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TRANSMITTAL

DATE: July 16, 2013 REFERENCE NO.: 017360
PROJECT NAME: Former Grand Rapids Metal Plant
To: Ms. Darlene Stringer
MDEQ RRD - Grand Rapids District
350 Ottawa Avenue NW
Unit 10
Grand Rapids, Michigan 49503-2341

Please find enclosed: Draft Final
 Originals Other
 Prints
Sent via: Mail Same Day Courier
 Overnight Courier Other

QUANTITY	DESCRIPTION
2	Summary of Sampling and Remedial Action Activities - 2011 and 2012 Memorandum Former Grand Rapids Metal Plant, Wyoming, Michigan

As Requested For Review and Comment
 For Your Use

COMMENTS:

Copy to: David Favero, RACER Trust
Completed by: Jeni Quigley Signed: Jeni Quigley
[Please Print]

Filing: **Correspondence File**



MEMORANDUM

TO: Darlene Stringer, MDEQ
Matt Gamble, MDEQ

REF. NO.: 017360

FROM: Jeni Quigley/ds/61/Pwl.

DATE: July 16, 2013

CC: David Favero, RACER Trust

RE: **Summary of Sampling and Remedial Action Activities - 2011 and 2012
Former Grand Rapids Metal Plant
Wyoming, Michigan**

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA), on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, is conducting investigation activities at the former Grand Rapids Metal Plant property located at 300 36th Street SW in Wyoming, Michigan (Site). These investigations have been conducted as part of the on-going assessment of the Site, which were initiated prior to 1981 to address various areas of concern at the Site. Ownership of the Site was transferred to the Thunder Ventures, LLC (Thunder Ventures) on June 28, 2011; however, RACER Trust retains certain responsibilities related to subsurface contamination associated with historical General Motors Corporation (GMC), operations at the Site. Decommissioning, demolition, and redevelopment activities were completed by MCM Management Corporation (MCM) on the Site on behalf of Thunder Ventures in 2011 and 2012, including decommissioning and demolition of all Site structures with the exception of the Primary Switch House and a Consumers Energy Company substation, removal of the former building slabs, and re-grading of the Site.

2.0 SCOPE OF WORK

During the demolition activities undertaken by MCM, in particular during the removal of the floor slabs and belowgrade structures (i.e., pits, sumps, trenches, etc.) to a depth of 4 feet below the final anticipated grade of the Site, areas of potential environmental concern were identified. These areas were identified by MCM and/or the WBRA's environmental consultant, Soils and Materials Engineers, Inc. (SME) based on visual or olfactory indications of potential contamination. Upon encountering areas of potential environmental concern, SME contacted CRA regarding each of the areas. CRA examined each of the areas and based on visual and olfactory observations and historical knowledge of the operations previously conducted in the area in question during operation of the facility and evaluated if sampling was appropriate. The identified areas were located in close proximity to identified Areas of Interest (AOIs) discussed in the Current Conditions Report (CCR) submitted to the Michigan Department of Environmental Quality (MDEQ) on December 23, 2010. The relationship of each identified area to the previously identified AOIs is further discussed in the subsections below.

Sampling was conducted throughout the duration of the demolition and re-grading activities conducted in 2011 and 2012. Based on the sampling results, excavation and off-Site disposal of materials with verification

sampling was also performed in select locations. Evaluation of sample results for additional evaluation and/or subsequent excavation during the duration of the demolition and re-grading activities was based on the comparison of the results to the following Michigan Act 451, Part 201 Generic Cleanup Criteria (Part 201):

- Groundwater Surface Water Interface Protection Criteria (GSIPC)
- Groundwater Contact Criteria (GCC)
- Non-Residential Particulate Soil Inhalation (PSIC)
- Non-Residential Direct Contact Criteria (DCC)

The comparison for further evaluation relative to remedial action was limited to the above Part 201 Generic Cleanup Criteria based on the following:

- A deed covenant is currently in place for the Site that restricts the use of the Site to non-residential purposes; therefore, the Part 201 Generic Residential Cleanup Criteria were not utilized for comparison purposes for areas requiring further evaluation during this scope of work.
- A deed covenant is currently in place for the Site that restricts the use of groundwater beneath the Site for any purpose; therefore, the Part 201 Drinking Water Protection Criteria (DWPC) were not utilized for comparison purposes for areas requiring further evaluation during this scope of work.
- A deed covenant is currently in place for the Site that addresses the potential for vapor intrusion through the "construction and installation of vapor intrusion barriers for any building or other enclosure structure that will be occupied by any persons for any purposes" if determined to be required to reasonably prevent exposure; therefore, the Part 201 Soil Volatilization to Indoor Air Inhalation Criteria (SVIAC), Infinite Source Volatile Soil Inhalation Criteria (VSIC), and Finite (2-meter and 5-meter source thickness) Source VSIC were not utilized for comparison purposes for areas requiring further evaluation during this scope of work.

The sampling and excavation activities that were conducted and evaluated based on comparison to Part 201 Generic Non-Residential DCC, PSIC, and GCC, and GSIPC by CRA on behalf of RACER Trust are summarized in the below subsections consistent with this comparison. It should be noted that GSIPC was not utilized for comparison for completion of delineation or excavation activities, as that pathway is anticipated to be evaluated and addressed in the future relative to impacts in groundwater, as further discussed below. Part 201 Generic Residential and Non-Residential Cleanup Criteria for soil samples are presented in Table 1. Part 201 Generic Residential and Non-Residential Cleanup Criteria for Synthetic Precipitation Leaching Procedure (SPLP) soil samples are presented in Table 2. A sample summary is presented in Table 3.

2.1 GRAB SAMPLE COLLECTION (SITE-WIDE)

2.1.1 NORTHWESTERN CORNER OF FORMER MAIN MANUFACTURING BUILDING (COLUMNS X-Z, ROWS 4-9)

On March 21, 2012, MCM observed a visually impacted fill seam in proximity of a buried foundation near former Column Y, Row 6. This area was located beneath the 1954 addition to the western portion of the former Main Manufacturing Building. Prior to the expansion of the former Main Manufacturing Building, this area historically consisted of three former railroad tracks. Railroad track operations were identified as

AOI 33 in the CCR. CRA mobilized to the Site to visually evaluate the material in the seam and collect a sample (Seam 1). The seam was observed to be comprised of cinders, slag, fly ash, sand, and coal fragments. The sample was submitted to the analytical laboratory for analysis for Target Compound List (TCL) volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PNAs), Site-specific metals, and polychlorinated biphenyls (PCBs).

On April 17, 2012, on behalf of RACER, CRA mobilized to the Site to attempt to determine the extent of the impacted fill material. Test pits were excavated and the fill material was identified in three other locations within the area of the initial sample (Seam 1). Three additional soil samples were collected (Seam 2, Seam 3, and Seam 4) for analysis of TCL VOCs, PNAs, Site-specific metals, and PCBs. Additionally, based on the results from the Site-specific metals analysis, SPLP analysis was conducted on certain samples where the detected concentrations of specific metals exceeded the Part 201 GSIPC Sample Seam 2 was collected near former Column Y, Row 9, sample Seam 3 was collected near former Column Z, Row 9, and sample Seam 4 was collected near former Column X, Row 4. Observations made during the demolition and re-grading activities identified the presence of the fill materials along the former railroad track locations.

Based on the analytical results, there were no exceedances of the Part 201 GCC, Non-Residential DCC, or Non-Residential PSIC. Arsenic, selenium, chromium, cobalt, fluoranthene, naphthalene, and phenanthrene were detected in various soil samples above the GSIPC; however, SPLP analysis for these compounds did not indicate concentrations above the Part 201 GSIC. Additionally, these compounds have not been identified in groundwater samples collected in monitoring wells at concentrations above the Part 201 GSIC in the immediate vicinity of this area or the Cole Drain.

Approximate sample locations are presented in Figure 1. A summary of analytical results for grab soil samples is presented in Table 4. A summary of analytical results for SPLP soil samples is presented in Table 5.

2.1.2 CENTRAL PORTION OF FORMER MAIN MANUFACTURING BUILDING (COLUMN U, ROW 25)

On April 27, 2012, an area of stained soil was discovered underneath the existing building slab near building Column U, Row 25. This area is in close proximity to former heat treat operations noted on a 1944 drawing near Columns U and W, Rows 26 and 27, which were identified to include a quench pit with four 12,000-gallon quench oil tanks. This area was identified as AOI 16.2 Former Heat Treat Operations - Main Manufacturing Building - Area No. 2 in the CCR. The stained soil was located on the surface of an additional slab approximately 2 feet below the former Main Manufacturing Building concrete slab that was removed initially. Borings previously advanced in the vicinity of this area indicated the presence of an approximate 0.5-foot void beneath the wood floor block and concrete in this area, which was immediately underlain by fill sand. CRA mobilized to the Site to complete a visual evaluation of the area. Based on CRA's observations, two soil samples (Stained Soil 1 and Stained Soil 2) were collected in order to evaluate the stained material. The soil samples were submitted to the analytical laboratory for analysis of VOCs, SVOCs, PCBs, and Site-specific metals.

Based on the analytical results, there were no exceedances of the Part 201 GCC, Non-Residential DCC, or Non-Residential PSIC. Phenanthrene was detected in soil sample Stained Soil 1 above the GSIPC; however, SPLP analysis for this compound did not indicate a concentration above the Part 201 GSIC. Additionally, this compound has not been identified in groundwater samples collected in monitoring wells at concentrations above the Part 201 GSIC in the immediate vicinity of this area or the Cole Drain. TCE was

the only other compound detected above the Part 201 Generic Cleanup Criteria, but was only above the Part 201 DWPC.

Approximate sample locations are presented in Figure 1. A summary of analytical results for grab soil samples is presented in Table 4. A summary of analytical results for SPLP soil samples is presented in Table 5.

2.1.2 FORMER SUBSTATION K

The concrete floor slab in basement Substation K was identified during decommissioning activities to be impacted with PCBs at a concentration above 1 part per million (ppm). Substation K was documented to have historically utilized electrical equipment containing PCB-dielectric fluid, was historically utilized as a PCB storage area, and had historical releases from the equipment. Substation K was identified as AOI 21.9 in the CCR. Consistent with the requirements of the Toxic Substances Control Act (TSCA), SME conducted delineation activities on behalf of the WBRA related to the PCB detections in concrete. Based on the detections of PCBs, an approximate 1- to 2-foot thick layer of concrete was removed from the floor slab in the northeastern corner of the former substation. Analytical results for remediation verification concrete core samples collected subsequent to the removal of the upper portion of the slab indicated that PCBs were present in the concrete at concentrations above 1 ppm. Based on the analytical results, removal and disposal of the entire thickness of the concrete in this area was selected to address the detections of PCBs in the concrete.

Based on the unknown concentration of PCBs in the concrete at the bottom of the slab that was removed (i.e., the portion of the slab immediately overlying the below soil), on May 4, 2012, CRA collected two soil samples (Substation K-1 and Substation K-2) from the underlying soil beneath the northern and southern portions of the removed slab, respectively, to evaluate the potential presence of PCBs in the soil at concentrations above 1 ppm. The soil samples were submitted to the analytical laboratory for analysis of PCBs.

Based on the analytical results, PCBs were not detected in the soil samples at a concentration greater than 1 mg/kg (i.e., ppm).

Approximate sample locations are presented in Figure 1. A summary of analytical results for grab samples is presented in Table 4.

2.1.3 CENTRAL PORTION OF FORMER MAIN MANUFACTURING BUILDING (COLUMN Q, ROW 20)

A pipe containing oil was discovered inside of a piece of concrete foundation wall near building Column Q, Row 20 on May 9, 2012. This area is in close proximity to former baler operations, which were noted on drawings from 1936 and 1950 between Columns O to Q, Rows 20½ to 22. The drawings depicted the presence of two balers; however, no additional information was available regarding the timeframe this area was operated for baling operations or the specific building structures used. This area was identified as AOI 15.1 – Baler Operations – Former Main Manufacturing Building Balers. Miscellaneous debris was also observed in this area, which was approximately 30 feet by 30 feet in areal extent. Based on the observed staining, MCM stockpiled portions of the excavated material adjacent to the foundation wall. CRA mobilized to the Site to complete a visual evaluation of the area on May 10, 2012. The soil below the pipe

was observed to be stained; however, the extent of visually impacted soil was limited in the immediate area surrounding the pipe. The area on the opposite side of the foundation wall was excavated and it was identified that the pipe did not extend through the concrete to the opposite side. No staining was observed in this area. Staining was observed in a portion of the removed stockpiled material. Based on the observed conditions, CRA collected two soil samples, one from the stained soil beneath the piping (Stained Soil Below Pipe) and one from the stockpiled material (Stained Soil Pile). The soil samples were submitted to the analytical laboratory for analysis of VOCs, SVOCs, PCBs, and Site-specific metals.

Based on the analytical results, there were no exceedances of the Part 201 GCC, Non-Residential DCC, or Non-Residential PSIC. Manganese and phenanthrene were detected in various soil samples above the GSIPC; however, SPLP analysis for these compounds did not indicate concentrations above the Part 201 GSIC. Additionally, these compounds have not been identified in groundwater samples collected in monitoring wells at concentrations above the Part 201 GSIC in the immediate vicinity of this area or the Cole Drain.

Approximate sample locations are presented in Figure 1. A summary of analytical results for grab samples is presented in Table 4. A summary of analytical results for SPLP soil samples is presented in Table 5.

2.1.4 FORMER WASTEWATER TREATMENT PLANT

During a Facility Environmental Assessment (FEA) conducted by CRA in 2010, a concrete core sample was collected adjacent to a sludge pit in the former wastewater treatment plant (WWTP). Based on the analytical results from the concrete core sample, PCBs were detected at a concentration of 6.6 mg/kg. The WWTP was identified as AOI 9 in the CCR. Based on the detection of PCBs, the floor slab of the former WWTP was removed during demolition activities under an approved Self-Implementing Plan (SIP) by MCM. Subsequent to the removal of the former WWTP building slab, a hand auger soil boring (SB188-12) was advanced on May 23, 2012 to 4 feet bgs beneath the former concrete that was identified to be impacted. Soil samples were collected from 0 to 2 feet and 2 to 4 feet bgs to evaluate potential impacts. The soil samples were submitted to the analytical laboratory for analysis of PCBs.

Based on the analytical results, PCBs were not detected in the soil samples above 1 mg/kg.

Approximate sample locations are presented in Figure 1. A summary of analytical results for grab samples is presented in Table 4.

2.1.5 NORTHWESTERN CORNER OF FORMER MAIN MANUFACTURING BUILDING (COLUMN ZC, ROWS 5.5-7.5)

On June 16, 2012, an area of visually impacted fill was observed near Column Zc, Row 5.5 to Row 7. This area was located beneath the 1978 addition to the western portion of the former Main Manufacturing Building. Prior to the expansion of the former Main Manufacturing Building, this area historically consisted of former railroad tracks. Railroad track operations were identified as AOI 33 in the CCR. CRA mobilized to the Site to observe the material and potentially collect samples for laboratory analysis. The material was observed to be comprised of cinders, slag, fly ash, sand, and coal fragments. Based on the observed conditions, CRA collected a soil sample (Seam - Zc-5.5 to Zc-7) from the stained material. The soil sample was submitted to the analytical laboratory for analysis of VOCs, SVOCs, PCBs, and Site-specific metals.

Based on the analytical results, there were no exceedances of the Part 201 GCC. Lead was detected above the Non-Residential DCC. Chromium and manganese were detected above the Part 201 Non-Residential PSIC. Arsenic, barium, cadmium, chromium, cobalt, copper, molybdenum, nickel, silver, zinc, and TCE were detected above the Part 201 GSIPC. These compounds have not been identified in groundwater samples collected in monitoring wells at concentrations above the Part 201 GSIC in the immediate vicinity of this area or the Cole Drain, with the exception of zinc.

Approximate sample locations are presented in Figure 1. A summary of analytical results for grab samples is presented in Table 4.

The extent of this fill material was not completely delineated during re-grading activities, as it was not necessary to remove it to meet the on-going redevelopment requirements. This area will be further evaluated during implementation of the next stage of the Site-wide investigation.

2.2 INVESTIGATION AND REMEDIATION AREAS

Based on the review of the analytical data collected at the Site and conditions identified during demolition activities, three areas within the Main Manufacturing Building footprint were identified to have soil impacts at concentrations above the Part 201 Non-Residential DCC which warranted further evaluation. Delineation and excavation activities associated with these areas that were completed are further described below. All excavation activities were completed by MCM, on behalf of CRA and RACER, in conjunction with Site demolition and re-grading activities; therefore, all backfilling and compaction activities were completed by MCM under the direction of the WBRA and SME.

2.2.1 SB77-11 AREA (CENTRAL PORTION OF FORMER MAIN MANUFACTURING BUILDING)

2.2.1.1 ADDITIONAL DELINEATION

During implementation of the 2011 Site-Wide Investigation, benzo(a)pyrene was detected in SB77-11 at a concentration above the Part 201 Non-Residential DCC in the soil sample collected from 1 to 3 feet bgs. Based on this exceedance, three additional soil borings (SB133-11 through SB135-11) were advanced to further evaluate the extent of contamination in this area; however, placement was limited due to on-going decommissioning activities being implemented at the time within the facility. No exceedances of Part 201 Generic Cleanup Criteria were identified in the additional soil samples collected in this area; however, PNAs were detected in some of the samples.

Based on MDEQ approval of a proposed scope-of-work, on April 24, 2012 CRA conducted additional delineation of these areas in order to identify the extent of impacts for remediation through excavation and disposal. Four soil borings (SB177-12 through SB180-12) were advanced to a depth of 10 feet bgs, and soil samples were collected in 2-foot intervals and submitted to the analytical laboratory for analysis of PNAs. The additional delineation samples did not indicate evidence of impacts above the Part 201 Non-Residential DCC.

Approximate sample locations are presented on Figure 2. A summary of analytical results for soil samples in the SB77-11 area is presented in Table 6.

2.2.1.2 EXCAVATION AND VERIFICATION SAMPLING

Excavation of the SB77-11 area was completed on June 14, 2012. Approximately 158 cubic yards of impacted soil was removed for off-Site disposal. After discussion with the MDEQ, approval was received to consider samples collected during the additional delineation on April 24, 2012 as excavation sidewall verification samples. Upon removal, four excavation sidewall verification soil samples (SB77-11 Excavation NW Floor, SB77-11 Excavation SE Floor, etc.) were collected to be used in conjunction with the existing analytical results, consistent with Part 201 requirements for excavation verification sampling, and submitted to the analytical laboratory for analysis of PNAs. Analytical results of the verification soil samples, presented in Table 4, did not indicate concentrations of PNAs above Part 201 Non-Residential DCC.

Approximate verification sample locations excavation extents are presented on Figure 2. A summary of analytical results for soil samples in the SB77-11 area is presented in Table 6. Disposal documentation is provided in Attachment A.

2.2.2 SB84-11 AREA (NORTHEAST CORNER OF FORMER MAIN MANUFACTURING BUILDING)

2.2.2.1 ADDITIONAL DELINEATION

During implementation of the 2011 Site-Wide Investigation, various PNAs were detected in SB84-11 at concentrations above the Part 201 Non-Residential DCC in the soil sample collected from 3 to 5 feet bgs. Based on these exceedances, four additional soil borings (SB137-11 through SB140-11) were advanced and soil samples collected for laboratory analysis for VOCs, PNAs, PCBs, and Site-specific metals to further evaluate the extent of contamination in this area. The additional delineation samples did not indicate evidence of impacts above the Part 201 Non-Residential DCC.

Approximate sample locations are presented on Figure 3. A summary of analytical results for soil samples in the SB84-11 area is presented in Table 7.

2.2.2.2 EXCAVATION AND VERIFICATION SAMPLING

Excavation of the SB84-11 area was completed on June 6, 2012. Approximately 123 cubic yards of soil was removed for off-Site disposal. Upon removal, six verification soil samples, four sidewall and two floor samples (SB84-11 Excavation East Wall, SB84-11 Excavation Floor East, etc.), were collected, consistent with Part 201 requirements for excavation verification sampling. The soil samples were submitted to the analytical laboratory for analysis of PNAs. Benzo(a)pyrene was detected at concentrations above the Part 201 Non-Residential DCC in the sidewall sample collected from the north wall of the excavation (SB84-11 Excavation, North Wall).

Additional excavation of approximately 10 cubic yards of soil from this area was completed on July 7, 2012 at the same time as the excavation of the impacted soils removed from A-Column. No additional verification soil samples were collected upon completion of the additional excavation activities because the excavated soil was contained inside of existing concrete foundations and steel sheet pile walls on the perimeter of the former Manufacturing Building; therefore, no additional soil remained to be sampled.

Approximate verification sample locations and excavation extents are presented on Figure 3. A summary of analytical results for soil samples in the SB84-11 area is presented in Table 7. Disposal documentation is provided in Attachment A.

2.2.3 COLUMN LINE A AREA (EASTERN SIDE OF FORMER MAIN MANUFACTURING BUILDING)

2.2.3.1 INITIAL SAMPLE COLLECTION

On May 23, 2012, MCM observed an area of stained soil near a former concrete machine pit along the eastern portion of the former Main Manufacturing Building. This area was located beneath the 1954 addition to the eastern portion of the former Main Manufacturing Building. Prior to the expansion of the former Main Manufacturing Building, this area historically consisted of former railroad tracks and "tarvia" (i.e., coal tar-based asphalt) paved areas. Railroad track operations were identified as AOI 33 in the CCR. CRA mobilized to the Site to complete a visual evaluation of the area. Based on CRA's observations, the material consisted of visually distinguishable upper and lower seams. The upper seam was observed to be primarily comprised of cinders, slag, fly ash, coal fragments, and metal fragments. The lower seam was observed to be primarily comprised of coarse gravel, tar, slag, and coal fragments. Staining was noted from directly below the slab to a depth of approximately 4 feet bgs. Based on the observed conditions, CRA collected soil samples (Unstained Seam A-10 to A-12 and Stained Seam A-10 to A-12) from the upper and lower seams. Additionally on May 23, 2012, a more extensive seam of fill material was uncovered by MCM during removal of basement walls and associated steel sheet piling in the vicinity of the former Main Manufacturing Building Columns A and B, Rows 26 to 28. The fill material observed was similar in nature to the upper seam described above. Based on the observed conditions, CRA collected a soil sample (Extensive Seam - A/B-26 to A/B-28) from the stained material. The soil samples were submitted to the analytical laboratory for analysis of VOCs, SVOCs, PCBs, and Site-specific metals. Based on the analytical results for the upper and lower seam samples collected near Column A, Rows 10 to 12, there were no exceedances of the Part 201 GCC or Non-Residential PSIC. Lead and benzo(a)pyrene were detected at concentrations above the Part 201 Non-Residential DCC in the upper seam sample.

On May 25, 2012, MCM observed an area of stained soil along the eastern portion of the former Main Manufacturing Building. This area was located beneath the 1954, 1964 and 1978 additions to the eastern portion of the former Main Manufacturing Building. Prior to the expansion of the former Main Manufacturing Building, this area historically consisted of former railroad tracks and "tarvia" (i.e., coal tar-based asphalt) paved areas. Railroad track operations were identified as AOI 33 in the CCR. CRA mobilized to the Site to complete a visual evaluation of the area. The material was observed to be comprised of slag and coal fragments and a portion of a weathered railroad tie was visible in the excavation sidewall. Based on the observed conditions, CRA collected a soil sample (Seam - A/B-45 to A/B-47) from the stained material. The soil samples were submitted to the analytical laboratory for analysis of VOCs, SVOCs, PCBs, and Site-specific metals. Based on the analytical results for the soil sample collected near Columns A and B, Rows 45 to 47, there were no exceedances of the Part 201 GCC, Non-Residential DCC, or Non-Residential PSIC.

Approximate sample locations are presented on Figure 1. A summary of analytical results for grab soil samples is presented in Table 4.

Based on the above exceedances in this area, additional evaluation of the area in the vicinity of Column A, Rows 10 to 12 was required.

2.2.3.2 TEST PIT INSTALLATION AND SOIL SAMPLING

On June 13 and 14, 2012, test pits were excavated by MCM, with oversight by CRA, in an effort to delineate soil impacts identified in the fill materials along the former Main Manufacturing Building Column A. Test pits were installed along the eastern side of the former Main Manufacturing Building Column A, Rows 10, 12, 17, 30, 33, and 39 to conduct a visual evaluation of the presence of the observed seam materials in these locations and evaluate the need for soil sampling to further characterize these materials. Based on the observed conditions, CRA collected soil samples from each of the test pits (Test Pit at A-10, Test Pit at A-12, Test Pit at A-17, Test Pit at A-30, Test Pit at A-33, and Test Pit at A-39) from the upper and lower seams. The soil samples were submitted to the analytical laboratory for analysis of VOCs, SVOCs, PCBs, and Site-specific metals. Based on the analytical results for the test pit soil samples collected near Column A, Rows 10, 12, 17, 20, 33, and 39, there were no exceedances of the Part 201 GCC or Non-Residential PSIC. Benzo(a)pyrene was detected at concentrations above the Part 201 Non-Residential DCC in the samples collected near Row 10.

On June 22, 2012 additional test pits were excavated in an effort to further delineate soil impacts associated with the fill materials discovered along the former Main Manufacturing Building Column A. Additional test pits were excavated along the former Main Manufacturing Building Column A, Rows 2, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, and 16 to conduct a visual evaluation of the presence of the observed seam materials in these locations and evaluate the need for soil sampling to further characterize these materials. The fill materials were observed to be present in limited quantity (less than 5 cubic yards) along a former concrete foundation wall at test pits excavated along the former Main Manufacturing Building Column A, Rows 2, 3, 4, 5, and 9. CRA collected soil samples from three of the test pits (A-2 Lower Seam, A-2 Upper Seam, A-3 Lower Seam, A-3 Upper Seam, A-9 Lower Seam, A-9 Upper seam) from the upper and lower seams. The soil samples were submitted to the laboratory for analysis of VOCs, SVOCs, PCBs, and Site-specific metals. Based on the analytical results for the test pit soil samples collected near Column A, Rows 2, 3, and 9, there were no exceedances of the Part 201 GCC or Non-Residential PSIC. Benzo(a)pyrene and dibenz(a,h)anthracene were detected at concentrations above the Part 201 Non-Residential DCC in the samples collected near Row 2. Benzo(a)pyrene was detected at concentrations above the Part 201 Non-Residential DCC in the samples collected near Row 3 and 9.

Approximate test pit sample locations are presented on Figure 4. A summary of analytical results for grab soil samples is presented in Table 4. A summary of analytical results for the Column A test pit installation soil sampling is presented in Table 8.

Based on the above exceedances in this area, excavation of the areas exceeding the Part 201 Non-Residential DCC was required.

2.2.3.3 EXCAVATION AND VERIFICATION SAMPLING

On July 6, 2012, the areas along the former Main Manufacturing Building Column A were excavated for disposal. Approximately 247 cubic yards of soil were removed from these areas beginning at the southern boundary of the SB84-11 excavation area and continuing south, along the former Main Manufacturing Building Column A, to the test pit located near Row 12. Upon removal, fourteen verification soil samples were collected, seven sidewall and seven floor samples (A Column Excavation North Area - N Floor, A Column Excavation South Area - NE Floor, etc.), consistent with Part 201 requirements for excavation

verification sampling and as previously discussed with MDEQ. The samples were submitted to the analytical laboratory for analysis of PNAs and Site-specific metals. Due to the presence of subsurface foundations and footings, and soils previously removed during demolition activities, excavation sidewall verification samples were only collected from locations where excavation sidewalls composed of soil existed. Benzo(a)pyrene was detected in concentrations above Part 201 Generic Non-Residential DCC in a single sidewall sample collected from the southeast wall of the excavation (A Column Excavation, South Area - Sidewall).

Additional excavation of approximately 70 cubic yards of soil from this area was completed on July 16, 2012. Upon removal, five additional excavation verification soil samples, two floor and three sidewall samples (A Column Excavation, Additional South Area), were collected consistent with Part 201 requirements for excavation verification sampling and as previously discussed with the MDEQ. The samples were submitted to the analytical laboratory for analysis of PNAs. Results of all excavation verification samples indicated that remaining concentrations of PNAs did not exceed Part 201 GCC, Non-Residential PSIC, or Non-Residential DCC.

Approximate verification sample locations excavation extents are presented on Figure 5. A summary of analytical results for soil samples is presented in Table 8. Disposal documentation is provided in Attachment A.

3.0 ADDITIONAL INVESTIGATION AND REMEDIATION - PCB AREAS

During the implementation of the 2011 Site-Wide Investigation, soil samples collected from two areas (PCB Area No.1 and PCB Area No.2) indicated the presence of PCBs in concentrations above the High Occupancy Area Cleanup Level of 1 ppm/1 mg/kg for bulk remediation waste (without further conditions) set forth in 40 Code of Federal Regulations (CFR) 761.61(a) of the Toxic Substances Control Act (TSCA) regarding the characterization and remediation of PCB remediation waste. In accordance with TSCA, a Self-Implementing Plan (SIP) was prepared, submitted, and approved by the United States Environmental Protection Agency (U.S. EPA) - Region 5 to address the remediation of subsurface soils containing PCBs.

On August 22, 2012, remediation of approximately 111 cubic yards of soil containing PCBs was completed by excavation and transported for off-Site disposal. A cleanup completion summary report, including a copy of the SIP, was submitted to the U.S. EPA and is included in Attachment B.

LIST OF FIGURES

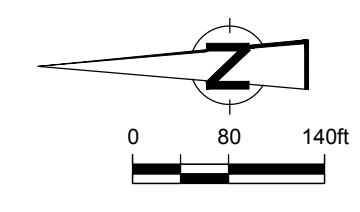
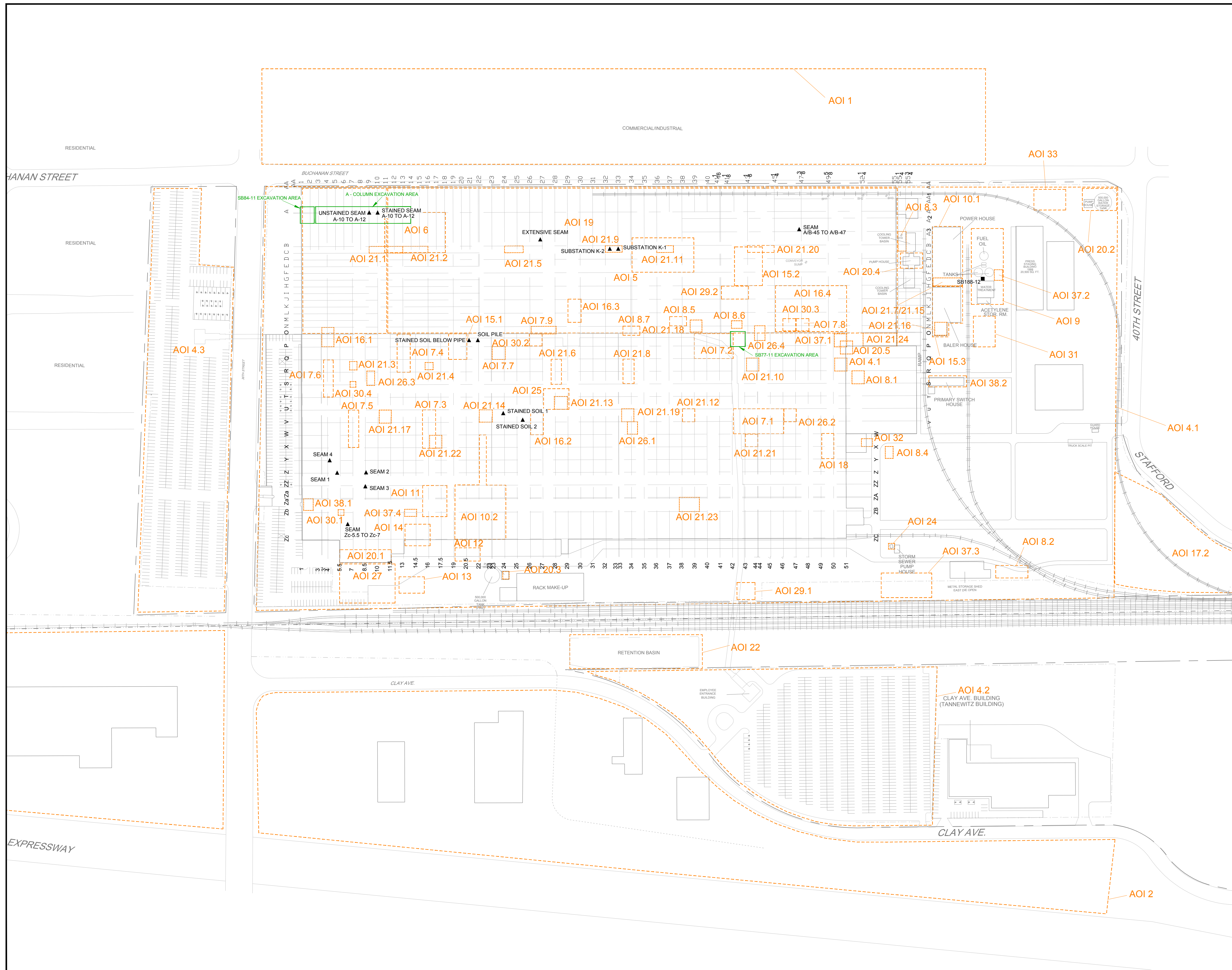
FIGURE 1	GRAB SAMPLE LOCATIONS
FIGURE 2	EXCAVATION AREA - SB77-11
FIGURE 3	EXCAVATION AREA - SB84-11
FIGURE 4	A-COLUMN INVESTIGATION LOCATIONS
FIGURE 5	A-COLUMN EXCAVATION LOCATIONS

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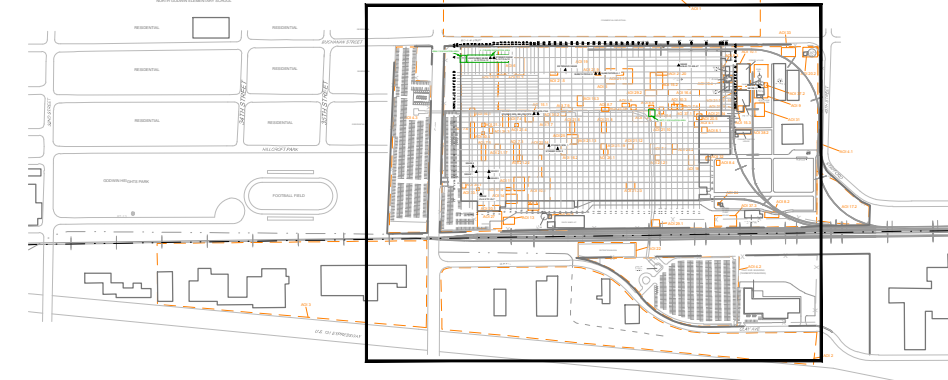
TABLE 1	PART 201 RESIDENTIAL AND NON-RESIDENTIAL SOIL CRITERIA
TABLE 2	PART 201 RESIDENTIAL AND NON-RESIDENTIAL SPLP SOIL CRITERIA
TABLE 3	SAMPLE SUMMARY
TABLE 4	SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
TABLE 5	SUMMARY OF ANALYTICAL RESULTS FOR SPLP SOIL SAMPLES
TABLE 6	SUMMARY OF ANALYTICAL RESULTS FOR SB77-11 AREA SOIL SAMPLES
TABLE 7	SUMMARY OF ANALYTICAL RESULTS FOR SB84-11 AREA SOIL SAMPLES
TABLE 8	SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES

LIST OF ATTACHMENTS

ATTACHMENT A	DISPOSAL DOCUMENTATION
ATTACHMENT B	SOIL CONTAINING PCB CLEANUP COMPLETION SUMMARY REPORT



- LEGEND**
- ▲ APPROXIMATE SOIL BORING LOCATION
 - ▲ APPROXIMATE GRAB SAMPLE LOCATION
 - - - APPROXIMATE SITE BOUNDARY
 - - - FENCE
 - - - RAILROAD
 - - - COLE DRAIN
 - - - APPROXIMATE AOI
 - - - EXCAVATION AREA



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

GRAB SAMPLE LOCATIONS
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

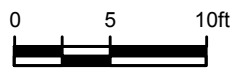
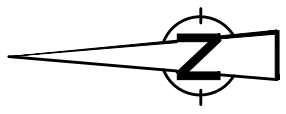


Source Reference: SOURCE: EDI ENGINEERING & SCIENCE, JUNE 1987 AND JUNE 1988 AND EARTH TECH, SEPTEMBER 2001.

