGS							
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB123-11
DATE COMPLETED: February 17, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 510926.98 EASTING: 12773406.88 GROUND SURFACE	681.14						
0	CONCRETE	680.34	BACKFILLED WITH BENTONITE CHIPS	1MC		50		0.1
2	SP-SAND (FILL), trace silt and fine to coarse gravel, fine grained, poorly graded, dark brown, moist, trace wood pieces	679.14						
	- REFUSAL at 2.0ft BGS							
4	END OF BOREHOLE @ 2.0ft BGS							
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

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB124-11
DATE COMPLETED: February 21, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510664.87
EASTING: 12773559.48

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	680.27						0.1
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine to coarse grained, poorly graded, brown, moist - fine grained, light brown at 3.0ft BGS			1-3' -105 1MC		80		0.2
4								
6			BACKFILLED WITH BENTONITE CHIPS					0.2
8				2MC		85		0.2
10	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, medium brown, moist - light brown at 9.5ft BGS	672.07						0.3
12	- with fine to coarse gravel at 10.0ft BGS	669.07		3MC		70		
14	SP/GP-SAND AND GRAVEL, compact, fine to coarse sand, fine gravel, poorly graded, medium brown, moist							0.2
16	SP-SAND, with fine to coarse gravel, compact, fine to coarse grained, poorly graded, light brown, moist - trace fine gravel at 16.0ft BGS	666.07						0.2
18				4MC 17-19' -106		70		0.2
20	- fine grained, no gravel, wet at 19.5ft BGS - with fine to coarse gravel, fine to coarse grained at 20.0ft BGS							
22	- trace fine gravel, fine to medium grained, trace coarse grained at 21.0ft BGS							
24								
26	END OF BOREHOLE @ 25.0ft BGS	656.07						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB125-11
DATE COMPLETED: March 3, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510151.3
EASTING: 12773775.14

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	678.78						
0	CONCRETE							
	SP-SAND (FILL), trace silt and fine gravel, compact, fine to medium grained, poorly graded, orange brown, moist	677.98		1-3' -168				0.4
2				1MC		75		
	- light brown at 3.0ft BGS							0.5
4	- fine to coarse grained, brown at 4.2ft BGS		BACKFILLED WITH BENTONITE CHIPS					
6								0.2
	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist	671.48		2MC		80		
8								0.2
10	- trace fine to coarse gravel at 10.0ft BGS							
								0.3
12				3MC		75		
14				13-15' -169				0.4
16	- brown, wet at 16.0ft BGS							0.4
				4MC		75		
18								0.5
20	END OF BOREHOLE @ 20.0ft BGS	658.78						
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 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB126-11
DATE COMPLETED: March 4, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 510461.18
EASTING: 12772812.47

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	676.30						
0	CONCRETE	675.60						
2	SP-SAND (FILL), trace silt and fine gravel, compact, fine grained, poorly graded, light orange brown, moist			1-3' -180 1MC		75		0.2
4		671.80	BACKFILLED WITH BENTONITE CHIPS					0.1
6	SP-SAND (native), trace fine gravel, compact, fine to coarse grained, poorly graded, light brown, moist - fine grained, no gravel, orange brown at 5.2ft BGS							0.2
8	- fine to coarse grained, trace fine gravel, light brown at 5.5ft BGS - orange (oxidation) at 6.5ft BGS			2MC		75		0.1
10	- no gravel, brown at 6.7ft BGS - with fine gravel at 7.2ft BGS							0.1
12	- with fine to coarse gravel, light brown at 8.5ft BGS - gravelly sand, fine to coarse gravel, brown at 10.0ft BGS			3MC		65		
14	- with fine gravel at 12.5ft BGS - wet at 14.5ft BGS			12.5-14.5' -181				0.1
16	- 0.2' fine gravel seam at 15.5ft BGS							0.1
18	- fine to medium grained, trace coarse grained, trace fine gravel at 18.2ft BGS			4MC		60		0.0
20	END OF BOREHOLE @ 20.0ft BGS	656.30						
22								
24								
26								
28								
30								
32								
34								

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

CHEMICAL ANALYSIS (1-3' -180)

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB127-11
DATE COMPLETED: February 15, 2011
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: D. RIVERS