Project Manager: J.Q.	Reviewed By: C.M.	Date: JULY 2012
Scale: 1" = 140'	Project N°: 017360-T11121	Report N°: MEMO061
		Drawing N°: FIGURE 1

42

43



SB134-11



SB180-12



SB177-12



SB77-11



SB178-12



SB135-11



SB179-12



LEGEND




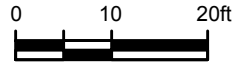
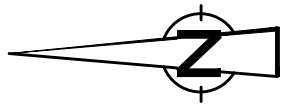
-  SB134-11 SOIL BORING LOCATION
-  EXTENT OF EXCAVATION
-  VERIFICATION SAMPLE LOCATION






figure 2

EXCAVATION AREA - SB77-11
 FORMER GRAND RAPIDS METAL PLANT
 Wyoming, Michigan





LEGEND

-  APPROXIMATE SITE BOUNDARY
-  EXTENT OF INITIAL EXCAVATION
-  SB137-11 SOIL BORING LOCATION
-  VERIFICATION SAMPLE LOCATION
-  CONCRETE FOUNDATION WALL

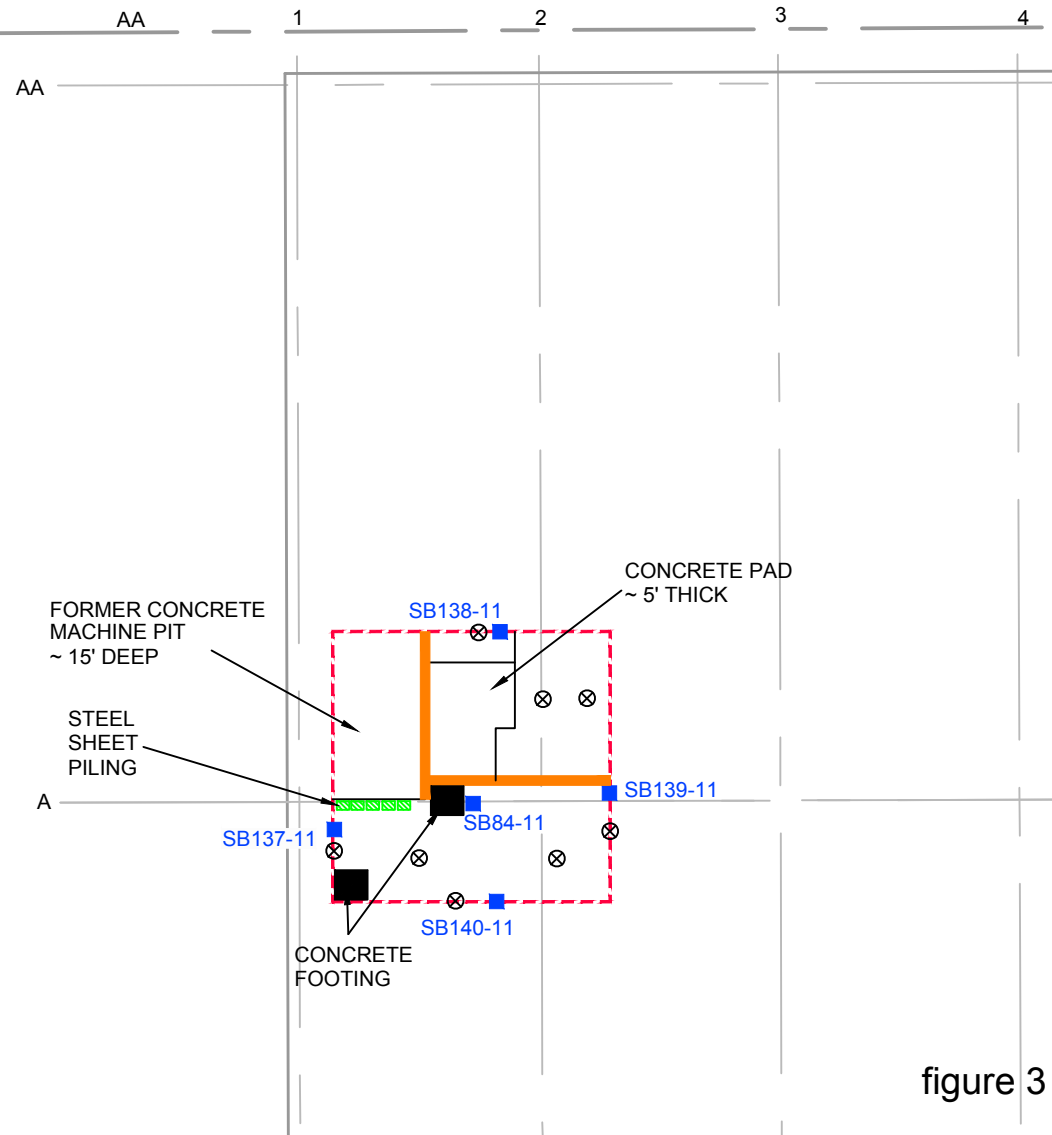
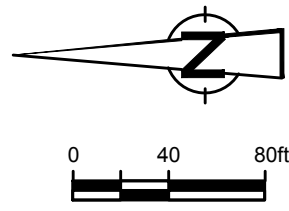


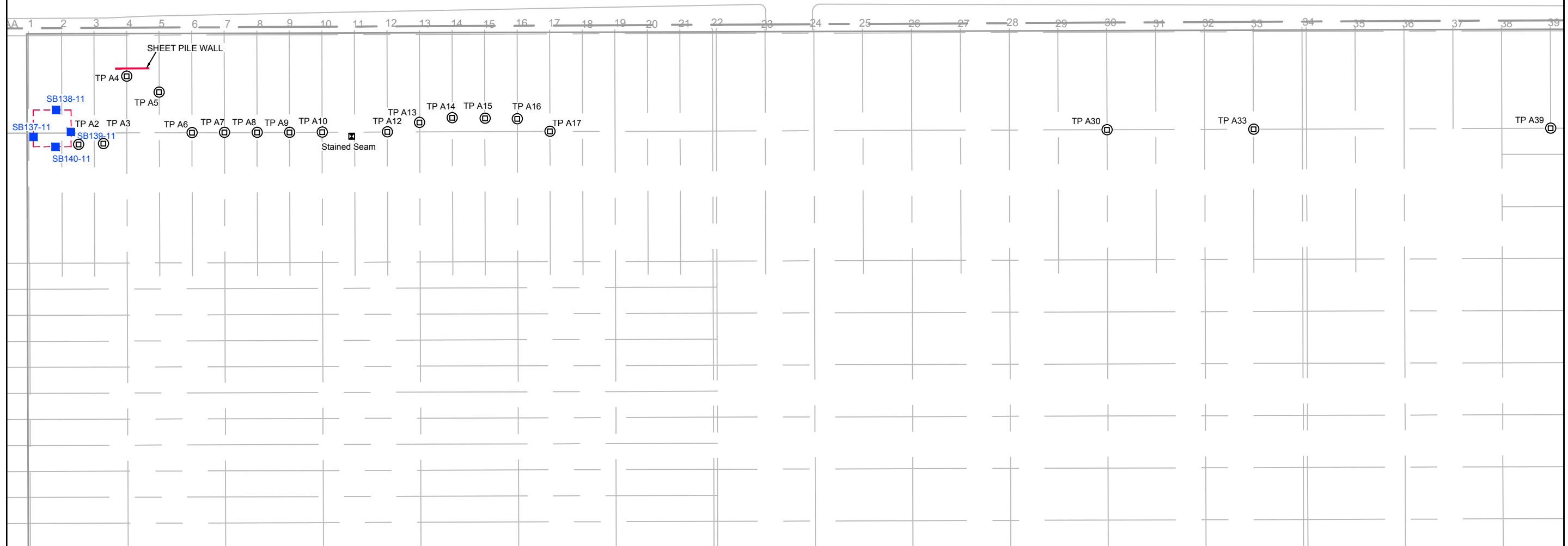
figure 3

EXCAVATION AREA - SB84-11
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan





BUCHANAN STREET



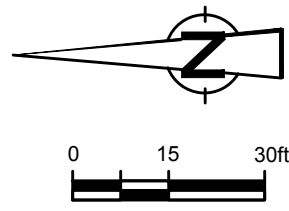
LEGEND

- APPROXIMATE SITE BOUNDARY
- - - - - EXTENT OF INITIAL EXCAVATION
- SB137-11 ■ SOIL BORING LOCATION
- TP A4 ⊙ TEST PIT LOCATION
- ⊠ GRAB SAMPLE LOCATION

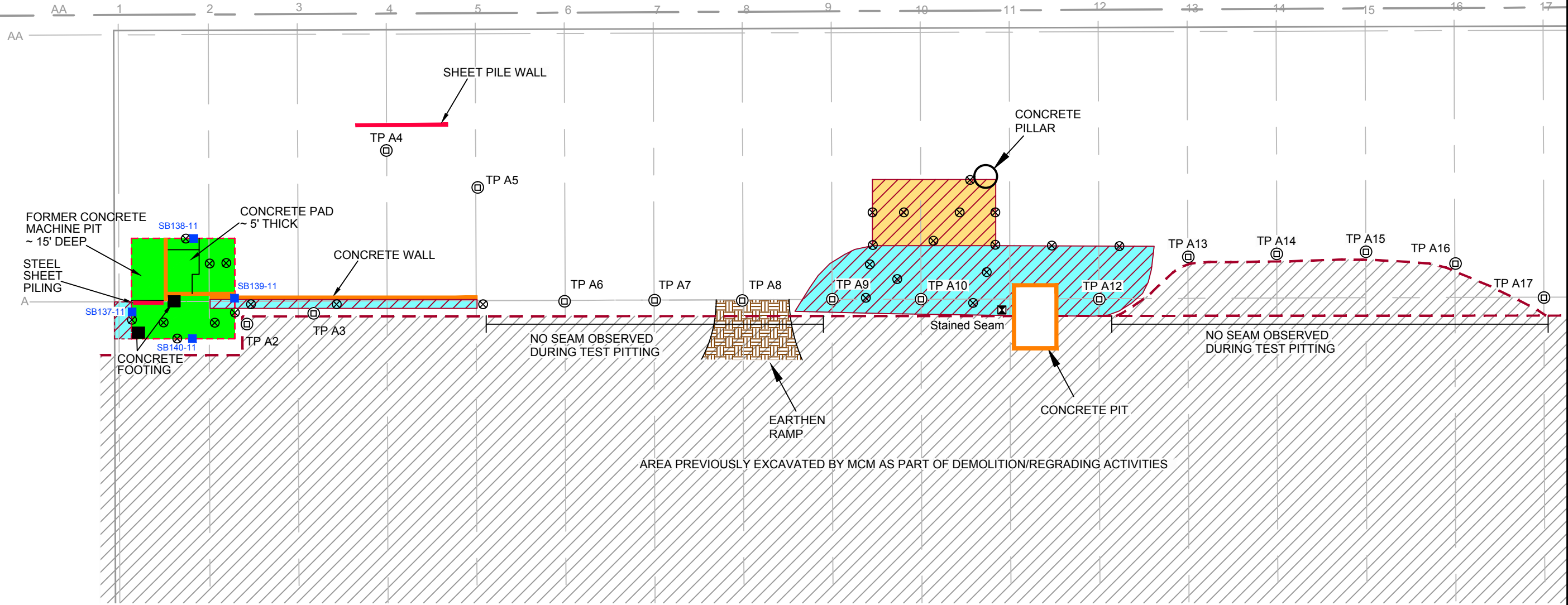
figure 4

A - COLUMN INVESTIGATION LOCATIONS
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan





BUCHANAN STREET



- LEGEND**
- ⊕ APPROXIMATE SITE BOUNDARY
 - - - - - EXTENT OF INITIAL EXCAVATION
 - SB137-11 ■ SOIL BORING LOCATION
 - TP A4 ⊕ TEST PIT SAMPLE LOCATION
 - ⊠ GRAB SAMPLE LOCATION
 - ⊗ EXCAVATION VERIFICATION SAMPLE
 - CONCRETE FOUNDATION WALL

- EXCAVATION AREA
- AREA EXCAVATED ON 6/12/2012
- AREA EXCAVATED ON 7/6/2012
- AREA EXCAVATED ON 7/16/2012

figure 5

A - COLUMN EXCAVATION LOCATIONS
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan



TABLE 1
PART 201 RESIDENTIAL AND NON-RESIDENTIAL SOIL CRITERIA
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

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

	Statewide Default Background	Residential Drinking Water Protection	Non-Residential Drinking Water Protection	Groundwater Surface Water Interface Protection ⁽⁶⁾	Groundwater Contact Protection	Residential Soil Volatilization to Indoor Air Inhalation	Non-Residential Soil Volatilization to Indoor Air Inhalation	Residential Infinite Source Volatile Soil Inhalation	Non-Residential Infinite Source Volatile Soil Inhalation	
	a	b	c	d	e	f	g	h	i	
Units										
Metals										
Antimony	µg/kg	NA	4300	4300	94000	49000000	NLV	NLV	NLV	NLV
Arsenic	µg/kg	5800	4600	4600	4600	2000000	NLV	NLV	NLV	NLV
Barium	µg/kg	75000	1300000	1300000	1050000	100000000	NLV	NLV	NLV	NLV
Beryllium	µg/kg	NA	51000	51000	680000	100000000	NLV	NLV	NLV	NLV
Cadmium	µg/kg	1200	6000	6000	3000	230000000	NLV	NLV	NLV	NLV
Chromium	µg/kg	18000	30000	30000	3300	140000000	NLV	NLV	NLV	NLV
Cobalt	µg/kg	6800	800	2000	2000	48000000	NLV	NLV	NLV	NLV
Copper	µg/kg	32000	5800000	5800000	150000	100000000	NLV	NLV	NLV	NLV
Iron	µg/kg	12000000	6000	6000	NA	100000000	NLV	NLV	NLV	NLV
Lead	µg/kg	21000	700000	700000	2500000	ID	NLV	NLV	NLV	NLV
Lead - coarse fraction	µg/kg	21000	700000	700000	NA	ID	NLV	NLV	NLV	NLV
Lead - fine fraction	µg/kg	21000	700000	700000	NA	ID	NLV	NLV	NLV	NLV
Lead - total (calculated by fine/coarse fraction)	µg/kg	21000	700000	700000	NA	ID	NLV	NLV	NLV	NLV
Manganese	µg/kg	440000	1000	1000	72000	180000000	NLV	NLV	NLV	NLV
Mercury	µg/kg	130	1700	1700	50	47000	48000	89000	52000	62000
Molybdenum	µg/kg	NA	1500	4200	64000	19000000	NLV	NLV	NLV	NLV
Nickel	µg/kg	20000	100000	100000	160000	100000000	NLV	NLV	NLV	NLV
Selenium	µg/kg	410	4000	4000	400	78000000	NLV	NLV	NLV	NLV
Silver	µg/kg	1000	4500	13000	100	200000000	NLV	NLV	NLV	NLV
Thallium	µg/kg	NA	2300	2300	4200	15000000	NLV	NLV	NLV	NLV
Vanadium	µg/kg	NA	72000	990000	190000	100000000	NLV	NLV	NLV	NLV
Zinc	µg/kg	47000	2400000	5000000	340000	100000000	NLV	NLV	NLV	NLV
PCBs										
Aroclor-1016 (PCB-1016)	µg/kg	NA	NLL	NLL	NLL	NLL	3000000	16000000	240000	810000
Aroclor-1221 (PCB-1221)	µg/kg	NA	NLL	NLL	NLL	NLL	3000000	16000000	240000	810000
Aroclor-1232 (PCB-1232)	µg/kg	NA	NLL	NLL	NLL	NLL	3000000	16000000	240000	810000
Aroclor-1242 (PCB-1242)	µg/kg	NA	NLL	NLL	NLL	NLL	3000000	16000000	240000	810000
Aroclor-1248 (PCB-1248)	µg/kg	NA	NLL	NLL	NLL	NLL	3000000	16000000	240000	810000
Aroclor-1254 (PCB-1254)	µg/kg	NA	NLL	NLL	NLL	NLL	3000000	16000000	240000	810000
Aroclor-1260 (PCB-1260)	µg/kg	NA	NLL	NLL	NLL	NLL	3000000	16000000	240000	810000
Total PCBs	µg/kg	NA	NLL	NLL	NLL	NLL	3000000	16000000	240000	810000

TABLE 1
PART 201 RESIDENTIAL AND NON-RESIDENTIAL SOIL CRITERIA
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

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

Table with 11 columns: Statewide Default Background, Residential Drinking Water Protection, Non-Residential Drinking Water Protection, Groundwater Surface Water Interface Protection (6), Groundwater Contact Protection, Residential Soil Volatilization to Indoor Air Inhalation, Non-Residential Soil Volatilization to Indoor Air Inhalation, Residential Infinite Source Volatile Soil Inhalation, Non-Residential Infinite Source Volatile Soil Inhalation, Units, and Chemical Compound Name. Rows include various organic compounds like 2,2'-Oxybis(1-chloropropane), 2,4,5-Trichlorophenol, etc.

TABLE 1
PART 201 RESIDENTIAL AND NON-RESIDENTIAL SOIL CRITERIA
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

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

	Statewide Default Background	Residential Drinking Water Protection	Non-Residential Drinking Water Protection	Groundwater Surface Water Interface Protection ⁽⁶⁾	Groundwater Contact Protection	Residential Soil Volatilization to Indoor Air Inhalation	Non-Residential Soil Volatilization to Indoor Air Inhalation	Residential Infinite Source Volatile Soil Inhalation	Non-Residential Infinite Source Volatile Soil Inhalation	
	a	b	c	d	e	f	g	h	i	
Units										
SVOCs (continued)										
Diethyl phthalate	µg/kg	NA	110000	320000	2200	740000	NLV	NLV	NLV	NLV
Dimethyl phthalate	µg/kg	NA	790000	790000	NA	790000	NLV	NLV	NLV	NLV
Di-n-butylphthalate (DBP)	µg/kg	NA	760000	760000	11000	760000	NLV	NLV	NLV	NLV
Di-n-octyl phthalate (DnOP)	µg/kg	NA	100000000	140000000	ID	140000000	NLV	NLV	NLV	NLV
Fluoranthene	µg/kg	NA	730000	730000	5500	730000	1000000000	1000000000	740000000	890000000
Fluorene	µg/kg	NA	390000	890000	5300	890000	580000000	1000000000	1300000000	1500000000
Hexachlorobenzene	µg/kg	NA	1800	1800	350	8200	41000	220000	17000	56000
Hexachlorobutadiene	µg/kg	NA	26000	72000	91	350000	130000	350000	130000	460000
Hexachlorocyclopentadiene	µg/kg	NA	320000	320000	ID	720000	30000	56000	50000	60000
Hexachloroethane	µg/kg	NA	430	1200	1800	110000	40000	79000	550000	660000
Indeno(1,2,3-cd)pyrene	µg/kg	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV
Isophorone	µg/kg	NA	15000	62000	26000	2400000	NLV	NLV	NLV	NLV
Naphthalene	µg/kg	NA	35000	100000	730	2100000	250000	470000	300000	350000
Nitrobenzene	µg/kg	NA	330	330	3600	220000	91000	170000	54000	64000
N-Nitrosodi-n-propylamine	µg/kg	NA	330	330	NA	7200	NLV	NLV	NLV	NLV
N-Nitrosodiphenylamine	µg/kg	NA	5400	22000	NA	700000	NLV	NLV	NLV	NLV
Pentachlorophenol	µg/kg	NA	22	22	17000	4300	NLV	NLV	NLV	NLV
Phenanthrene	µg/kg	NA	56000	160000	2100	1100000	2800000	5100000	160000	190000
Phenol	µg/kg	NA	88000	260000	9000	12000000	NLV	NLV	NLV	NLV
Pyrene	µg/kg	NA	480000	480000	ID	480000	1000000000	1000000000	650000000	780000000
Volatile Organic Compounds (VOCs)										
1,1,1-Trichloroethane	µg/kg	NA	4000	4000	1800	460000	250000	460000	3800000	4500000
1,1,2,2-Tetrachloroethane	µg/kg	NA	170	700	1600	94000	4300	23000	10000	34000
1,1,2-Trichloroethane	µg/kg	NA	100	100	6600	420000	4600	24000	17000	57000
1,1-Dichloroethane	µg/kg	NA	18000	50000	15000	890000	230000	430000	2100000	2500000
1,1-Dichloroethene	µg/kg	NA	140	140	2600	220000	62	330	1100	3700
1,2,4-Trichlorobenzene	µg/kg	NA	4200	4200	5900	1100000	1100000	1100000	28000000	34000000
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	NA	10	10	ID	1200	1200	1200	13000	15000
1,2-Dibromoethane ⁽²⁾	µg/kg	NA	20	20	110	500	670	3600	1700	5800
1,2-Dichlorobenzene	µg/kg	NA	14000	14000	280	210000	210000	210000	39000000	46000000
1,2-Dichloroethane	µg/kg	NA	100	100	7200	380000	2100	11000	6200	21000
1,2-Dichloropropane	µg/kg	NA	100	100	4600	320000	4000	7400	25000	30000
1,3-Dichlorobenzene	µg/kg	NA	170	480	680	51000	26000	48000	79000	94000
1,4-Dichlorobenzene	µg/kg	NA	1700	1700	360	140000	19000	100000	77000	260000
2-Butanone ⁽³⁾	µg/kg	NA	260000	760000	44000	27000000	27000000	27000000	29000000	35000000
2-Hexanone	µg/kg	NA	20000	58000	ID	2500000	990000	1800000	1100000	1300000
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	NA	36000	100000	ID	2700000	2700000	2700000	45000000	53000000
Acetone	µg/kg	NA	15000	42000	34000	110000000	110000000	110000000	130000000	160000000
Benzene	µg/kg	NA	100	100	4000	220000	1600	8400	13000	45000
Bromodichloromethane	µg/kg	NA	1600	1600	ID	280000	1200	6400	9100	31000
Bromoform	µg/kg	NA	1600	1600	ID	870000	150000	770000	900000	3100000

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FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

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

	Statewide Default Background	Residential Drinking Water Protection	Non-Residential Drinking Water Protection	Groundwater Surface Water Interface Protection ⁽⁶⁾	Groundwater Contact Protection	Residential Soil Volatilization to Indoor Air Inhalation	Non-Residential Soil Volatilization to Indoor Air Inhalation	Residential Infinite Source Volatile Soil Inhalation	Non-Residential Infinite Source Volatile Soil Inhalation	
	a	b	c	d	e	f	g	h	i	
Units										
VOCs (continued)										
Bromomethane (Methyl bromide)	µg/kg	NA	200	580	700	1400000	860	1600	11000	13000
Carbon disulfide	µg/kg	NA	16000	46000	ID	280000	76000	140000	1300000	1600000
Carbon tetrachloride	µg/kg	NA	100	100	900	92000	190	990	3500	12000
Chlorobenzene	µg/kg	NA	2000	2000	500	260000	120000	220000	770000	920000
Chloroethane	µg/kg	NA	8600	34000	22000	950000	950000	950000	30000000	36000000
Chloroform (Trichloromethane)	µg/kg	NA	1600	1600	7000	1500000	7200	38000	45000	150000
Chloromethane (Methyl chloride)	µg/kg	NA	5200	22000	ID	1100000	2300	10000	40000	120000
cis-1,2-Dichloroethene	µg/kg	NA	1400	1400	12000	640000	22000	41000	180000	210000
cis-1,3-Dichloropropene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	µg/kg	NA	1600	1600	ID	360000	3900	21000	24000	80000
Dichlorodifluoromethane (CFC-12)	µg/kg	NA	95000	270000	ID	1000000	900000	1700000	53000000	63000000
Ethylbenzene	µg/kg	NA	1500	1500	360	140000	87000	140000	720000	2400000
Isopropyl benzene	µg/kg	NA	91000	260000	3200	390000	390000	390000	1700000	2000000
Methyl acetate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl cyclohexane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butyl ether (MTBE)	µg/kg	NA	800	800	140000	5900000	5900000	5900000	25000000	30000000
Methylene chloride	µg/kg	NA	100	100	30000	2300000	45000	240000	210000	700000
Styrene	µg/kg	NA	2700	2700	2100	270000	250000	520000	970000	3300000
Tetrachloroethene	µg/kg	NA	100	100	1200	88000	11000	60000	180000	600000
Toluene	µg/kg	NA	16000	16000	5400	250000	250000	250000	2800000	3300000
trans-1,2-Dichloroethene	µg/kg	NA	2000	2000	30000	1400000	23000	43000	280000	330000
trans-1,3-Dichloropropene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	µg/kg	NA	100	100	4000	440000	7100	37000	78000	260000
Trichlorofluoromethane (CFC-11)	µg/kg	NA	52000	150000		560000	560000	560000	9200000	11000000
Trifluorotrchloroethane (Freon 113)	µg/kg	NA	550000	550000	1700	550000	550000	550000	18000000	21000000
Vinyl chloride	µg/kg	NA	40	40	260	20000	270	2800	4200	29000
Xylenes (total)	µg/kg	NA	5600	5600	820	150000	150000	150000	4600000	5400000

Notes:

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

⁽²⁾ 1,2-Dibromoethane also known as Ethylene dibromide

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

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

⁽⁵⁾ Carbonate Hardness of 344 mg/L was used to calculate Groundwater Surface Water Interface Protection Criteria.

⁽⁶⁾ 2,2'-Oxybis(1-chloropropane) also known as bis(2-Chloroisopropyl) ether -- Parameter was not analyzed.

U - Not present at or above the associated value.

J - Estimated concentration.

UJ - Estimated reporting limit.

R - Rejected.

ID - Insufficient data to develop criterion.

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

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

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

Exceeds Generic Cleanup Criteria.

Superscript notes the criterion exceeded.

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FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

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

	Residential Finite VSIC for 5 Meter Source Thickness	Non-Residential Finite VSIC for 5 Meter Source Thickness	Residential Finite VSIC for 2 Meter Source Thickness	Non-Residential Finite VSIC for 2 Meter Source Thickness	Residential Particulate Soil Inhalation	Non-Residential Particulate Soil Inhalation	Residential Direct Contact	Non-Residential Direct Contact	Soil Saturation Concentration Screening	
	j	k	l	m	n	o	p	q	r	
<i>Units</i>										
Metals										
Antimony	µg/kg	NLV	NLV	NLV	NLV	13000000	5900000	180000	670000	NA
Arsenic	µg/kg	NLV	NLV	NLV	NLV	7200000	9100000	7600	37000	NA
Barium	µg/kg	NLV	NLV	NLV	NLV	3300000000	1500000000	370000000	1300000000	NA
Beryllium	µg/kg	NLV	NLV	NLV	NLV	13000000	5900000	410000	1600000	NA
Cadmium	µg/kg	NLV	NLV	NLV	NLV	17000000	22000000	5500000	21000000	NA
Chromium	µg/kg	NLV	NLV	NLV	NLV	2600000	2400000	25000000	92000000	NA
Cobalt	µg/kg	NLV	NLV	NLV	NLV	130000000	59000000	26000000	90000000	NA
Copper	µg/kg	NLV	NLV	NLV	NLV	1300000000	590000000	200000000	730000000	NA
Iron	µg/kg	NLV	NLV	NLV	NLV	ID	ID	1600000000	5800000000	NA
Lead	µg/kg	NLV	NLV	NLV	NLV	1000000000	440000000	4000000	9000000	NA
Lead - coarse fraction	µg/kg	NLV	NLV	NLV	NLV	1000000000	440000000	4000000	9000000	NA
Lead - fine fraction	µg/kg	NLV	NLV	NLV	NLV	1000000000	440000000	4000000	9000000	NA
Lead - total (calculated by fine/coarse fraction)	µg/kg	NLV	NLV	NLV	NLV	1000000000	440000000	4000000	9000000	NA
Manganese	µg/kg	NLV	NLV	NLV	NLV	33000000	15000000	250000000	900000000	NA
Mercury	µg/kg	52000	62000	52000	62000	20000000	8800000	160000	580000	NA
Molybdenum	µg/kg	NLV	NLV	NLV	NLV	ID	ID	2600000	9600000	NA
Nickel	µg/kg	NLV	NLV	NLV	NLV	130000000	160000000	400000000	1500000000	NA
Selenium	µg/kg	NLV	NLV	NLV	NLV	1300000000	590000000	26000000	96000000	NA
Silver	µg/kg	NLV	NLV	NLV	NLV	67000000	29000000	25000000	90000000	NA
Thallium	µg/kg	NLV	NLV	NLV	NLV	130000000	59000000	35000	130000	NA
Vanadium	µg/kg	NLV	NLV	NLV	NLV	ID	ID	7500000	55000000	NA
Zinc	µg/kg	NLV	NLV	NLV	NLV	ID	ID	1700000000	6300000000	NA
PCBs										
Aroclor-1016 (PCB-1016)	µg/kg	7900000	28000000	7900000	28000000	5200000	6500000	4000	16000	NA
Aroclor-1221 (PCB-1221)	µg/kg	79000000	280000000	79000000	280000000	52000000	65000000	4000	16000	NA
Aroclor-1232 (PCB-1232)	µg/kg	79000000	280000000	79000000	280000000	52000000	65000000	4000	16000	NA
Aroclor-1242 (PCB-1242)	µg/kg	79000000	280000000	79000000	280000000	52000000	65000000	4000	16000	NA
Aroclor-1248 (PCB-1248)	µg/kg	79000000	280000000	79000000	280000000	52000000	65000000	4000	16000	NA
Aroclor-1254 (PCB-1254)	µg/kg	79000000	280000000	79000000	280000000	52000000	65000000	4000	16000	NA
Aroclor-1260 (PCB-1260)	µg/kg	79000000	280000000	79000000	280000000	52000000	65000000	4000	16000	NA
Total PCBs	µg/kg	79000000	280000000	79000000	280000000	52000000	65000000	4000	16000	NA

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SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

	<i>Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria ⁽¹⁾</i>								
	Residential Finite VSIC for 5 Meter Source Thickness	Non-Residential Finite VSIC for 5 Meter Source Thickness	Residential Finite VSIC for 2 Meter Source Thickness	Non-Residential Finite VSIC for 2 Meter Source Thickness	Residential Particulate Soil Inhalation	Non-Residential Particulate Soil Inhalation	Residential Direct Contact	Non-Residential Direct Contact	Soil Saturation Concentration Screening
	j	k	l	m	n	o	p	q	r
Units									
Semi-Volatile Organic Compounds (SVOCs)									
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	µg/kg	NLV	NLV	NLV	NLV	23000000000	10000000000	23000000	73000000
2,4,6-Trichlorophenol	µg/kg	NLV	NLV	NLV	NLV	1000000000	1300000000	710000	3300000
2,4-Dichlorophenol	µg/kg	NLV	NLV	NLV	NLV	5100000000	2300000000	660000	1800000
2,4-Dimethylphenol	µg/kg	NLV	NLV	NLV	NLV	4700000000	2100000000	11000000	36000000
2,4-Dinitrophenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	µg/kg	NLV	NLV	NLV	NLV	16000000	20000000	48000	220000
2,6-Dinitrotoluene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	µg/kg	ID	ID	ID	ID	ID	ID	56000000	180000000
2-Chlorophenol	µg/kg	960000	1100000	960000	1100000	1200000000	530000000	1400000	4500000
2-Methylnaphthalene	µg/kg	1500000	1800000	1500000	1800000	670000000	290000000	8100000	26000000
2-Methylphenol	µg/kg	NLV	NLV	NLV	NLV	6700000000	2900000000	11000000	36000000
2-Nitroaniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	µg/kg	NLV	NLV	NLV	NLV	ID	ID	630000	2000000
3,3'-Dichlorobenzidine	µg/kg	NLV	NLV	NLV	NLV	6500000	8200000	6600	30000
3-Nitroaniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	µg/kg	NLV	NLV	NLV	NLV	ID	ID	79000	260000
4-Bromophenyl phenyl ether	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	µg/kg	NLV	NLV	NLV	NLV	ID	ID	4500000	15000000
4-Chloroaniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	µg/kg	NLV	NLV	NLV	NLV	6700000000	2900000000	11000000	36000000
4-Nitroaniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	µg/kg	81000000	97000000	81000000	97000000	14000000000	6200000000	41000000	130000000
Acenaphthylene	µg/kg	2200000	2700000	2200000	2700000	2300000000	1000000000	1600000	5200000
Acetophenone	µg/kg	44000000	52000000	44000000	52000000	33000000000	14000000000	11000000	11000000
Anthracene	µg/kg	1400000000	1600000000	1400000000	1600000000	67000000000	29000000000	230000000	730000000
Atrazine	µg/kg	NLV	NLV	NLV	NLV	ID	ID	71000	330000
Benzaldehyde	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	µg/kg	NLV	NLV	NLV	NLV	ID	ID	20000	80000
Benzo(a)pyrene	µg/kg	NLV	NLV	NLV	NLV	1500000	1900000	2000	8000
Benzo(b)fluoranthene	µg/kg	ID	ID	ID	ID	ID	ID	20000	80000
Benzo(g,h,i)perylene	µg/kg	NLV	NLV	NLV	NLV	800000000	350000000	2500000	7000000
Benzo(k)fluoranthene	µg/kg	NLV	NLV	NLV	NLV	ID	ID	200000	800000
Biphenyl (1,1-Biphenyl)	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	µg/kg	3800	13000	3800	13000	9400000	12000000	13000	58000
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	NLV	NLV	NLV	NLV	700000000	890000000	2800000	10000000
Butyl benzylphthalate (BBP)	µg/kg	NLV	NLV	NLV	NLV	47000000000	21000000000	310000	310000
Caprolactam	µg/kg	NLV	NLV	NLV	NLV	6700000000	2900000000	53000000	310000000
Carbazole	µg/kg	NLV	NLV	NLV	NLV	62000000	78000000	530000	2400000
Chrysene	µg/kg	ID	ID	ID	ID	ID	ID	2000000	8000000
Dibenz(a,h)anthracene	µg/kg	NLV	NLV	NLV	NLV	ID	ID	2000	8000
Dibenzofuran	µg/kg	130000	160000	130000	160000	6700000	2900000	ID	ID

TABLE 1
PART 201 RESIDENTIAL AND NON-RESIDENTIAL SOIL CRITERIA
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

	Units	<i>Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria⁽¹⁾</i>								
		Residential Finite VSIC for 5 Meter Source Thickness	Non-Residential Finite VSIC for 5 Meter Source Thickness	Residential Finite VSIC for 2 Meter Source Thickness	Non-Residential Finite VSIC for 2 Meter Source Thickness	Residential Particulate Soil Inhalation	Non-Residential Particulate Soil Inhalation	Residential Direct Contact	Non-Residential Direct Contact	Soil Saturation Concentration Screening
		j	k	l	m	n	o	p	q	r
SVOCs (continued)										
Diethyl phthalate	µg/kg	NLV	NLV	NLV	NLV	3300000000	1500000000	740000	740000	740000
Dimethyl phthalate	µg/kg	NLV	NLV	NLV	NLV	3300000000	1500000000	790000	790000	790000
Di-n-butylphthalate (DBP)	µg/kg	NLV	NLV	NLV	NLV	3300000000	1500000000	760000	760000	760000
Di-n-octyl phthalate (DnOP)	µg/kg	NLV	NLV	NLV	NLV	3100000000	1400000000	690000	2000000	1400000000
Fluoranthene	µg/kg	740000000	880000000	740000000	880000000	9300000000	4100000000	46000000	130000000	NA
Fluorene	µg/kg	1300000000	1500000000	1300000000	1500000000	9300000000	4100000000	270000000	870000000	NA
Hexachlorobenzene	µg/kg	17000	56000	17000	56000	68000000	85000000	8900	37000	NA
Hexachlorobutadiene	µg/kg	130000	460000	130000	460000	1400000000	1800000000	100000	350000	350000
Hexachlorocyclopentadiene	µg/kg	50000	60000	50000	60000	1300000000	590000000	720000	720000	720000
Hexachloroethane	µg/kg	930000	1400000	930000	1400000	2300000000	1000000000	230000	730000	NA
Indeno(1,2,3-cd)pyrene	µg/kg	NLV	NLV	NLV	NLV	ID	ID	20000	80000	NA
Isophorone	µg/kg	NLV	NLV	NLV	NLV	12000000000	8200000000	2400000	2400000	2400000
Naphthalene	µg/kg	300000	350000	300000	350000	2000000000	880000000	16000000	5200000	NA
Nitrobenzene	µg/kg	54000	64000	54000	64000	4700000000	2100000000	100000	340000	490000
N-Nitrosodi-n-propylamine	µg/kg	NLV	NLV	NLV	NLV	1600000	2000000	1200	5400	1500000
N-Nitrosodiphenylamine	µg/kg	NLV	NLV	NLV	NLV	2200000000	2800000000	1700000	7800000	NA
Pentachlorophenol	µg/kg	NLV	NLV	NLV	NLV	1000000000	1300000000	90000	320000	NA
Phenanthrene	µg/kg	160000	190000	160000	190000	6700000	2900000	160000	520000	NA
Phenol	µg/kg	NLV	NLV	NLV	NLV	40000000000	18000000000	12000000	12000000	12000000
Pyrene	µg/kg	650000000	780000000	650000000	780000000	6700000000	2900000000	29000000	84000000	NA
Volatile Organic Compounds (VOCs)										
1,1,1-Trichloroethane	µg/kg	12000000	15000000	28000000	31000000	67000000000	29000000000	460000	460000	460000
1,1,2,2-Tetrachloroethane	µg/kg	10000	34000	14000	34000	5400000000	6800000000	53000	240000	870000
1,1,2-Trichloroethane	µg/kg	21000	57000	44000	120000	1900000000	2500000000	180000	840000	920000
1,1-Dichloroethane	µg/kg	5900000	6000000	14000000	14000000	33000000000	15000000000	890000	890000	890000
1,1-Dichloroethene	µg/kg	5300	15000	13000	37000	62000000	780000000	200000	570000	570000
1,2,4-Trichlorobenzene	µg/kg	28000000	34000000	28000000	34000000	25000000000	11000000000	990000	1100000	1100000
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	13000	15000	13000	15000	130000000	590000000	1200	1200	1200
1,2-Dibromoethane ⁽²⁾	µg/kg	1700	5800	3300	9800	140000000	180000000	92	430	890000
1,2-Dichlorobenzene	µg/kg	39000000	46000000	52000000	55000000	100000000000	44000000000	210000	210000	210000
1,2-Dichloroethane	µg/kg	11000	33000	26000	74000	1200000000	1500000000	91000	420000	1200000
1,2-Dichloropropane	µg/kg	50000	51000	110000	120000	2700000000	1200000000	140000	550000	550000
1,3-Dichlorobenzene	µg/kg	79000	94000	110000	110000	2000000000	880000000	170000	170000	170000
1,4-Dichlorobenzene	µg/kg	77000	260000	110000	340000	4500000000	5700000000	400000	1900000	NA
2-Butanone ⁽³⁾	µg/kg	29000000	35000000	35000000	36000000	67000000000	29000000000	27000000	27000000	27000000
2-Hexanone	µg/kg	1100000	1300000	1400000	1500000	2700000000	1200000000	250000	250000	250000
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	45000000	53000000	67000000	70000000	140000000000	60000000000	2700000	2700000	2700000
Acetone	µg/kg	130000000	160000000	190000000	200000000	390000000000	170000000000	23000000	73000000	110000000
Benzene	µg/kg	34000	99000	79000	230000	3800000000	4700000000	180000	400000	400000
Bromodichloromethane	µg/kg	9700	31000	19000	57000	840000000	1100000000	110000	490000	1500000
Bromoform	µg/kg	900000	3100000	900000	3100000	2800000000	3600000000	820000	870000	870000

TABLE 1
PART 201 RESIDENTIAL AND NON-RESIDENTIAL SOIL CRITERIA
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

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

	Residential Finite VSIC for 5 Meter Source Thickness	Non-Residential Finite VSIC for 5 Meter Source Thickness	Residential Finite VSIC for 2 Meter Source Thickness	Non-Residential Finite VSIC for 2 Meter Source Thickness	Residential Particulate Soil Inhalation	Non-Residential Particulate Soil Inhalation	Residential Direct Contact	Non-Residential Direct Contact	Soil Saturation Concentration Screening	
	j	k	l	m	n	o	p	q	r	
Units										
VOCs (continued)										
Bromomethane (Methyl bromide)	µg/kg	57000	57000	140000	140000	330000000	150000000	320000	1000000	2200000
Carbon disulfide	µg/kg	7900000	8000000	19000000	19000000	47000000000	21000000000	280000	280000	280000
Carbon tetrachloride	µg/kg	12000	34000	28000	79000	130000000	170000000	96000	390000	390000
Chlorobenzene	µg/kg	990000	1100000	2100000	2100000	4700000000	2100000000	260000	260000	260000
Chloroethane	µg/kg	120000000	120000000	280000000	280000000	670000000000	290000000000	950000	950000	950000
Chloroform (Trichloromethane)	µg/kg	120000	340000	270000	790000	1300000000	1600000000	1200000	1500000	1500000
Chloromethane (Methyl chloride)	µg/kg	410000	1000000	1000000	2500000	4900000000	2600000000	1100000	1100000	1100000
cis-1,2-Dichloroethene	µg/kg	420000	430000	990000	1000000	2300000000	1000000000	640000	640000	640000
cis-1,3-Dichloropropene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	µg/kg	24000	80000	33000	98000	130000000	160000000	110000	500000	610000
Dichlorodifluoromethane (CFC-12)	µg/kg	550000000	550000000	1400000000	1400000000	3300000000000	1500000000000	1000000	1000000	1000000
Ethylbenzene	µg/kg	1000000	3100000	2200000	6500000	10000000000	13000000000	140000	140000	140000
Isopropyl benzene	µg/kg	1700000	2000000	2800000	3000000	5800000000	2600000000	390000	390000	390000
Methyl acetate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl cyclohexane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butyl ether (MTBE)	µg/kg	39000000	41000000	87000000	89000000	200000000000	88000000000	1500000	5900000	5900000
Methylene chloride	µg/kg	590000	1700000	1400000	4000000	6600000000	8300000000	1300000	2300000	2300000
Styrene	µg/kg	970000	3300000	1400000	4200000	5500000000	6900000000	400000	520000	520000
Tetrachloroethene	µg/kg	480000	1400000	1100000	3300000	5400000000	6800000000	88000	88000	88000
Toluene	µg/kg	5100000	36000000	12000000	36000000	27000000000	12000000000	250000	250000	250000
trans-1,2-Dichloroethene	µg/kg	830000	840000	2000000	2000000	4700000000	2100000000	1400000	1400000	1400000
trans-1,3-Dichloropropene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	µg/kg	170000	440000	390000	1100000	1800000000	2300000000	500000	500000	500000
Trichlorofluoromethane (CFC-11)	µg/kg	630000000	14000000000	1500000000	14000000000	3800000000000	1700000000000	560000	560000	560000
Trifluorotrchloroethane (Freon 113)	µg/kg	880000000	890000000	2100000000	2100000000	5100000000000	2300000000000	550000	550000	550000
Vinyl chloride	µg/kg	30000	170000	73000	420000	350000000	890000000	3800	34000	490000
Xylenes (total)	µg/kg	61000000	65000000	130000000	130000000	290000000000	130000000000	150000	150000	150000

Notes:
⁽¹⁾ Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 3/25/2011, pursuant to 1994 PA 451 as amended.
⁽²⁾ 1,2-Dibromoethane also known as Ethylene dibromide
⁽³⁾ 2-Butanone also known as Methyl ethyl ketone (MEK)
⁽⁴⁾ 4-Methyl-2-pentanone also known as Methyl isobutyl ketone (MIBK)
⁽⁵⁾ Carbonate Hardness of 344 mg/L was used to calculate Groundwater Surface Water Interface Protection Criteria.
⁽⁶⁾ 2,2'-Oxybis(1-chloropropane) also known as bis(2-Chloroisopropyl) ether -- Parameter was not analyzed.
 U - Not present at or above the associated value.
 J - Estimated concentration.
 UJ - Estimated reporting limit.
 R - Rejected.
 ID - Insufficient data to develop criterion.
 NA - A criterion or value is not available or, in the case of background and CAS numbers, not applicable.
 NLL - Hazardous substance is not likely to leach under most soil conditions.
 NLV - Hazardous substance is not likely to volatilize under most conditions.
 [] Exceeds Generic Cleanup Criteria.
 Superscript notes the criterion exceeded.

TABLE 2

**PART 201 RESIDENTIAL AND NON-RESIDENTIAL CRITERIA FOR SPLP SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN**

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

		Residential Drinking Water	Non-Residential Drinking Water	Groundwater Surface Water Interface ⁽²⁾	Residential Groundwater Volatilization to Indoor Air Inhalation	Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Groundwater Contact	Water Solubility	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels
	<i>Units</i>	a	b	c	d	e	f	g	h	i
SPLP-Metals										
Arsenic	mg/L	0.01	0.01	0.01	NLV	NLV	4.3	NA	ID	ID
Chromium	mg/L	0.1	0.1	0.011	NLV	NLV	460	NA	ID	ID
Cobalt	mg/L	0.04	0.1	0.1	NLV	NLV	2400	NA	ID	ID
Copper	mg/L	1	1	0.026	NLV	NLV	7400	NA	ID	ID
Manganese	mg/L	0.05	0.05	3.6	NLV	NLV	9100	NA	ID	ID
Selenium	mg/L	0.05	0.05	0.005	NLV	NLV	970	NA	ID	ID
Silver	mg/L	0.034	0.098	0.0002	NLV	NLV	1500	NA	ID	ID
Zinc	mg/L	2.4	5	0.34	NLV	NLV	110000	NA	ID	ID
SPLP-SVOCs										
Fluoranthene	mg/L	0.21	0.21	0.0016	0.21	0.21	0.21	0.206	ID	ID
Phenanthrene	mg/L	0.052	0.15	0.002	1	1	1	1	ID	ID

Notes:

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

⁽²⁾ Carbonate Hardness of 344 mg/L was used to calculate Groundwater Surface Water Interface Protection Criteria.

U - Not present at or above the associated value.

J - Estimated concentration.

UJ - Estimated reporting limit.

R - Rejected.

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

SPLP - Synthetic Precipitation Leaching Procedure

TABLE 3

**SAMPLE SUMMARY
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN**

<i>Sample Location</i>	<i>Sample Identification</i>	<i>Sample Date</i>	<i>QA/QC</i>	<i>Depth</i>	<i>Excavation Status</i>	<i>Matrix</i>	<i>Analysis</i>
Seam 1	S-17360-032112-JQ-001	3/21/2012		-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals
Seam 1	S-17360-032112-JQ-002	3/21/2012	Duplicate	-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals
Seam 2	SO-17360-041712-EB-001	4/17/2012		-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals, SPLP
Seam 3	SO-07360-041712-EB-002	4/17/2012		-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals, SPLP
Seam 4	SO-07360-041712-EB-003	4/17/2012		-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals, SPLP
Seam 4	SO-17360-041712-EB-004	4/17/2012	Duplicate	-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals, SPLP
Trip Blank	TB-17360-041712-EB	4/17/2012		-	NA	NA	VOCs
SB177-12	S-17360-042412-EM-047	4/24/2012		(0-2) ft BGS	Excavated	Soil	PNAs
SB177-12	S-17360-042412-EM-048	4/24/2012		(2-4) ft BGS	Excavated	Soil	PNAs
SB178-12	S-17360-042412-EM-029	4/24/2012		(0-2) ft BGS	Excavated	Soil	PNAs
SB178-12	S-17360-042412-EM-030	4/24/2012		(2-4) ft BGS	Excavated	Soil	PNAs
SB178-12	S-17360-042412-EM-031	4/24/2012	Duplicate	(2-4) ft BGS	Excavated	Soil	PNAs
SB179-12	S-17360-042412-EM-035	4/24/2012		(0-2) ft BGS	Excavated	Soil	PNAs
SB179-12	S-17360-042412-EM-036	4/24/2012		(2-4) ft BGS	Excavated	Soil	PNAs
SB180-12	S-17360-042412-EM-041	4/24/2012		(0-2) ft BGS	Excavated	Soil	PNAs
SB180-12	S-17360-042412-EM-042	4/24/2012		(2-4) ft BGS	Excavated	Soil	PNAs
Stained Soil 1	SO-17360-042712-EB-001	4/27/2012		-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals
Stained Soil 2	SO-17360-042712-EB-002	4/27/2012		-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals
Soil Pile - Q-20	SO-17360-051012-EB-002	5/10/2012		-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals
Stained Soil Below Pipe - Q-20	SO-17360-051012-EB-001	5/10/2012		-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals, SPLP
Stained Soil 1	SO-17360-051812-EB-001	5/18/2012		-	Unexcavated	Soil	SPLP
Extensive Seam - A/B-26 to A/B-28	SO-17360-052312-EB-006	5/23/2012		-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals
SB188-12	SO-17360-052312-EB-001	5/23/2012		(0-2) ft BGS	Unexcavated	Soil	PCBs
SB188-12	SO-17360-052312-EB-002	5/23/2012		(2-4) ft BGS	Unexcavated	Soil	PCBs
SB188-12	SO-17360-052312-EB-003	5/23/2012	Duplicate	(2-4) ft BGS	Unexcavated	Soil	PCBs
Stained Seam - A-10 to A-12	SO-17360-052312-EB-004	5/23/2012		-	Excavated	Soil	VOCs, SVOCs, PCBs, Metals
Unstained Seam - A-10 to A-12	SO-17360-052312-EB-005	5/23/2012		-	Excavated	Soil	VOCs, SVOCs, PCBs, Metals
Seam - A/B-45 to A/B-47	SO-17360-052512-EB-001	5/25/2012		-	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals
Substation K-1	SO-17360-050412-EB-001	5/4/2012		-	Unexcavated	Soil	SVOCs, PCBs
Substation K-2	SO-17360-050412-EB-002	5/4/2012		-	Unexcavated	Soil	SVOCs, PCBs
SB84-11 Excavation, East Wall	SO-17360-061212-SM-006	6/12/2012		(4-) ft BGS	Unexcavated	Soil	SVOCs
SB84-11 Excavation, Floor, East	SO-17360-061212-SM-008	6/12/2012		(5-) ft BGS	Unexcavated	Soil	SVOCs
SB84-11 Excavation, Floor, NW Corner	SO-17360-061212-SM-010	6/12/2012		(5-) ft BGS	Unexcavated	Soil	SVOCs
SB84-11 Excavation, Floor, SE corner	SO-17360-061212-SM-007	6/12/2012		(5-) ft BGS	Unexcavated	Soil	SVOCs
SB84-11 Excavation, Floor, SW Corner	SO-17360-061212-SM-009	6/12/2012		(5-) ft BGS	Unexcavated	Soil	SVOCs
SB84-11 Excavation, North Wall	SO-17360-061212-SM-001	6/12/2012		(3.5-) ft BGS	Excavated	Soil	SVOCs
SB84-11 Excavation, South Wall, East	SO-17360-061212-SM-005	6/12/2012		(4-) ft BGS	Unexcavated	Soil	SVOCs
SB84-11 Excavation, South Wall, West	SO-17360-061212-SM-003	6/12/2012		(4-) ft BGS	Excavated	Soil	SVOCs
SB84-11 Excavation, South Wall, West	SO-17360-061212-SM-004	6/12/2012	Duplicate	(4-) ft BGS	Excavated	Soil	SVOCs
SB84-11 Excavation, West Wall	SO-17360-061212-SM-002	6/12/2012		(3.5-) ft BGS	Unexcavated	Soil	SVOCs
Test pit at A-10	SO-17360-061312-SM-011	6/13/2012		(1.5-) ft BGS	Excavated	Soil	SVOCs, PCBs, Metals
Test pit at A-10	SO-17360-061312-SM-012	6/13/2012		(3-) ft BGS	Excavated	Soil	VOCs, SVOCs, PCBs, Metals
Test pit at A-12	SO-17360-061312-SM-013	6/13/2012		(1.5-) ft BGS	Excavated	Soil	SVOCs, PCBs, Metals
Test pit at A-12	SO-17360-061312-SM-014	6/13/2012		(3-) ft BGS	Excavated	Soil	SVOCs, PCBs, Metals
Test pit at A-17	SO-17360-061312-SM-015	6/13/2012		(3-) ft BGS	Unexcavated	Soil	SVOCs, PCBs, Metals
Test pit at A-17	SO-17360-061312-SM-016	6/13/2012	Duplicate	(3-) ft BGS	Unexcavated	Soil	SVOCs, PCBs, Metals
Test pit at A-30	SO-17360-061312-SM-017	6/13/2012		(3-) ft BGS	Unexcavated	Soil	SVOCs, PCBs, Metals
Test pit at A-33	SO-17360-061312-SM-018	6/13/2012		(3-) ft BGS	Unexcavated	Soil	SVOCs, PCBs, Metals
Test pit at A-39	SO-17360-061312-SM-019	6/13/2012		(3-) ft BGS	Unexcavated	Soil	SVOCs, PCBs, Metals
SB77-11 Excavation, NE section	SO-17360-061412-EB-028	6/14/2012		(3-) ft BGS	Unexcavated	Soil	PNAs
SB77-11 Excavation, NW section	SO-17360-061412-EB-029	6/14/2012		(3-) ft BGS	Unexcavated	Soil	PNAs

SAMPLE SUMMARY
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

<i>Sample Location</i>	<i>Sample Identification</i>	<i>Sample Date</i>	<i>QA/QC</i>	<i>Depth</i>	<i>Excavation Status</i>	<i>Matrix</i>	<i>Analysis</i>
SB77-11 Excavation, NW section	SO-17360-061412-EB-030	6/14/2012	Duplicate	(3-) ft BGS	Unexcavated	Soil	PNAs
SB77-11 Excavation, SE section	SO-17360-061412-EB-032	6/14/2012		(3-) ft BGS	Unexcavated	Soil	PNAs
SB77-11 Excavation, SW section	SO-17360-061412-EB-031	6/14/2012		(3-) ft BGS	Unexcavated	Soil	PNAs
Test pit at A-10	SO-17360-061412-SM-020	6/14/2012		(1.5-) ft BGS	Excavated	Soil	VOCs
Test pit at A-12	SO-17360-061412-SM-021	6/14/2012		(1.5-) ft BGS	Excavated	Soil	VOCs
Test pit at A-12	SO-17360-061412-SM-022	6/14/2012		(3-) ft BGS	Excavated	Soil	VOCs
Test pit at A-17	SO-17360-061412-SM-023	6/14/2012		(3-) ft BGS	Unexcavated	Soil	VOCs
Test pit at A-17	SO-17360-061412-SM-024	6/14/2012	Duplicate	(3-) ft BGS	Unexcavated	Soil	VOCs
Test pit at A-30	SO-17360-061412-SM-025	6/14/2012		(3-) ft BGS	Unexcavated	Soil	VOCs
Test pit at A-33	SO-17360-061412-SM-026	6/14/2012		(3-) ft BGS	Unexcavated	Soil	VOCs
Test pit at A-39	SO-17360-061412-SM-027	6/14/2012		(3-) ft BGS	Unexcavated	Soil	VOCs
Seam - Zc-5.5 to Zc-7	SO-17360-061912-EB-001	6/19/2012		(0.25-1) ft BGS	Unexcavated	Soil	VOCs, SVOCs, PCBs, Metals
A-2 - Lower Seam	SO-17360-062212-EB-002	6/22/2012		(3-) ft BGS	Excavated	Soil	VOCs, SVOCs, PCBs, Metals
A-2 - Upper Seam	SO-17360-062212-EB-001	6/22/2012		(1.5-) ft BGS	Excavated	Soil	VOCs, SVOCs, PCBs, Metals
A-3 - Lower Seam	SO-17360-062212-EB-004	6/22/2012		(3-) ft BGS	Excavated	Soil	VOCs, SVOCs, PCBs, Metals
A-3 - Upper Seam	SO-17360-062212-EB-003	6/22/2012		(1.5-) ft BGS	Excavated	Soil	VOCs, SVOCs, PCBs, Metals
A-9 Lower Seam	SO-17360-062212-EB-007	6/22/2012		(3-) ft BGS	Excavated	Soil	VOCs, SVOCs, PCBs, Metals
A-9 Upper Seam	SO-17360-062212-EB-005	6/22/2012		(2-) ft BGS	Excavated	Soil	VOCs, SVOCs, PCBs, Metals
A-9 Upper Seam	SO-17360-062212-EB-006	6/22/2012	Duplicate	(2-) ft BGS	Excavated	Soil	VOCs, SVOCs, PCBs, Metals
A Column Excavation, Additional South Area	SO-17360-071612-EB-001	7/16/2012		(2.5-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, Additional South Area	SO-17360-071612-EB-002	7/16/2012	Duplicate	(2.5-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, Additional South Area	SO-17360-071612-EB-003	7/16/2012		(3-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, Additional South Area	SO-17360-071612-EB-004	7/16/2012		(2.5-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, Additional South Area	SO-17360-071612-EB-005	7/16/2012		(5-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, Additional South Area	SO-17360-071612-EB-006	7/16/2012		(5-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, North Area - N Floor	SO-17360-070612-EB-001	7/6/2012		(5-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, North Area - S Floor	SO-17360-070612-EB-002	7/6/2012		(5-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, North Area - S Sidewall	SO-17360-070612-EB-003	7/6/2012		(3-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, South Area - Middle	SO-17360-070612-EB-012	7/6/2012		(5-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, South Area - NE Floor	SO-17360-070612-EB-010	7/6/2012		(5-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, South Area - NW Floor	SO-17360-070612-EB-011	7/6/2012		(6-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, South Area - SE Floor	SO-17360-070612-EB-014	7/6/2012		(5-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, South Area - Sidewall	SO-17360-070612-EB-004	7/6/2012		(3-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, South Area - Sidewall	SO-17360-070612-EB-005	7/6/2012		(3-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, South Area - Sidewall	SO-17360-070612-EB-006	7/6/2012		(3-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, South Area - Sidewall	SO-17360-070612-EB-007	7/6/2012		(3-) ft BGS	Excavated	Soil	PNAs, Metals
A Column Excavation, South Area - Sidewall	SO-17360-070612-EB-008	7/6/2012	Duplicate	(3-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, South Area - Sidewall	SO-17360-070612-EB-009	7/6/2012		(3-) ft BGS	Unexcavated	Soil	PNAs, Metals
A Column Excavation, South Area - SW Floor	SO-17360-070612-EB-013	7/6/2012		(7-) ft BGS	Unexcavated	Soil	PNAs, Metals

Notes:

VOCs - Target Compound List Volatile Organic Compounds

SVOCs - Target Compound List Semi-Volatile Organic Compounds

PNAs - Polycyclic Aromatic Hydrocarbons

Metals - Antimony, Arsenic, Barium, Beryllium, Cadmium, total Chromium, Cobalt, Copper,

Lead, Manganese, Mercury, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc

PCBs - Polychlorinated Biphenyls

QC - Quality Control

MS/MSD - Matrix Spike /Matrix Spike Duplicate

TABLE 4
SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		<i>Extensive Seam - A/B-26 to A/B-28</i>	<i>Seam - Zc-5.5 to Zc-7</i>	<i>Seam 1</i>	<i>Seam 1</i>	<i>Seam 2</i>
Sample Identification		SO-17360-052312-EB-006	SO-17360-061912-EB-001	S-17360-032112-JQ-001	S-17360-032112-JQ-002	SO-17360-041712-EB-001
Sample Date		5/23/2012	6/19/2012	3/21/2012	3/21/2012	4/17/2012
Sample Depth		-	(0.25-1) ft BGS	-	-	-
Sample Type					<i>Duplicate</i>	
Excavation Status		<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>
	<i>Units</i>					
Metals						
Antimony	µg/kg	300	87000 ^{bc}	1800	2400	630
Arsenic	µg/kg	2100	19000 ^{ccup}	10000 ^{ccup}	13000 ^{ccup}	3700
Barium	µg/kg	17000	1200000 ^d	120000	140000	350000
Beryllium	µg/kg	530	310 J	1500	1700	1500
Cadmium	µg/kg	66	13000 ^{ccu}	58	81	140
Chromium	µg/kg	4600	2000000 ^{ccano}	5300	4400	4200
Cobalt	µg/kg	3200	95000 J ^{ccu}	5900	6200	4900
Copper	µg/kg	9400	1500000 ^d	51000	55000	29000
Iron	µg/kg	6400000	18000000 ^{ccp}	1600000 ^{cc}	16000000 ^{cc}	7700000
Lead	µg/kg	4800	5200000 ^{ccupq}	23000	35000	210000 J
Lead - coarse fraction	µg/kg	--	--	--	--	--
Lead - fine fraction	µg/kg	--	--	--	--	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--	--
Manganese	µg/kg	100000	7400000 ^{ccano}	190000	140000	56000
Mercury	µg/kg	50 U	13 J	11 J	18 J	16 J
Molybdenum	µg/kg	390 J	560000 ^{ccca}	2200 ^b	3100 ^b	1000
Nickel	µg/kg	7600	1600000 ^{ccca}	11000	13000	12000
Selenium	µg/kg	280	490 UJ	1200 ^d	1400 ^d	760 ^d
Silver	µg/kg	27 J	9200 J ^{cca}	51	46 J	120
Thallium	µg/kg	32 J	180 J	240	310	93
Vanadium	µg/kg	6900	19000 J	15000	14000	20000
Zinc	µg/kg	10000	3400000 ^{ccu}	13000	17000	79000
PCBs						
Aroclor-1016 (PCB-1016)	µg/kg	330 U	380 U	380 U	370 U	400 U
Aroclor-1221 (PCB-1221)	µg/kg	330 U	380 U	380 U	370 U	400 UJ
Aroclor-1232 (PCB-1232)	µg/kg	330 U	380 U	380 U	370 U	400 UJ
Aroclor-1242 (PCB-1242)	µg/kg	330 U	380 U	380 U	370 U	400 U
Aroclor-1248 (PCB-1248)	µg/kg	330 U	380 U	380 U	370 U	400 U
Aroclor-1254 (PCB-1254)	µg/kg	330 U	380 U	380 U	370 U	400 U
Aroclor-1260 (PCB-1260)	µg/kg	330 U	18 J	380 U	370 U	400 U
Total PCBs	µg/kg	ND	18 J	ND	ND	ND

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SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>Extensive Seam - A/B-26 to A/B-28</i>		<i>Seam - Zc-5.5 to Zc-7</i>		<i>Seam 1</i>		<i>Seam 1</i>		<i>Seam 2</i>	
Sample Identification	SO-17360-052312-EB-006		SO-17360-061912-EB-001		S-17360-032112-JQ-001		S-17360-032112-JQ-002		SO-17360-041712-EB-001	
Sample Date	5/23/2012		6/19/2012		3/21/2012		3/21/2012		4/17/2012	
Sample Depth	-		(0.25-1) ft BGS		-		-		-	
Sample Type							<i>Duplicate</i>			
Excavation Status	<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>	
	<i>Units</i>									
<i>Semi-Volatile Organic Compounds (SVOCs)</i>										
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/kg	18 U		19 U	--		--		--	
2,4,5-Trichlorophenol	µg/kg	18 U		19 U	--		--		--	
2,4,6-Trichlorophenol	µg/kg	18 U		19 U	--		--		--	
2,4-Dichlorophenol	µg/kg	36 U		38 U	--		--		--	
2,4-Dimethylphenol	µg/kg	180 U		190 U	--		--		--	
2,4-Dinitrophenol	µg/kg	180 U		190 U	--		--		--	
2,4-Dinitrotoluene	µg/kg	36 U		38 U	--		--		--	
2,6-Dinitrotoluene	µg/kg	18 U		19 U	--		--		--	
2-Chloronaphthalene	µg/kg	18 U		19 U	--		--		--	
2-Chlorophenol	µg/kg	18 U		19 UJ	--		--		--	
2-Methylnaphthalene	µg/kg	13 J		5.6 J	--		140 J / 85 J		1000 J	
2-Methylphenol	µg/kg	18 U		19 U	--		--		--	
2-Nitroaniline	µg/kg	18 U		19 U	--		--		--	
2-Nitrophenol	µg/kg	18 U		19 U	--		--		--	
3,3'-Dichlorobenzidine	µg/kg	910 U		950 U	--		--		--	
3-Nitroaniline	µg/kg	36 U		38 U	--		--		--	
4,6-Dinitro-2-methylphenol	µg/kg	180 U		190 U	--		--		--	
4-Bromophenyl phenyl ether	µg/kg	18 U		19 U	--		--		--	
4-Chloro-3-methylphenol	µg/kg	18 U		19 U	--		--		--	
4-Chloroaniline	µg/kg	73 U		76 U	--		--		--	
4-Chlorophenyl phenyl ether	µg/kg	18 U		19 U	--		--		--	
4-Methylphenol	µg/kg	18 U		19 U	--		--		--	
4-Nitroaniline	µg/kg	36 U		38 U	--		--		--	
4-Nitrophenol	µg/kg	730 U		760 U	--		--		--	
Acenaphthene	µg/kg	2.2 J		2.4 J	780 U		7.9 J / 760 U		1700 J	
Acenaphthylene	µg/kg	2.2 J		19 U	35 J		85 J / 57 J		16000 U	
Acetophenone	µg/kg	18 U		19 U	--		--		--	
Anthracene	µg/kg	5.1 J		10 J	86 J		88 J / 54 J		6900 J	
Atrazine	µg/kg	18 U		19 U	--		--		--	
Benzaldehyde	µg/kg	73 U		8 J	--		--		--	
Benzo(a)anthracene	µg/kg	32		19 U	500 J		560 / 820		8700 J	
Benzo(a)pyrene	µg/kg	35		76	480 J		570 / 720 J		5700 J ^a	
Benzo(b)fluoranthene	µg/kg	61		320	520 J		650 / 690 J		8400 J	
Benzo(g,h,i)perylene	µg/kg	36		200	360 J		320 J / 450 J		2300 J	
Benzo(k)fluoranthene	µg/kg	28		70	200 J		360 J / 420 J		2700 J	
Biphenyl (1,1-Biphenyl)	µg/kg	2.2 J		19 U	--		--		--	
bis(2-Chloroethoxy)methane	µg/kg	18 U		19 U	--		--		--	
bis(2-Chloroethyl)ether	µg/kg	18 U		19 U	--		--		--	
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	37 U		38 U	--		--		--	
Butyl benzylphthalate (BBP)	µg/kg	36 U		38 U	--		--		--	
Caprolactam	µg/kg	73 U		76 U	--		--		--	
Carbazole	µg/kg	10 J		190 U	--		--		--	
Chrysene	µg/kg	30		160	520 J		470 / 820		7000 J	
Dibenz(a,h)anthracene	µg/kg	9.9 J		73	120 J		120 J / 89 J		500 J	
Dibenzofuran	µg/kg	4.4 J		9.2 J	--		--		--	

TABLE 4
SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>Extensive Seam - A/B-26 to A/B-28</i>		<i>Seam - Zc-5.5 to Zc-7</i>		<i>Seam 1</i>		<i>Seam 1</i>		<i>Seam 2</i>	
Sample Identification	SO-17360-052312-EB-006		SO-17360-061912-EB-001		S-17360-032112-JQ-001		S-17360-032112-JQ-002		SO-17360-041712-EB-001	
Sample Date	5/23/2012		6/19/2012		3/21/2012		3/21/2012		4/17/2012	
Sample Depth	-		(0.25-1) ft BGS		-		-		-	
Sample Type							<i>Duplicate</i>			
Excavation Status	<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>	
	<i>Units</i>									
<i>SVOCs (continued)</i>										
Diethyl phthalate	µg/kg	18 U	19 U	--	--	--	--	--	--	--
Dimethyl phthalate	µg/kg	3.7 J	19 U	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/kg	73 U	76 U	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/kg	18 U	19 U	--	--	--	--	--	--	--
Fluoranthene	µg/kg	50	140	400 J	730 J / 510	17000 ^a		2500 J		
Fluorene	µg/kg	2.2 J	2.4 J	24 J	38 J / 15 J	--	--	--	--	--
Hexachlorobenzene	µg/kg	18 U	19 U	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/kg	18 U	19 U	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/kg	18 U	19 U	--	--	--	--	--	--	--
Hexachloroethane	µg/kg	18 U	19 U	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	30 J	140	210 J	320 J / 240 J	--	--	--	3100 J	
Isophorone	µg/kg	18 U	19 U	--	--	--	--	--	--	--
Naphthalene	µg/kg	9.5 J	10 J	130 J	110 J / 83 J	1500 J ^a		--		
Nitrobenzene	µg/kg	18 U	19 U	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	µg/kg	18 U	19 U	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/kg	18 U	19 U	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	180 U	190 U	--	--	--	--	--	--	--
Phenanthrene	µg/kg	28	100	400 J	410 J / 620 J	17000 ^a		--		
Phenol	µg/kg	180 U	2.4 J	--	--	--	--	--	--	--
Pyrene	µg/kg	55	130	920	810 / 1500	--	--	--	12000 J	
<i>Volatile Organic Compounds (VOCs)</i>										
1,1,1-Trichloroethane	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
1,1,2,2-Tetrachloroethane	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
1,1,2-Trichloroethane	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
1,1-Dichloroethane	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
1,1-Dichloroethene	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
1,2,4-Trichlorobenzene	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	260 U	280 U	480 U	570 U	--	--	--	280 U	
1,2-Dibromoethane ⁽²⁾	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
1,2-Dichlorobenzene	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
1,2-Dichloroethane	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
1,2-Dichloropropane	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
1,3-Dichlorobenzene	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
1,4-Dichlorobenzene	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
2-Butanone ⁽³⁾	µg/kg	770 U	850 U	1400 U	1700 U	--	--	--	830 U	
2-Hexanone	µg/kg	2600 U	2800 U	4800 U	5700 U	--	--	--	2800 U	
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	2600 U	2800 U	4800 U	5700 U	--	--	--	2800 U	
Acetone	µg/kg	150 J	850 U	1400 U	1700 U	--	--	--	830 U	
Benzene	µg/kg	11 J	57 U	38 J	80 J	--	--	--	12 J	
Bromodichloromethane	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	
Bromoform	µg/kg	51 U	57 U	96 U	110 U	--	--	--	55 U	

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FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>Extensive Seam - A/B-26 to A/B-28</i>		<i>Seam - Zc-5.5 to Zc-7</i>		<i>Seam 1</i>		<i>Seam 1</i>		<i>Seam 2</i>	
Sample Identification	SO-17360-052312-EB-006		SO-17360-061912-EB-001		S-17360-032112-JQ-001		S-17360-032112-JQ-002		SO-17360-041712-EB-001	
Sample Date	5/23/2012		6/19/2012		3/21/2012		3/21/2012		4/17/2012	
Sample Depth	-		(0.25-1) ft BGS		-		-		-	
Sample Type							<i>Duplicate</i>			
Excavation Status	<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>	
	<i>Units</i>									
<i>VOCs (continued)</i>										
Bromomethane (Methyl bromide)	µg/kg	32 J		57 U		96 U		110 U		55 U
Carbon disulfide	µg/kg	260 U		280 U		480 U		570 U		280 U
Carbon tetrachloride	µg/kg	51 U		57 U		96 U		110 U		55 U
Chlorobenzene	µg/kg	51 U		57 U		96 U		110 U		55 U
Chloroethane	µg/kg	51 U		57 U		96 U		110 U		55 U
Chloroform (Trichloromethane)	µg/kg	51 U		57 U		96 U		110 U		55 U
Chloromethane (Methyl chloride)	µg/kg	51 U		57 U		96 U		110 U		55 U
cis-1,2-Dichloroethene	µg/kg	51 U		57 U		96 U		110 U		55 U
cis-1,3-Dichloropropene	µg/kg	51 U		57 U		96 U		110 U		55 U
Cyclohexane	µg/kg	180 J		280 U		79 J		120 J		410
Dibromochloromethane	µg/kg	51 U		57 U		96 U		110 U		55 U
Dichlorodifluoromethane (CFC-12)	µg/kg	51 U		57 U		96 U		110 U		55 U
Ethylbenzene	µg/kg	38 J		57 U		28 J		59 J		45 J
Isopropyl benzene	µg/kg	46 J		57 U		96 U		42 J		26 J
Methyl acetate	µg/kg	260 U		280 U		480 U		570 U		280 U
Methyl cyclohexane	µg/kg	680		280 U		240 J		420 J		1300
Methyl tert butyl ether (MTBE)	µg/kg	51 U		57 U		96 U		110 U		55 U
Methylene chloride	µg/kg	270 U		110 U		190 U		230 U		110 U
Styrene	µg/kg	51 U		57 U		96 U		110 U		55 U
Tetrachloroethene	µg/kg	51 U		57 U		96 U		110 U		110 ^U
Toluene	µg/kg	100		57 U		250		340		220 U
trans-1,2-Dichloroethene	µg/kg	51 U		57 U		96 U		110 U		55 U
trans-1,3-Dichloropropene	µg/kg	51 U		57 U		96 U		110 U		55 U
Trichloroethene	µg/kg	15 J		4800 ^U		96 U		110 U		55 U
Trichlorofluoromethane (CFC-11)	µg/kg	51 U		57 U		96 U		110 U		55 U
Trifluorotrchloroethane (Freon 113)	µg/kg	51 U		57 U		96 U		110 U		55 U
Vinyl chloride	µg/kg	41 U		46 U		76 U		90 U		44 U
Xylenes (total)	µg/kg	440		170 U		260 J		400		580

Notes:

See Table 1 for applicable criteria and notes.

TABLE 4

SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
 SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
 FORMER GRAND RAPIDS METAL PLANT
 WYOMING, MICHIGAN

Sample Location	Seam 3	Seam 4	Seam 4	Seam - A/B-45 to A/B-47	Stained Seam - A-10 to A-12	Stained Soil 1
Sample Identification	SO-07360-041712-EB-002	SO-07360-041712-EB-003	SO-17360-041712-EB-004	SO-17360-052512-EB-001	SO-17360-052312-EB-004	SO-17360-042712-EB-001
Sample Date	4/17/2012	4/17/2012	4/17/2012	5/25/2012	5/23/2012	4/27/2012
Sample Depth	-	-	-	-	-	-
Sample Type			Duplicate			
Excavation Status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Excavated	Unexcavated
	Units					
Metals						
Antimony	2300	1300	1200	2000	7300 ^{bc}	410
Arsenic	3300	6400 ^{cca}	5500	11000 ^{cccp}	450	1200
Barium	91000	160000 J	270000 J	44000	560000	34000 J
Beryllium	910	1000	1200	360 J	140 J	150 J
Cadmium	630	220	290	54	69000 ^{cca}	97
Chromium	7900	46000 J ^{cca}	7300 J	7000	29000 ^{ca}	4400
Cobalt	10000 ^{cca}	4900	5000	2500	4200	1600
Copper	57000	95000	52000	25000	400000 ^{ca}	7500
Iron	11000000	21000000 ^{bc}	15000000 ^{bc}	40000000 ^{bc}	37000000 ^{bc}	4600000 J
Lead	91000	130000 J	93000	24000	37000000 ^{cccpa}	7600
Lead - coarse fraction	--	--	--	--	--	--
Lead - fine fraction	--	--	--	--	--	--
Lead - total (calculated by fine/coarse fraction)	--	--	--	--	--	--
Manganese	110000 J	320000 J	230000 J	58000	330000	130000
Mercury	21 J	12 J	22 J	38 J	64	11 J
Molybdenum	1500	1700 ^b	920 J	2400 ^b	350 J	220 J
Nickel	24000	32000	16000	6800	31000	3500
Selenium	680 ^a	680 ^a	670 ^a	1100 ^a	140 U	92 U
Silver	130	68	100	63	17000 ^{cca}	46 U
Thallium	65	71	79	610	120	64
Vanadium	12000	15000	16000	13000	6200	6900
Zinc	63000	190000 J	220000 J	13000	1300000 ^{ca}	22000
PCBs						
Aroclor-1016 (PCB-1016)	360 U	380 U	380 U	340 U	370 UJ	340 UJ
Aroclor-1221 (PCB-1221)	360 U	380 U	380 U	340 U	370 UJ	340 UJ
Aroclor-1232 (PCB-1232)	360 U	380 U	380 U	340 U	370 UJ	340 UJ
Aroclor-1242 (PCB-1242)	360 U	380 U	380 U	340 U	370 UJ	16 J
Aroclor-1248 (PCB-1248)	360 U	380 U	380 U	340 U	18 J	340 UJ
Aroclor-1254 (PCB-1254)	360 U	380 U	380 U	340 U	29 J	19 J
Aroclor-1260 (PCB-1260)	82 J	8.4 J	8 J	340 U	12 J	340 UJ
Total PCBs	82 J	8.4 J	8 J	ND	59 J	35 J

TABLE 4

SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		Seam 3	Seam 4	Seam 4	Seam - A/B-45 to A/B-47	Stained Seam - A-10 to A-12	Stained Soil 1
Sample Identification		SO-07360-041712-EB-002	SO-07360-041712-EB-003	SO-17360-041712-EB-004	SO-17360-052512-EB-001	SO-17360-052312-EB-004	SO-17360-042712-EB-001
Sample Date		4/17/2012	4/17/2012	4/17/2012	5/25/2012	5/23/2012	4/27/2012
Sample Depth		-	-	-	-	-	-
Sample Type				Duplicate			
Excavation Status		Unexcavated	Unexcavated	Unexcavated	Unexcavated	Excavated	Unexcavated
		<i>Units</i>					
<i>Semi-Volatile Organic Compounds (SVOCs)</i>							
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/kg	--	--	--	870 U	3700 U	1400 U
2,4,5-Trichlorophenol	µg/kg	--	--	--	870 U	3700 U	1400 U
2,4,6-Trichlorophenol	µg/kg	--	--	--	870 U	3700 U	1400 U
2,4-Dichlorophenol	µg/kg	--	--	--	1700 U	7500 U	2700 U
2,4-Dimethylphenol	µg/kg	--	--	--	8700 U	37000 U	14000 U
2,4-Dinitrophenol	µg/kg	--	--	--	8700 U	37000 U	14000 U
2,4-Dinitrotoluene	µg/kg	--	--	--	1700 U	7500 U	2700 U
2,6-Dinitrotoluene	µg/kg	--	--	--	870 U	3700 U	1400 U
2-Chloronaphthalene	µg/kg	--	--	--	870 U	3700 U	1400 U
2-Chlorophenol	µg/kg	--	--	--	870 U	3700 U	1400 U
2-Methylnaphthalene	µg/kg	63 J	110 J	160 J	160 J	670 J	300 J
2-Methylphenol	µg/kg	--	--	--	870 U	3700 U	1400 U
2-Nitroaniline	µg/kg	--	--	--	870 U	3700 U	1400 U
2-Nitrophenol	µg/kg	--	--	--	870 U	3700 U	1400 U
3,3'-Dichlorobenzidine	µg/kg	--	--	--	43000 U	190000 U	69000 U
3-Nitroaniline	µg/kg	--	--	--	1700 U	7500 U	2700 U
4,6-Dinitro-2-methylphenol	µg/kg	--	--	--	8700 U	37000 U	14000 U
4-Bromophenyl phenyl ether	µg/kg	--	--	--	870 U	3700 U	1400 U
4-Chloro-3-methylphenol	µg/kg	--	--	--	870 UJ	3700 U	1400 U
4-Chloroaniline	µg/kg	--	--	--	3500 U	15000 U	5500 U
4-Chlorophenyl phenyl ether	µg/kg	--	--	--	870 U	3700 U	1400 U
4-Methylphenol	µg/kg	--	--	--	870 U	3700 U	1400 U
4-Nitroaniline	µg/kg	--	--	--	1700 U	7500 U	2700 U
4-Nitrophenol	µg/kg	--	--	--	35000 U	150000 U	55000 U
Acenaphthene	µg/kg	37 J	28 J	190 J	110 J	1800 J	1900
Acenaphthylene	µg/kg	280 J	15 J	69 J	200 J	3700 U	1400 U
Acetophenone	µg/kg	--	--	--	870 U	3700 U	1400 U
Anthracene	µg/kg	400 J	86 J	300 J	870 U	2500 J	1300 J
Atrazine	µg/kg	--	--	--	870 U	3700 U	1400 U
Benzaldehyde	µg/kg	--	--	--	3500 U	15000 U	5500 U
Benzo(a)anthracene	µg/kg	4500	520	950	830 J	8200	2200
Benzo(a)pyrene	µg/kg	3300 J ^P	330 J	740 J	880	16000 ^{PS}	1300 J
Benzo(b)fluoranthene	µg/kg	9000	710	1400	1400	22000 ^P	2200
Benzo(g,h,i)perylene	µg/kg	4100	250 J	410 J	790 J	9800	880 J
Benzo(k)fluoranthene	µg/kg	2800 J	180 J	480 J	580 J	8300	1600
Biphenyl (1,1'-Biphenyl)	µg/kg	--	--	--	870 U	220 J	160 J
bis(2-Chloroethoxy)methane	µg/kg	--	--	--	870 U	3700 U	1400 U
bis(2-Chloroethyl)ether	µg/kg	--	--	--	870 U	3700 U	1400 U
bis(2-Ethylhexyl)phthalate (DEHP) ^P	µg/kg	--	--	--	1700 U	7500 U	5000
Butyl benzylphthalate (BBP)	µg/kg	--	--	--	1700 U	7500 U	2700 U
Caprolactam	µg/kg	--	--	--	3500 U	15000 U	5500 U
Carbazole	µg/kg	--	--	--	8700 U	4300 J ^U	14000 U
Chrysene	µg/kg	3100 J	290 J	720 J	940	8800	1700
Dibenz(a,h)anthracene	µg/kg	590 J	7.3 J	69 J	1700 U	2200 J ^P	330 J
Dibenzofuran	µg/kg	--	--	--	870 U	1100 J	1100 J

TABLE 4

SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	Seam 3	Seam 4	Seam 4	Seam - A/B-45 to A/B-47	Stained Seam - A-10 to A-12	Stained Soil 1
Sample Identification	SO-07360-041712-EB-002	SO-07360-041712-EB-003	SO-17360-041712-EB-004	SO-17360-052512-EB-001	SO-17360-052312-EB-004	SO-17360-042712-EB-001
Sample Date	4/17/2012	4/17/2012	4/17/2012	5/25/2012	5/23/2012	4/27/2012
Sample Depth	-	-	-	-	-	-
Sample Type			Duplicate			
Excavation Status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Excavated	Unexcavated
	Units					
SVOCs (continued)						
Diethyl phthalate	µg/kg	--	--	870 U	3700 U	1400 U
Dimethyl phthalate	µg/kg	--	--	870 U	3700 U	1400 U
Di-n-butylphthalate (DBP)	µg/kg	--	--	3500 U	15000 U	5500 U
Di-n-octyl phthalate (DnOP)	µg/kg	--	--	870 U	3700 U	1400 U
Fluoranthene	µg/kg	5900 ^a	560	1300	14000 ^a	5300
Fluorene	µg/kg	55 J	25 J	170 J	1700 U	2300 J
Hexachlorobenzene	µg/kg	--	--	--	870 U	3700 U
Hexachlorobutadiene	µg/kg	--	--	--	870 U	3700 U
Hexachlorocyclopentadiene	µg/kg	--	--	--	870 U	3700 U
Hexachloroethane	µg/kg	--	--	--	870 U	3700 U
Indeno(1,2,3-cd)pyrene	µg/kg	4100	270 J	540 J	690 J	7600
Isophorone	µg/kg	--	--	--	870 U	3700 U
Naphthalene	µg/kg	92 J	76 J	130 J	310 J	1300 J ^a
Nitrobenzene	µg/kg	--	--	--	870 U	3700 U
N-Nitrosodi-n-propylamine	µg/kg	--	--	--	870 U	3700 U
N-Nitrosodiphenylamine	µg/kg	--	--	--	870 U	3700 U
Pentachlorophenol	µg/kg	--	--	--	8700 U	37000 U
Phenanthrene	µg/kg	1700 J	350 J	1100	270 J	9200 ^a
Phenol	µg/kg	--	--	--	8700 U	37000 U
Pyrene	µg/kg	5600	560	1300	2000	26000
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	µg/kg	50 U	52 U	52 U	38 J	56 U
1,1,2,2-Tetrachloroethane	µg/kg	50 U	52 U	52 U	71 U	56 U
1,1,2-Trichloroethane	µg/kg	50 U	52 U	52 U	71 U	56 U
1,1-Dichloroethane	µg/kg	50 U	52 U	52 U	71 U	56 U
1,1-Dichloroethene	µg/kg	50 U	52 U	52 U	71 U	56 U
1,2,4-Trichlorobenzene	µg/kg	50 U	52 U	52 U	71 U	56 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	250 U	260 U	260 U	350 U	280 U
1,2-Dibromoethane ⁽²⁾	µg/kg	50 U	52 U	52 U	71 U	56 U
1,2-Dichlorobenzene	µg/kg	50 U	52 U	52 U	71 U	56 U
1,2-Dichloroethane	µg/kg	50 U	52 U	52 U	71 U	56 U
1,2-Dichloropropane	µg/kg	50 U	52 U	52 U	71 U	56 U
1,3-Dichlorobenzene	µg/kg	50 U	52 U	52 U	71 U	56 U
1,4-Dichlorobenzene	µg/kg	50 U	52 U	52 U	71 U	56 U
2-Butanone ⁽³⁾	µg/kg	760 U	780 U	780 U	1100 U	850 U
2-Hexanone	µg/kg	2500 U	2600 U	2600 U	3500 U	2800 U
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	2500 U	2600 U	2600 U	3500 U	2800 U
Acetone	µg/kg	760 U	780 U	780 U	200 J	250 J
Benzene	µg/kg	50 U	19 J	18 J	1300 ^{bc}	56 U
Bromodichloromethane	µg/kg	50 U	52 U	52 U	71 U	56 U
Bromoform	µg/kg	50 U	52 U	52 U	71 U	56 U

TABLE 4

SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		<i>Seam 3</i>	<i>Seam 4</i>	<i>Seam 4</i>	<i>Seam - A/B-45 to A/B-47</i>	<i>Stained Seam - A-10 to A-12</i>	<i>Stained Soil 1</i>
Sample Identification		SO-07360-041712-EB-002	SO-07360-041712-EB-003	SO-17360-041712-EB-004	SO-17360-052512-EB-001	SO-17360-052312-EB-004	SO-17360-042712-EB-001
Sample Date		4/17/2012	4/17/2012	4/17/2012	5/25/2012	5/23/2012	4/27/2012
Sample Depth		-	-	-	-	-	-
Sample Type				<i>Duplicate</i>			
Excavation Status		<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Excavated</i>	<i>Unexcavated</i>
	<i>Units</i>						
<i>VOCs (continued)</i>							
Bromomethane (Methyl bromide)	µg/kg	50 U	52 U	52 U	40 J	32 J	52 U
Carbon disulfide	µg/kg	250 U	260 U	260 U	350 U	280 U	260 U
Carbon tetrachloride	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Chlorobenzene	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Chloroethane	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Chloroform (Trichloromethane)	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Chloromethane (Methyl chloride)	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
cis-1,2-Dichloroethene	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
cis-1,3-Dichloropropene	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Cyclohexane	µg/kg	92 J	220 J	220 J	1500	280 U	29 J
Dibromochloromethane	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Dichlorodifluoromethane (CFC-12)	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Ethylbenzene	µg/kg	50 U	25 J	27 J	750 ^u	14 J	19 J
Isopropyl benzene	µg/kg	50 U	52 U	12 J	640	56 U	52 U
Methyl acetate	µg/kg	250 U	260 U	260 U	350 U	420	330 U
Methyl cyclohexane	µg/kg	280	570	570	5200	280 U	85 J
Methyl tert butyl ether (MTBE)	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Methylene chloride	µg/kg	100 U	100 U	100 U	380 U	300 U	39 J
Styrene	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Tetrachloroethene	µg/kg	39 J	76	67	410 ^u	29 J	52 U
Toluene	µg/kg	75 U	190 U	250	4100	40 J	37 J
trans-1,2-Dichloroethene	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
trans-1,3-Dichloropropene	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Trichloroethene	µg/kg	50 U	52 U	52 U	2800 ^u	56 U	860 ^u
Trichlorofluoromethane (CFC-11)	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Trifluorotrchloroethane (Freon 113)	µg/kg	50 U	52 U	52 U	71 U	56 U	52 U
Vinyl chloride	µg/kg	40 U	42 U	42 U	57 U	45 U	41 U
Xylenes (total)	µg/kg	150	340	390	5200 ^u	62 J	120 J

Notes:

See Table 1 for applicable criteria and notes.