NORTHING: 512197.28
EASTING: 12773047.48

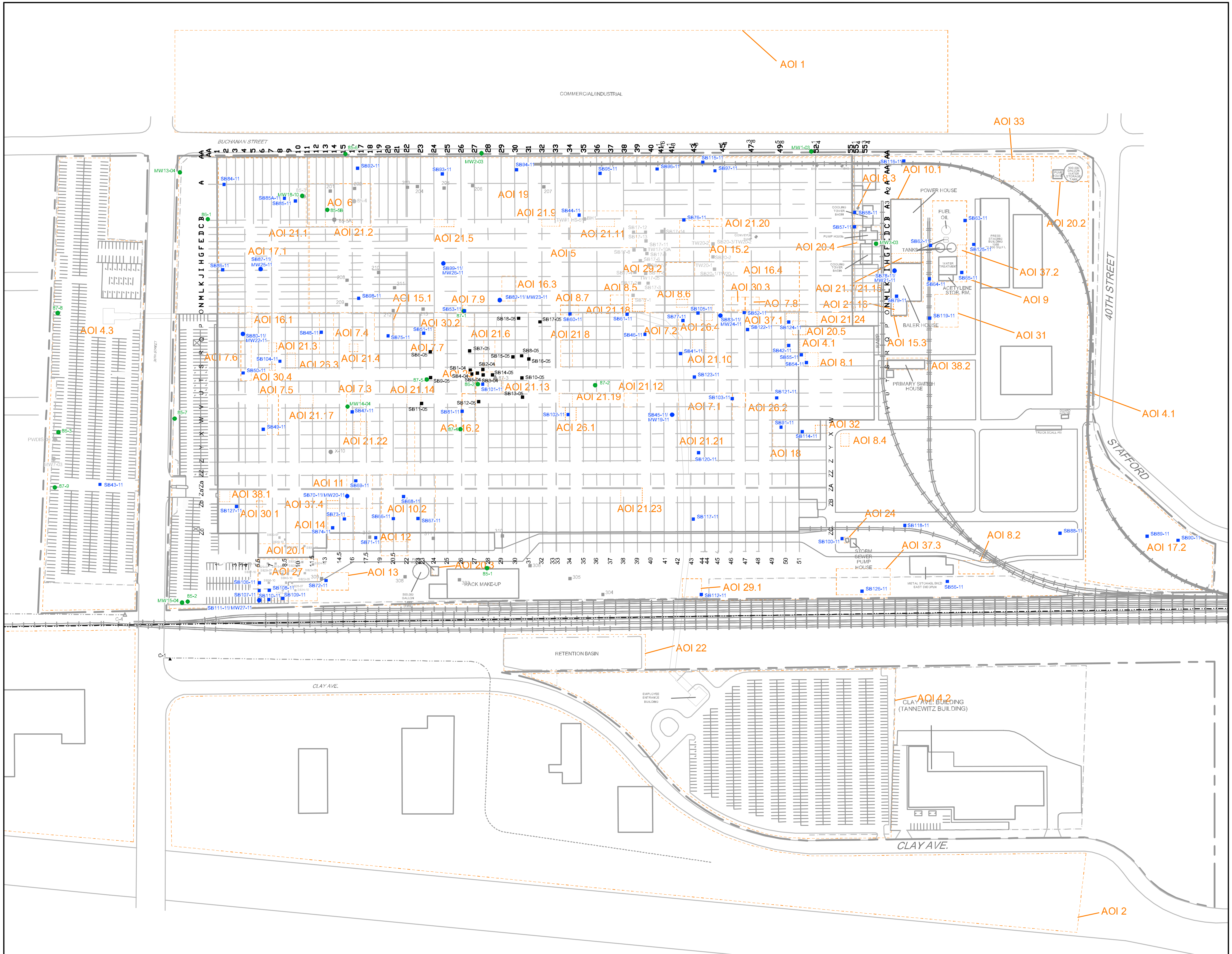
DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	680.99					
0	WOOD BLOCK	680.79					
	CONCRETE	679.99					0.1
2	SP-SAND (FILL), trace silt and fine to coarse gravel, compact, fine grained, poorly graded, brown, moist		1-3' -056				
			1MC		70		
4							0.1
	- fine grained, no gravel, orange/brown, slight increase in silt content at 5.5ft BGS						
6							0.0
			2MC		70		
8							0.0
10							
	PT-PEAT, trace rootlets, soft to firm, dark brown to black, moist	670.19					0.0
12	SP-SAND (native), compact, fine grained, poorly graded, orange/brown, moist	668.79	3MC		70		
	- light brown and dark brown banded at 12.8ft BGS	667.19					0.0
14	PT-PEAT, trace rootlets, soft to firm, dark brown to black, moist	666.99					
		665.79					
16	SP-SAND (native), compact, fine grained, poorly graded, light brown, moist	665.29					0.0
		664.99					
	PT-PEAT, trace rootlets, soft to firm, dark brown to black, moist	664.79	4MC		70		
18							0.0
	SP-SAND (native), compact, fine grained, poorly graded, light brown, moist						
20	PT-PEAT, trace rootlets, soft to firm, dark brown to black, moist		20-22' -057				0.0
22	SP-SAND (native), compact, fine grained, poorly graded, brown, moist		5MC		75		
	- tan/beige at 19.3ft BGS						
	- brown/gray, wet at 22.5ft BGS						0.0
24							
	END OF BOREHOLE @ 25.0ft BGS	655.99					
26							
28							
30							
32							
34							

BOREHOLE: BACKFILLED WITH BENTONITE CHIPS

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

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/2/11



LEGEND

- SB51-11 SURVEYED LOCATIONS
- TW20-2 HISTORICAL SAMPLE LOCATION
- MW6-03 MONITORING WELL LOCATION TO BE SAMPLED
- SB78-11/ MW21-11 SITE-WIDE INVESTIGATION LOCATION
- APPROXIMATE SITE BOUNDARY
- FENCE
- RAILROAD
- COLE DRAIN
- APPROXIMATE AOI

0 65 130ft

SCALE VERIFICATION

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

SAMPLE LOCATIONS

SITE-WIDE INVESTIGATION DATA PACKAGE

FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

CONESTOGA-ROVERS & ASSOCIATES

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

Project Manager: J.Q.	Reviewed By: C.M.	Date: JUNE 2011	
Scale: 1" = 120'	Project №: 017360-T05	Report №: MEMO055	Drawing №: PLAN 1

017360-T05(MEMO055)GN-DE001 JUN 07/2011