TABLE 4

SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
 SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
 FORMER GRAND RAPIDS METAL PLANT
 WYOMING, MICHIGAN

Sample Location	Stained Soil 2	Stained Soil Below Pipe - Q-20	Soil Pile - Q-20	Substation K-1	Substation K-2	Unstained Seam - A-10 to A-12	
Sample Identification	SO-17360-042712-EB-002	SO-17360-051012-EB-001	SO-17360-051012-EB-002	SO-17360-050412-EB-001	SO-17360-050412-EB-002	SO-17360-052312-EB-005	
Sample Date	4/27/2012	5/10/2012	5/10/2012	5/4/2012	5/4/2012	5/23/2012	
Sample Depth	-	-	-	-	-	-	
Sample Type							
Excavation Status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Excavated	
	Units						
Metals							
Antimony	µg/kg	190	11000 ^{SC}	170	--	930	
Arsenic	µg/kg	970	1200	2500	--	7800 ^{CCUP}	
Barium	µg/kg	11000 J	11000	77000	--	95000	
Beryllium	µg/kg	100 J	83 J	300 J	--	2400	
Cadmium	µg/kg	53	780	130	--	660	
Chromium	µg/kg	3400	5600	10000	--	11000	
Cobalt	µg/kg	1400	1700	4500	--	4700	
Copper	µg/kg	4300	41000	11000	--	35000	
Iron	µg/kg	3800000	5100000	12000000	--	5200000 ^{SC}	
Lead	µg/kg	7100	76000	7700	--	16000	
Lead - coarse fraction	µg/kg	--	--	--	--	--	
Lead - fine fraction	µg/kg	--	--	--	--	--	
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--	--	
Manganese	µg/kg	86000	70000	690000 ^{SCA}	--	300000	
Mercury	µg/kg	50 U	50 U	11 J	--	15 J	
Molybdenum	µg/kg	160 J	230 J	330 J	--	6300 ^{SC}	
Nickel	µg/kg	3400	4700	8400	--	17000	
Selenium	µg/kg	140 U	94 U	180 U	--	1100 ^U	
Silver	µg/kg	50 U	31 J	41 J	--	110	
Thallium	µg/kg	55	29 J	100	--	330	
Vanadium	µg/kg	5100	5600	17000	--	44000	
Zinc	µg/kg	9400	71000	32000	--	89000	
PCBs							
Aroclor-1016 (PCB-1016)	µg/kg	350 U	360 UJ	360 U	390 U	390 U	410 U
Aroclor-1221 (PCB-1221)	µg/kg	350 U	360 UJ	360 U	390 U	390 U	410 U
Aroclor-1232 (PCB-1232)	µg/kg	350 U	360 UJ	360 U	390 U	390 U	410 U
Aroclor-1242 (PCB-1242)	µg/kg	350 U	360 UJ	360 U	390 U	390 U	410 U
Aroclor-1248 (PCB-1248)	µg/kg	350 U	360 UJ	360 U	390 U	390 U	410 U
Aroclor-1254 (PCB-1254)	µg/kg	350 U	87 J	360 U	390 U	390 U	410 U
Aroclor-1260 (PCB-1260)	µg/kg	350 U	360 UJ	360 U	7.5 J	110 J	410 U
Total PCBs	µg/kg	ND	87 J	ND	7.5 J	110 J	ND

TABLE 4

SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		<i>Stained Soil 2</i>	<i>Stained Soil Below Pipe - Q-20</i>	<i>Soil Pile - Q-20</i>	<i>Substation K-1</i>	<i>Substation K-2</i>	<i>Unstained Seam - A-10 to A-12</i>
Sample Identification		SO-17360-042712-EB-002	SO-17360-051012-EB-001	SO-17360-051012-EB-002	SO-17360-050412-EB-001	SO-17360-050412-EB-002	SO-17360-052312-EB-005
Sample Date		4/27/2012	5/10/2012	5/10/2012	5/4/2012	5/4/2012	5/23/2012
Sample Depth		-	-	-	-	-	-
Sample Type							
Excavation Status		<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Excavated</i>
		<i>Units</i>					
<i>Semi-Volatile Organic Compounds (SVOCs)</i>							
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/kg	180 U	370 U	18 U	--	--	410 U
2,4,5-Trichlorophenol	µg/kg	180 U	370 U	18 U	--	--	410 U
2,4,6-Trichlorophenol	µg/kg	180 U	370 U	18 U	--	--	410 U
2,4-Dichlorophenol	µg/kg	350 U	730 U	37 U	--	--	820 U
2,4-Dimethylphenol	µg/kg	1800 U	3700 U	180 U	--	--	4100 U
2,4-Dinitrophenol	µg/kg	1800 U	3700 U	180 U	--	--	4100 U
2,4-Dinitrotoluene	µg/kg	350 U	730 U	37 U	--	--	820 U
2,6-Dinitrotoluene	µg/kg	180 U	370 U	18 U	--	--	410 U
2-Chloronaphthalene	µg/kg	180 U	370 U	18 U	--	--	410 U
2-Chlorophenol	µg/kg	180 U	370 U	18 U	--	--	410 U
2-Methylnaphthalene	µg/kg	180 U	270 J	18 U	--	--	2700
2-Methylphenol	µg/kg	180 U	370 U	18 U	--	--	410 U
2-Nitroaniline	µg/kg	180 U	370 U	18 U	--	--	410 U
2-Nitrophenol	µg/kg	180 U	370 U	18 U	--	--	410 U
3,3'-Dichlorobenzidine	µg/kg	8900 U	18000 U	920 U	--	--	21000 U
3-Nitroaniline	µg/kg	350 U	730 U	37 U	--	--	820 U
4,6-Dinitro-2-methylphenol	µg/kg	1800 U	3700 U	180 U	--	--	4100 U
4-Bromophenyl phenyl ether	µg/kg	180 U	370 U	18 U	--	--	410 U
4-Chloro-3-methylphenol	µg/kg	180 U	370 U	18 U	--	--	410 U
4-Chloroaniline	µg/kg	710 U	1500 U	73 U	--	--	1600 U
4-Chlorophenyl phenyl ether	µg/kg	180 U	370 U	18 U	--	--	410 U
4-Methylphenol	µg/kg	180 U	370 U	18 U	--	--	410 U
4-Nitroaniline	µg/kg	350 U	730 U	37 U	--	--	820 U
4-Nitrophenol	µg/kg	7100 U	15000 U	730 U	--	--	16000 U
Acenaphthene	µg/kg	24 J	220 J	3.9 J	--	--	220 J
Acenaphthylene	µg/kg	180 U	370 U	18 U	--	--	52 J
Acetophenone	µg/kg	180 U	370 U	18 U	--	--	410 U
Anthracene	µg/kg	42 J	240 J	10 J	--	--	480
Atrazine	µg/kg	180 U	370 U	18 U	--	--	410 U
Benzaldehyde	µg/kg	710 U	1500 U	3.1 J	--	--	1600 U
Benzo(a)anthracene	µg/kg	180	1400	51	--	--	560
Benzo(a)pyrene	µg/kg	140 J	970	41	--	--	450
Benzo(b)fluoranthene	µg/kg	160 J	2000	68	--	--	680
Benzo(g,h,i)perylene	µg/kg	77 J	740	33 J	--	--	800 J
Benzo(k)fluoranthene	µg/kg	110 J	510	26	--	--	280 J
Biphenyl (1,1-Biphenyl)	µg/kg	180 U	82 J	18 U	--	--	1000
bis(2-Chloroethoxy)methane	µg/kg	180 U	370 U	18 U	--	--	410 U
bis(2-Chloroethyl)ether	µg/kg	180 U	370 U	18 U	--	--	410 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	350 U	730 U	37 U	--	--	820 U
Butyl benzylphthalate (BBP)	µg/kg	350 U	1300	2.3 J	--	--	820 U
Caprolactam	µg/kg	710 U	410 J	73 U	--	--	1600 U
Carbazole	µg/kg	1800 U	3700 U	180 U	--	--	980 J
Chrysene	µg/kg	190	1900	42	--	--	660
Dibenz(a,h)anthracene	µg/kg	350 U	730 U	37 U	--	--	120 J
Dibenzofuran	µg/kg	180 U	230 J	18 U	--	--	1100

TABLE 4
SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		<i>Stained Soil 2</i>	<i>Stained Soil Below Pipe - Q-20</i>	<i>Soil Pile - Q-20</i>	<i>Substation K-1</i>	<i>Substation K-2</i>	<i>Unstained Seam - A-10 to A-12</i>
Sample Identification		SO-17360-042712-EB-002	SO-17360-051012-EB-001	SO-17360-051012-EB-002	SO-17360-050412-EB-001	SO-17360-050412-EB-002	SO-17360-052312-EB-005
Sample Date		4/27/2012	5/10/2012	5/10/2012	5/4/2012	5/4/2012	5/23/2012
Sample Depth		-	-	-	-	-	-
Sample Type							
Excavation Status		<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Excavated</i>
		<i>Units</i>					
<i>SVOCs (continued)</i>							
Diethyl phthalate	µg/kg	180 U	370 U	6.2 J	--	--	410 U
Dimethyl phthalate	µg/kg	180 U	370 U	18 U	--	--	410 U
Di-n-butylphthalate (DBP)	µg/kg	710 U	450 J	73 U	--	--	1600 U
Di-n-octyl phthalate (DnOP)	µg/kg	180 U	630	18 U	--	--	410 U
Fluoranthene	µg/kg	320	1900	83	--	--	1200
Fluorene	µg/kg	350 U	240 J	2.3 J	--	--	170 J
Hexachlorobenzene	µg/kg	180 U	370 U	18 U	--	--	410 U
Hexachlorobutadiene	µg/kg	180 U	370 U	18 U	--	--	410 U
Hexachlorocyclopentadiene	µg/kg	180 U	370 U	18 U	--	--	410 U
Hexachloroethane	µg/kg	180 U	370 U	18 U	--	--	410 U
Indeno(1,2,3-cd)pyrene	µg/kg	90 J	690 J	33 J	--	--	420 J
Isophorone	µg/kg	180 U	370 U	18 U	--	--	410 U
Naphthalene	µg/kg	180 U	300 J	18 U	--	--	1800*
Nitrobenzene	µg/kg	180 U	370 U	18 U	--	--	410 U
N-Nitrosodi-n-propylamine	µg/kg	180 U	370 U	18 U	--	--	410 U
N-Nitrosodiphenylamine	µg/kg	180 U	370 U	18 U	--	--	410 U
Pentachlorophenol	µg/kg	1800 U	3700 U	180 U	--	--	4100 U
Phenanthrene	µg/kg	230	2700*	45	--	--	5100*
Phenol	µg/kg	1800 U	3700 U	180 U	--	--	4100 U
Pyrene	µg/kg	390	2000	74	--	--	1300
<i>Volatile Organic Compounds (VOCs)</i>							
1,1,1-Trichloroethane	µg/kg	53 U	55 U	50 U	--	--	67 U
1,1,2,2-Tetrachloroethane	µg/kg	53 U	55 U	50 U	--	--	67 U
1,1,2-Trichloroethane	µg/kg	53 U	55 U	50 U	--	--	67 U
1,1-Dichloroethane	µg/kg	53 U	55 U	50 U	--	--	67 U
1,1-Dichloroethene	µg/kg	53 U	55 U	50 U	--	--	67 U
1,2,4-Trichlorobenzene	µg/kg	53 U	55 U	50 U	--	--	67 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	270 U	280 U	250 U	--	--	340 U
1,2-Dibromoethane ⁽²⁾	µg/kg	53 U	55 U	50 U	--	--	67 U
1,2-Dichlorobenzene	µg/kg	53 U	55 U	50 U	--	--	67 U
1,2-Dichloroethane	µg/kg	53 U	55 U	50 U	--	--	67 U
1,2-Dichloropropane	µg/kg	53 U	55 U	50 U	--	--	67 U
1,3-Dichlorobenzene	µg/kg	53 U	55 U	50 U	--	--	67 U
1,4-Dichlorobenzene	µg/kg	53 U	55 U	50 U	--	--	67 U
2-Butanone ⁽³⁾	µg/kg	800 U	830 U	760 U	--	--	1000 U
2-Hexanone	µg/kg	2700 U	280 J	2500 U	--	--	3400 U
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	2700 U	150 J	2500 U	--	--	390 J
Acetone	µg/kg	800 U	830 U	760 U	--	--	220 J
Benzene	µg/kg	53 U	55 U	50 U	--	--	67 U
Bromodichloromethane	µg/kg	53 U	55 U	50 U	--	--	67 U
Bromoform	µg/kg	53 U	55 U	50 U	--	--	67 U

TABLE 4

SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		<i>Stained Soil 2</i>	<i>Stained Soil Below Pipe - Q-20</i>	<i>Soil Pile - Q-20</i>	<i>Substation K-1</i>	<i>Substation K-2</i>	<i>Unstained Seam - A-10 to A-12</i>
Sample Identification		SO-17360-042712-EB-002	SO-17360-051012-EB-001	SO-17360-051012-EB-002	SO-17360-050412-EB-001	SO-17360-050412-EB-002	SO-17360-052312-EB-005
Sample Date		4/27/2012	5/10/2012	5/10/2012	5/4/2012	5/4/2012	5/23/2012
Sample Depth		-	-	-	-	-	-
Sample Type							
Excavation Status		<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Excavated</i>
		<i>Units</i>					
<i>VOCs (continued)</i>							
Bromomethane (Methyl bromide)	µg/kg	53 U	55 U	50 U	--	--	36 J
Carbon disulfide	µg/kg	270 U	280 U	250 U	--	--	340 U
Carbon tetrachloride	µg/kg	53 U	55 U	50 U	--	--	67 U
Chlorobenzene	µg/kg	53 U	55 U	50 U	--	--	67 U
Chloroethane	µg/kg	53 U	55 U	50 U	--	--	67 U
Chloroform (Trichloromethane)	µg/kg	53 U	55 U	50 U	--	--	67 U
Chloromethane (Methyl chloride)	µg/kg	53 U	55 U	50 U	--	--	67 U
cis-1,2-Dichloroethene	µg/kg	53 U	55 U	50 U	--	--	67 U
cis-1,3-Dichloropropene	µg/kg	53 U	55 U	50 U	--	--	67 U
Cyclohexane	µg/kg	270 U	280 U	250 U	--	--	340 U
Dibromochloromethane	µg/kg	53 U	55 U	50 U	--	--	67 U
Dichlorodifluoromethane (CFC-12)	µg/kg	53 U	55 U	50 U	--	--	67 U
Ethylbenzene	µg/kg	53 U	40 J	50 U	--	--	48 J
Isopropyl benzene	µg/kg	53 U	72	50 U	--	--	25 J
Methyl acetate	µg/kg	270 U	380 U	250 U	--	--	380
Methyl cyclohexane	µg/kg	270 U	69 J	250 U	--	--	100 J
Methyl tert butyl ether (MTBE)	µg/kg	53 U	55 U	50 U	--	--	67 U
Methylene chloride	µg/kg	32 J	110 U	100 U	--	--	360 U
Styrene	µg/kg	53 U	76	50 U	--	--	67 U
Tetrachloroethene	µg/kg	53 U	55 U	50 U	--	--	130 ^{NS}
Toluene	µg/kg	53 U	21 J	50 U	--	--	34 J
trans-1,2-Dichloroethene	µg/kg	53 U	55 U	50 U	--	--	67 U
trans-1,3-Dichloropropene	µg/kg	53 U	55 U	50 U	--	--	67 U
Trichloroethene	µg/kg	88	14 J	50 U	--	--	67 U
Trichlorofluoromethane (CFC-11)	µg/kg	53 U	55 U	50 U	--	--	67 U
Trifluorotrchloroethane (Freon 113)	µg/kg	53 U	55 U	50 U	--	--	67 U
Vinyl chloride	µg/kg	43 U	44 U	40 U	--	--	54 U
Xylenes (total)	µg/kg	160 U	260	150 U	--	--	290

Notes:

See Table 1 for applicable criteria and notes.

TABLE 4
 SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
 SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
 FORMER GRAND RAPIDS METAL PLANT
 WYOMING, MICHIGAN

Sample Location		SB188-12	SB188-12	SB188-12
Sample Identification		SO-17360-052312-EB-001	SO-17360-052312-EB-002	SO-17360-052312-EB-003
Sample Date		5/23/2012	5/23/2012	5/23/2012
Sample Depth		(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS
Sample Type				Duplicate
Excavation Status		Unexcavated	Unexcavated	Unexcavated
	Units			
Metals				
Antimony	µg/kg	--	--	--
Arsenic	µg/kg	--	--	--
Barium	µg/kg	--	--	--
Beryllium	µg/kg	--	--	--
Cadmium	µg/kg	--	--	--
Chromium	µg/kg	--	--	--
Cobalt	µg/kg	--	--	--
Copper	µg/kg	--	--	--
Iron	µg/kg	--	--	--
Lead	µg/kg	--	--	--
Lead - coarse fraction	µg/kg	--	--	--
Lead - fine fraction	µg/kg	--	--	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--
Manganese	µg/kg	--	--	--
Mercury	µg/kg	--	--	--
Molybdenum	µg/kg	--	--	--
Nickel	µg/kg	--	--	--
Selenium	µg/kg	--	--	--
Silver	µg/kg	--	--	--
Thallium	µg/kg	--	--	--
Vanadium	µg/kg	--	--	--
Zinc	µg/kg	--	--	--
PCBs				
Aroclor-1016 (PCB-1016)	µg/kg	340 U	350 U	340 U
Aroclor-1221 (PCB-1221)	µg/kg	340 U	350 U	340 U
Aroclor-1232 (PCB-1232)	µg/kg	340 U	350 U	340 U
Aroclor-1242 (PCB-1242)	µg/kg	340 U	350 U	340 U
Aroclor-1248 (PCB-1248)	µg/kg	8.8 J	5.1 J	340 U
Aroclor-1254 (PCB-1254)	µg/kg	19 J	5.9 J	340 U
Aroclor-1260 (PCB-1260)	µg/kg	15 J	10 J	11 J
Total PCBs	µg/kg	42.8 J	21 J	11 J

TABLE 4

SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		SB188-12	SB188-12	SB188-12
Sample Identification		SO-17360-052312-EB-001	SO-17360-052312-EB-002	SO-17360-052312-EB-003
Sample Date		5/23/2012	5/23/2012	5/23/2012
Sample Depth		(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS
Sample Type				Duplicate
Excavation Status		Unexcavated	Unexcavated	Unexcavated
	Units			
<i>Semi-Volatile Organic Compounds (SVOCs)</i>				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/kg	--	--	--
2,4,5-Trichlorophenol	µg/kg	--	--	--
2,4,6-Trichlorophenol	µg/kg	--	--	--
2,4-Dichlorophenol	µg/kg	--	--	--
2,4-Dimethylphenol	µg/kg	--	--	--
2,4-Dinitrophenol	µg/kg	--	--	--
2,4-Dinitrotoluene	µg/kg	--	--	--
2,6-Dinitrotoluene	µg/kg	--	--	--
2-Chloronaphthalene	µg/kg	--	--	--
2-Chlorophenol	µg/kg	--	--	--
2-Methylnaphthalene	µg/kg	--	--	--
2-Methylphenol	µg/kg	--	--	--
2-Nitroaniline	µg/kg	--	--	--
2-Nitrophenol	µg/kg	--	--	--
3,3'-Dichlorobenzidine	µg/kg	--	--	--
3-Nitroaniline	µg/kg	--	--	--
4,6-Dinitro-2-methylphenol	µg/kg	--	--	--
4-Bromophenyl phenyl ether	µg/kg	--	--	--
4-Chloro-3-methylphenol	µg/kg	--	--	--
4-Chloroaniline	µg/kg	--	--	--
4-Chlorophenyl phenyl ether	µg/kg	--	--	--
4-Methylphenol	µg/kg	--	--	--
4-Nitroaniline	µg/kg	--	--	--
4-Nitrophenol	µg/kg	--	--	--
Acenaphthene	µg/kg	--	--	--
Acenaphthylene	µg/kg	--	--	--
Acetophenone	µg/kg	--	--	--
Anthracene	µg/kg	--	--	--
Atrazine	µg/kg	--	--	--
Benzaldehyde	µg/kg	--	--	--
Benzo(a)anthracene	µg/kg	--	--	--
Benzo(a)pyrene	µg/kg	--	--	--
Benzo(b)fluoranthene	µg/kg	--	--	--
Benzo(g,h,i)perylene	µg/kg	--	--	--
Benzo(k)fluoranthene	µg/kg	--	--	--
Biphenyl (1,1-Biphenyl)	µg/kg	--	--	--
bis(2-Chloroethoxy)methane	µg/kg	--	--	--
bis(2-Chloroethyl)ether	µg/kg	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	--	--
Butyl benzylphthalate (BBP)	µg/kg	--	--	--
Caprolactam	µg/kg	--	--	--
Carbazole	µg/kg	--	--	--
Chrysene	µg/kg	--	--	--
Dibenz(a,h)anthracene	µg/kg	--	--	--
Dibenzofuran	µg/kg	--	--	--

TABLE 4

SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	SB188-12	SB188-12	SB188-12
Sample Identification	SO-17360-052312-EB-001	SO-17360-052312-EB-002	SO-17360-052312-EB-003
Sample Date	5/23/2012	5/23/2012	5/23/2012
Sample Depth	(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS
Sample Type			Duplicate
Excavation Status	Unexcavated	Unexcavated	Unexcavated
	Units		
<i>SVOCs (continued)</i>			
Diethyl phthalate	µg/kg	--	--
Dimethyl phthalate	µg/kg	--	--
Di-n-butylphthalate (DBP)	µg/kg	--	--
Di-n-octyl phthalate (DnOP)	µg/kg	--	--
Fluoranthene	µg/kg	--	--
Fluorene	µg/kg	--	--
Hexachlorobenzene	µg/kg	--	--
Hexachlorobutadiene	µg/kg	--	--
Hexachlorocyclopentadiene	µg/kg	--	--
Hexachloroethane	µg/kg	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	--	--
Isophorone	µg/kg	--	--
Naphthalene	µg/kg	--	--
Nitrobenzene	µg/kg	--	--
N-Nitrosodi-n-propylamine	µg/kg	--	--
N-Nitrosodiphenylamine	µg/kg	--	--
Pentachlorophenol	µg/kg	--	--
Phenanthrene	µg/kg	--	--
Phenol	µg/kg	--	--
Pyrene	µg/kg	--	--
<i>Volatile Organic Compounds (VOCs)</i>			
1,1,1-Trichloroethane	µg/kg	--	--
1,1,2,2-Tetrachloroethane	µg/kg	--	--
1,1,2-Trichloroethane	µg/kg	--	--
1,1-Dichloroethane	µg/kg	--	--
1,1-Dichloroethene	µg/kg	--	--
1,2,4-Trichlorobenzene	µg/kg	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	--	--
1,2-Dibromoethane ⁽²⁾	µg/kg	--	--
1,2-Dichlorobenzene	µg/kg	--	--
1,2-Dichloroethane	µg/kg	--	--
1,2-Dichloropropane	µg/kg	--	--
1,3-Dichlorobenzene	µg/kg	--	--
1,4-Dichlorobenzene	µg/kg	--	--
2-Butanone ⁽³⁾	µg/kg	--	--
2-Hexanone	µg/kg	--	--
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	--	--
Acetone	µg/kg	--	--
Benzene	µg/kg	--	--
Bromodichloromethane	µg/kg	--	--
Bromoform	µg/kg	--	--

TABLE 4

SUMMARY OF ANALYTICAL RESULTS FOR GRAB SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	SB188-12	SB188-12	SB188-12
Sample Identification	SO-17360-052312-EB-001	SO-17360-052312-EB-002	SO-17360-052312-EB-003
Sample Date	5/23/2012	5/23/2012	5/23/2012
Sample Depth	(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS
Sample Type			Duplicate
Excavation Status	Unexcavated	Unexcavated	Unexcavated
	Units		
<i>VOCs (continued)</i>			
Bromomethane (Methyl bromide)	µg/kg	--	--
Carbon disulfide	µg/kg	--	--
Carbon tetrachloride	µg/kg	--	--
Chlorobenzene	µg/kg	--	--
Chloroethane	µg/kg	--	--
Chloroform (Trichloromethane)	µg/kg	--	--
Chloromethane (Methyl chloride)	µg/kg	--	--
cis-1,2-Dichloroethene	µg/kg	--	--
cis-1,3-Dichloropropene	µg/kg	--	--
Cyclohexane	µg/kg	--	--
Dibromochloromethane	µg/kg	--	--
Dichlorodifluoromethane (CFC-12)	µg/kg	--	--
Ethylbenzene	µg/kg	--	--
Isopropyl benzene	µg/kg	--	--
Methyl acetate	µg/kg	--	--
Methyl cyclohexane	µg/kg	--	--
Methyl tert butyl ether (MTBE)	µg/kg	--	--
Methylene chloride	µg/kg	--	--
Styrene	µg/kg	--	--
Tetrachloroethene	µg/kg	--	--
Toluene	µg/kg	--	--
trans-1,2-Dichloroethene	µg/kg	--	--
trans-1,3-Dichloropropene	µg/kg	--	--
Trichloroethene	µg/kg	--	--
Trichlorofluoromethane (CFC-11)	µg/kg	--	--
Trifluorotrchloroethane (Freon 113)	µg/kg	--	--
Vinyl chloride	µg/kg	--	--
Xylenes (total)	µg/kg	--	--

Notes:

See Table 1 for applicable criteria and notes.

TABLE 5
SUMMARY OF ANALYTICAL RESULTS FOR SPLP SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		<i>Seam 2</i>	<i>Seam 3</i>	<i>Seam 4</i>	<i>Seam 4</i>	<i>Stained Seam - A-10 to A-12</i>	<i>Stained Soil 1</i>	<i>Stained Soil Below Pipe - Q-20</i>	<i>Soil Pile - Q-20</i>
Sample Identification		SO-17360-041712-EB-001	SO-07360-041712-EB-002	SO-07360-041712-EB-003	SO-17360-041712-EB-004	SO-17360-052312-EB-004	SO-17360-051812-EB-001	SO-17360-051012-EB-001	SO-17360-051012-EB-002
Sample Date		4/17/2012	4/17/2012	4/17/2012	4/17/2012	5/23/2012	5/18/2012	5/10/2012	5/10/2012
Sample Depth		-	-	-	-	-	-	-	-
Sample Type					<i>Duplicate</i>				
Excavation Status		<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Excavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>
	<i>Units</i>								
<i>SPLP - Metals</i>									
Arsenic	mg/L	--	--	0.0050 U	0.0017 J	--	--	--	--
Chromium	mg/L	0.010 U	0.010 U	0.010 U	0.010 U	--	--	--	--
Cobalt	mg/L	0.020 U	0.00057 J	0.020 U	0.020 U	--	--	--	--
Copper	mg/L	--	--	--	0.0040 U	--	--	--	--
Manganese	mg/L	0.050 U	0.0076 J	0.0080 J	0.0087 J	--	--	--	0.0036 J
Selenium	mg/L	0.0050 U	0.0050 U	0.0050 U	0.0050 U	--	--	--	--
Silver	mg/L	0.00020 U	0.00021 U	--	--	--	--	--	--
Zinc	mg/L	--	--	0.050 U	0.050 U	--	--	--	--
<i>SPLP - SVOCs</i>									
Fluoranthene	mg/L	0.000080 J	0.000080 J	--	--	--	--	--	--
Phenanthrene	mg/L	0.00012 J	--	--	--	--	0.0015	0.0016 J	--

Notes:

See Table 2 for applicable criteria and notes.

TABLE 6

SUMMARY OF ANALYTICAL RESULTS FOR SB77-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	SB177-12	SB177-12	SB178-12	SB178-12	SB178-12	SB179-12	SB179-12	SB180-12	
Sample Identification	S-17360-042412-EM-047	S-17360-042412-EM-048	S-17360-042412-EM-029	S-17360-042412-EM-030	S-17360-042412-EM-031	S-17360-042412-EM-035	S-17360-042412-EM-036	S-17360-042412-EM-041	
Sample Date	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	
Sample Depth	(0-2) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(0-2) ft BGS	
Sample Type					Duplicate				
Excavated Status	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	
	Units								
Metals									
Antimony	µg/kg	--	--	--	--	--	--	--	
Arsenic	µg/kg	--	--	--	--	--	--	--	
Barium	µg/kg	--	--	--	--	--	--	--	
Beryllium	µg/kg	--	--	--	--	--	--	--	
Cadmium	µg/kg	--	--	--	--	--	--	--	
Chromium	µg/kg	--	--	--	--	--	--	--	
Cobalt	µg/kg	--	--	--	--	--	--	--	
Copper	µg/kg	--	--	--	--	--	--	--	
Iron	µg/kg	--	--	--	--	--	--	--	
Lead	µg/kg	--	--	--	--	--	--	--	
Lead - coarse fraction	µg/kg	--	--	--	--	--	--	--	
Lead - fine fraction	µg/kg	--	--	--	--	--	--	--	
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--	--	--	--	
Manganese	µg/kg	--	--	--	--	--	--	--	
Mercury	µg/kg	--	--	--	--	--	--	--	
Molybdenum	µg/kg	--	--	--	--	--	--	--	
Nickel	µg/kg	--	--	--	--	--	--	--	
Selenium	µg/kg	--	--	--	--	--	--	--	
Silver	µg/kg	--	--	--	--	--	--	--	
Thallium	µg/kg	--	--	--	--	--	--	--	
Vanadium	µg/kg	--	--	--	--	--	--	--	
Zinc	µg/kg	--	--	--	--	--	--	--	
PCBs									
Aroclor-1016 (PCB-1016)	µg/kg	--	--	--	--	--	--	--	
Aroclor-1221 (PCB-1221)	µg/kg	--	--	--	--	--	--	--	
Aroclor-1232 (PCB-1232)	µg/kg	--	--	--	--	--	--	--	
Aroclor-1242 (PCB-1242)	µg/kg	--	--	--	--	--	--	--	
Aroclor-1248 (PCB-1248)	µg/kg	--	--	--	--	--	--	--	
Aroclor-1254 (PCB-1254)	µg/kg	--	--	--	--	--	--	--	
Aroclor-1260 (PCB-1260)	µg/kg	--	--	--	--	--	--	--	
Total PCBs	µg/kg	--	--	--	--	--	--	--	

TABLE 6

SUMMARY OF ANALYTICAL RESULTS FOR SB77-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	SB177-12	SB177-12	SB178-12	SB178-12	SB178-12	SB179-12	SB179-12	SB180-12
Sample Identification	S-17360-042412-EM-047	S-17360-042412-EM-048	S-17360-042412-EM-029	S-17360-042412-EM-030	S-17360-042412-EM-031	S-17360-042412-EM-035	S-17360-042412-EM-036	S-17360-042412-EM-041
Sample Date	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012
Sample Depth	(0-2) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(0-2) ft BGS
Sample Type					Duplicate			
Excavated Status	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated
Units								
<i>Semi-Volatile Organic Compounds (SVOCs)</i>								
2,2-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/kg	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/kg	--	--	--	--	--	--	--
2,4-Dichlorophenol	µg/kg	--	--	--	--	--	--	--
2,4-Dimethylphenol	µg/kg	--	--	--	--	--	--	--
2,4-Dinitrophenol	µg/kg	--	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/kg	--	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/kg	--	--	--	--	--	--	--
2-Chloronaphthalene	µg/kg	--	--	--	--	--	--	--
2-Chlorophenol	µg/kg	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/kg	11 J	350 U	11 J	1800 U	12 J	2.5 J	350 U
2-Methylphenol	µg/kg	--	--	--	--	--	--	--
2-Nitroaniline	µg/kg	--	--	--	--	--	--	--
2-Nitrophenol	µg/kg	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	µg/kg	--	--	--	--	--	--	--
3-Nitroaniline	µg/kg	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/kg	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	µg/kg	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/kg	--	--	--	--	--	--	--
4-Chloroaniline	µg/kg	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	µg/kg	--	--	--	--	--	--	--
4-Methylphenol	µg/kg	--	--	--	--	--	--	--
4-Nitroaniline	µg/kg	--	--	--	--	--	--	--
4-Nitrophenol	µg/kg	--	--	--	--	--	--	--
Acenaphthene	µg/kg	110 J	22 J	350 U	42 J	210 J	350 U	350 U
Acenaphthylene	µg/kg	3.7 J	350 U	350 U	11 J	12 J	350 U	350 U
Acetophenone	µg/kg	--	--	--	--	--	--	--
Anthracene	µg/kg	240 J	47 J	5 J	140 J	490 J	350 U	350 U
Atrazine	µg/kg	--	--	--	--	--	--	--
Benzaldehyde	µg/kg	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/kg	870	100 J	34 J	900 J	1900	30 J	1.9 J
Benzo(a)pyrene	µg/kg	560	95 J	25 J	650 J	1200 J	17 J	1.9 J
Benzo(b)fluoranthene	µg/kg	1000	150 J	49 J	1200 J	1900	37 J	2.2 J
Benzo(g,h,i)perylene	µg/kg	370	51 J	15 J	460 J	640 J	17 J	1.9 J
Benzo(k)fluoranthene	µg/kg	310 J	55 J	19 J	240 J	680 J	350 U	350 U
Biphenyl (1,1-Biphenyl)	µg/kg	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/kg	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/kg	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	µg/kg	--	--	--	--	--	--	--
Caprolactam	µg/kg	--	--	--	--	--	--	--
Carbazole	µg/kg	--	--	--	--	--	--	--
Chrysene	µg/kg	560	90 J	29 J	500 J	1200 J	25 J	1.9 J
Dibenz(a,h)anthracene	µg/kg	22 J	4.3 J	5.4 J	73 J	110 J	4.3 J	350 U
Dibenzofuran	µg/kg	--	--	--	--	--	--	--

TABLE 6

SUMMARY OF ANALYTICAL RESULTS FOR SB77-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	SB177-12	SB177-12	SB178-12	SB178-12	SB178-12	SB179-12	SB179-12	SB180-12	
Sample Identification	S-17360-042412-EM-047	S-17360-042412-EM-048	S-17360-042412-EM-029	S-17360-042412-EM-030	S-17360-042412-EM-031	S-17360-042412-EM-035	S-17360-042412-EM-036	S-17360-042412-EM-041	
Sample Date	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	
Sample Depth	(0-2) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(0-2) ft BGS	
Sample Type					Duplicate				
Excavated Status	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	
Units									
SVOCs (continued)									
Diethyl phthalate	µg/kg	--	--	--	--	--	--	--	
Dimethyl phthalate	µg/kg	--	--	--	--	--	--	--	
Di-n-butylphthalate (DBP)	µg/kg	--	--	--	--	--	--	--	
Di-n-octyl phthalate (DnOP)	µg/kg	--	--	--	--	--	--	--	
Fluoranthene	µg/kg	1300	270 J	45 J	1200 J	2700	25 J	350 U	330 J
Fluorene	µg/kg	91 J	17 J	350 U	38 J	240 J	350 U	350 U	34 J
Hexachlorobenzene	µg/kg	--	--	--	--	--	--	--	
Hexachlorobutadiene	µg/kg	--	--	--	--	--	--	--	
Hexachlorocyclopentadiene	µg/kg	--	--	--	--	--	--	--	
Hexachloroethane	µg/kg	--	--	--	--	--	--	--	
Indeno(1,2,3-cd)pyrene	µg/kg	510	52 J	15 J	320 J	790 J	14 J	1.9 J	86 J
Isophorone	µg/kg	--	--	--	--	--	--	--	
Naphthalene	µg/kg	21 J	3.2 J	9.3 J	1800 U	11 J	350 U	350 U	6 J
Nitrobenzene	µg/kg	--	--	--	--	--	--	--	
N-Nitrosodi-n-propylamine	µg/kg	--	--	--	--	--	--	--	
N-Nitrosodiphenylamine	µg/kg	--	--	--	--	--	--	--	
Pentachlorophenol	µg/kg	--	--	--	--	--	--	--	
Phenanthrene	µg/kg	1200	160 J	21 J	580 J	2400 ^a	11 J	1.1 J	320 J
Phenol	µg/kg	--	--	--	--	--	--	--	
Pyrene	µg/kg	1100	190 J	45 J	1100 J	2800	29 J	350 U	410
Volatile Organic Compounds (VOCs)									
1,1,1-Trichloroethane	µg/kg	--	--	--	--	--	--	--	
1,1,2,2-Tetrachloroethane	µg/kg	--	--	--	--	--	--	--	
1,1,2-Trichloroethane	µg/kg	--	--	--	--	--	--	--	
1,1-Dichloroethane	µg/kg	--	--	--	--	--	--	--	
1,1-Dichloroethene	µg/kg	--	--	--	--	--	--	--	
1,2,4-Trichlorobenzene	µg/kg	--	--	--	--	--	--	--	
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	--	--	--	--	--	--	--	
1,2-Dibromoethane ⁽²⁾	µg/kg	--	--	--	--	--	--	--	
1,2-Dichlorobenzene	µg/kg	--	--	--	--	--	--	--	
1,2-Dichloroethane	µg/kg	--	--	--	--	--	--	--	
1,2-Dichloropropane	µg/kg	--	--	--	--	--	--	--	
1,3-Dichlorobenzene	µg/kg	--	--	--	--	--	--	--	
1,4-Dichlorobenzene	µg/kg	--	--	--	--	--	--	--	
2-Butanone ⁽³⁾	µg/kg	--	--	--	--	--	--	--	
2-Hexanone	µg/kg	--	--	--	--	--	--	--	
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	--	--	--	--	--	--	--	
Acetone	µg/kg	--	--	--	--	--	--	--	
Benzene	µg/kg	--	--	--	--	--	--	--	
Bromodichloromethane	µg/kg	--	--	--	--	--	--	--	
Bromoform	µg/kg	--	--	--	--	--	--	--	

TABLE 6

SUMMARY OF ANALYTICAL RESULTS FOR SB77-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	SB177-12	SB177-12	SB178-12	SB178-12	SB178-12	SB179-12	SB179-12	SB180-12	
Sample Identification	S-17360-042412-EM-047	S-17360-042412-EM-048	S-17360-042412-EM-029	S-17360-042412-EM-030	S-17360-042412-EM-031	S-17360-042412-EM-035	S-17360-042412-EM-036	S-17360-042412-EM-041	
Sample Date	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	4/24/2012	
Sample Depth	(0-2) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(0-2) ft BGS	
Sample Type					Duplicate				
Excavated Status	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	
	Units								
VOCs (continued)									
Bromomethane (Methyl bromide)	µg/kg	--	--	--	--	--	--	--	
Carbon disulfide	µg/kg	--	--	--	--	--	--	--	
Carbon tetrachloride	µg/kg	--	--	--	--	--	--	--	
Chlorobenzene	µg/kg	--	--	--	--	--	--	--	
Chloroethane	µg/kg	--	--	--	--	--	--	--	
Chloroform (Trichloromethane)	µg/kg	--	--	--	--	--	--	--	
Chloromethane (Methyl chloride)	µg/kg	--	--	--	--	--	--	--	
cis-1,2-Dichloroethene	µg/kg	--	--	--	--	--	--	--	
cis-1,3-Dichloropropene	µg/kg	--	--	--	--	--	--	--	
Cyclohexane	µg/kg	--	--	--	--	--	--	--	
Dibromochloromethane	µg/kg	--	--	--	--	--	--	--	
Dichlorodifluoromethane (CFC-12)	µg/kg	--	--	--	--	--	--	--	
Ethylbenzene	µg/kg	--	--	--	--	--	--	--	
Isopropyl benzene	µg/kg	--	--	--	--	--	--	--	
Methyl acetate	µg/kg	--	--	--	--	--	--	--	
Methyl cyclohexane	µg/kg	--	--	--	--	--	--	--	
Methyl tert butyl ether (MTBE)	µg/kg	--	--	--	--	--	--	--	
Methylene chloride	µg/kg	--	--	--	--	--	--	--	
Styrene	µg/kg	--	--	--	--	--	--	--	
Tetrachloroethene	µg/kg	--	--	--	--	--	--	--	
Toluene	µg/kg	--	--	--	--	--	--	--	
trans-1,2-Dichloroethene	µg/kg	--	--	--	--	--	--	--	
trans-1,3-Dichloropropene	µg/kg	--	--	--	--	--	--	--	
Trichloroethene	µg/kg	--	--	--	--	--	--	--	
Trichlorofluoromethane (CFC-11)	µg/kg	--	--	--	--	--	--	--	
Trifluorotrchloroethane (Freon 113)	µg/kg	--	--	--	--	--	--	--	
Vinyl chloride	µg/kg	--	--	--	--	--	--	--	
Xylenes (total)	µg/kg	--	--	--	--	--	--	--	

Notes:

See Table 1 for applicable criteria and notes.

TABLE 6

SUMMARY OF ANALYTICAL RESULTS FOR SB77-11 AREA SOIL SAMPLES
 SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
 FORMER GRAND RAPIDS METAL PLANT
 WYOMING, MICHIGAN

Sample Location		SB180-12	SB77-11 Excavation, NE Floor	SB77-11 Excavation, NW Floor	SB77-11 Excavation, NW Floor	SB77-11 Excavation, SE Floor	SB77-11 Excavation, SW Floor
Sample Identification		S-17360-042412-EM-042	SO-17360-061412-EB-028	SO-17360-061412-EB-029	SO-17360-061412-EB-030	SO-17360-061412-EB-032	SO-17360-061412-EB-031
Sample Date		4/24/2012	6/14/2012	6/14/2012	6/14/2012	6/14/2012	6/14/2012
Sample Depth		(2-4) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS
Sample Type					Duplicate		
Excavated Status		Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units						
Metals							
Antimony	µg/kg	--	--	--	--	--	--
Arsenic	µg/kg	--	--	--	--	--	--
Barium	µg/kg	--	--	--	--	--	--
Beryllium	µg/kg	--	--	--	--	--	--
Cadmium	µg/kg	--	--	--	--	--	--
Chromium	µg/kg	--	--	--	--	--	--
Cobalt	µg/kg	--	--	--	--	--	--
Copper	µg/kg	--	--	--	--	--	--
Iron	µg/kg	--	--	--	--	--	--
Lead	µg/kg	--	--	--	--	--	--
Lead - coarse fraction	µg/kg	--	--	--	--	--	--
Lead - fine fraction	µg/kg	--	--	--	--	--	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--	--	--
Manganese	µg/kg	--	--	--	--	--	--
Mercury	µg/kg	--	--	--	--	--	--
Molybdenum	µg/kg	--	--	--	--	--	--
Nickel	µg/kg	--	--	--	--	--	--
Selenium	µg/kg	--	--	--	--	--	--
Silver	µg/kg	--	--	--	--	--	--
Thallium	µg/kg	--	--	--	--	--	--
Vanadium	µg/kg	--	--	--	--	--	--
Zinc	µg/kg	--	--	--	--	--	--
PCBs							
Aroclor-1016 (PCB-1016)	µg/kg	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	µg/kg	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	µg/kg	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	µg/kg	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	µg/kg	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	µg/kg	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	µg/kg	--	--	--	--	--	--
Total PCBs	µg/kg	--	--	--	--	--	--

TABLE 6

SUMMARY OF ANALYTICAL RESULTS FOR SB77-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	SB180-12	SB77-11 Excavation, NE Floor	SB77-11 Excavation, NW Floor	SB77-11 Excavation, NW Floor	SB77-11 Excavation, SE Floor	SB77-11 Excavation, SW Floor
Sample Identification	S-17360-042412-EM-042	SO-17360-061412-EB-028	SO-17360-061412-EB-029	SO-17360-061412-EB-030	SO-17360-061412-EB-032	SO-17360-061412-EB-031
Sample Date	4/24/2012	6/14/2012	6/14/2012	6/14/2012	6/14/2012	6/14/2012
Sample Depth	(2-4) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS
Sample Type				Duplicate		
Excavated Status	Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
Units						
<i>Semi-Volatile Organic Compounds (SVOCs)</i>						
2,2-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	--	--	--	--	--
2,4,5-Trichlorophenol	µg/kg	--	--	--	--	--
2,4,6-Trichlorophenol	µg/kg	--	--	--	--	--
2,4-Dichlorophenol	µg/kg	--	--	--	--	--
2,4-Dimethylphenol	µg/kg	--	--	--	--	--
2,4-Dinitrophenol	µg/kg	--	--	--	--	--
2,4-Dinitrotoluene	µg/kg	--	--	--	--	--
2,6-Dinitrotoluene	µg/kg	--	--	--	--	--
2-Chloronaphthalene	µg/kg	--	--	--	--	--
2-Chlorophenol	µg/kg	--	--	--	--	--
2-Methylnaphthalene	µg/kg	350 U	3400 U	3500 U	3500 U	18 J
2-Methylphenol	µg/kg	--	--	--	--	--
2-Nitroaniline	µg/kg	--	--	--	--	--
2-Nitrophenol	µg/kg	--	--	--	--	--
3,3-Dichlorobenzidine	µg/kg	--	--	--	--	--
3-Nitroaniline	µg/kg	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/kg	--	--	--	--	--
4-Bromophenyl phenyl ether	µg/kg	--	--	--	--	--
4-Chloro-3-methylphenol	µg/kg	--	--	--	--	--
4-Chloroaniline	µg/kg	--	--	--	--	--
4-Chlorophenyl phenyl ether	µg/kg	--	--	--	--	--
4-Methylphenol	µg/kg	--	--	--	--	--
4-Nitroaniline	µg/kg	--	--	--	--	--
4-Nitrophenol	µg/kg	--	--	--	--	--
Acenaphthene	µg/kg	350 U	3400 U	3500 U	3500 U	33 J
Acenaphthylene	µg/kg	350 U	3400 U	3500 U	3500 U	3500 U
Acetophenone	µg/kg	--	--	--	--	--
Anthracene	µg/kg	350 U	3400 U	3500 U	3500 U	55 J
Atrazine	µg/kg	--	--	--	--	--
Benzaldehyde	µg/kg	--	--	--	--	--
Benzo(a)anthracene	µg/kg	2.2 J	46 J	40 J	25 J	37 J
Benzo(a)pyrene	µg/kg	2.2 J	43 J	55 J	3500 U	73 J
Benzo(b)fluoranthene	µg/kg	2.2 J	50 J	80 J	29 J	88 J
Benzo(g,h,i)perylene	µg/kg	350 U	36 J	36 J	18 J	40 J
Benzo(k)fluoranthene	µg/kg	350 U	39 J	47 J	3500 U	66 J
Biphenyl (1,1-Biphenyl)	µg/kg	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/kg	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/kg	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	--	--	--	--
Butyl benzylphthalate (BBP)	µg/kg	--	--	--	--	--
Caprolactam	µg/kg	--	--	--	--	--
Carbazole	µg/kg	--	--	--	--	--
Chrysene	µg/kg	350 U	54 J	44 J	22 J	48 J
Dibenz(a,h)anthracene	µg/kg	350 U	3400 U	3500 U	3500 U	3500 U
Dibenzofuran	µg/kg	--	--	--	--	--

TABLE 6

SUMMARY OF ANALYTICAL RESULTS FOR SB77-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		SB180-12	SB77-11 Excavation, NE Floor	SB77-11 Excavation, NW Floor	SB77-11 Excavation, NW Floor	SB77-11 Excavation, SE Floor	SB77-11 Excavation, SW Floor
Sample Identification		S-17360-042412-EM-042	SO-17360-061412-EB-028	SO-17360-061412-EB-029	SO-17360-061412-EB-030	SO-17360-061412-EB-032	SO-17360-061412-EB-031
Sample Date		4/24/2012	6/14/2012	6/14/2012	6/14/2012	6/14/2012	6/14/2012
Sample Depth		(2-4) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS
Sample Type					Duplicate		
Excavated Status		Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
Units							
SVOCs (continued)							
Diethyl phthalate	µg/kg	--	--	--	--	--	--
Dimethyl phthalate	µg/kg	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/kg	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/kg	--	--	--	--	--	--
Fluoranthene	µg/kg	2.2 J	79 J	91 J	22 J	70 J	430 J
Fluorene	µg/kg	350 U	3400 U	3500 U	3500 U	3500 U	26 J
Hexachlorobenzene	µg/kg	--	--	--	--	--	--
Hexachlorobutadiene	µg/kg	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/kg	--	--	--	--	--	--
Hexachloroethane	µg/kg	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	2.2 J	32 J	44 J	3500 U	40 J	110 J
Isophorone	µg/kg	--	--	--	--	--	--
Naphthalene	µg/kg	350 U	3400 U	3500 U	3500 U	3500 U	3500 U
Nitrobenzene	µg/kg	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	µg/kg	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/kg	--	--	--	--	--	--
Pentachlorophenol	µg/kg	--	--	--	--	--	--
Phenanthrene	µg/kg	2.2 J	50 J	73 J	33 J	44 J	310 J
Phenol	µg/kg	--	--	--	--	--	--
Pyrene	µg/kg	2.2 J	75 J	87 J	25 J	70 J	320 J
Volatile Organic Compounds (VOCs)							
1,1,1-Trichloroethane	µg/kg	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/kg	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/kg	--	--	--	--	--	--
1,1-Dichloroethane	µg/kg	--	--	--	--	--	--
1,1-Dichloroethene	µg/kg	--	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/kg	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	--	--	--	--	--	--
1,2-Dibromoethane ⁽²⁾	µg/kg	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/kg	--	--	--	--	--	--
1,2-Dichloroethane	µg/kg	--	--	--	--	--	--
1,2-Dichloropropane	µg/kg	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/kg	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/kg	--	--	--	--	--	--
2-Butanone ⁽³⁾	µg/kg	--	--	--	--	--	--
2-Hexanone	µg/kg	--	--	--	--	--	--
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	--	--	--	--	--	--
Acetone	µg/kg	--	--	--	--	--	--
Benzene	µg/kg	--	--	--	--	--	--
Bromodichloromethane	µg/kg	--	--	--	--	--	--
Bromoform	µg/kg	--	--	--	--	--	--

TABLE 6

SUMMARY OF ANALYTICAL RESULTS FOR SB77-11 AREA SOIL SAMPLES
 SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
 FORMER GRAND RAPIDS METAL PLANT
 WYOMING, MICHIGAN

Sample Location	SB180-12	SB77-11 Excavation, NE Floor	SB77-11 Excavation, NW Floor	SB77-11 Excavation, NW Floor	SB77-11 Excavation, SE Floor	SB77-11 Excavation, SW Floor
Sample Identification	S-17360-042412-EM-042	SO-17360-061412-EB-028	SO-17360-061412-EB-029	SO-17360-061412-EB-030	SO-17360-061412-EB-032	SO-17360-061412-EB-031
Sample Date	4/24/2012	6/14/2012	6/14/2012	6/14/2012	6/14/2012	6/14/2012
Sample Depth	(2-4) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS
Sample Type				Duplicate		
Excavated Status	Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
Units						
VOCs (continued)						
Bromomethane (Methyl bromide)	µg/kg	--	--	--	--	--
Carbon disulfide	µg/kg	--	--	--	--	--
Carbon tetrachloride	µg/kg	--	--	--	--	--
Chlorobenzene	µg/kg	--	--	--	--	--
Chloroethane	µg/kg	--	--	--	--	--
Chloroform (Trichloromethane)	µg/kg	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/kg	--	--	--	--	--
cis-1,2-Dichloroethene	µg/kg	--	--	--	--	--
cis-1,3-Dichloropropene	µg/kg	--	--	--	--	--
Cyclohexane	µg/kg	--	--	--	--	--
Dibromochloromethane	µg/kg	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/kg	--	--	--	--	--
Ethylbenzene	µg/kg	--	--	--	--	--
Isopropyl benzene	µg/kg	--	--	--	--	--
Methyl acetate	µg/kg	--	--	--	--	--
Methyl cyclohexane	µg/kg	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/kg	--	--	--	--	--
Methylene chloride	µg/kg	--	--	--	--	--
Styrene	µg/kg	--	--	--	--	--
Tetrachloroethene	µg/kg	--	--	--	--	--
Toluene	µg/kg	--	--	--	--	--
trans-1,2-Dichloroethene	µg/kg	--	--	--	--	--
trans-1,3-Dichloropropene	µg/kg	--	--	--	--	--
Trichloroethene	µg/kg	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/kg	--	--	--	--	--
Trifluorotrchloroethane (Freon 113)	µg/kg	--	--	--	--	--
Vinyl chloride	µg/kg	--	--	--	--	--
Xylenes (total)	µg/kg	--	--	--	--	--

Notes:
 See Table 1 for applicable criteria and notes.

TABLE 7

SUMMARY OF ANALYTICAL RESULTS FOR SB84-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	SB84-11 Excavation, East Wall	SB84-11 Excavation, E Floor	SB84-11 Excavation, Floor, NW Corner	SB84-11 Excavation, Floor, SE corner	SB84-11 Excavation, Floor, SW Corner
Sample Identification	SO-17360-061212-SM-006	SO-17360-061212-SM-008	SO-17360-061212-SM-010	SO-17360-061212-SM-007	SO-17360-061212-SM-009
Sample Date	6/12/2012	6/12/2012	6/12/2012	6/12/2012	6/12/2012
Sample Depth	(4-) ft BGS	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS
Sample Type					
Excavation Status	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units				
Metals					
Antimony	µg/kg	--	--	--	--
Arsenic	µg/kg	--	--	--	--
Barium	µg/kg	--	--	--	--
Beryllium	µg/kg	--	--	--	--
Cadmium	µg/kg	--	--	--	--
Chromium	µg/kg	--	--	--	--
Cobalt	µg/kg	--	--	--	--
Copper	µg/kg	--	--	--	--
Iron	µg/kg	--	--	--	--
Lead	µg/kg	--	--	--	--
Lead - coarse fraction	µg/kg	--	--	--	--
Lead - fine fraction	µg/kg	--	--	--	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--
Manganese	µg/kg	--	--	--	--
Mercury	µg/kg	--	--	--	--
Molybdenum	µg/kg	--	--	--	--
Nickel	µg/kg	--	--	--	--
Selenium	µg/kg	--	--	--	--
Silver	µg/kg	--	--	--	--
Thallium	µg/kg	--	--	--	--
Vanadium	µg/kg	--	--	--	--
Zinc	µg/kg	--	--	--	--
PCBs					
Aroclor-1016 (PCB-1016)	µg/kg	--	--	--	--
Aroclor-1221 (PCB-1221)	µg/kg	--	--	--	--
Aroclor-1232 (PCB-1232)	µg/kg	--	--	--	--
Aroclor-1242 (PCB-1242)	µg/kg	--	--	--	--
Aroclor-1248 (PCB-1248)	µg/kg	--	--	--	--
Aroclor-1254 (PCB-1254)	µg/kg	--	--	--	--
Aroclor-1260 (PCB-1260)	µg/kg	--	--	--	--
Total PCBs	µg/kg	--	--	--	--

TABLE 7

SUMMARY OF ANALYTICAL RESULTS FOR SB84-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		SB84-11 Excavation, East Wall	SB84-11 Excavation, E Floor	SB84-11 Excavation, Floor, NW Corner	SB84-11 Excavation, Floor, SE corner	SB84-11 Excavation, Floor, SW Corner
Sample Identification		SO-17360-061212-SM-006	SO-17360-061212-SM-008	SO-17360-061212-SM-010	SO-17360-061212-SM-007	SO-17360-061212-SM-009
Sample Date		6/12/2012	6/12/2012	6/12/2012	6/12/2012	6/12/2012
Sample Depth		(4-) ft BGS	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS
Sample Type						
Excavation Status		Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units					
<i>Semi-Volatile Organic Compounds (SVOCs)</i>						
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	--	--	--	--	--
2,4,5-Trichlorophenol	µg/kg	--	--	--	--	--
2,4,6-Trichlorophenol	µg/kg	--	--	--	--	--
2,4-Dichlorophenol	µg/kg	--	--	--	--	--
2,4-Dimethylphenol	µg/kg	--	--	--	--	--
2,4-Dinitrophenol	µg/kg	--	--	--	--	--
2,4-Dinitrotoluene	µg/kg	--	--	--	--	--
2,6-Dinitrotoluene	µg/kg	--	--	--	--	--
2-Chloronaphthalene	µg/kg	--	--	--	--	--
2-Chlorophenol	µg/kg	--	--	--	--	--
2-Methylnaphthalene	µg/kg	340 U	3400 U	3.6 J	3400 U	32 J
2-Methylphenol	µg/kg	--	--	--	--	--
2-Nitroaniline	µg/kg	--	--	--	--	--
2-Nitrophenol	µg/kg	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/kg	--	--	--	--	--
3-Nitroaniline	µg/kg	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/kg	--	--	--	--	--
4-Bromophenyl phenyl ether	µg/kg	--	--	--	--	--
4-Chloro-3-methylphenol	µg/kg	--	--	--	--	--
4-Chloroaniline	µg/kg	--	--	--	--	--
4-Chlorophenyl phenyl ether	µg/kg	--	--	--	--	--
4-Methylphenol	µg/kg	--	--	--	--	--
4-Nitroaniline	µg/kg	--	--	--	--	--
4-Nitrophenol	µg/kg	--	--	--	--	--
Acenaphthene	µg/kg	340 U	58 J	51 J	63 J	170 J
Acenaphthylene	µg/kg	340 U	3400 U	680 U	3400 U	3400 U
Acetophenone	µg/kg	--	--	--	--	--
Anthracene	µg/kg	340 U	83 J	120 J	92 J	300 J
Atrazine	µg/kg	--	--	--	--	--
Benzaldehyde	µg/kg	--	--	--	--	--
Benzo(a)anthracene	µg/kg	11 J	190 J	300 J	330 J	650 J
Benzo(a)pyrene	µg/kg	11 J	130 J	220 J	240 J	450 J
Benzo(b)fluoranthene	µg/kg	27 J	180 J	260 J	440 J	670 J
Benzo(g,h,i)perylene	µg/kg	17 J	190 J	140 J	250 J	400 J
Benzo(k)fluoranthene	µg/kg	11 J	91 J	130 J	130 J	270 J
Biphenyl (1,1-Biphenyl)	µg/kg	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/kg	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/kg	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	--	--	--	--
Butyl benzylphthalate (BBP)	µg/kg	--	--	--	--	--
Caprolactam	µg/kg	--	--	--	--	--
Carbazole	µg/kg	--	--	--	--	--
Chrysene	µg/kg	12 J	200 J	230 J	340 J	530 J
Dibenz(a,h)anthracene	µg/kg	17 J	3400 U	62 J	170 J	210 J
Dibenzofuran	µg/kg	--	--	--	--	--

TABLE 7

SUMMARY OF ANALYTICAL RESULTS FOR SB84-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		SB84-11 Excavation, East Wall	SB84-11 Excavation, E Floor	SB84-11 Excavation, Floor, NW Corner	SB84-11 Excavation, Floor, SE corner	SB84-11 Excavation, Floor, SW Corner
Sample Identification		SO-17360-061212-SM-006	SO-17360-061212-SM-008	SO-17360-061212-SM-010	SO-17360-061212-SM-007	SO-17360-061212-SM-009
Sample Date		6/12/2012	6/12/2012	6/12/2012	6/12/2012	6/12/2012
Sample Depth		(4-) ft BGS	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS
Sample Type						
Excavation Status		Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units					
SVOCs (continued)						
Diethyl phthalate	µg/kg	--	--	--	--	--
Dimethyl phthalate	µg/kg	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/kg	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/kg	--	--	--	--	--
Fluoranthene	µg/kg	25 J	510 J	690 D	860 J	1400 J
Fluorene	µg/kg	340 U	25 J	39 J	18 J	120 J
Hexachlorobenzene	µg/kg	--	--	--	--	--
Hexachlorobutadiene	µg/kg	--	--	--	--	--
Hexachlorocyclopentadiene	µg/kg	--	--	--	--	--
Hexachloroethane	µg/kg	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	19 J	180 J	130 J	230 J	370 J
Isophorone	µg/kg	--	--	--	--	--
Naphthalene	µg/kg	340 U	40 J	10 J	3400 U	95 J
Nitrobenzene	µg/kg	--	--	--	--	--
N-Nitrosodi-n-propylamine	µg/kg	--	--	--	--	--
N-Nitrosodiphenylamine	µg/kg	--	--	--	--	--
Pentachlorophenol	µg/kg	--	--	--	--	--
Phenanthrene	µg/kg	8.6 J	390 J	440 J	430 J	1200 J
Phenol	µg/kg	--	--	--	--	--
Pyrene	µg/kg	35 J	580 J	450 J	830 J	1100 J
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	µg/kg	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/kg	--	--	--	--	--
1,1,2-Trichloroethane	µg/kg	--	--	--	--	--
1,1-Dichloroethane	µg/kg	--	--	--	--	--
1,1-Dichloroethene	µg/kg	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/kg	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	--	--	--	--	--
1,2-Dibromoethane ⁽²⁾	µg/kg	--	--	--	--	--
1,2-Dichlorobenzene	µg/kg	--	--	--	--	--
1,2-Dichloroethane	µg/kg	--	--	--	--	--
1,2-Dichloropropane	µg/kg	--	--	--	--	--
1,3-Dichlorobenzene	µg/kg	--	--	--	--	--
1,4-Dichlorobenzene	µg/kg	--	--	--	--	--
2-Butanone ⁽³⁾	µg/kg	--	--	--	--	--
2-Hexanone	µg/kg	--	--	--	--	--
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	--	--	--	--	--
Acetone	µg/kg	--	--	--	--	--
Benzene	µg/kg	--	--	--	--	--
Bromodichloromethane	µg/kg	--	--	--	--	--
Bromoform	µg/kg	--	--	--	--	--

TABLE 7

SUMMARY OF ANALYTICAL RESULTS FOR SB84-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		SB84-11 Excavation, East Wall	SB84-11 Excavation, E Floor	SB84-11 Excavation, Floor, NW Corner	SB84-11 Excavation, Floor, SE corner	SB84-11 Excavation, Floor, SW Corner
Sample Identification		SO-17360-061212-SM-006	SO-17360-061212-SM-008	SO-17360-061212-SM-010	SO-17360-061212-SM-007	SO-17360-061212-SM-009
Sample Date		6/12/2012	6/12/2012	6/12/2012	6/12/2012	6/12/2012
Sample Depth		(4-) ft BGS	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS
Sample Type						
Excavation Status		Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units					
<i>VOCs (continued)</i>						
Bromomethane (Methyl bromide)	µg/kg	--	--	--	--	--
Carbon disulfide	µg/kg	--	--	--	--	--
Carbon tetrachloride	µg/kg	--	--	--	--	--
Chlorobenzene	µg/kg	--	--	--	--	--
Chloroethane	µg/kg	--	--	--	--	--
Chloroform (Trichloromethane)	µg/kg	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/kg	--	--	--	--	--
cis-1,2-Dichloroethene	µg/kg	--	--	--	--	--
cis-1,3-Dichloropropene	µg/kg	--	--	--	--	--
Cyclohexane	µg/kg	--	--	--	--	--
Dibromochloromethane	µg/kg	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/kg	--	--	--	--	--
Ethylbenzene	µg/kg	--	--	--	--	--
Isopropyl benzene	µg/kg	--	--	--	--	--
Methyl acetate	µg/kg	--	--	--	--	--
Methyl cyclohexane	µg/kg	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/kg	--	--	--	--	--
Methylene chloride	µg/kg	--	--	--	--	--
Styrene	µg/kg	--	--	--	--	--
Tetrachloroethene	µg/kg	--	--	--	--	--
Toluene	µg/kg	--	--	--	--	--
trans-1,2-Dichloroethene	µg/kg	--	--	--	--	--
trans-1,3-Dichloropropene	µg/kg	--	--	--	--	--
Trichloroethene	µg/kg	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/kg	--	--	--	--	--
Trifluorotrchloroethane (Freon 113)	µg/kg	--	--	--	--	--
Vinyl chloride	µg/kg	--	--	--	--	--
Xylenes (total)	µg/kg	--	--	--	--	--

Notes:

See Table 1 for applicable criteria and notes.

TABLE 7

SUMMARY OF ANALYTICAL RESULTS FOR SB84-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		SB84-11 Excavation, North Wall	SB84-11 Excavation, South Wall, East	SB84-11 Excavation, South Wall, West	SB84-11 Excavation, South Wall, West	SB84-11 Excavation, West Wall
Sample Identification		SO-17360-061212-SM-001	SO-17360-061212-SM-005	SO-17360-061212-SM-003	SO-17360-061212-SM-004	SO-17360-061212-SM-002
Sample Date		6/12/2012	6/12/2012	6/12/2012	6/12/2012	6/12/2012
Sample Depth		(3.5-) ft BGS	(4-) ft BGS	(4-) ft BGS	(4-) ft BGS	(3.5-) ft BGS
Sample Type					Duplicate	
Excavation Status		Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units					
Metals						
Antimony	µg/kg	--	--	--	--	--
Arsenic	µg/kg	--	--	--	--	--
Barium	µg/kg	--	--	--	--	--
Beryllium	µg/kg	--	--	--	--	--
Cadmium	µg/kg	--	--	--	--	--
Chromium	µg/kg	--	--	--	--	--
Cobalt	µg/kg	--	--	--	--	--
Copper	µg/kg	--	--	--	--	--
Iron	µg/kg	--	--	--	--	--
Lead	µg/kg	--	--	--	--	--
Lead - coarse fraction	µg/kg	--	--	--	--	--
Lead - fine fraction	µg/kg	--	--	--	--	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--	--
Manganese	µg/kg	--	--	--	--	--
Mercury	µg/kg	--	--	--	--	--
Molybdenum	µg/kg	--	--	--	--	--
Nickel	µg/kg	--	--	--	--	--
Selenium	µg/kg	--	--	--	--	--
Silver	µg/kg	--	--	--	--	--
Thallium	µg/kg	--	--	--	--	--
Vanadium	µg/kg	--	--	--	--	--
Zinc	µg/kg	--	--	--	--	--
PCBs						
Aroclor-1016 (PCB-1016)	µg/kg	--	--	--	--	--
Aroclor-1221 (PCB-1221)	µg/kg	--	--	--	--	--
Aroclor-1232 (PCB-1232)	µg/kg	--	--	--	--	--
Aroclor-1242 (PCB-1242)	µg/kg	--	--	--	--	--
Aroclor-1248 (PCB-1248)	µg/kg	--	--	--	--	--
Aroclor-1254 (PCB-1254)	µg/kg	--	--	--	--	--
Aroclor-1260 (PCB-1260)	µg/kg	--	--	--	--	--
Total PCBs	µg/kg	--	--	--	--	--

TABLE 7

SUMMARY OF ANALYTICAL RESULTS FOR SB84-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		SB84-11 Excavation, North Wall	SB84-11 Excavation, South Wall, East	SB84-11 Excavation, South Wall, West	SB84-11 Excavation, South Wall, West	SB84-11 Excavation, West Wall
Sample Identification		SO-17360-061212-SM-001	SO-17360-061212-SM-005	SO-17360-061212-SM-003	SO-17360-061212-SM-004	SO-17360-061212-SM-002
Sample Date		6/12/2012	6/12/2012	6/12/2012	6/12/2012	6/12/2012
Sample Depth		(3.5-) ft BGS	(4-) ft BGS	(4-) ft BGS	(4-) ft BGS	(3.5-) ft BGS
Sample Type					Duplicate	
Excavation Status		Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units					
<i>Semi-Volatile Organic Compounds (SVOCs)</i>						
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	--	--	--	--	--
2,4,5-Trichlorophenol	µg/kg	--	--	--	--	--
2,4,6-Trichlorophenol	µg/kg	--	--	--	--	--
2,4-Dichlorophenol	µg/kg	--	--	--	--	--
2,4-Dimethylphenol	µg/kg	--	--	--	--	--
2,4-Dinitrophenol	µg/kg	--	--	--	--	--
2,4-Dinitrotoluene	µg/kg	--	--	--	--	--
2,6-Dinitrotoluene	µg/kg	--	--	--	--	--
2-Chloronaphthalene	µg/kg	--	--	--	--	--
2-Chlorophenol	µg/kg	--	--	--	--	--
2-Methylnaphthalene	µg/kg	170 J	3500 U	130 J	36 J	1700 U
2-Methylphenol	µg/kg	--	--	--	--	--
2-Nitroaniline	µg/kg	--	--	--	--	--
2-Nitrophenol	µg/kg	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/kg	--	--	--	--	--
3-Nitroaniline	µg/kg	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/kg	--	--	--	--	--
4-Bromophenyl phenyl ether	µg/kg	--	--	--	--	--
4-Chloro-3-methylphenol	µg/kg	--	--	--	--	--
4-Chloroaniline	µg/kg	--	--	--	--	--
4-Chlorophenyl phenyl ether	µg/kg	--	--	--	--	--
4-Methylphenol	µg/kg	--	--	--	--	--
4-Nitroaniline	µg/kg	--	--	--	--	--
4-Nitrophenol	µg/kg	--	--	--	--	--
Acenaphthene	µg/kg	1600 J	3500 U	800 J	500 J	1700 U
Acenaphthylene	µg/kg	14000 U	3500 U	3400 U	3800 U	1700 U
Acetophenone	µg/kg	--	--	--	--	--
Anthracene	µg/kg	4800 J	26 J	1800 J	1100 J	1700 U
Atrazine	µg/kg	--	--	--	--	--
Benzaldehyde	µg/kg	--	--	--	--	--
Benzo(a)anthracene	µg/kg	15000 D	160 J	3200 J	2700 J	100 J
Benzo(a)pyrene	µg/kg	10000 J ^M	120 J	2100 J ^P	2000 J	91 J
Benzo(b)fluoranthene	µg/kg	14000 D	260 J	2600 J	2700 J	190 J
Benzo(g,h,i)perylene	µg/kg	6100 J	170 J	1200 J	1300 J	110 J
Benzo(k)fluoranthene	µg/kg	5000 J	89 J	1700 J	1300 J	50 J
Biphenyl (1,1-Biphenyl)	µg/kg	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/kg	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/kg	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	--	--	--	--
Butyl benzylphthalate (BBP)	µg/kg	--	--	--	--	--
Caprolactam	µg/kg	--	--	--	--	--
Carbazole	µg/kg	--	--	--	--	--
Chrysene	µg/kg	12000 J	170 J	2700 J	2500 J	120 J
Dibenz(a,h)anthracene	µg/kg	2100 J ^P	3500 U	410 J	460 J	75 J
Dibenzofuran	µg/kg	--	--	--	--	--

TABLE 7

SUMMARY OF ANALYTICAL RESULTS FOR SB84-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	SB84-11 Excavation, North Wall	SB84-11 Excavation, South Wall, East	SB84-11 Excavation, South Wall, West	SB84-11 Excavation, South Wall, West	SB84-11 Excavation, West Wall
Sample Identification	SO-17360-061212-SM-001	SO-17360-061212-SM-005	SO-17360-061212-SM-003	SO-17360-061212-SM-004	SO-17360-061212-SM-002
Sample Date	6/12/2012	6/12/2012	6/12/2012	6/12/2012	6/12/2012
Sample Depth	(3.5-) ft BGS	(4-) ft BGS	(4-) ft BGS	(4-) ft BGS	(3.5-) ft BGS
Sample Type				Duplicate	
Excavation Status	Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	<i>Units</i>				
SVOCs (continued)					
Diethyl phthalate	µg/kg	--	--	--	--
Dimethyl phthalate	µg/kg	--	--	--	--
Di-n-butylphthalate (DBP)	µg/kg	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/kg	--	--	--	--
Fluoranthene	µg/kg	29000 D ^a	370 J	7300 D ^a	6300 D ^a
Fluorene	µg/kg	1400 J	3500 U	730 J	440 J
Hexachlorobenzene	µg/kg	--	--	--	--
Hexachlorobutadiene	µg/kg	--	--	--	--
Hexachlorocyclopentadiene	µg/kg	--	--	--	--
Hexachloroethane	µg/kg	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	5600 J	170 J	1200 J	1200 J
Isophorone	µg/kg	--	--	--	--
Naphthalene	µg/kg	210 J	3500 U	240 J	71 J
Nitrobenzene	µg/kg	--	--	--	--
N-Nitrosodi-n-propylamine	µg/kg	--	--	--	--
N-Nitrosodiphenylamine	µg/kg	--	--	--	--
Pentachlorophenol	µg/kg	--	--	--	--
Phenanthrene	µg/kg	18000 D ^a	180 J	7000 D ^a	4900 D ^a
Phenol	µg/kg	--	--	--	--
Pyrene	µg/kg	20000 D	460 J	5700 D	4400 D
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/kg	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/kg	--	--	--	--
1,1,2-Trichloroethane	µg/kg	--	--	--	--
1,1-Dichloroethane	µg/kg	--	--	--	--
1,1-Dichloroethene	µg/kg	--	--	--	--
1,2,4-Trichlorobenzene	µg/kg	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	--	--	--	--
1,2-Dibromoethane ⁽²⁾	µg/kg	--	--	--	--
1,2-Dichlorobenzene	µg/kg	--	--	--	--
1,2-Dichloroethane	µg/kg	--	--	--	--
1,2-Dichloropropane	µg/kg	--	--	--	--
1,3-Dichlorobenzene	µg/kg	--	--	--	--
1,4-Dichlorobenzene	µg/kg	--	--	--	--
2-Butanone ⁽³⁾	µg/kg	--	--	--	--
2-Hexanone	µg/kg	--	--	--	--
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	--	--	--	--
Acetone	µg/kg	--	--	--	--
Benzene	µg/kg	--	--	--	--
Bromodichloromethane	µg/kg	--	--	--	--
Bromoform	µg/kg	--	--	--	--

TABLE 7

SUMMARY OF ANALYTICAL RESULTS FOR SB84-11 AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		SB84-11 Excavation, North Wall	SB84-11 Excavation, South Wall, East	SB84-11 Excavation, South Wall, West	SB84-11 Excavation, South Wall, West	SB84-11 Excavation, West Wall
Sample Identification		SO-17360-061212-SM-001	SO-17360-061212-SM-005	SO-17360-061212-SM-003	SO-17360-061212-SM-004	SO-17360-061212-SM-002
Sample Date		6/12/2012	6/12/2012	6/12/2012	6/12/2012	6/12/2012
Sample Depth		(3.5-) ft BGS	(4-) ft BGS	(4-) ft BGS	(4-) ft BGS	(3.5-) ft BGS
Sample Type					Duplicate	
Excavation Status		Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units					
<i>VOCs (continued)</i>						
Bromomethane (Methyl bromide)	µg/kg	--	--	--	--	--
Carbon disulfide	µg/kg	--	--	--	--	--
Carbon tetrachloride	µg/kg	--	--	--	--	--
Chlorobenzene	µg/kg	--	--	--	--	--
Chloroethane	µg/kg	--	--	--	--	--
Chloroform (Trichloromethane)	µg/kg	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/kg	--	--	--	--	--
cis-1,2-Dichloroethene	µg/kg	--	--	--	--	--
cis-1,3-Dichloropropene	µg/kg	--	--	--	--	--
Cyclohexane	µg/kg	--	--	--	--	--
Dibromochloromethane	µg/kg	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/kg	--	--	--	--	--
Ethylbenzene	µg/kg	--	--	--	--	--
Isopropyl benzene	µg/kg	--	--	--	--	--
Methyl acetate	µg/kg	--	--	--	--	--
Methyl cyclohexane	µg/kg	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/kg	--	--	--	--	--
Methylene chloride	µg/kg	--	--	--	--	--
Styrene	µg/kg	--	--	--	--	--
Tetrachloroethene	µg/kg	--	--	--	--	--
Toluene	µg/kg	--	--	--	--	--
trans-1,2-Dichloroethene	µg/kg	--	--	--	--	--
trans-1,3-Dichloropropene	µg/kg	--	--	--	--	--
Trichloroethene	µg/kg	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/kg	--	--	--	--	--
Trifluorotrchloroethane (Freon 113)	µg/kg	--	--	--	--	--
Vinyl chloride	µg/kg	--	--	--	--	--
Xylenes (total)	µg/kg	--	--	--	--	--

Notes:

See Table 1 for applicable criteria and notes.

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, Additional South Area</i>		<i>A Column Excavation, Additional South Area</i>		<i>A Column Excavation, Additional South Area</i>		<i>A Column Excavation, Additional South Area</i>	
Sample Identification	SO-17360-071612-EB-001		SO-17360-071612-EB-002		SO-17360-071612-EB-004		SO-17360-071612-EB-003	
Sample Date	7/16/2012		7/16/2012		7/16/2012		7/16/2012	
Sample Depth	(2.5-) ft BGS		(2.5-) ft BGS		(2.5-) ft BGS		(3-) ft BGS	
Sample Type			Duplicate					
Excavation Status	<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>	
	<i>Units</i>							
<i>Metals</i>								
Antimony	µg/kg	62 J		55 J		73 J		78 J
Arsenic	µg/kg	1500		1800		1200		1300
Barium	µg/kg	8400		9600		29000		37000
Beryllium	µg/kg	120 J		140 J		130 J		110 J
Cadmium	µg/kg	39 J		34 J		25 J		60 J
Chromium	µg/kg	8900		5800		5200		5800
Cobalt	µg/kg	2600		2400		1800		2200
Copper	µg/kg	5500		5500		2400		3900
Iron	µg/kg	5900000		5600000		5000000		4800000
Lead	µg/kg	2700		3000		2200		4900
Lead - coarse fraction	µg/kg	--		--		--		--
Lead - fine fraction	µg/kg	--		--		--		--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--		--		--		--
Manganese	µg/kg	120000		96000		92000		150000
Mercury	µg/kg	18 J		17 J		7.8 J		15 J
Molybdenum	µg/kg	140 J		180 J		200 J		170 J
Nickel	µg/kg	6300		5800		4000		4400
Selenium	µg/kg	180 J		160 J		170 J		84 J
Silver	µg/kg	5 J		7.2 J		4.4 J		11 J
Thallium	µg/kg	66 J		42 J		71 J		49 J
Vanadium	µg/kg	11000		11000		10000		9600
Zinc	µg/kg	10000		12000		10000		22000
<i>PCBs</i>								
Aroclor-1016 (PCB-1016)	µg/kg	--		--		--		--
Aroclor-1221 (PCB-1221)	µg/kg	--		--		--		--
Aroclor-1232 (PCB-1232)	µg/kg	--		--		--		--
Aroclor-1242 (PCB-1242)	µg/kg	--		--		--		--
Aroclor-1248 (PCB-1248)	µg/kg	--		--		--		--
Aroclor-1254 (PCB-1254)	µg/kg	--		--		--		--
Aroclor-1260 (PCB-1260)	µg/kg	--		--		--		--
Total PCBs	µg/kg	--		--		--		--

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		A Column Excavation, Additional South Area	A Column Excavation, Additional South Area	A Column Excavation, Additional South Area	A Column Excavation, Additional South Area
Sample Identification		SO-17360-071612-EB-001	SO-17360-071612-EB-002	SO-17360-071612-EB-004	SO-17360-071612-EB-003
Sample Date		7/16/2012	7/16/2012	7/16/2012	7/16/2012
Sample Depth		(2.5-) ft BGS	(2.5-) ft BGS	(2.5-) ft BGS	(3-) ft BGS
Sample Type			Duplicate		
Excavation Status		Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units				
<i>Semi-Volatile Organic Compounds (SVOCs)</i>					
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	--	--	--	--
2,4,5-Trichlorophenol	µg/kg	--	--	--	--
2,4,6-Trichlorophenol	µg/kg	--	--	--	--
2,4-Dichlorophenol	µg/kg	--	--	--	--
2,4-Dimethylphenol	µg/kg	--	--	--	--
2,4-Dinitrophenol	µg/kg	--	--	--	--
2,4-Dinitrotoluene	µg/kg	--	--	--	--
2,6-Dinitrotoluene	µg/kg	--	--	--	--
2-Chloronaphthalene	µg/kg	--	--	--	--
2-Chlorophenol	µg/kg	--	--	--	--
2-Methylnaphthalene	µg/kg	83 U	82 U	83 U	83 U
2-Methylphenol	µg/kg	--	--	--	--
2-Nitroaniline	µg/kg	--	--	--	--
2-Nitrophenol	µg/kg	--	--	--	--
3,3'-Dichlorobenzidine	µg/kg	--	--	--	--
3-Nitroaniline	µg/kg	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/kg	--	--	--	--
4-Bromophenyl phenyl ether	µg/kg	--	--	--	--
4-Chloro-3-methylphenol	µg/kg	--	--	--	--
4-Chloroaniline	µg/kg	--	--	--	--
4-Chlorophenyl phenyl ether	µg/kg	--	--	--	--
4-Methylphenol	µg/kg	--	--	--	--
4-Nitroaniline	µg/kg	--	--	--	--
4-Nitrophenol	µg/kg	--	--	--	--
Acenaphthene	µg/kg	31 U	31 U	31 U	22 J
Acenaphthylene	µg/kg	31 U	31 U	31 U	31 U
Acetophenone	µg/kg	--	--	--	--
Anthracene	µg/kg	31 U	31 U	31 U	77
Atrazine	µg/kg	--	--	--	--
Benzaldehyde	µg/kg	--	--	--	--
Benzo(a)anthracene	µg/kg	31 U	31 U	31 U	200
Benzo(a)pyrene	µg/kg	31 U	31 U	31 U	240
Benzo(b)fluoranthene	µg/kg	31 U	31 U	31 U	340
Benzo(g,h,i)perylene	µg/kg	31 U	31 U	31 U	81
Benzo(k)fluoranthene	µg/kg	31 U	31 U	31 U	320
Biphenyl (1,1-Biphenyl)	µg/kg	--	--	--	--
bis(2-Chloroethoxy)methane	µg/kg	--	--	--	--
bis(2-Chloroethyl)ether	µg/kg	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	--	--	--
Butyl benzylphthalate (BBP)	µg/kg	--	--	--	--
Caprolactam	µg/kg	--	--	--	--
Carbazole	µg/kg	--	--	--	--
Chrysene	µg/kg	31 U	31 U	31 U	300
Dibenz(a,h)anthracene	µg/kg	31 U	31 U	31 U	31 U
Dibenzofuran	µg/kg	--	--	--	--

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	A Column Excavation, Additional South Area		A Column Excavation, Additional South Area		A Column Excavation, Additional South Area		A Column Excavation, Additional South Area	
Sample Identification	SO-17360-071612-EB-001		SO-17360-071612-EB-002		SO-17360-071612-EB-004		SO-17360-071612-EB-003	
Sample Date	7/16/2012		7/16/2012		7/16/2012		7/16/2012	
Sample Depth	(2.5-) ft BGS		(2.5-) ft BGS		(2.5-) ft BGS		(3-) ft BGS	
Sample Type			Duplicate					
Excavation Status	Unexcavated		Unexcavated		Unexcavated		Unexcavated	
	<i>Units</i>							
<i>SVOCs (continued)</i>								
Diethyl phthalate	µg/kg	--	--	--	--	--	--	--
Dimethyl phthalate	µg/kg	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/kg	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/kg	--	--	--	--	--	--	--
Fluoranthene	µg/kg	31 U	31 U	31 U	31 U	31 U	550	
Fluorene	µg/kg	31 U	31 U	31 U	31 U	31 U	21 J	
Hexachlorobenzene	µg/kg	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/kg	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/kg	--	--	--	--	--	--	--
Hexachloroethane	µg/kg	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	31 U	31 U	31 U	31 U	31 U	68	
Isophorone	µg/kg	--	--	--	--	--	--	--
Naphthalene	µg/kg	31 U	31 U	31 U	31 U	31 U	31 U	
Nitrobenzene	µg/kg	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	µg/kg	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/kg	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	--	--	--	--	--	--	--
Phenanthrene	µg/kg	31 U	31 U	31 U	31 U	31 U	270	
Phenol	µg/kg	--	--	--	--	--	--	--
Pyrene	µg/kg	31 U	31 U	31 U	31 U	31 U	380	
<i>Volatile Organic Compounds (VOCs)</i>								
1,1,1-Trichloroethane	µg/kg	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/kg	--	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/kg	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/kg	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/kg	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/kg	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	--	--	--	--	--	--	--
1,2-Dibromoethane ⁽²⁾	µg/kg	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/kg	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/kg	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/kg	--	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/kg	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/kg	--	--	--	--	--	--	--
2-Butanone ⁽³⁾	µg/kg	--	--	--	--	--	--	--
2-Hexanone	µg/kg	--	--	--	--	--	--	--
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	--	--	--	--	--	--	--
Acetone	µg/kg	--	--	--	--	--	--	--
Benzene	µg/kg	--	--	--	--	--	--	--
Bromodichloromethane	µg/kg	--	--	--	--	--	--	--
Bromoform	µg/kg	--	--	--	--	--	--	--

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, Additional South Area</i>		<i>A Column Excavation, Additional South Area</i>		<i>A Column Excavation, Additional South Area</i>		<i>A Column Excavation, Additional South Area</i>	
Sample Identification	SO-17360-071612-EB-001		SO-17360-071612-EB-002		SO-17360-071612-EB-004		SO-17360-071612-EB-003	
Sample Date	7/16/2012		7/16/2012		7/16/2012		7/16/2012	
Sample Depth	(2.5-) ft BGS		(2.5-) ft BGS		(2.5-) ft BGS		(3-) ft BGS	
Sample Type			Duplicate					
Excavation Status	<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>	
	<i>Units</i>							
<i>VOCs (continued)</i>								
Bromomethane (Methyl bromide)	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Carbon disulfide	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Carbon tetrachloride	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Chlorobenzene	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Chloroethane	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Chloroform (Trichloromethane)	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Chloromethane (Methyl chloride)	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
cis-1,2-Dichloroethene	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
cis-1,3-Dichloropropene	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Cyclohexane	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Dibromochloromethane	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Dichlorodifluoromethane (CFC-12)	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Ethylbenzene	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Isopropyl benzene	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Methyl acetate	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Methyl cyclohexane	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Methyl tert butyl ether (MTBE)	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Methylene chloride	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Styrene	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Tetrachloroethene	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Toluene	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
trans-1,2-Dichloroethene	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
trans-1,3-Dichloropropene	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Trichloroethene	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Trichlorofluoromethane (CFC-11)	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Trifluorotrchloroethane (Freon 113)	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Vinyl chloride	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--
Xylenes (total)	µg/kg	--	µg/kg	--	µg/kg	--	µg/kg	--

Notes:

See Table 1 for applicable criteria and notes.

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, Additional South Area</i>	<i>A Column Excavation, Additional South Area</i>	<i>A Column Excavation, North Area - N Floor</i>	<i>A Column Excavation, North Area - S Floor</i>	
Sample Identification	SO-17360-071612-EB-005	SO-17360-071612-EB-006	SO-17360-070612-EB-001	SO-17360-070612-EB-002	
Sample Date	7/16/2012	7/16/2012	7/6/2012	7/6/2012	
Sample Depth	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS	
Sample Type					
Excavation Status	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	
	<i>Units</i>				
Metals					
Antimony	µg/kg	52 J	62 J	52 J	140 J
Arsenic	µg/kg	1200	1200	1300	1300
Barium	µg/kg	21000	21000	5200	17000
Beryllium	µg/kg	120 J	130 J	83 J	99 J
Cadmium	µg/kg	19 J	28 J	34 J	78 J
Chromium	µg/kg	6100	6800	4200	4900
Cobalt	µg/kg	1800	2300	1400	1700
Copper	µg/kg	2900	3600	3000	8200
Iron	µg/kg	5100000	5100000	3500000	4500000
Lead	µg/kg	2000	2400	1600	10000
Lead - coarse fraction	µg/kg	--	--	--	--
Lead - fine fraction	µg/kg	--	--	--	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--
Manganese	µg/kg	62000	78000	78000	120000
Mercury	µg/kg	11 J	9.9 J	27 J	30 J
Molybdenum	µg/kg	130 J	120 J	190 J	300 J
Nickel	µg/kg	4200	5000	4200	4100
Selenium	µg/kg	190 J	89 J	290	310 J
Silver	µg/kg	3.4 J	5.4 J	3.7 J	12 J
Thallium	µg/kg	38 J	40 J	34 J	37 J
Vanadium	µg/kg	10000	11000	5900	7200
Zinc	µg/kg	9300	9400	5800	23000
PCBs					
Aroclor-1016 (PCB-1016)	µg/kg	--	--	--	--
Aroclor-1221 (PCB-1221)	µg/kg	--	--	--	--
Aroclor-1232 (PCB-1232)	µg/kg	--	--	--	--
Aroclor-1242 (PCB-1242)	µg/kg	--	--	--	--
Aroclor-1248 (PCB-1248)	µg/kg	--	--	--	--
Aroclor-1254 (PCB-1254)	µg/kg	--	--	--	--
Aroclor-1260 (PCB-1260)	µg/kg	--	--	--	--
Total PCBs	µg/kg	--	--	--	--

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, Additional South Area</i>	<i>A Column Excavation, Additional South Area</i>	<i>A Column Excavation, North Area - N Floor</i>	<i>A Column Excavation, North Area - S Floor</i>
Sample Identification	SO-17360-071612-EB-005	SO-17360-071612-EB-006	SO-17360-070612-EB-001	SO-17360-070612-EB-002
Sample Date	7/16/2012	7/16/2012	7/6/2012	7/6/2012
Sample Depth	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS
Sample Type				
Excavation Status	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>
	<i>Units</i>			
<i>Semi-Volatile Organic Compounds (SVOCs)</i>				
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	--	--	--
2,4,5-Trichlorophenol	µg/kg	--	--	--
2,4,6-Trichlorophenol	µg/kg	--	--	--
2,4-Dichlorophenol	µg/kg	--	--	--
2,4-Dimethylphenol	µg/kg	--	--	--
2,4-Dinitrophenol	µg/kg	--	--	--
2,4-Dinitrotoluene	µg/kg	--	--	--
2,6-Dinitrotoluene	µg/kg	--	--	--
2-Chloronaphthalene	µg/kg	--	--	--
2-Chlorophenol	µg/kg	--	--	--
2-Methylnaphthalene	µg/kg	83 U	84 U	62 J
2-Methylphenol	µg/kg	--	--	--
2-Nitroaniline	µg/kg	--	--	--
2-Nitrophenol	µg/kg	--	--	--
3,3'-Dichlorobenzidine	µg/kg	--	--	--
3-Nitroaniline	µg/kg	--	--	--
4,6-Dinitro-2-methylphenol	µg/kg	--	--	--
4-Bromophenyl phenyl ether	µg/kg	--	--	--
4-Chloro-3-methylphenol	µg/kg	--	--	--
4-Chloroaniline	µg/kg	--	--	--
4-Chlorophenyl phenyl ether	µg/kg	--	--	--
4-Methylphenol	µg/kg	--	--	--
4-Nitroaniline	µg/kg	--	--	--
4-Nitrophenol	µg/kg	--	--	--
Acenaphthene	µg/kg	31 U	32 U	200
Acenaphthylene	µg/kg	31 U	32 U	17 J
Acetophenone	µg/kg	--	--	--
Anthracene	µg/kg	31 U	32 U	390
Atrazine	µg/kg	--	--	--
Benzaldehyde	µg/kg	--	--	--
Benzo(a)anthracene	µg/kg	31 U	32 U	1100
Benzo(a)pyrene	µg/kg	31 U	32 U	1000
Benzo(b)fluoranthene	µg/kg	31 U	32 U	1200
Benzo(g,h,i)perylene	µg/kg	31 U	32 U	750
Benzo(k)fluoranthene	µg/kg	31 U	32 U	830
Biphenyl (1,1-Biphenyl)	µg/kg	--	--	--
bis(2-Chloroethoxy)methane	µg/kg	--	--	--
bis(2-Chloroethyl)ether	µg/kg	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	--	--
Butyl benzylphthalate (BBP)	µg/kg	--	--	--
Caprolactam	µg/kg	--	--	--
Carbazole	µg/kg	--	--	--
Chrysene	µg/kg	31 U	32 U	1100
Dibenz(a,h)anthracene	µg/kg	31 U	32 U	260 J
Dibenzofuran	µg/kg	--	--	--

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, Additional South Area</i>	<i>A Column Excavation, Additional South Area</i>	<i>A Column Excavation, North Area - N Floor</i>	<i>A Column Excavation, North Area - S Floor</i>
Sample Identification	SO-17360-071612-EB-005	SO-17360-071612-EB-006	SO-17360-070612-EB-001	SO-17360-070612-EB-002
Sample Date	7/16/2012	7/16/2012	7/6/2012	7/6/2012
Sample Depth	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS	(5-) ft BGS
Sample Type				
Excavation Status	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>
	<i>Units</i>			
<i>SVOCs (continued)</i>				
Diethyl phthalate	µg/kg	--	--	--
Dimethyl phthalate	µg/kg	--	--	--
Di-n-butylphthalate (DBP)	µg/kg	--	--	--
Di-n-octyl phthalate (DnOP)	µg/kg	--	--	--
Fluoranthene	µg/kg	31 U	32 U	2700
Fluorene	µg/kg	31 U	32 U	170
Hexachlorobenzene	µg/kg	--	--	--
Hexachlorobutadiene	µg/kg	--	--	--
Hexachlorocyclopentadiene	µg/kg	--	--	--
Hexachloroethane	µg/kg	--	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	31 U	32 U	630
Isophorone	µg/kg	--	--	--
Naphthalene	µg/kg	31 U	32 U	71
Nitrobenzene	µg/kg	--	--	--
N-Nitrosodi-n-propylamine	µg/kg	--	--	--
N-Nitrosodiphenylamine	µg/kg	--	--	--
Pentachlorophenol	µg/kg	--	--	--
Phenanthrene	µg/kg	31 U	32 U	1400
Phenol	µg/kg	--	--	--
Pyrene	µg/kg	31 U	32 U	2200
<i>Volatile Organic Compounds (VOCs)</i>				
1,1,1-Trichloroethane	µg/kg	--	--	--
1,1,2,2-Tetrachloroethane	µg/kg	--	--	--
1,1,2-Trichloroethane	µg/kg	--	--	--
1,1-Dichloroethane	µg/kg	--	--	--
1,1-Dichloroethene	µg/kg	--	--	--
1,2,4-Trichlorobenzene	µg/kg	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	--	--	--
1,2-Dibromoethane ⁽²⁾	µg/kg	--	--	--
1,2-Dichlorobenzene	µg/kg	--	--	--
1,2-Dichloroethane	µg/kg	--	--	--
1,2-Dichloropropane	µg/kg	--	--	--
1,3-Dichlorobenzene	µg/kg	--	--	--
1,4-Dichlorobenzene	µg/kg	--	--	--
2-Butanone ⁽³⁾	µg/kg	--	--	--
2-Hexanone	µg/kg	--	--	--
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	--	--	--
Acetone	µg/kg	--	--	--
Benzene	µg/kg	--	--	--
Bromodichloromethane	µg/kg	--	--	--
Bromoform	µg/kg	--	--	--

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, Additional South Area</i>		<i>A Column Excavation, Additional South Area</i>		<i>A Column Excavation, North Area - N Floor</i>		<i>A Column Excavation, North Area - S Floor</i>	
Sample Identification	SO-17360-071612-EB-005		SO-17360-071612-EB-006		SO-17360-070612-EB-001		SO-17360-070612-EB-002	
Sample Date	7/16/2012		7/16/2012		7/6/2012		7/6/2012	
Sample Depth	(5-) ft BGS		(5-) ft BGS		(5-) ft BGS		(5-) ft BGS	
Sample Type								
Excavation Status	<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>	
	<i>Units</i>							
<i>VOCs (continued)</i>								
Bromomethane (Methyl bromide)	µg/kg	--	--	--	--	--	--	--
Carbon disulfide	µg/kg	--	--	--	--	--	--	--
Carbon tetrachloride	µg/kg	--	--	--	--	--	--	--
Chlorobenzene	µg/kg	--	--	--	--	--	--	--
Chloroethane	µg/kg	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/kg	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/kg	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/kg	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/kg	--	--	--	--	--	--	--
Cyclohexane	µg/kg	--	--	--	--	--	--	--
Dibromochloromethane	µg/kg	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/kg	--	--	--	--	--	--	--
Ethylbenzene	µg/kg	--	--	--	--	--	--	--
Isopropyl benzene	µg/kg	--	--	--	--	--	--	--
Methyl acetate	µg/kg	--	--	--	--	--	--	--
Methyl cyclohexane	µg/kg	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/kg	--	--	--	--	--	--	--
Methylene chloride	µg/kg	--	--	--	--	--	--	--
Styrene	µg/kg	--	--	--	--	--	--	--
Tetrachloroethene	µg/kg	--	--	--	--	--	--	--
Toluene	µg/kg	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/kg	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/kg	--	--	--	--	--	--	--
Trichloroethene	µg/kg	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/kg	--	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	µg/kg	--	--	--	--	--	--	--
Vinyl chloride	µg/kg	--	--	--	--	--	--	--
Xylenes (total)	µg/kg	--	--	--	--	--	--	--

Notes:

See Table 1 for applicable criteria and notes.

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, North Area - S Sidewall</i>	<i>A Column Excavation, South Area - Middle</i>	<i>A Column Excavation, South Area - NE Floor</i>	<i>A Column Excavation, South Area - NW Floor</i>	
Sample Identification	SO-17360-070612-EB-003	SO-17360-070612-EB-012	SO-17360-070612-EB-010	SO-17360-070612-EB-011	
Sample Date	7/6/2012	7/6/2012	7/6/2012	7/6/2012	
Sample Depth	(3-) ft BGS	(5-) ft BGS	(5-) ft BGS	(6-) ft BGS	
Sample Type					
Excavation Status	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	
	<i>Units</i>				
<i>Metals</i>					
Antimony	µg/kg	150 J	51 J	56 J	49 J
Arsenic	µg/kg	1400	840	1200	870
Barium	µg/kg	22000	5000	13000	5300
Beryllium	µg/kg	110 J	64 J	91 J	63 J
Cadmium	µg/kg	74 J	30 J	39 J	29 J
Chromium	µg/kg	5000	3400	3900	2900
Cobalt	µg/kg	1800	1100	1600	1100
Copper	µg/kg	5600	2800	3600	2400
Iron	µg/kg	4600000	2800000	4000000	2700000
Lead	µg/kg	7100	2000	3000	1700
Lead - coarse fraction	µg/kg	--	--	--	--
Lead - fine fraction	µg/kg	--	--	--	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--
Manganese	µg/kg	130000	76000	100000	62000
Mercury	µg/kg	34 J	15 J	15 J	10 J
Molybdenum	µg/kg	350 J	120 J	180 J	110 J
Nickel	µg/kg	4100	3000	3700	2900
Selenium	µg/kg	340	250 J	260 J	290
Silver	µg/kg	18 J	4.7 J	5.2 J	5.1 J
Thallium	µg/kg	37 J	21 J	28 J	19 J
Vanadium	µg/kg	7600	5000	6800	5000
Zinc	µg/kg	16000	7600	9600	7100
<i>PCBs</i>					
Aroclor-1016 (PCB-1016)	µg/kg	--	--	--	--
Aroclor-1221 (PCB-1221)	µg/kg	--	--	--	--
Aroclor-1232 (PCB-1232)	µg/kg	--	--	--	--
Aroclor-1242 (PCB-1242)	µg/kg	--	--	--	--
Aroclor-1248 (PCB-1248)	µg/kg	--	--	--	--
Aroclor-1254 (PCB-1254)	µg/kg	--	--	--	--
Aroclor-1260 (PCB-1260)	µg/kg	--	--	--	--
Total PCBs	µg/kg	--	--	--	--

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, North Area - S Sidewall</i>	<i>A Column Excavation, South Area - Middle</i>	<i>A Column Excavation, South Area - NE Floor</i>	<i>A Column Excavation, South Area - NW Floor</i>
Sample Identification	SO-17360-070612-EB-003	SO-17360-070612-EB-012	SO-17360-070612-EB-010	SO-17360-070612-EB-011
Sample Date	7/6/2012	7/6/2012	7/6/2012	7/6/2012
Sample Depth	(3-) ft BGS	(5-) ft BGS	(5-) ft BGS	(6-) ft BGS
Sample Type				
Excavation Status	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>
	<i>Units</i>			
<i>Semi-Volatile Organic Compounds (SVOCs)</i>				
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	--	--	--
2,4,5-Trichlorophenol	µg/kg	--	--	--
2,4,6-Trichlorophenol	µg/kg	--	--	--
2,4-Dichlorophenol	µg/kg	--	--	--
2,4-Dimethylphenol	µg/kg	--	--	--
2,4-Dinitrophenol	µg/kg	--	--	--
2,4-Dinitrotoluene	µg/kg	--	--	--
2,6-Dinitrotoluene	µg/kg	--	--	--
2-Chloronaphthalene	µg/kg	--	--	--
2-Chlorophenol	µg/kg	--	--	--
2-Methylnaphthalene	µg/kg	50 J	34 J	16 J
2-Methylphenol	µg/kg	--	--	--
2-Nitroaniline	µg/kg	--	--	--
2-Nitrophenol	µg/kg	--	--	--
3,3'-Dichlorobenzidine	µg/kg	--	--	--
3-Nitroaniline	µg/kg	--	--	--
4,6-Dinitro-2-methylphenol	µg/kg	--	--	--
4-Bromophenyl phenyl ether	µg/kg	--	--	--
4-Chloro-3-methylphenol	µg/kg	--	--	--
4-Chloroaniline	µg/kg	--	--	--
4-Chlorophenyl phenyl ether	µg/kg	--	--	--
4-Methylphenol	µg/kg	--	--	--
4-Nitroaniline	µg/kg	--	--	--
4-Nitrophenol	µg/kg	--	--	--
Acenaphthene	µg/kg	340	49	42
Acenaphthylene	µg/kg	31 U	31 U	33
Acetophenone	µg/kg	--	--	--
Anthracene	µg/kg	600	100	150
Atrazine	µg/kg	--	--	--
Benzaldehyde	µg/kg	--	--	--
Benzo(a)anthracene	µg/kg	1400	160	260
Benzo(a)pyrene	µg/kg	1300	310 U	230 J
Benzo(b)fluoranthene	µg/kg	1400	180 J	250 J
Benzo(g,h,i)perylene	µg/kg	520	330	470
Benzo(k)fluoranthene	µg/kg	790	310 U	230 J
Biphenyl (1,1-Biphenyl)	µg/kg	--	--	--
bis(2-Chloroethoxy)methane	µg/kg	--	--	--
bis(2-Chloroethyl)ether	µg/kg	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	--	--
Butyl benzylphthalate (BBP)	µg/kg	--	--	--
Caprolactam	µg/kg	--	--	--
Carbazole	µg/kg	--	--	--
Chrysene	µg/kg	1400	170	250
Dibenz(a,h)anthracene	µg/kg	200	310 U	310 U
Dibenzofuran	µg/kg	--	--	--

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, North Area - S Sidewall</i>		<i>A Column Excavation, South Area - Middle</i>		<i>A Column Excavation, South Area - NE Floor</i>		<i>A Column Excavation, South Area - NW Floor</i>	
Sample Identification	SO-17360-070612-EB-003		SO-17360-070612-EB-012		SO-17360-070612-EB-010		SO-17360-070612-EB-011	
Sample Date	7/6/2012		7/6/2012		7/6/2012		7/6/2012	
Sample Depth	(3-) ft BGS		(5-) ft BGS		(5-) ft BGS		(6-) ft BGS	
Sample Type								
Excavation Status	<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>	
	<i>Units</i>							
<i>SVOCs (continued)</i>								
Diethyl phthalate	µg/kg	--	--	--	--	--	--	--
Dimethyl phthalate	µg/kg	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/kg	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/kg	--	--	--	--	--	--	--
Fluoranthene	µg/kg	3700	410	570	280			
Fluorene	µg/kg	310	60	42	21 J			
Hexachlorobenzene	µg/kg	--	--	--	--			
Hexachlorobutadiene	µg/kg	--	--	--	--			
Hexachlorocyclopentadiene	µg/kg	--	--	--	--			
Hexachloroethane	µg/kg	--	--	--	--			
Indeno(1,2,3-cd)pyrene	µg/kg	470	310 U	310 U	300 U			
Isophorone	µg/kg	--	--	--	--			
Naphthalene	µg/kg	59	43	31 U	30 U			
Nitrobenzene	µg/kg	--	--	--	--			
N-Nitrosodi-n-propylamine	µg/kg	--	--	--	--			
N-Nitrosodiphenylamine	µg/kg	--	--	--	--			
Pentachlorophenol	µg/kg	--	--	--	--			
Phenanthrene	µg/kg	3100 ^a	340	410	190			
Phenol	µg/kg	--	--	--	--			
Pyrene	µg/kg	3000	430	630	310			
<i>Volatile Organic Compounds (VOCs)</i>								
1,1,1-Trichloroethane	µg/kg	--	--	--	--			
1,1,2,2-Tetrachloroethane	µg/kg	--	--	--	--			
1,1,2-Trichloroethane	µg/kg	--	--	--	--			
1,1-Dichloroethane	µg/kg	--	--	--	--			
1,1-Dichloroethene	µg/kg	--	--	--	--			
1,2,4-Trichlorobenzene	µg/kg	--	--	--	--			
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	--	--	--	--			
1,2-Dibromoethane ⁽²⁾	µg/kg	--	--	--	--			
1,2-Dichlorobenzene	µg/kg	--	--	--	--			
1,2-Dichloroethane	µg/kg	--	--	--	--			
1,2-Dichloropropane	µg/kg	--	--	--	--			
1,3-Dichlorobenzene	µg/kg	--	--	--	--			
1,4-Dichlorobenzene	µg/kg	--	--	--	--			
2-Butanone ⁽³⁾	µg/kg	--	--	--	--			
2-Hexanone	µg/kg	--	--	--	--			
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	--	--	--	--			
Acetone	µg/kg	--	--	--	--			
Benzene	µg/kg	--	--	--	--			
Bromodichloromethane	µg/kg	--	--	--	--			
Bromoform	µg/kg	--	--	--	--			

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, North Area - S Sidewall</i>		<i>A Column Excavation, South Area - Middle</i>		<i>A Column Excavation, South Area - NE Floor</i>		<i>A Column Excavation, South Area - NW Floor</i>	
Sample Identification	SO-17360-070612-EB-003		SO-17360-070612-EB-012		SO-17360-070612-EB-010		SO-17360-070612-EB-011	
Sample Date	7/6/2012		7/6/2012		7/6/2012		7/6/2012	
Sample Depth	(3-) ft BGS		(5-) ft BGS		(5-) ft BGS		(6-) ft BGS	
Sample Type								
Excavation Status	<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>	
	<i>Units</i>							
<i>VOCs (continued)</i>								
Bromomethane (Methyl bromide)	µg/kg	--	--	--	--	--	--	--
Carbon disulfide	µg/kg	--	--	--	--	--	--	--
Carbon tetrachloride	µg/kg	--	--	--	--	--	--	--
Chlorobenzene	µg/kg	--	--	--	--	--	--	--
Chloroethane	µg/kg	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/kg	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/kg	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/kg	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/kg	--	--	--	--	--	--	--
Cyclohexane	µg/kg	--	--	--	--	--	--	--
Dibromochloromethane	µg/kg	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/kg	--	--	--	--	--	--	--
Ethylbenzene	µg/kg	--	--	--	--	--	--	--
Isopropyl benzene	µg/kg	--	--	--	--	--	--	--
Methyl acetate	µg/kg	--	--	--	--	--	--	--
Methyl cyclohexane	µg/kg	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/kg	--	--	--	--	--	--	--
Methylene chloride	µg/kg	--	--	--	--	--	--	--
Styrene	µg/kg	--	--	--	--	--	--	--
Tetrachloroethene	µg/kg	--	--	--	--	--	--	--
Toluene	µg/kg	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/kg	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/kg	--	--	--	--	--	--	--
Trichloroethene	µg/kg	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/kg	--	--	--	--	--	--	--
Trifluorotrchloroethane (Freon 113)	µg/kg	--	--	--	--	--	--	--
Vinyl chloride	µg/kg	--	--	--	--	--	--	--
Xylenes (total)	µg/kg	--	--	--	--	--	--	--

Notes:

See Table 1 for applicable criteria and notes.

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, South Area - SE Floor</i>	<i>A Column Excavation, South Area - Sidewall</i>	<i>A Column Excavation, South Area - Sidewall</i>	<i>A Column Excavation, South Area - Sidewall</i>	
Sample Identification	SO-17360-070612-EB-014	SO-17360-070612-EB-004	SO-17360-070612-EB-005	SO-17360-070612-EB-006	
Sample Date	7/6/2012	7/6/2012	7/6/2012	7/6/2012	
Sample Depth	(5-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	
Sample Type					
Excavation Status	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	
	<i>Units</i>				
Metals					
Antimony	µg/kg	55 J	110 J	97 J	220 J
Arsenic	µg/kg	900	1300	1400	2200
Barium	µg/kg	6400	22000	26000	73000
Beryllium	µg/kg	69 J	120 J	110 J	160 J
Cadmium	µg/kg	35 J	76 J	55 J	85 J
Chromium	µg/kg	3200	6200	5400	9100
Cobalt	µg/kg	1200	2100	1800	2300
Copper	µg/kg	3000	4500	4100	9000
Iron	µg/kg	2900000	5500000	5100000	7300000
Lead	µg/kg	2100	7200	7800	8000
Lead - coarse fraction	µg/kg	--	--	--	--
Lead - fine fraction	µg/kg	--	--	--	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--
Manganese	µg/kg	73000	140000	110000	180000
Mercury	µg/kg	9.9 J	29 J	33 J	34 J
Molybdenum	µg/kg	100 J	210 J	190 J	770 J
Nickel	µg/kg	3100	5000	4300	7700
Selenium	µg/kg	260 J	320	300	300
Silver	µg/kg	4.8 J	8.7 J	9.7 J	16 J
Thallium	µg/kg	23 J	78 J	49 J	43 J
Vanadium	µg/kg	5200	9300	9100	11000
Zinc	µg/kg	8200	18000	22000	30000
PCBs					
Aroclor-1016 (PCB-1016)	µg/kg	--	--	--	--
Aroclor-1221 (PCB-1221)	µg/kg	--	--	--	--
Aroclor-1232 (PCB-1232)	µg/kg	--	--	--	--
Aroclor-1242 (PCB-1242)	µg/kg	--	--	--	--
Aroclor-1248 (PCB-1248)	µg/kg	--	--	--	--
Aroclor-1254 (PCB-1254)	µg/kg	--	--	--	--
Aroclor-1260 (PCB-1260)	µg/kg	--	--	--	--
Total PCBs	µg/kg	--	--	--	--

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, South Area - SE Floor</i>	<i>A Column Excavation, South Area - Sidewall</i>	<i>A Column Excavation, South Area - Sidewall</i>	<i>A Column Excavation, South Area - Sidewall</i>
Sample Identification	SO-17360-070612-EB-014	SO-17360-070612-EB-004	SO-17360-070612-EB-005	SO-17360-070612-EB-006
Sample Date	7/6/2012	7/6/2012	7/6/2012	7/6/2012
Sample Depth	(5-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS
Sample Type				
Excavation Status	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>
	<i>Units</i>			
<i>Semi-Volatile Organic Compounds (SVOCs)</i>				
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	--	--	--
2,4,5-Trichlorophenol	µg/kg	--	--	--
2,4,6-Trichlorophenol	µg/kg	--	--	--
2,4-Dichlorophenol	µg/kg	--	--	--
2,4-Dimethylphenol	µg/kg	--	--	--
2,4-Dinitrophenol	µg/kg	--	--	--
2,4-Dinitrotoluene	µg/kg	--	--	--
2,6-Dinitrotoluene	µg/kg	--	--	--
2-Chloronaphthalene	µg/kg	--	--	--
2-Chlorophenol	µg/kg	--	--	--
2-Methylnaphthalene	µg/kg	22 J	57 J	60 J
2-Methylphenol	µg/kg	--	--	--
2-Nitroaniline	µg/kg	--	--	--
2-Nitrophenol	µg/kg	--	--	--
3,3'-Dichlorobenzidine	µg/kg	--	--	--
3-Nitroaniline	µg/kg	--	--	--
4,6-Dinitro-2-methylphenol	µg/kg	--	--	--
4-Bromophenyl phenyl ether	µg/kg	--	--	--
4-Chloro-3-methylphenol	µg/kg	--	--	--
4-Chloroaniline	µg/kg	--	--	--
4-Chlorophenyl phenyl ether	µg/kg	--	--	--
4-Methylphenol	µg/kg	--	--	--
4-Nitroaniline	µg/kg	--	--	--
4-Nitrophenol	µg/kg	--	--	--
Acenaphthene	µg/kg	32	290	220
Acenaphthylene	µg/kg	18 J	31 U	30 U
Acetophenone	µg/kg	--	--	--
Anthracene	µg/kg	110	1700	1400
Atrazine	µg/kg	--	--	--
Benzaldehyde	µg/kg	--	--	--
Benzo(a)anthracene	µg/kg	210	1100	950
Benzo(a)pyrene	µg/kg	250 J	1000	830
Benzo(b)fluoranthene	µg/kg	300 J	1200	930
Benzo(g,h,i)perylene	µg/kg	630	680	510 J
Benzo(k)fluoranthene	µg/kg	170 J	750	670
Biphenyl (1,1-Biphenyl)	µg/kg	--	--	--
bis(2-Chloroethoxy)methane	µg/kg	--	--	--
bis(2-Chloroethyl)ether	µg/kg	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	--	--
Butyl benzylphthalate (BBP)	µg/kg	--	--	--
Caprolactam	µg/kg	--	--	--
Carbazole	µg/kg	--	--	--
Chrysene	µg/kg	250	1300	1100
Dibenz(a,h)anthracene	µg/kg	310 U	620 U	600 U
Dibenzofuran	µg/kg	--	--	--

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, South Area - SE Floor</i>	<i>A Column Excavation, South Area - Sidewall</i>	<i>A Column Excavation, South Area - Sidewall</i>	<i>A Column Excavation, South Area - Sidewall</i>
Sample Identification	SO-17360-070612-EB-014	SO-17360-070612-EB-004	SO-17360-070612-EB-005	SO-17360-070612-EB-006
Sample Date	7/6/2012	7/6/2012	7/6/2012	7/6/2012
Sample Depth	(5-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS
Sample Type				
Excavation Status	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>
	<i>Units</i>			
<i>SVOCs (continued)</i>				
Diethyl phthalate	µg/kg	--	--	--
Dimethyl phthalate	µg/kg	--	--	--
Di-n-butylphthalate (DBP)	µg/kg	--	--	--
Di-n-octyl phthalate (DnOP)	µg/kg	--	--	--
Fluoranthene	µg/kg	440	1400	1400
Fluorene	µg/kg	41	300	220
Hexachlorobenzene	µg/kg	--	--	--
Hexachlorobutadiene	µg/kg	--	--	--
Hexachlorocyclopentadiene	µg/kg	--	--	--
Hexachloroethane	µg/kg	--	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	310 U	490 J	600 U
Isophorone	µg/kg	--	--	--
Naphthalene	µg/kg	22 J	77	39
Nitrobenzene	µg/kg	--	--	--
N-Nitrosodi-n-propylamine	µg/kg	--	--	--
N-Nitrosodiphenylamine	µg/kg	--	--	--
Pentachlorophenol	µg/kg	--	--	--
Phenanthrene	µg/kg	330	830	780
Phenol	µg/kg	--	--	--
Pyrene	µg/kg	540	2300	2100
<i>Volatile Organic Compounds (VOCs)</i>				
1,1,1-Trichloroethane	µg/kg	--	--	--
1,1,2,2-Tetrachloroethane	µg/kg	--	--	--
1,1,2-Trichloroethane	µg/kg	--	--	--
1,1-Dichloroethane	µg/kg	--	--	--
1,1-Dichloroethene	µg/kg	--	--	--
1,2,4-Trichlorobenzene	µg/kg	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	--	--	--
1,2-Dibromoethane ⁽²⁾	µg/kg	--	--	--
1,2-Dichlorobenzene	µg/kg	--	--	--
1,2-Dichloroethane	µg/kg	--	--	--
1,2-Dichloropropane	µg/kg	--	--	--
1,3-Dichlorobenzene	µg/kg	--	--	--
1,4-Dichlorobenzene	µg/kg	--	--	--
2-Butanone ⁽³⁾	µg/kg	--	--	--
2-Hexanone	µg/kg	--	--	--
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	--	--	--
Acetone	µg/kg	--	--	--
Benzene	µg/kg	--	--	--
Bromodichloromethane	µg/kg	--	--	--
Bromoform	µg/kg	--	--	--

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, South Area - SE Floor</i>	<i>A Column Excavation, South Area - Sidewall</i>	<i>A Column Excavation, South Area - Sidewall</i>	<i>A Column Excavation, South Area - Sidewall</i>
Sample Identification	SO-17360-070612-EB-014	SO-17360-070612-EB-004	SO-17360-070612-EB-005	SO-17360-070612-EB-006
Sample Date	7/6/2012	7/6/2012	7/6/2012	7/6/2012
Sample Depth	(5-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS
Sample Type				
Excavation Status	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>
	<i>Units</i>			
<i>VOCs (continued)</i>				
Bromomethane (Methyl bromide)	µg/kg	--	--	--
Carbon disulfide	µg/kg	--	--	--
Carbon tetrachloride	µg/kg	--	--	--
Chlorobenzene	µg/kg	--	--	--
Chloroethane	µg/kg	--	--	--
Chloroform (Trichloromethane)	µg/kg	--	--	--
Chloromethane (Methyl chloride)	µg/kg	--	--	--
cis-1,2-Dichloroethene	µg/kg	--	--	--
cis-1,3-Dichloropropene	µg/kg	--	--	--
Cyclohexane	µg/kg	--	--	--
Dibromochloromethane	µg/kg	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/kg	--	--	--
Ethylbenzene	µg/kg	--	--	--
Isopropyl benzene	µg/kg	--	--	--
Methyl acetate	µg/kg	--	--	--
Methyl cyclohexane	µg/kg	--	--	--
Methyl tert butyl ether (MTBE)	µg/kg	--	--	--
Methylene chloride	µg/kg	--	--	--
Styrene	µg/kg	--	--	--
Tetrachloroethene	µg/kg	--	--	--
Toluene	µg/kg	--	--	--
trans-1,2-Dichloroethene	µg/kg	--	--	--
trans-1,3-Dichloropropene	µg/kg	--	--	--
Trichloroethene	µg/kg	--	--	--
Trichlorofluoromethane (CFC-11)	µg/kg	--	--	--
Trifluorotrchloroethane (Freon 113)	µg/kg	--	--	--
Vinyl chloride	µg/kg	--	--	--
Xylenes (total)	µg/kg	--	--	--

Notes:

See Table 1 for applicable criteria and notes.

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, South Area - Sidewall</i>		<i>A Column Excavation, South Area - Sidewall</i>		<i>A Column Excavation, South Area - Sidewall</i>		<i>A Column Excavation, South Area - SW Floor</i>	
Sample Identification	SO-17360-070612-EB-007		SO-17360-070612-EB-008		SO-17360-070612-EB-009		SO-17360-070612-EB-013	
Sample Date	7/6/2012		7/6/2012		7/6/2012		7/6/2012	
Sample Depth	(3-) ft BGS		(3-) ft BGS		(3-) ft BGS		(7-) ft BGS	
Sample Type			Duplicate					
Excavation Status	<i>Excavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>		<i>Unexcavated</i>	
	<i>Units</i>							
<i>Metals</i>								
Antimony	µg/kg	290 J		140 J		140 J		190 J
Arsenic	µg/kg	1800		1100		1400		1600
Barium	µg/kg	52000		31000		36000		11000
Beryllium	µg/kg	130 J		96 J		110 J		97 J
Cadmium	µg/kg	160 J		63 J		84 J		130 J
Chromium	µg/kg	5800		4600		5000		10000
Cobalt	µg/kg	1900		1400		1700		1800
Copper	µg/kg	7500		5600		6300		11000
Iron	µg/kg	6200000		3900000		4700000		9800000
Lead	µg/kg	20000		10000		11000		5800
Lead - coarse fraction	µg/kg	--		--		--		--
Lead - fine fraction	µg/kg	--		--		--		--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--		--		--		--
Manganese	µg/kg	140000		110000		120000		160000
Mercury	µg/kg	44 J		17 J		17 J		14 J
Molybdenum	µg/kg	470 J		210 J		330 J		840 J
Nickel	µg/kg	5100		6700		4400		6600
Selenium	µg/kg	260 J		210 J		240 J		280 J
Silver	µg/kg	18 J		8.5 J		12 J		13 J
Thallium	µg/kg	41 J		34 J		39 J		27 J
Vanadium	µg/kg	7800		7300		9600		6300
Zinc	µg/kg	26000		23000		47000		24000
<i>PCBs</i>								
Aroclor-1016 (PCB-1016)	µg/kg	--		--		--		--
Aroclor-1221 (PCB-1221)	µg/kg	--		--		--		--
Aroclor-1232 (PCB-1232)	µg/kg	--		--		--		--
Aroclor-1242 (PCB-1242)	µg/kg	--		--		--		--
Aroclor-1248 (PCB-1248)	µg/kg	--		--		--		--
Aroclor-1254 (PCB-1254)	µg/kg	--		--		--		--
Aroclor-1260 (PCB-1260)	µg/kg	--		--		--		--
Total PCBs	µg/kg	--		--		--		--

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	A Column Excavation, South Area - Sidewall		A Column Excavation, South Area - Sidewall		A Column Excavation, South Area - Sidewall		A Column Excavation, South Area - SW Floor	
Sample Identification	SO-17360-070612-EB-007		SO-17360-070612-EB-008		SO-17360-070612-EB-009		SO-17360-070612-EB-013	
Sample Date	7/6/2012		7/6/2012		7/6/2012		7/6/2012	
Sample Depth	(3-) ft BGS		(3-) ft BGS		(3-) ft BGS		(7-) ft BGS	
Sample Type			Duplicate					
Excavation Status	Excavated		Unexcavated		Unexcavated		Unexcavated	
	<i>Units</i>							
<i>Semi-Volatile Organic Compounds (SVOCs)</i>								
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/kg	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/kg	--	--	--	--	--	--	--
2,4-Dichlorophenol	µg/kg	--	--	--	--	--	--	--
2,4-Dimethylphenol	µg/kg	--	--	--	--	--	--	--
2,4-Dinitrophenol	µg/kg	--	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/kg	--	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/kg	--	--	--	--	--	--	--
2-Chloronaphthalene	µg/kg	--	--	--	--	--	--	--
2-Chlorophenol	µg/kg	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/kg	1700	33 J		50 J		37 J	
2-Methylphenol	µg/kg	--	--	--	--	--	--	--
2-Nitroaniline	µg/kg	--	--	--	--	--	--	--
2-Nitrophenol	µg/kg	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/kg	--	--	--	--	--	--	--
3-Nitroaniline	µg/kg	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/kg	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	µg/kg	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/kg	--	--	--	--	--	--	--
4-Chloroaniline	µg/kg	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	µg/kg	--	--	--	--	--	--	--
4-Methylphenol	µg/kg	--	--	--	--	--	--	--
4-Nitroaniline	µg/kg	--	--	--	--	--	--	--
4-Nitrophenol	µg/kg	--	--	--	--	--	--	--
Acenaphthene	µg/kg	12000 ^d	140		150		44	
Acenaphthylene	µg/kg	130	18 J		27 J		16 J	
Acetophenone	µg/kg	--	--	--	--	--	--	--
Anthracene	µg/kg	24000	270		340		150	
Atrazine	µg/kg	--	--	--	--	--	--	--
Benzaldehyde	µg/kg	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/kg	26000 ^p	610		800		330	
Benzo(a)pyrene	µg/kg	20000 ^{pt}	590		870		410	
Benzo(b)fluoranthene	µg/kg	22000 ^p	700		910		450	
Benzo(g,h,i)perylene	µg/kg	9000	480		680		760	
Benzo(k)fluoranthene	µg/kg	14000	480		830		400	
Biphenyl (1,1-Biphenyl)	µg/kg	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/kg	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/kg	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	µg/kg	--	--	--	--	--	--	--
Caprolactam	µg/kg	--	--	--	--	--	--	--
Carbazole	µg/kg	--	--	--	--	--	--	--
Chrysene	µg/kg	27000	620		730		360	
Dibenz(a,h)anthracene	µg/kg	3200 ^p	310 U		200 J		310 U	
Dibenzofuran	µg/kg	--	--	--	--	--	--	--

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	A Column Excavation, South Area - Sidewall		A Column Excavation, South Area - Sidewall		A Column Excavation, South Area - Sidewall		A Column Excavation, South Area - SW Floor	
Sample Identification	SO-17360-070612-EB-007		SO-17360-070612-EB-008		SO-17360-070612-EB-009		SO-17360-070612-EB-013	
Sample Date	7/6/2012		7/6/2012		7/6/2012		7/6/2012	
Sample Depth	(3-) ft BGS		(3-) ft BGS		(3-) ft BGS		(7-) ft BGS	
Sample Type			Duplicate					
Excavation Status	Excavated		Unexcavated		Unexcavated		Unexcavated	
	<i>Units</i>							
<i>SVOCs (continued)</i>								
Diethyl phthalate	µg/kg	--	--	--	--	--	--	--
Dimethyl phthalate	µg/kg	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/kg	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/kg	--	--	--	--	--	--	--
Fluoranthene	µg/kg	67000 ^a	1300	1500	730			
Fluorene	µg/kg	12000 ^a	120	150	47			
Hexachlorobenzene	µg/kg	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/kg	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/kg	--	--	--	--	--	--	--
Hexachloroethane	µg/kg	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/kg	8800	350	520	290 J			
Isophorone	µg/kg	--	--	--	--	--	--	--
Naphthalene	µg/kg	1700 ^a	27 J	55	34			
Nitrobenzene	µg/kg	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	µg/kg	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/kg	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	--	--	--	--	--	--	--
Phenanthrene	µg/kg	68000 ^{aa}	1000	1100	460			
Phenol	µg/kg	--	--	--	--	--	--	--
Pyrene	µg/kg	51000	1800	1800	820			
<i>Volatile Organic Compounds (VOCs)</i>								
1,1,1-Trichloroethane	µg/kg	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/kg	--	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/kg	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/kg	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/kg	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/kg	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	--	--	--	--	--	--	--
1,2-Dibromoethane ⁽²⁾	µg/kg	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/kg	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/kg	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/kg	--	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/kg	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/kg	--	--	--	--	--	--	--
2-Butanone ⁽³⁾	µg/kg	--	--	--	--	--	--	--
2-Hexanone	µg/kg	--	--	--	--	--	--	--
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	--	--	--	--	--	--	--
Acetone	µg/kg	--	--	--	--	--	--	--
Benzene	µg/kg	--	--	--	--	--	--	--
Bromodichloromethane	µg/kg	--	--	--	--	--	--	--
Bromoform	µg/kg	--	--	--	--	--	--	--

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>A Column Excavation, South Area - Sidewall</i>		<i>A Column Excavation, South Area - Sidewall</i>		<i>A Column Excavation, South Area - Sidewall</i>		<i>A Column Excavation, South Area - SW Floor</i>	
Sample Identification	SO-17360-070612-EB-007		SO-17360-070612-EB-008		SO-17360-070612-EB-009		SO-17360-070612-EB-013	
Sample Date	7/6/2012		7/6/2012		7/6/2012		7/6/2012	
Sample Depth	(3-) ft BGS		(3-) ft BGS		(3-) ft BGS		(7-) ft BGS	
Sample Type			Duplicate					
Excavation Status	Excavated		Unexcavated		Unexcavated		Unexcavated	
	<i>Units</i>							
<i>VOCs (continued)</i>								
Bromomethane (Methyl bromide)	µg/kg	--	--	--	--	--	--	--
Carbon disulfide	µg/kg	--	--	--	--	--	--	--
Carbon tetrachloride	µg/kg	--	--	--	--	--	--	--
Chlorobenzene	µg/kg	--	--	--	--	--	--	--
Chloroethane	µg/kg	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/kg	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/kg	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/kg	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/kg	--	--	--	--	--	--	--
Cyclohexane	µg/kg	--	--	--	--	--	--	--
Dibromochloromethane	µg/kg	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/kg	--	--	--	--	--	--	--
Ethylbenzene	µg/kg	--	--	--	--	--	--	--
Isopropyl benzene	µg/kg	--	--	--	--	--	--	--
Methyl acetate	µg/kg	--	--	--	--	--	--	--
Methyl cyclohexane	µg/kg	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/kg	--	--	--	--	--	--	--
Methylene chloride	µg/kg	--	--	--	--	--	--	--
Styrene	µg/kg	--	--	--	--	--	--	--
Tetrachloroethene	µg/kg	--	--	--	--	--	--	--
Toluene	µg/kg	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/kg	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/kg	--	--	--	--	--	--	--
Trichloroethene	µg/kg	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/kg	--	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	µg/kg	--	--	--	--	--	--	--
Vinyl chloride	µg/kg	--	--	--	--	--	--	--
Xylenes (total)	µg/kg	--	--	--	--	--	--	--

Notes:

See Table 1 for applicable criteria and notes.

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		A-2 - Lower Seam	A-2 - Upper Seam	A-3 - Lower Seam	A-3 - Upper Seam	A-9 Upper Seam	A-9 Upper Seam	A-9 Lower Seam
Sample Identification		SO-17360-062212-EB-002	SO-17360-062212-EB-001	SO-17360-062212-EB-004	SO-17360-062212-EB-003	SO-17360-062212-EB-005	SO-17360-062212-EB-006	SO-17360-062212-EB-007
Sample Date		6/22/2012	6/22/2012	6/22/2012	6/22/2012	6/22/2012	6/22/2012	6/22/2012
Sample Depth		(3-) ft BGS	(1.5-) ft BGS	(3-) ft BGS	(1.5-) ft BGS	(2-) ft BGS	(2-) ft BGS	(3-) ft BGS
Sample Type							Duplicate	
Excavation Status		Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated
	Units							
Metals								
Antimony	µg/kg	450 J	3000 J	310 J	4700 J ^{nc}	1400 J	1100 J	1900 J
Arsenic	µg/kg	4100	3400	4400	3000	3400	2800	8800 ^{ncap}
Barium	µg/kg	50000	150000	39000	120000	130000	68000	45000
Beryllium	µg/kg	230 J	140 J	230 J	140 J	180 J	140 J	470 J
Cadmium	µg/kg	96 J	880	280 J	4600 ^{nl}	300 J	260 J	380 J
Chromium	µg/kg	4900 J	18000	4900 J	22000 ^{nl}	11000	6600	5200 J
Cobalt	µg/kg	2700	4200	3700	6000	2700	2400	3000
Copper	µg/kg	19000	190000 ^{nl}	19000	260000 ^{nl}	23000	20000	29000
Iron	µg/kg	7500000	15000000 ^{nc}	6300000	23000000 ^{nc}	11000000	8600000	11000000
Lead	µg/kg	21000	160000	64000	120000	37000	28000	40000
Lead - coarse fraction	µg/kg	--	--	--	--	--	--	--
Lead - fine fraction	µg/kg	--	--	--	--	--	--	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--	--	--	--
Manganese	µg/kg	220000	360000	120000	340000	200000	200000	150000
Mercury	µg/kg	16 J	99	28 J	33 J	17 J	15 J	19 J
Molybdenum	µg/kg	930 J	3000 J ^b	940 J	4600 ^{nc}	1600 J ^b	1100 J	1700 J ^b
Nickel	µg/kg	5800	20000	6900	21000	12000	10000	9500
Selenium	µg/kg	620 U	670 U	570 U	690 U	610 U	630 U	860 U
Silver	µg/kg	14 J	190 J	13 J	74 J	23 J	40 J	16 J
Thallium	µg/kg	22 J	19 J	15 J	34000 U	1500 U	1600 U	71 J
Vanadium	µg/kg	6900 J	11000 J	5800 J	9500 J	9000 J	7000 J	13000 J
Zinc	µg/kg	17000	140000	19000	140000	77000	48000	59000
PCBs								
Aroclor-1016 (PCB-1016)	µg/kg	340 U	320 U	350 U	340 U	340 U	340 U	360 U
Aroclor-1221 (PCB-1221)	µg/kg	340 U	320 U	350 U	340 U	340 U	340 U	360 U
Aroclor-1232 (PCB-1232)	µg/kg	340 U	320 U	350 U	340 U	340 U	340 U	360 U
Aroclor-1242 (PCB-1242)	µg/kg	340 U	320 U	350 U	340 U	340 U	340 U	360 U
Aroclor-1248 (PCB-1248)	µg/kg	340 U	320 U	350 U	340 U	340 U	340 U	360 U
Aroclor-1254 (PCB-1254)	µg/kg	65 J	130 J	350 U	340	340 U	340 U	360 U
Aroclor-1260 (PCB-1260)	µg/kg	340 U	320 U	350 U	340 U	340 U	340 U	360 U
Total PCBs	µg/kg	65 J	130 J	ND	340	ND	ND	ND

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
 SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
 FORMER GRAND RAPIDS METAL PLANT
 WYOMING, MICHIGAN

Sample Location		A-2 - Lower Seam	A-2 - Upper Seam	A-3 - Lower Seam	A-3 - Upper Seam	A-9 Upper Seam	A-9 Upper Seam	A-9 Lower Seam
Sample Identification		SO-17360-062212-EB-002	SO-17360-062212-EB-001	SO-17360-062212-EB-004	SO-17360-062212-EB-003	SO-17360-062212-EB-005	SO-17360-062212-EB-006	SO-17360-062212-EB-007
Sample Date		6/22/2012	6/22/2012	6/22/2012	6/22/2012	6/22/2012	6/22/2012	6/22/2012
Sample Depth		(3-) ft BGS	(1.5-) ft BGS	(3-) ft BGS	(1.5-) ft BGS	(2-) ft BGS	(2-) ft BGS	(3-) ft BGS
Sample Type							Duplicate	
Excavation Status		Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated
	Units							
Semi-Volatile Organic Compounds (SVOCs)								
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
2,4,5-Trichlorophenol	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
2,4,6-Trichlorophenol	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
2,4-Dichlorophenol	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
2,4-Dimethylphenol	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
2,4-Dinitrophenol	µg/kg	17000 U	43000 U	18000 U	43000 U	44000 U	44000 U	9400 U
2,4-Dinitrotoluene	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
2,6-Dinitrotoluene	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
2-Chloronaphthalene	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
2-Chlorophenol	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
2-Methylnaphthalene	µg/kg	440 J	2300 J	7000 U	17000 U	18000 U	1100 J	830 J
2-Methylphenol	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
2-Nitroaniline	µg/kg	17000 U	43000 U	18000 U	43000 U	44000 U	44000 U	9400 U
2-Nitrophenol	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
3,3'-Dichlorobenzidine	µg/kg	41000 U	100000 U	42000 U	100000 U	110000 U	110000 U	23000 U
3-Nitroaniline	µg/kg	17000 U	43000 U	18000 U	43000 U	44000 U	44000 U	9400 U
4,6-Dinitro-2-methylphenol	µg/kg	17000 U	43000 U	18000 U	43000 U	44000 U	44000 U	9400 U
4-Bromophenyl phenyl ether	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
4-Chloro-3-methylphenol	µg/kg	5700 U	14000 U	5900 U	14000 U	15000 U	15000 U	3200 U
4-Chloroaniline	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
4-Chlorophenyl phenyl ether	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
4-Methylphenol	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
4-Nitroaniline	µg/kg	17000 U	43000 U	18000 U	43000 U	44000 U	44000 U	9400 U
4-Nitrophenol	µg/kg	17000 U	43000 U	18000 U	43000 U	44000 U	44000 U	9400 U
Acenaphthene	µg/kg	1700 J	16000 J ¹⁴	7000 U	3300 J	18000 U	5700 J	730 J
Acenaphthylene	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
Acetophenone	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
Anthracene	µg/kg	4400 J	38000	460 J	7900 J	1300 J	14000 J	1900 J
Atrazine	µg/kg	1000 U	2600 U	1100 U	2600 U	2700 U	2700 U	560 U
Benzaldehyde	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
Benzo(a)anthracene	µg/kg	10000	70000 ^P	1100 J	17000	3800 J	24000 ^P	3300 J
Benzo(a)pyrene	µg/kg	8300 ^{PA}	56000 ^{PA}	780 J	14000 J ^{PA}	6000 J ^P	19000 ^{PA}	2900 J ^P
Benzo(b)fluoranthene	µg/kg	12000	80000 ^P	1200 J	21000 ^P	9600 J	26000 ^P	3900
Benzo(g,h,i)perylene	µg/kg	5100 J	34000	590 J	8900 J	7000 J	14000 J	2700 J
Benzo(k)fluoranthene	µg/kg	5000 J	32000	490 J	7500 J	3900 J	10000 J	2000 J
Biphenyl (1,1-Biphenyl)	µg/kg	6700 U	1200 J	7000 U	17000 U	18000 U	18000 U	260 J
bis(2-Chloroethoxy)methane	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
bis(2-Chloroethyl)ether	µg/kg	2000 U	5100 U	2100 U	5200 U	5300 U	5300 U	1100 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	6700 U	17000 U	7000 U	8200 J	18000 U	18000 U	3700 U
Butyl benzylphthalate (BBP)	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
Caprolactam	µg/kg	6700 U	17000 U	7000 U	17000 U	18000 U	18000 U	3700 U
Carbazole	µg/kg	3200 J ¹⁴	27000 ^{PA}	7000 U	5400 J ¹⁴	1100 J	7300 J ¹⁴	1400 J ¹⁴
Chrysene	µg/kg	9900	72000	1400 J	17000	6100 J	22000	3200 J
Dibenz(a,h)anthracene	µg/kg	1400 J	9900 J ^{PA}	7000 U	2500 J ^P	1300 J	3200 J ^P	530 J
Dibenzofuran	µg/kg	1100 J	13000 J ¹⁴	7000 U	2300 J ¹⁴	18000 U	3400 J ¹⁴	770 J

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	A-2 - Lower Seam		A-2 - Upper Seam		A-3 - Lower Seam		A-3 - Upper Seam		A-9 Upper Seam		A-9 Upper Seam		A-9 Lower Seam	
Sample Identification	SO-17360-062212-EB-002		SO-17360-062212-EB-001		SO-17360-062212-EB-004		SO-17360-062212-EB-003		SO-17360-062212-EB-005		SO-17360-062212-EB-006		SO-17360-062212-EB-007	
Sample Date	6/22/2012		6/22/2012		6/22/2012		6/22/2012		6/22/2012		6/22/2012		6/22/2012	
Sample Depth	(3-) ft BGS		(1.5-) ft BGS		(3-) ft BGS		(1.5-) ft BGS		(2-) ft BGS		(2-) ft BGS		(3-) ft BGS	
Sample Type											Duplicate			
Excavation Status	Excavated		Excavated		Excavated		Excavated		Excavated		Excavated		Excavated	
	Units													
SVOCs (continued)														
Diethyl phthalate	µg/kg	6700 U		17000 U		7000 U		17000 U		18000 U		18000 U		3700 U
Dimethyl phthalate	µg/kg	6700 U		17000 U		7000 U		17000 U		18000 U		18000 U		3700 U
Di-n-butylphthalate (DBP)	µg/kg	6700 U		17000 U		7000 U		17000 U		18000 U		18000 U		3700 U
Di-n-octyl phthalate (DnOP)	µg/kg	6700 U		17000 U		7000 U		17000 U		18000 U		18000 U		3700 U
Fluoranthene	µg/kg	24000 ^a		190000 ^a		2400 J		43000 ^a		5800 J ^a		56000 J ^a		7800 ^a
Fluorene	µg/kg	1700 J		17000 ^a		7000 U		3500 J		18000 U		6700 J ^a		850 J
Hexachlorobenzene	µg/kg	6700 U		17000 U		7000 U		17000 U		18000 U		18000 U		3700 U
Hexachlorobutadiene	µg/kg	1000 U		2600 U		1100 U		2600 U		2700 U		2700 U		560 U
Hexachlorocyclopentadiene	µg/kg	6700 U		17000 U		7000 U		17000 U		18000 U		18000 U		3700 U
Hexachloroethane	µg/kg	6100 U		15000 U		6400 U		16000 U		16000 U		16000 U		3400 U
Indeno(1,2,3-cd)pyrene	µg/kg	4600 J		31000 ^a		490 J		7800 J		4700 J		11000 J		1900 J
Isophorone	µg/kg	6700 U		17000 U		7000 U		17000 U		18000 U		18000 U		3700 U
Naphthalene	µg/kg	500 J		2300 J ^a		7000 U		17000 U		18000 U		920 J ^a		770 J ^a
Nitrobenzene	µg/kg	6700 U		17000 U		7000 U		17000 U		18000 U		18000 U		3700 U
N-Nitrosodi-n-propylamine	µg/kg	6700 U		17000 U		7000 U		17000 U		18000 U		18000 U		3700 U
N-Nitrosodiphenylamine	µg/kg	6700 U		17000 U		7000 U		17000 U		18000 U		18000 U		3700 U
Pentachlorophenol	µg/kg	410 U		1000 U		420 U		1000 U		1100 U		1100 U		230 U
Phenanthrene	µg/kg	18000 ^a		160000 ^a		2000 J		34000 ^a		3800 J ^a		46000 J ^a		7400 ^a
Phenol	µg/kg	6700 U		17000 U		7000 U		17000 U		18000 U		18000 U		3700 U
Pyrene	µg/kg	21000		140000		2200 J		35000		5500 J		48000 J		6700
Volatile Organic Compounds (VOCs)														
1,1,1-Trichloroethane	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,1,2,2-Tetrachloroethane	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,1,2-Trichloroethane	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,1-Dichloroethane	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,1-Dichloroethene	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,2,4-Trichlorobenzene	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,2-Dibromoethane ⁽²⁾	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,2-Dichlorobenzene	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,2-Dichloroethane	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,2-Dichloropropane	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,3-Dichlorobenzene	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
1,4-Dichlorobenzene	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
2-Butanone ⁽³⁾	µg/kg	410 U		240 U		370 U		250 U		240 U		240 U		280 U
2-Hexanone	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
Acetone	µg/kg	200 U		120 U		190 U		120 U		120 U		120 U		140 U
Benzene	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
Bromodichloromethane	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U
Bromoform	µg/kg	61 U		36 U		56 U		37 U		37 U		36 U		42 U

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		A-2 - Lower Seam	A-2 - Upper Seam	A-3 - Lower Seam	A-3 - Upper Seam	A-9 Upper Seam	A-9 Upper Seam	A-9 Lower Seam
Sample Identification		SO-17360-062212-EB-002	SO-17360-062212-EB-001	SO-17360-062212-EB-004	SO-17360-062212-EB-003	SO-17360-062212-EB-005	SO-17360-062212-EB-006	SO-17360-062212-EB-007
Sample Date		6/22/2012	6/22/2012	6/22/2012	6/22/2012	6/22/2012	6/22/2012	6/22/2012
Sample Depth		(3-) ft BGS	(1.5-) ft BGS	(3-) ft BGS	(1.5-) ft BGS	(2-) ft BGS	(2-) ft BGS	(3-) ft BGS
Sample Type							Duplicate	
Excavation Status		Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated
	Units							
<i>VOCs (continued)</i>								
Bromomethane (Methyl bromide)	µg/kg	150 U	89 U	140 U	94 U	92 U	89 U	100 U
Carbon disulfide	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Carbon tetrachloride	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Chlorobenzene	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Chloroethane	µg/kg	200 U	120 U	190 U	120 U	120 U	120 U	140 U
Chloroform (Trichloromethane)	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Chloromethane (Methyl chloride)	µg/kg	200 U	120 U	190 U	120 U	120 U	120 U	140 U
cis-1,2-Dichloroethene	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
cis-1,3-Dichloropropene	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Cyclohexane	µg/kg	160	36 U	56 U	37 U	37 U	36 U	42 U
Dibromochloromethane	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Dichlorodifluoromethane (CFC-12)	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Ethylbenzene	µg/kg	53 J	36 U	56 U	34 J	37 U	36 U	42 U
Isopropyl benzene	µg/kg	51 J	36 U	56 U	37 U	37 U	36 U	42 U
Methyl acetate	µg/kg	410 U	240 U	370 U	250 U	240 U	240 U	280 U
Methyl cyclohexane	µg/kg	480	36 U	140	37 U	37 U	36 U	42 U
Methyl tert butyl ether (MTBE)	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Methylene chloride	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Styrene	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Tetrachloroethene	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Toluene	µg/kg	190	36 U	33 J	23 J	27 J	36 U	91
trans-1,2-Dichloroethene	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
trans-1,3-Dichloropropene	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Trichloroethene	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Trichlorofluoromethane (CFC-11)	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 UJ
Trifluorotrchloroethane (Freon 113)	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Vinyl chloride	µg/kg	61 U	36 U	56 U	37 U	37 U	36 U	42 U
Xylenes (total)	µg/kg	420	110 U	120 J	170	110 U	110 U	82 J

Notes:

See Table 1 for applicable criteria and notes.

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	<i>Stained Seam - A-10 to A-12</i>		<i>Test pit at A-10</i>		<i>Test pit at A-12</i>		
Sample Identification	SO-17360-052312-EB-004		SO-17360-061312-SM-011		SO-17360-061412-SM-020		
Sample Date	5/23/2012		6/13/2012		6/13/2012		
Sample Depth	-		(1.5-) ft BGS		(1.5-) ft BGS		
Sample Type							
Excavation Status	<i>Excavated</i>		<i>Excavated</i>		<i>Excavated</i>		
	<i>Units</i>						
Metals							
Antimony	µg/kg	7300 ^{NC}	280 J	840	--	8400 ^{NC}	220 J
Arsenic	µg/kg	450	2000	3100	--	17000 ^{CCCP}	2800
Barium	µg/kg	560000	45000	44000	--	630000	38000
Beryllium	µg/kg	140 J	150 J	220 J	--	64 J	270 J
Cadmium	µg/kg	69000 ^{CCU}	120 J	670	--	1600	280
Chromium	µg/kg	29000 ^d	7300	10000	--	110000 ^{CCa}	5300
Cobalt	µg/kg	4200	2200	3000	--	12000 ^{CCU}	2500
Copper	µg/kg	400000 ^d	7900	28000	--	210000 ^d	19000
Iron	µg/kg	37000000 ^{NC}	5800000	12000000	--	130000000 ^{NC}	11000000
Lead	µg/kg	37000000 ^{CCPPa}	13000	55000	--	110000	21000
Lead - coarse fraction	µg/kg	--	--	--	--	59000	--
Lead - fine fraction	µg/kg	--	--	--	--	65000	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--	59000	--
Manganese	µg/kg	330000	190000	150000	--	1300000 ^{CCa}	150000
Mercury	µg/kg	64	25 J	19 J	--	96	17 J
Molybdenum	µg/kg	350 J	410 J	900 J	--	17000 ^{NC}	900 J
Nickel	µg/kg	31000	6100	7900	--	140000 ^{NC}	8100
Selenium	µg/kg	140 U	290	390	--	230 J	360
Silver	µg/kg	17000 ^{CCa}	13 J	34 J	--	120 J	11 J
Thallium	µg/kg	120	48 J	45 J	--	19 J	44 J
Vanadium	µg/kg	6200	8300	11000	--	20000	9000
Zinc	µg/kg	1300000 ^d	20000	48000	--	760000 ^d	87000
PCBs							
Aroclor-1016 (PCB-1016)	µg/kg	370 UJ	320 U	320 U	--	330 U	310 U
Aroclor-1221 (PCB-1221)	µg/kg	370 UJ	320 U	320 U	--	330 U	310 U
Aroclor-1232 (PCB-1232)	µg/kg	370 UJ	320 U	320 U	--	330 U	310 U
Aroclor-1242 (PCB-1242)	µg/kg	370 UJ	320 U	320 U	--	330 U	310 U
Aroclor-1248 (PCB-1248)	µg/kg	18 J	320 U	320 U	--	330 U	310 U
Aroclor-1254 (PCB-1254)	µg/kg	29 J	320 U	320 U	--	330 U	310 U
Aroclor-1260 (PCB-1260)	µg/kg	12 J	320 U	320 U	--	330 U	310 U
Total PCBs	µg/kg	59 J	ND	ND	--	ND	ND

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		<i>Stained Seam - A-10 to A-12</i>	<i>Test pit at A-10</i>	<i>Test pit at A-10</i>	<i>Test pit at A-10</i>	<i>Test pit at A-12</i>	<i>Test pit at A-12</i>
Sample Identification		SO-17360-052312-EB-004	SO-17360-061312-SM-011	SO-17360-061312-SM-012	SO-17360-061412-SM-020	SO-17360-061312-SM-013	SO-17360-061312-SM-014
Sample Date		5/23/2012	6/13/2012	6/13/2012	6/14/2012	6/13/2012	6/13/2012
Sample Depth		-	(1.5-) ft BGS	(3-) ft BGS	(1.5-) ft BGS	(1.5-) ft BGS	(3-) ft BGS
Sample Type							
Excavation Status		<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>
	<i>Units</i>						
<i>Semi-Volatile Organic Compounds (SVOCs)</i>							
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
2,4,5-Trichlorophenol	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
2,4,6-Trichlorophenol	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
2,4-Dichlorophenol	µg/kg	7500 U	16000 U	6500 U	--	26000 U	130000 U
2,4-Dimethylphenol	µg/kg	37000 U	16000 U	6500 U	--	26000 U	130000 U
2,4-Dinitrophenol	µg/kg	37000 U	41000 U	16000 U	--	66000 U	330000 U
2,4-Dinitrotoluene	µg/kg	7500 U	16000 U	6500 U	--	26000 U	130000 U
2,6-Dinitrotoluene	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
2-Chloronaphthalene	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
2-Chlorophenol	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
2-Methylnaphthalene	µg/kg	670 J	1500 J	1200 J	--	2100 J	39000 J nd
2-Methylphenol	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
2-Nitroaniline	µg/kg	3700 U	41000 U	16000 U	--	66000 U	330000 U
2-Nitrophenol	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
3,3'-Dichlorobenzidine	µg/kg	190000 U	98000 U	39000 U	--	160000 U	790000 U
3-Nitroaniline	µg/kg	7500 U	41000 U	16000 U	--	66000 U	330000 U
4,6-Dinitro-2-methylphenol	µg/kg	37000 U	41000 U	16000 U	--	66000 U	330000 U
4-Bromophenyl phenyl ether	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
4-Chloro-3-methylphenol	µg/kg	3700 U	14000 U	5500 U	--	22000 U	110000 U
4-Chloroaniline	µg/kg	15000 U	16000 U	6500 U	--	26000 U	130000 U
4-Chlorophenyl phenyl ether	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
4-Methylphenol	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
4-Nitroaniline	µg/kg	7500 U	41000 U	16000 U	--	66000 U	330000 U
4-Nitrophenol	µg/kg	150000 U	41000 U	16000 U	--	66000 U	330000 U
Acenaphthene	µg/kg	1800 J	6700 J	3000 J	--	2400 J	100000 J nd
Acenaphthylene	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
Acetophenone	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
Anthracene	µg/kg	2500 J	14000 J	5900 J	--	6200 J	160000 ^{ccc}
Atrazine	µg/kg	3700 U	2500 U	980 U	--	4000 U	20000 U
Benzaldehyde	µg/kg	15000 U	16000 U	6500 U	--	26000 U	130000 U
Benzo(a)anthracene	µg/kg	8200	21000 ^p	9100	--	7000 J	160000 ^{pd}
Benzo(a)pyrene	µg/kg	16000 ^{pd}	17000 ^{pd}	8100 ^{pd}	--	5200 J ^p	120000 J ^{pd}
Benzo(b)fluoranthene	µg/kg	22000 ^p	24000 ^p	13000	--	12000 J	190000 ^{pd}
Benzo(g,h,i)perylene	µg/kg	9800	5500 J	2100 J	--	2100 J	36000 J
Benzo(k)fluoranthene	µg/kg	8300	10000 J	5400 J	--	5600 J	52000 J
Biphenyl (1,1-Biphenyl)	µg/kg	220 J	16000 U	6500 U	--	26000 U	130000 U
bis(2-Chloroethoxy)methane	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
bis(2-Chloroethyl)ether	µg/kg	3700 U	4900 U	2000 U	--	8000 U	40000 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	7500 U	16000 U	6500 U	--	1800 J	130000 U
Butyl benzylphthalate (BBP)	µg/kg	7500 U	16000 U	6500 U	--	26000 U	130000 U
Caprolactam	µg/kg	15000 U	16000 U	6500 U	--	3900 J	130000 U
Carbazole	µg/kg	4300 J ^a	23000 ^{pd}	10000 ^{pd}	--	7900 J ^a	240000 ^{ccc}
Chrysene	µg/kg	8800	20000	11000	--	8000 J	150000
Dibenz(a,h)anthracene	µg/kg	2200 J ^p	3000 J ^p	1100 J	--	2700 J ^p	16000 J ^{pd}
Dibenzofuran	µg/kg	1100 J	2300 J nd	1600 J	--	26000 U	66000 J nd

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		<i>Stained Seam - A-10 to A-12</i>	<i>Test pit at A-10</i>	<i>Test pit at A-10</i>	<i>Test pit at A-10</i>	<i>Test pit at A-12</i>	<i>Test pit at A-12</i>
Sample Identification		SO-17360-052312-EB-004	SO-17360-061312-SM-011	SO-17360-061312-SM-012	SO-17360-061412-SM-020	SO-17360-061312-SM-013	SO-17360-061312-SM-014
Sample Date		5/23/2012	6/13/2012	6/13/2012	6/14/2012	6/13/2012	6/13/2012
Sample Depth		-	(1.5-) ft BGS	(3-) ft BGS	(1.5-) ft BGS	(1.5-) ft BGS	(3-) ft BGS
Sample Type							
Excavation Status		<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>
	<i>Units</i>						
<i>SVOCs (continued)</i>							
Diethyl phthalate	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
Dimethyl phthalate	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
Di-n-butylphthalate (DBP)	µg/kg	15000 U	16000 U	6500 U	--	26000 U	130000 U
Di-n-octyl phthalate (DnOP)	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
Fluoranthene	µg/kg	14000^u	50000^u	19000^u	--	18000 J^u	410000^u
Fluorene	µg/kg	2300 J	6100 J^u	2500 J	--	6500 J^u	110000 J^u
Hexachlorobenzene	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
Hexachlorobutadiene	µg/kg	3700 U	2500 U	980 U	--	4000 U	20000 U
Hexachlorocyclopentadiene	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
Hexachloroethane	µg/kg	3700 U	15000 U	5900 U	--	24000 U	120000 U
Indeno(1,2,3-cd)pyrene	µg/kg	7600	5500 J	1900 J	--	1600 J	36000 J^u
Isophorone	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
Naphthalene	µg/kg	1300 J^u	2400 J^u	2200 J^u	--	1700 J^u	96000 J^u
Nitrobenzene	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
N-Nitrosodi-n-propylamine	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
N-Nitrosodiphenylamine	µg/kg	3700 U	16000 U	6500 U	--	26000 U	130000 U
Pentachlorophenol	µg/kg	37000 U	980 U	390 U	--	1600 U	7900 U
Phenanthrene	µg/kg	9200^u	47000^u	19000^u	--	26000 J^u	490000^u
Phenol	µg/kg	37000 U	16000 U	6500 U	--	26000 U	130000 U
Pyrene	µg/kg	26000	40000	24000	--	20000 J	320000
<i>Volatile Organic Compounds (VOCs)</i>							
1,1,1-Trichloroethane	µg/kg	56 U	--	30 U	33 U	--	--
1,1,2,2-Tetrachloroethane	µg/kg	56 U	--	30 U	33 U	--	--
1,1,2-Trichloroethane	µg/kg	56 U	--	30 U	33 U	--	--
1,1-Dichloroethane	µg/kg	56 U	--	30 U	33 U	--	--
1,1-Dichloroethene	µg/kg	56 U	--	30 U	33 U	--	--
1,2,4-Trichlorobenzene	µg/kg	56 U	--	30 U	33 U	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	280 U	--	30 U	33 U	--	--
1,2-Dibromoethane ⁽²⁾	µg/kg	56 U	--	30 U	33 U	--	--
1,2-Dichlorobenzene	µg/kg	56 U	--	30 U	33 U	--	--
1,2-Dichloroethane	µg/kg	56 U	--	30 U	33 U	--	--
1,2-Dichloropropane	µg/kg	56 U	--	30 U	33 U	--	--
1,3-Dichlorobenzene	µg/kg	56 U	--	30 U	33 U	--	--
1,4-Dichlorobenzene	µg/kg	56 U	--	30 U	33 U	--	--
2-Butanone ⁽³⁾	µg/kg	850 U	--	200 U	220 U	--	--
2-Hexanone	µg/kg	2800 U	--	30 U	33 U	--	--
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	2800 U	--	30 U	33 U	--	--
Acetone	µg/kg	250 J	--	100 U	110 U	--	--
Benzene	µg/kg	56 U	--	200^{uc}	33 U	--	--
Bromodichloromethane	µg/kg	56 U	--	30 U	33 U	--	--
Bromoform	µg/kg	56 U	--	30 U	33 U	--	--

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		<i>Stained Seam - A-10 to A-12</i>	<i>Test pit at A-10</i>	<i>Test pit at A-10</i>	<i>Test pit at A-10</i>	<i>Test pit at A-12</i>	<i>Test pit at A-12</i>
Sample Identification		SO-17360-052312-EB-004	SO-17360-061312-SM-011	SO-17360-061312-SM-012	SO-17360-061412-SM-020	SO-17360-061312-SM-013	SO-17360-061312-SM-014
Sample Date		5/23/2012	6/13/2012	6/13/2012	6/14/2012	6/13/2012	6/13/2012
Sample Depth		-	(1.5-) ft BGS	(3-) ft BGS	(1.5-) ft BGS	(1.5-) ft BGS	(3-) ft BGS
Sample Type							
Excavation Status		<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>	<i>Excavated</i>
	<i>Units</i>						
<i>VOCs (continued)</i>							
Bromomethane (Methyl bromide)	µg/kg	32 J	--	75 U	83 U	--	--
Carbon disulfide	µg/kg	280 U	--	28 J	33 U	--	--
Carbon tetrachloride	µg/kg	56 U	--	30 U	33 U	--	--
Chlorobenzene	µg/kg	56 U	--	30 U	33 U	--	--
Chloroethane	µg/kg	56 U	--	100 U	110 U	--	--
Chloroform (Trichloromethane)	µg/kg	56 U	--	30 U	33 U	--	--
Chloromethane (Methyl chloride)	µg/kg	56 U	--	100 U	110 U	--	--
cis-1,2-Dichloroethene	µg/kg	56 U	--	30 U	33 U	--	--
cis-1,3-Dichloropropene	µg/kg	56 U	--	30 U	33 U	--	--
Cyclohexane	µg/kg	280 U	--	120	33 U	--	--
Dibromochloromethane	µg/kg	56 U	--	30 U	33 U	--	--
Dichlorodifluoromethane (CFC-12)	µg/kg	56 U	--	30 U	33 U	--	--
Ethylbenzene	µg/kg	14 J	--	130	17 J	--	--
Isopropyl benzene	µg/kg	56 U	--	72	25 J	--	--
Methyl acetate	µg/kg	420	--	200 U	220 U	--	--
Methyl cyclohexane	µg/kg	280 U	--	410	33 U	--	--
Methyl tert butyl ether (MTBE)	µg/kg	56 U	--	30 U	33 U	--	--
Methylene chloride	µg/kg	300 U	--	30 U	33 U	--	--
Styrene	µg/kg	56 U	--	30 U	33 U	--	--
Tetrachloroethene	µg/kg	29 J	--	72	33 U	--	--
Toluene	µg/kg	40 J	--	660	46	--	--
trans-1,2-Dichloroethene	µg/kg	56 U	--	30 U	33 U	--	--
trans-1,3-Dichloropropene	µg/kg	56 U	--	30 U	33 U	--	--
Trichloroethene	µg/kg	56 U	--	30 U	33 U	--	--
Trichlorofluoromethane (CFC-11)	µg/kg	56 U	--	30 U	33 U	--	--
Trifluorotrchloroethane (Freon 113)	µg/kg	56 U	--	30 U	33 U	--	--
Vinyl chloride	µg/kg	45 U	--	30 U	33 U	--	--
Xylenes (total)	µg/kg	62 J	--	610	110	--	--

Notes:

See Table 1 for applicable criteria and notes.

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		Test pit at A-12	Test pit at A-12	Test pit at A-17	Test pit at A-17	Test pit at A-17	Test pit at A-17	Test pit at A-30
Sample Identification		SO-17360-061412-SM-021	SO-17360-061412-SM-022	SO-17360-061312-SM-015	SO-17360-061312-SM-016	SO-17360-061412-SM-023	SO-17360-061412-SM-024	SO-17360-061312-SM-017
Sample Date		6/14/2012	6/14/2012	6/13/2012	6/13/2012	6/14/2012	6/14/2012	6/13/2012
Sample Depth		(1.5-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS
Sample Type					Duplicate		Duplicate	
Excavation Status		Excavated	Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units							
Metals								
Antimony	µg/kg	--	--	840	440	--	--	400 J
Arsenic	µg/kg	--	--	2200	1900	--	--	2200
Barium	µg/kg	--	--	110000	63000	--	--	34000
Beryllium	µg/kg	--	--	95 J	110 J	--	--	170 J
Cadmium	µg/kg	--	--	320	300	--	--	170 J
Chromium	µg/kg	--	--	9100	6100	--	--	4900
Cobalt	µg/kg	--	--	2100	1600	--	--	2200
Copper	µg/kg	--	--	55000	40000	--	--	10000
Iron	µg/kg	--	--	6800000	5100000	--	--	4700000
Lead	µg/kg	--	--	91000	83000	--	--	29000
Lead - coarse fraction	µg/kg	--	--	66000	68000	--	--	--
Lead - fine fraction	µg/kg	--	--	55000	60000	--	--	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	64000	67000	--	--	--
Manganese	µg/kg	--	--	170000	120000	--	--	110000
Mercury	µg/kg	--	--	61	12 J	--	--	6.7 J
Molybdenum	µg/kg	--	--	1400 J	700 J	--	--	510 J
Nickel	µg/kg	--	--	9500	5500	--	--	5500
Selenium	µg/kg	--	--	300 J	280 J	--	--	300
Silver	µg/kg	--	--	97 J	49 J	--	--	57 J
Thallium	µg/kg	--	--	790 U	720 U	--	--	21 J
Vanadium	µg/kg	--	--	6300	7200	--	--	7600
Zinc	µg/kg	--	--	240000	250000	--	--	19000
PCBs								
Aroclor-1016 (PCB-1016)	µg/kg	--	--	320 U	330 U	--	--	320 U
Aroclor-1221 (PCB-1221)	µg/kg	--	--	320 U	330 U	--	--	320 U
Aroclor-1232 (PCB-1232)	µg/kg	--	--	320 U	330 U	--	--	320 U
Aroclor-1242 (PCB-1242)	µg/kg	--	--	320 U	330 U	--	--	320 U
Aroclor-1248 (PCB-1248)	µg/kg	--	--	320 U	330 U	--	--	320 U
Aroclor-1254 (PCB-1254)	µg/kg	--	--	320 U	330 U	--	--	320 U
Aroclor-1260 (PCB-1260)	µg/kg	--	--	320 U	330 U	--	--	320 U
Total PCBs	µg/kg	--	--	ND	ND	--	--	ND

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		Test pit at A-12	Test pit at A-12	Test pit at A-17	Test pit at A-17	Test pit at A-17	Test pit at A-17	Test pit at A-30
Sample Identification		SO-17360-061412-SM-021	SO-17360-061412-SM-022	SO-17360-061312-SM-015	SO-17360-061312-SM-016	SO-17360-061412-SM-023	SO-17360-061412-SM-024	SO-17360-061312-SM-017
Sample Date		6/14/2012	6/14/2012	6/13/2012	6/13/2012	6/14/2012	6/14/2012	6/13/2012
Sample Depth		(1.5-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS
Sample Type					Duplicate		Duplicate	
Excavation Status		Excavated	Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units							
<i>Semi-Volatile Organic Compounds (SVOCs)</i>								
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
2,4,5-Trichlorophenol	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
2,4,6-Trichlorophenol	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
2,4-Dichlorophenol	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
2,4-Dimethylphenol	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
2,4-Dinitrophenol	µg/kg	--	--	16000 U	16000 U	--	--	17000 U
2,4-Dinitrotoluene	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
2,6-Dinitrotoluene	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
2-Chloronaphthalene	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
2-Chlorophenol	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
2-Methylnaphthalene	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
2-Methylphenol	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
2-Nitroaniline	µg/kg	--	--	16000 U	16000 U	--	--	17000 U
2-Nitrophenol	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
3,3'-Dichlorobenzidine	µg/kg	--	--	40000 U	39000 U	--	--	40000 U
3-Nitroaniline	µg/kg	--	--	16000 U	16000 U	--	--	17000 U
4,6-Dinitro-2-methylphenol	µg/kg	--	--	16000 U	16000 U	--	--	17000 U
4-Bromophenyl phenyl ether	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
4-Chloro-3-methylphenol	µg/kg	--	--	5500 U	5500 U	--	--	5600 U
4-Chloroaniline	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
4-Chlorophenyl phenyl ether	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
4-Methylphenol	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
4-Nitroaniline	µg/kg	--	--	16000 U	16000 U	--	--	17000 U
4-Nitrophenol	µg/kg	--	--	16000 U	16000 U	--	--	17000 U
Acenaphthene	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Acenaphthylene	µg/kg	--	--	6500 U	6500 U	--	--	1100 J
Acetophenone	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Anthracene	µg/kg	--	--	440 J	6500 U	--	--	1200 J
Atrazine	µg/kg	--	--	990 U	990 U	--	--	1000 U
Benzaldehyde	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Benzo(a)anthracene	µg/kg	--	--	970 J	470 J	--	--	6500 J
Benzo(a)pyrene	µg/kg	--	--	2000 J	1500 J	--	--	6200 J ¹
Benzo(b)fluoranthene	µg/kg	--	--	2700 J	2000 J	--	--	9500
Benzo(g,h,i)perylene	µg/kg	--	--	1000 J	810 J	--	--	1900 J
Benzo(k)fluoranthene	µg/kg	--	--	1300 J	930 J	--	--	3000 J
Biphenyl (1,1-Biphenyl)	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
bis(2-Chloroethoxy)methane	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
bis(2-Chloroethyl)ether	µg/kg	--	--	2000 U	2000 U	--	--	2000 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Butyl benzylphthalate (BBP)	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Caprolactam	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Carbazole	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Chrysene	µg/kg	--	--	1200 J	550 J	--	--	5700 J
Dibenz(a,h)anthracene	µg/kg	--	--	720 J	730 J	--	--	1100 J
Dibenzofuran	µg/kg	--	--	6500 U	6500 U	--	--	6600 U

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		Test pit at A-12	Test pit at A-12	Test pit at A-17	Test pit at A-17	Test pit at A-17	Test pit at A-17	Test pit at A-30
Sample Identification		SO-17360-061412-SM-021	SO-17360-061412-SM-022	SO-17360-061312-SM-015	SO-17360-061312-SM-016	SO-17360-061412-SM-023	SO-17360-061412-SM-024	SO-17360-061312-SM-017
Sample Date		6/14/2012	6/14/2012	6/13/2012	6/13/2012	6/14/2012	6/14/2012	6/13/2012
Sample Depth		(1.5-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS
Sample Type					Duplicate		Duplicate	
Excavation Status		Excavated	Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units							
SVOCs (continued)								
Diethyl phthalate	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Dimethyl phthalate	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Di-n-butylphthalate (DBP)	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Di-n-octyl phthalate (DnOP)	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Fluoranthene	µg/kg	--	--	1500 J	740 J	--	--	8800 ^a
Fluorene	µg/kg	--	--	6500 U	6500 U	--	--	400 J
Hexachlorobenzene	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Hexachlorobutadiene	µg/kg	--	--	990 U	990 U	--	--	1000 U
Hexachlorocyclopentadiene	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Hexachloroethane	µg/kg	--	--	5900 U	5900 U	--	--	6000 U
Indeno(1,2,3-cd)pyrene	µg/kg	--	--	750 J	640 J	--	--	1900 J
Isophorone	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Naphthalene	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Nitrobenzene	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
N-Nitrosodi-n-propylamine	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
N-Nitrosodiphenylamine	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Pentachlorophenol	µg/kg	--	--	400 U	390 U	--	--	400 U
Phenanthrene	µg/kg	--	--	950 J	610 J	--	--	4400 J ^a
Phenol	µg/kg	--	--	6500 U	6500 U	--	--	6600 U
Pyrene	µg/kg	--	--	1500 J	760 J	--	--	7600
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	µg/kg	32 U	37 U	--	--	32 U	33 U	--
1,1,2,2-Tetrachloroethane	µg/kg	32 U	37 U	--	--	32 U	33 U	--
1,1,2-Trichloroethane	µg/kg	32 U	37 U	--	--	32 U	33 U	--
1,1-Dichloroethane	µg/kg	32 U	37 U	--	--	32 U	33 U	--
1,1-Dichloroethene	µg/kg	32 U	37 U	--	--	32 U	33 U	--
1,2,4-Trichlorobenzene	µg/kg	32 U	37 U	--	--	32 U	33 U	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	32 U	37 U	--	--	32 U	33 U	--
1,2-Dibromoethane ⁽²⁾	µg/kg	32 U	37 U	--	--	32 U	33 U	--
1,2-Dichlorobenzene	µg/kg	32 U	37 U	--	--	32 U	41	--
1,2-Dichloroethane	µg/kg	32 U	37 U	--	--	32 U	33 U	--
1,2-Dichloropropane	µg/kg	32 U	37 U	--	--	32 U	33 U	--
1,3-Dichlorobenzene	µg/kg	32 U	37 U	--	--	32 U	33 U	--
1,4-Dichlorobenzene	µg/kg	32 U	37 U	--	--	32 U	33 U	--
2-Butanone ⁽³⁾	µg/kg	210 U	940	--	--	220 U	220 U	--
2-Hexanone	µg/kg	32 U	37 U	--	--	32 U	33 U	--
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Acetone	µg/kg	110 U	390	--	--	110 U	110 U	--
Benzene	µg/kg	32 U	140 ^{bc}	--	--	32 U	33 U	--
Bromodichloromethane	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Bromoform	µg/kg	32 U	37 U	--	--	32 U	33 U	--

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		Test pit at A-12	Test pit at A-12	Test pit at A-17	Test pit at A-17	Test pit at A-17	Test pit at A-17	Test pit at A-30
Sample Identification		SO-17360-061412-SM-021	SO-17360-061412-SM-022	SO-17360-061312-SM-015	SO-17360-061312-SM-016	SO-17360-061412-SM-023	SO-17360-061412-SM-024	SO-17360-061312-SM-017
Sample Date		6/14/2012	6/14/2012	6/13/2012	6/13/2012	6/14/2012	6/14/2012	6/13/2012
Sample Depth		(1.5-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS
Sample Type					Duplicate		Duplicate	
Excavation Status		Excavated	Excavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated
	Units							
<i>VOCs (continued)</i>								
Bromomethane (Methyl bromide)	µg/kg	80 U	56 J	--	--	81 U	83 U	--
Carbon disulfide	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Carbon tetrachloride	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Chlorobenzene	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Chloroethane	µg/kg	110 U	120 U	--	--	110 U	110 U	--
Chloroform (Trichloromethane)	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Chloromethane (Methyl chloride)	µg/kg	110 U	120 U	--	--	110 U	110 U	--
cis-1,2-Dichloroethene	µg/kg	32 U	37 U	--	--	32 U	33 U	--
cis-1,3-Dichloropropene	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Cyclohexane	µg/kg	32 U	670	--	--	32 U	62	--
Dibromochloromethane	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Dichlorodifluoromethane (CFC-12)	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Ethylbenzene	µg/kg	32 U	530 ^u	--	--	41	95	--
Isopropyl benzene	µg/kg	35	240	--	--	19 J	51	--
Methyl acetate	µg/kg	210 U	250 U	--	--	220 U	220 U	--
Methyl cyclohexane	µg/kg	32 U	2500	--	--	32 U	250	--
Methyl tert butyl ether (MTBE)	µg/kg	57	37 U	--	--	32 U	33 U	--
Methylene chloride	µg/kg	74	47	--	--	52	14 J	--
Styrene	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Tetrachloroethene	µg/kg	32 U	110 ^u	--	--	32 U	33 U	--
Toluene	µg/kg	32 U	2000	--	--	96	150	--
trans-1,2-Dichloroethene	µg/kg	32 U	37 U	--	--	32 U	33 U	--
trans-1,3-Dichloropropene	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Trichloroethene	µg/kg	32 U	130 ^u	--	--	32 U	33 U	--
Trichlorofluoromethane (CFC-11)	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Trifluorotrchloroethane (Freon 113)	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Vinyl chloride	µg/kg	32 U	37 U	--	--	32 U	33 U	--
Xylenes (total)	µg/kg	84 J	2800 ^u	--	--	210	580	--

Notes:

See Table 1 for applicable criteria and notes.

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		<i>Test pit at A-30</i>	<i>Test pit at A-33</i>	<i>Test pit at A-33</i>	<i>Test pit at A-39</i>	<i>Test pit at A-39</i>	<i>Unstained Seam - A-10 to A-12</i>
Sample Identification		SO-17360-061412-SM-025	SO-17360-061312-SM-018	SO-17360-061412-SM-026	SO-17360-061312-SM-019	SO-17360-061412-SM-027	SO-17360-052312-EB-005
Sample Date		6/14/2012	6/13/2012	6/14/2012	6/13/2012	6/14/2012	5/23/2012
Sample Depth		(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	-
Sample Type							
Excavation Status		<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Unexcavated</i>	<i>Excavated</i>
	<i>Units</i>						
Metals							
Antimony	µg/kg	--	530	--	160 J	--	930
Arsenic	µg/kg	--	3200	--	1800	--	7800 ^{RECP}
Barium	µg/kg	--	30000	--	13000	--	95000
Beryllium	µg/kg	--	160 J	--	100 J	--	2400
Cadmium	µg/kg	--	280	--	53 J	--	660
Chromium	µg/kg	--	8000	--	4900	--	11000
Cobalt	µg/kg	--	2700	--	1900	--	4700
Copper	µg/kg	--	20000	--	4300	--	35000
Iron	µg/kg	--	9900000	--	4500000	--	52000000 ^{RE}
Lead	µg/kg	--	58000	--	7300	--	16000
Lead - coarse fraction	µg/kg	--	--	--	--	--	--
Lead - fine fraction	µg/kg	--	--	--	--	--	--
Lead - total (calculated by fine/coarse fraction)	µg/kg	--	--	--	--	--	--
Manganese	µg/kg	--	210000	--	100000	--	300000
Mercury	µg/kg	--	17 J	--	12 J	--	15 J
Molybdenum	µg/kg	--	630 J	--	170 J	--	6300 ^{RE}
Nickel	µg/kg	--	7300	--	4400	--	17000
Selenium	µg/kg	--	380	--	250 J	--	1100 ^{RE}
Silver	µg/kg	--	23 J	--	8.6 J	--	110
Thallium	µg/kg	--	13 J	--	710 U	--	330
Vanadium	µg/kg	--	13000	--	10000	--	44000
Zinc	µg/kg	--	24000	--	9800	--	89000
PCBs							
Aroclor-1016 (PCB-1016)	µg/kg	--	320 U	--	320 U	--	410 U
Aroclor-1221 (PCB-1221)	µg/kg	--	320 U	--	320 U	--	410 U
Aroclor-1232 (PCB-1232)	µg/kg	--	320 U	--	320 U	--	410 U
Aroclor-1242 (PCB-1242)	µg/kg	--	320 U	--	320 U	--	410 U
Aroclor-1248 (PCB-1248)	µg/kg	--	320 U	--	320 U	--	410 U
Aroclor-1254 (PCB-1254)	µg/kg	--	320 U	--	320 U	--	410 U
Aroclor-1260 (PCB-1260)	µg/kg	--	320 U	--	320 U	--	410 U
Total PCBs	µg/kg	--	ND	--	ND	--	ND

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
 SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
 FORMER GRAND RAPIDS METAL PLANT
 WYOMING, MICHIGAN

Sample Location		Test pit at A-30	Test pit at A-33	Test pit at A-33	Test pit at A-39	Test pit at A-39	Unstained Seam - A-10 to A-12
Sample Identification		SO-17360-061412-SM-025	SO-17360-061312-SM-018	SO-17360-061412-SM-026	SO-17360-061312-SM-019	SO-17360-061412-SM-027	SO-17360-052312-EB-005
Sample Date		6/14/2012	6/13/2012	6/14/2012	6/13/2012	6/14/2012	5/23/2012
Sample Depth		(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	-
Sample Type							
Excavation Status		Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Excavated
	Units						
<i>Semi-Volatile Organic Compounds (SVOCs)</i>							
2,2'-Oxybis(1-chloropropane) ⁽⁶⁾	µg/kg	--	26000 U	--	6600 U	--	410 U
2,4,5-Trichlorophenol	µg/kg	--	26000 U	--	6600 U	--	410 U
2,4,6-Trichlorophenol	µg/kg	--	26000 U	--	6600 U	--	410 U
2,4-Dichlorophenol	µg/kg	--	26000 U	--	6600 U	--	820 U
2,4-Dimethylphenol	µg/kg	--	26000 U	--	6600 U	--	4100 U
2,4-Dinitrophenol	µg/kg	--	66000 U	--	17000 U	--	4100 U
2,4-Dinitrotoluene	µg/kg	--	26000 U	--	6600 U	--	820 U
2,6-Dinitrotoluene	µg/kg	--	26000 U	--	6600 U	--	410 U
2-Chloronaphthalene	µg/kg	--	26000 U	--	6600 U	--	410 U
2-Chlorophenol	µg/kg	--	26000 U	--	6600 U	--	410 U
2-Methylnaphthalene	µg/kg	--	1700 J	--	6600 U	--	2700
2-Methylphenol	µg/kg	--	26000 U	--	6600 U	--	410 U
2-Nitroaniline	µg/kg	--	66000 U	--	17000 U	--	410 U
2-Nitrophenol	µg/kg	--	26000 U	--	6600 U	--	410 U
3,3'-Dichlorobenzidine	µg/kg	--	160000 U	--	40000 U	--	21000 U
3-Nitroaniline	µg/kg	--	66000 U	--	17000 U	--	820 U
4,6-Dinitro-2-methylphenol	µg/kg	--	66000 U	--	17000 U	--	4100 U
4-Bromophenyl phenyl ether	µg/kg	--	26000 U	--	6600 U	--	410 U
4-Chloro-3-methylphenol	µg/kg	--	22000 U	--	5600 U	--	410 U
4-Chloroaniline	µg/kg	--	26000 U	--	6600 U	--	1600 U
4-Chlorophenyl phenyl ether	µg/kg	--	26000 U	--	6600 U	--	410 U
4-Methylphenol	µg/kg	--	26000 U	--	6600 U	--	410 U
4-Nitroaniline	µg/kg	--	66000 U	--	17000 U	--	820 U
4-Nitrophenol	µg/kg	--	66000 U	--	17000 U	--	16000 U
Acenaphthene	µg/kg	--	2400 J	--	6600 U	--	220 J
Acenaphthylene	µg/kg	--	26000 U	--	6600 U	--	52 J
Acetophenone	µg/kg	--	26000 U	--	6600 U	--	410 U
Anthracene	µg/kg	--	2500 J	--	680 J	--	480
Atrazine	µg/kg	--	4000 U	--	1000 U	--	410 U
Benzaldehyde	µg/kg	--	26000 U	--	6600 U	--	1600 U
Benzo(a)anthracene	µg/kg	--	2700 J	--	2300 J	--	560
Benzo(a)pyrene	µg/kg	--	26000 U	--	2000 J	--	450
Benzo(b)fluoranthene	µg/kg	--	3000 J	--	3400 J	--	680
Benzo(g,h,i)perylene	µg/kg	--	26000 U	--	640 J	--	800 J
Benzo(k)fluoranthene	µg/kg	--	3100 J	--	1600 J	--	280 J
Biphenyl (1,1-Biphenyl)	µg/kg	--	26000 U	--	6600 U	--	1000
bis(2-Chloroethoxy)methane	µg/kg	--	26000 U	--	6600 U	--	410 U
bis(2-Chloroethyl)ether	µg/kg	--	7900 U	--	2000 U	--	410 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	--	26000 U	--	6600 U	--	820 U
Butyl benzylphthalate (BBP)	µg/kg	--	26000 U	--	6600 U	--	820 U
Caprolactam	µg/kg	--	26000 U	--	6600 U	--	1600 U
Carbazole	µg/kg	--	26000 U	--	6600 U	--	980 J
Chrysene	µg/kg	--	2500 J	--	2600 J	--	660
Dibenz(a,h)anthracene	µg/kg	--	26000 U	--	760 J	--	120 J
Dibenzofuran	µg/kg	--	26000 U	--	6600 U	--	1100

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		Test pit at A-30	Test pit at A-33	Test pit at A-33	Test pit at A-39	Test pit at A-39	Unstained Seam - A-10 to A-12
Sample Identification		SO-17360-061412-SM-025	SO-17360-061312-SM-018	SO-17360-061412-SM-026	SO-17360-061312-SM-019	SO-17360-061412-SM-027	SO-17360-052312-EB-005
Sample Date		6/14/2012	6/13/2012	6/14/2012	6/13/2012	6/14/2012	5/23/2012
Sample Depth		(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	-
Sample Type							
Excavation Status		Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Excavated
	Units						
SVOCs (continued)							
Diethyl phthalate	µg/kg	--	26000 U	--	6600 U	--	410 U
Dimethyl phthalate	µg/kg	--	26000 U	--	6600 U	--	410 U
Di-n-butylphthalate (DBP)	µg/kg	--	26000 U	--	6600 U	--	1600 U
Di-n-octyl phthalate (DnOP)	µg/kg	--	26000 U	--	6600 U	--	410 U
Fluoranthene	µg/kg	--	8700 J ^a	--	5700 J ^a	--	1200
Fluorene	µg/kg	--	3400 J	--	6600 U	--	170 J
Hexachlorobenzene	µg/kg	--	26000 U	--	6600 U	--	410 U
Hexachlorobutadiene	µg/kg	--	4000 U	--	1000 U	--	410 U
Hexachlorocyclopentadiene	µg/kg	--	26000 U	--	6600 U	--	410 U
Hexachloroethane	µg/kg	--	24000 U	--	6000 U	--	410 U
Indeno(1,2,3-cd)pyrene	µg/kg	--	26000 U	--	620 J	--	420 J
Isophorone	µg/kg	--	26000 U	--	6600 U	--	410 U
Naphthalene	µg/kg	--	3400 J ^a	--	6600 U	--	1800 ^a
Nitrobenzene	µg/kg	--	26000 U	--	6600 U	--	410 U
N-Nitrosodi-n-propylamine	µg/kg	--	26000 U	--	6600 U	--	410 U
N-Nitrosodiphenylamine	µg/kg	--	26000 U	--	6600 U	--	410 U
Pentachlorophenol	µg/kg	--	1600 U	--	400 U	--	4100 U
Phenanthrene	µg/kg	--	13000 J ^a	--	3800 J ^a	--	5100 ^a
Phenol	µg/kg	--	26000 U	--	6600 U	--	4100 U
Pyrene	µg/kg	--	7700 J	--	4600 J	--	1300
Volatile Organic Compounds (VOCs)							
1,1,1-Trichloroethane	µg/kg	32 U	--	36 U	--	32 U	67 U
1,1,2,2-Tetrachloroethane	µg/kg	32 U	--	36 U	--	32 U	67 U
1,1,2-Trichloroethane	µg/kg	32 U	--	36 U	--	32 U	67 U
1,1-Dichloroethane	µg/kg	32 U	--	36 U	--	32 U	67 U
1,1-Dichloroethene	µg/kg	32 U	--	36 U	--	32 U	67 U
1,2,4-Trichlorobenzene	µg/kg	32 U	--	36 U	--	32 U	67 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	32 U	--	36 U	--	32 U	340 U
1,2-Dibromoethane ⁽²⁾	µg/kg	32 U	--	36 U	--	32 U	67 U
1,2-Dichlorobenzene	µg/kg	32 U	--	36 U	--	32 U	67 U
1,2-Dichloroethane	µg/kg	32 U	--	36 U	--	32 U	67 U
1,2-Dichloropropane	µg/kg	32 U	--	36 U	--	32 U	67 U
1,3-Dichlorobenzene	µg/kg	32 U	--	36 U	--	32 U	67 U
1,4-Dichlorobenzene	µg/kg	32 U	--	36 U	--	32 U	67 U
2-Butanone ⁽³⁾	µg/kg	210 U	--	240 U	--	210 U	1000 U
2-Hexanone	µg/kg	32 U	--	36 U	--	32 U	3400 U
4-Methyl-2-pentanone ⁽⁴⁾	µg/kg	32 U	--	36 U	--	32 U	390 J
Acetone	µg/kg	110 U	--	120 U	--	110 U	220 J
Benzene	µg/kg	27 J	--	80	--	32 U	67 U
Bromodichloromethane	µg/kg	32 U	--	36 U	--	32 U	67 U
Bromoform	µg/kg	32 U	--	36 U	--	32 U	67 U

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR COLUMN LINE A AREA SOIL SAMPLES
SUMMARY OF SAMPLING AND REMEDIAL ACTION ACTIVITIES
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		Test pit at A-30	Test pit at A-33	Test pit at A-33	Test pit at A-39	Test pit at A-39	Unstained Seam - A-10 to A-12
Sample Identification		SO-17360-061412-SM-025	SO-17360-061312-SM-018	SO-17360-061412-SM-026	SO-17360-061312-SM-019	SO-17360-061412-SM-027	SO-17360-052312-EB-005
Sample Date		6/14/2012	6/13/2012	6/14/2012	6/13/2012	6/14/2012	5/23/2012
Sample Depth		(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	(3-) ft BGS	-
Sample Type							
Excavation Status		Unexcavated	Unexcavated	Unexcavated	Unexcavated	Unexcavated	Excavated
	Units						
<i>VOCs (continued)</i>							
Bromomethane (Methyl bromide)	µg/kg	57 J	--	87 J	--	49 J	36 J
Carbon disulfide	µg/kg	32 U	--	36 U	--	32 U	340 U
Carbon tetrachloride	µg/kg	32 U	--	36 U	--	32 U	67 U
Chlorobenzene	µg/kg	32 U	--	36 U	--	32 U	67 U
Chloroethane	µg/kg	110 U	--	120 U	--	110 U	67 U
Chloroform (Trichloromethane)	µg/kg	32 U	--	36 U	--	32 U	67 U
Chloromethane (Methyl chloride)	µg/kg	110 U	--	120 U	--	110 U	67 U
cis-1,2-Dichloroethene	µg/kg	32 U	--	65	--	32 U	67 U
cis-1,3-Dichloropropene	µg/kg	32 U	--	36 U	--	32 U	67 U
Cyclohexane	µg/kg	32 U	--	230	--	32 U	340 U
Dibromochloromethane	µg/kg	32 U	--	36 U	--	32 U	67 U
Dichlorodifluoromethane (CFC-12)	µg/kg	32 U	--	36 U	--	32 U	67 U
Ethylbenzene	µg/kg	32 U	--	120	--	32 U	48 J
Isopropyl benzene	µg/kg	32 U	--	97	--	32 U	25 J
Methyl acetate	µg/kg	210 U	--	240 U	--	210 U	380
Methyl cyclohexane	µg/kg	87	--	860	--	32 U	100 J
Methyl tert butyl ether (MTBE)	µg/kg	32 U	--	36 U	--	32 U	67 U
Methylene chloride	µg/kg	26 J	--	36 U	--	21 J	360 U
Styrene	µg/kg	32 U	--	36 U	--	32 U	67 U
Tetrachloroethene	µg/kg	75	--	160 ^{NC}	--	32 U	130 ^{NC}
Toluene	µg/kg	85	--	410	--	32 U	34 J
trans-1,2-Dichloroethene	µg/kg	32 U	--	36 U	--	32 U	67 U
trans-1,3-Dichloropropene	µg/kg	32 U	--	36 U	--	32 U	67 U
Trichloroethene	µg/kg	32 U	--	320 ^{NC}	--	32 U	67 U
Trichlorofluoromethane (CFC-11)	µg/kg	32 U	--	36 U	--	32 U	67 U
Trifluorotrchloroethane (Freon 113)	µg/kg	32 U	--	36 U	--	32 U	67 U
Vinyl chloride	µg/kg	32 U	--	36 U	--	32 U	54 U
Xylenes (total)	µg/kg	64 J	--	790	--	96 U	290

Notes:

See Table 1 for applicable criteria and notes.

ATTACHMENT A
DISPOSAL DOCUMENTATION



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MFK1566 33412		Manifest Doc No.		2. Page 1 of 1								
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235			Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY			A. Manifest Number WMNA 01162936								
						B. State Generator's ID								
5. Transporter 1 Company Name Cordes 128-47			6. US EPA ID Number			C. State Transporter's ID								
7. Transporter 2 Company Name			8. US EPA ID Number			D. Transporter's Phone								
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464			10. US EPA ID Number			E. State Transporter's ID								
						F. Transporter's Phone								
						G. State Facility ID								
						H. State Facility Phone 616-688-5777								
GENERATOR	11. Description of Waste Materials				12. Containers		13. Total Quantity		14. Unit Wt./Vol.		15. Misc. Comments			
	a. PNA Impacted Soils				No.		Type							
	WM Profile # 109577MI Exp Date: 05/18/2013				1		Truck		48.99		Tons			
	b. WM Profile #													
	c. WM Profile #													
	d. WM Profile #													
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid				K. Disposal Location										
				Cell						Level				
				Grid										
15. Special Handling Instructions and Additional Information														
Purchase Order # 40-4048767				EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123										
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.														
Printed Name Earl Batendug				Signature "On behalf of" RACER TRUST				Month 7		Day 16		Year 12		
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials													
	Printed Name Tom Brown				Signature [Signature]				Month 7		Day 16		Year 12	
	18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed Name				Signature				Month		Day		Year		
FACILITY	19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.													
	20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.													
Printed Name Barb VanDam				Signature B VanDam				Month 7		Day 16		Year 12		

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY

Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST	1. Generator's US EPA ID No. MIK156633412	Manifest Doc No.	2. Page 1 of 1
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235		Generator's Site Address (If different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY	
5. Transporter 1 Company Name Cordes 128-47		6. US EPA ID Number	
7. Transporter 2 Company Name		8. US EPA ID Number	
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464		10. US EPA ID Number	
		A. Manifest Number WMNA 01162935	
		B. State Generator's ID	
		C. State Transporter's ID	
		D. Transporter's Phone	
		E. State Transporter's ID	
		F. Transporter's Phone	
		G. State Facility ID	
		H. State Facility Phone 616-688-5777	
GENERATOR	11. Description of Waste Materials		12. Containers
	a. PNA Impacted Soils		No. Type
	WM Profile # 109577MI Exp Date: 05/18/2013		1 Tank
	b.		58.10
	WM Profile #		Tons
	c.		
WM Profile #			
d.			
WM Profile #			
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid		K. Disposal Location	
		Cell	Level
		Grid	
15. Special Handling Instructions and Additional Information			
Purchase Order # 40-4048767		EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123	
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.			
Printed Name Earl Batenburg		Signature "On behalf of" RACER TRUST	Month Day Year 7 16 12
17. Transporter 1 Acknowledgement of Receipt of Materials			
Printed Name Tom BROWN		Signature TB	Month Day Year 7 18 12
18. Transporter 2 Acknowledgement of Receipt of Materials			
Printed Name		Signature	Month Day Year
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.			
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.			
Printed Name Cindy Engelsma		Signature Cindy Engelsma	Month Day Year 07 16 12

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY

Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MJK156633412		Manifest Doc No.		2. Page 1 of 1				
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235			Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY			A. Manifest Number WMNA 01162928				
5. Transporter 1 Company Name Cordes			6. US EPA ID Number			C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number			D. Transporter's Phone				
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464			10. US EPA ID Number			E. State Transporter's ID				
						F. Transporter's Phone				
						G. State Facility ID				
						H. State Facility Phone 616-688-5777				
GENERATOR	11. Description of Waste Materials				12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments	
	a. PNA Impacted Soils + Metals 293-C19 WM Profile # 109577MI Exp Date: 05/18/2013				No.	Type				
	b. WM Profile #									
	c. WM Profile #									
	d. WM Profile #									
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid					K. Disposal Location					
					Cell		Level			
					Grid					
15. Special Handling Instructions and Additional Information										
Purchase Order # 40-4048767					EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123					
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.										
Printed Name Earl Batenburg				Signature [Signature] RACER TRUST				Month 7	Day 6	Year 12
17. Transporter 1 Acknowledgement of Receipt of Materials										
Printed Name [Signature]				Signature [Signature]				Month 7	Day 6	Year 12
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed Name				Signature				Month	Day	Year
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.										
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.										
Printed Name Barb Vandam				Signature [Signature]				Month 7	Day 6	Year 12

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY

Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MIK15633412	Manifest Doc No.		2. Page 1 of 1			
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235		Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY		A. Manifest Number WMNA	01162930			
5. Transporter 1 Company Name Cordes		6. US EPA ID Number		B. State Generator's ID				
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID				
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464		10. US EPA ID Number		D. Transporter's Phone				
				E. State Transporter's ID				
				F. Transporter's Phone				
				G. State Facility ID				
				H. State Facility Phone 616-688-5777				
GENERATOR	11. Description of Waste Materials		12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments	
	a. PNA Impacted Soils <i>+metals</i> WM Profile # 109577MI Exp Date: 05/18/2013		1 <i>Truck</i>		<i>48.76</i>	<i>Tons</i>		
	b. WM Profile #							
	c. WM Profile #							
	d. WM Profile #							
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid		K. Disposal Location						
		Cell		Level				
		Grid						
15. Special Handling Instructions and Additional Information								
Purchase Order # 40-4048767		EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123						
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.								
Printed Name <i>Earl Batenburg</i>		Signature "On behalf of" <i>RACER TRUST</i>			Month <i>7</i>	Day <i>6</i>	Year <i>12</i>	
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed Name <i>Rick Simons</i>			Signature <i>Rick S</i>			
					Month <i>7</i>	Day <i>6</i>	Year <i>12</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed Name			Signature			
					Month	Day	Year	
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.								
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.								
Printed Name <i>Barb Vanden</i>		Signature <i>B Vanden</i>			Month <i>7</i>	Day <i>6</i>	Year <i>12</i>	

TRANSPORTER

FACILITY

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY

Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MIK 156633412	Manifest Doc No.		2. Page 1 of 1			
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235		Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY		A. Manifest Number WMNA	01162948			
5. Transporter 1 Company Name Cordes		6. US EPA ID Number		B. State Generator's ID				
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID				
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464		10. US EPA ID Number		D. Transporter's Phone				
				E. State Transporter's ID				
				F. Transporter's Phone				
				G. State Facility ID				
				H. State Facility Phone 616-688-5777				
GENERATOR	11. Description of Waste Materials		12. Containers		13. Total Quantity	14. Unit Wt./Vol.	1. Misc. Comments	
	a. PNA Impacted Soils + Metals WM Profile # 109577MI Exp Date: 05/18/2013		410-133AB	1	Truck	57.57	Tons	
	b. WM Profile #							
	c. WM Profile #							
	d. WM Profile #							
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid		K. Disposal Location						
		Cell			Level			
		Grid						
15. Special Handling Instructions and Additional Information								
Purchase Order # 40-4048767		EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123						
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.								
Printed Name Earl Batenburg		Signature "On behalf of" RACER TRUST			Month 7	Day 6	Year 12	
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed Name Roger Jovi 5401			Signature Roger Jovi			
					Month 7	Day 6	Year 12	
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed Name			Signature			
					Month	Day	Year	
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.								
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.								
Printed Name Barb vanDam		Signature B vanDam			Month 7	Day 6	Year 12	

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY

Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MIK 156633412	Manifest Doc No.		2. Page 1 of 1				
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235		Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY		A. Manifest Number WMNA	01162932				
5. Transporter 1 Company Name Cordes		6. US EPA ID Number DA 410 133		B. State Generator's ID					
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID					
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464		10. US EPA ID Number		D. Transporter's Phone					
				E. State Transporter's ID					
				F. Transporter's Phone					
				G. State Facility ID					
				H. State Facility Phone 616-688-5777					
GENERATOR	11. Description of Waste Materials		12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments		
	a. PNA Impacted Soils + Metals WM Profile # 109577MI Exp Date: 05/18/2013		No.	Type					
					1	Truck		51.59	Tons
	b. WM Profile #								
	c. WM Profile #								
d. WM Profile #									
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid		K. Disposal Location							
		Cell		Level					
		Grid							
15. Special Handling Instructions and Additional Information									
Purchase Order # 40-4048767		EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123							
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.									
Printed Name Earl Batenburg		Signature "On behalf of" RACER TRUST			Month 7	Day 6	Year 12		
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed Name Roger Jonisse			Signature Roger Jonisse				
					Month 7	Day 6	Year 12		
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed Name			Signature				
					Month	Day	Year		
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.									
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.									
Printed Name Barb Vandam		Signature B Vandam			Month 7	Day 6	Year 12		

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY

Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MIK156633412		Manifest Doc No.		2. Page 1 of 1					
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235			Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY			A. Manifest Number WMNA 01162933					
5. Transporter 1 Company Name Cordes			6. US EPA ID Number			C. State Transporter's ID					
7. Transporter 2 Company Name			8. US EPA ID Number			D. Transporter's Phone					
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464			10. US EPA ID Number			E. State Transporter's ID					
						F. Transporter's Phone					
						G. State Facility ID					
						H. State Facility Phone 616-688-5777					
GENERATOR	11. Description of Waste Materials				12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments		
	a. PNA Impacted Soils +Metals 12875 WM Profile # 109577MI Exp Date: 05/18/2013				No.	Type					
	b. WM Profile #										
	c. WM Profile #										
d. WM Profile #											
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid				K. Disposal Location							
				Cell		Level					
				Grid							
15. Special Handling Instructions and Additional Information											
Purchase Order # 40-4048767				EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123							
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.											
Printed Name Earl Datsenburg				Signature "on behalf of" RACER TRUST				Month 7	Day 6	Year 12	
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials										
	Printed Name Tom BROWN				Signature [Signature]				Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials											
Printed Name				Signature				Month	Day	Year	
FACILITY	19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.										
	20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.										
Printed Name Barb Vandam				Signature [Signature]				Month 7	Day 6	Year 12	

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY

Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MIK156633412	Manifest Doc No.		2. Page 1 of (
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY		Generator's Site Address (If different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY		A. Manifest Number WMNA	01162934			
4. Generator's Phone 217-741-6235		B. State Generator's ID						
5. Transporter 1 Company Name Cordes		6. US EPA ID Number 410 133 PNA		C. State Transporter's ID				
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone				
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464		10. US EPA ID Number		E. State Transporter's ID				
				F. Transporter's Phone				
				G. State Facility ID				
				H. State Facility Phone 616-688-5777				
GENERATOR	11. Description of Waste Materials		12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments	
	a. PNA Impacted Soils +Metals WM Profile # 109577MI Exp Date: 05/18/2013		No.	Type				
	b.							
	c.							
	d.							
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid		K. Disposal Location						
		Cell		Level				
		Grid						
15. Special Handling Instructions and Additional Information								
Purchase Order # 40-4048767		EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123						
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.								
Printed Name Earl Batenburg		Signature "On behalf of" RACER TRUST			Month 7	Day 6	Year 12	
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed Name Roger Jonsson			Signature <i>[Signature]</i>			
					Month 7	Day 6	Year 12	
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed Name			Signature			
					Month	Day	Year	
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.								
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.								
Printed Name Barb Vandam		Signature B Vandam			Month 7	Day 6	Year 12	

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY

Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MJK156633412		Manifest Doc No.		2. Page 1 of 1		
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY			4. Generator's Phone 217-741-6235			Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY		
5. Transporter 1 Company Name Cordes				6. US EPA ID Number				
7. Transporter 2 Company Name				8. US EPA ID Number				
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464				10. US EPA ID Number				
11. Description of Waste Materials				12. Containers		13. Total Quantity	14. Unit Wt./Vol.	
				No.	Type			I. Misc. Comments
a. PNA Impacted Soils Metals WM Profile # 109577MI Exp Date: 05/18/2013				1	Truck	56.01	Tons	
b.								
c.								
d.								
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid				K. Disposal Location				
				Cell		Level		
				Grid				
15. Special Handling Instructions and Additional Information								
Purchase Order # 40-4048767				EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123				
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.								
Printed Name Earl Batenburg				Signature "on behalf of" RACER TRUST		Month 7	Day 6	Year 12
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature [Signature]		Month	Day	Year
Printed Name Tom Brown				Signature [Signature]				
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Month	Day	Year
Printed Name				Signature				
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.								
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.								
Printed Name Barb Vandan				Signature [Signature]		Month 7	Day 6	Year 12



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MIK 156633412		Manifest Doc No.		2. Page 1 of					
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235			Generator's Site Address (If different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY			A. Manifest Number WMNA 01162922					
5. Transporter 1 Company Name Cordes 130-609			6. US EPA ID Number			B. State Generator's ID					
7. Transporter 2 Company Name			8. US EPA ID Number			C. State Transporter's ID					
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464			10. US EPA ID Number			D. Transporter's Phone					
						E. State Transporter's ID					
						F. Transporter's Phone					
						G. State Facility ID					
						H. State Facility Phone 616-688-5777					
GENERATOR	11. Description of Waste Materials				12. Containers		13. Total	14. Unit	I. Misc. Comments		
	a. PNA Impacted Soils				No.	Type	Quantity	Wt./Vol.			
	WM Profile # 109577MI Exp Date: 05/18/2013				1	Truck	43.89	Tons			
	b. WM Profile #										
	c. WM Profile #										
d. WM Profile #											
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid				K. Disposal Location							
				Cell		Level					
				Grid							
15. Special Handling Instructions and Additional Information											
Purchase Order # 40-4048767				EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123							
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.											
Printed Name Earl Bateburg				Signature "On behalf of" RACER				Month	Day	Year	
								6	12	12	
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials										
	Printed Name Steve Gress				Signature Steve Gress				Month	Day	Year
									06	12	12
18. Transporter 2 Acknowledgement of Receipt of Materials											
Printed Name				Signature				Month	Day	Year	
FACILITY	19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.										
	20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.										
Printed Name Jim VanDam				Signature Jim VanDam				Month	Day	Year	
								06	12	12	

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY

Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MJK156633412	Manifest Doc No.		2. Page 1 of 1		
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY		Generator's Site Address (If different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY		A. Manifest Number WMNA	01162921		
4. Generator's Phone 217-741-6235				B. State Generator's ID			
5. Transporter 1 Company Name Cordes		6. US EPA ID Number 293-15		C. State Transporter's ID			
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone			
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464		10. US EPA ID Number		E. State Transporter's ID			
				F. Transporter's Phone			
				G. State Facility ID			
				H. State Facility Phone 616-688-5777			
GENERATOR	11. Description of Waste Materials		12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
	a. PNA Impacted Soils		No.	Type			
	WM Profile # 109577MI Exp Date: 05/18/2013		1	Truck	51.42	Tons	
	b.						
	WM Profile #						
c.							
WM Profile #							
d.							
WM Profile #							
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid			K. Disposal Location				
			Cell		Level		
			Grid				
15. Special Handling Instructions and Additional Information							
Purchase Order # 40-4048767		EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123					
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.							
Printed Name Earl Batenburg		Signature "on behalf of" RACER			Month 06	Day 12	Year 12
17. Transporter 1 Acknowledgement of Receipt of Materials							
Printed Name Rick Simons		Signature Rick S.			Month 6	Day 12	Year 12
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed Name		Signature			Month	Day	Year
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.							
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.							
Printed Name Jim VanDoren		Signature Jim VanDoren			Month 12	Day 12	Year 12

White - TREATMENT, STORAGE, DISPOSAL FACILITY COPY Blue - GENERATOR #2 COPY Yellow - GENERATOR #1 COPY
 Pink - FACILITY USE ONLY Gold - TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MIK156633412		Manifest Doc No.		2. Page 1 of					
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235			Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY			A. Manifest Number WMNA 01162920					
						B. State Generator's ID					
5. Transporter 1 Company Name Cordes 101-19			6. US EPA ID Number			C. State Transporter's ID					
7. Transporter 2 Company Name			8. US EPA ID Number			D. Transporter's Phone					
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464			10. US EPA ID Number			E. State Transporter's ID					
						F. Transporter's Phone					
						G. State Facility ID					
						H. State Facility Phone 616-688-5777					
GENERATOR	11. Description of Waste Materials				12. Containers		13. Total Quantity	14. Unit Wt./Vol.	15. Misc. Comments		
	a. PNA Impacted Soils WM Profile # 109577MI Exp Date: 05/18/2013				No.	Type	45.97	Tons			
	b. WM Profile #										
	c. WM Profile #										
	d. WM Profile #										
	J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid				K. Disposal Location						
				Cell			Level				
				Grid							
15. Special Handling Instructions and Additional Information											
Purchase Order # 40-4048767				EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123							
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.											
Printed Name Earl B. Tenburg				Signature "On behalf of" RACER				Month	Day	Year	
								06	12	12	
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials										
	Printed Name Alexandra				Signature Alexandra				Month	Day	Year
									06	12	12
FACILITY	18. Transporter 2 Acknowledgement of Receipt of Materials										
	Printed Name				Signature				Month	Day	Year
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.											
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.											
Printed Name Jim VanDam				Signature Jim VanDam				Month	Day	Year	
								06	12	12	

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY

Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST	1. Generator's US EPA ID No. MIK156633412	Manifest Doc No.	2. Page 1 of
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY	4. Generator's Phone 217-741-6235	Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY	A. Manifest Number WMNA 01162919
			B. State Generator's ID MIK156633412
5. Transporter 1 Company Name Cordes	6. US EPA ID Number	C. State Transporter's ID	
7. Transporter 2 Company Name	8. US EPA ID Number	D. Transporter's Phone	
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464	10. US EPA ID Number	E. State Transporter's ID	
		F. Transporter's Phone	
11. Description of Waste Materials	12. Containers	13. Total Quantity	14. Unit Wt./Vol.
		I. Misc. Comments	
a. PNA Impacted Soils WM Profile # 109577MI Exp Date: 05/18/2013	No. Type	46.81	Tons
b. WM Profile #			
c. WM Profile #			
d. WM Profile #			
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid	K. Disposal Location		
	Cell	Level	
15. Special Handling Instructions and Additional Information			
Purchase Order # 40-4048767		EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123	
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.			
Printed Name Earl Batenburg	Signature "On behalf of" RACER	Month 06	Day 12
17. Transporter 1 Acknowledgement of Receipt of Materials		Year 12	
Printed Name Steve Gregg	Signature Steve Gregg	Month 04	Day 12
18. Transporter 2 Acknowledgement of Receipt of Materials		Year 12	
Printed Name	Signature	Month	Day
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.			
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.			
Printed Name Jill Van Dam	Signature Jill Van Dam	Month 06	Day 12
		Year 12	

GENERATOR
TRANSPORTER
FACILITY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MIK 156633412		Manifest Doc No.		2. Page 1 of 1				
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY			Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY			A. Manifest Number WMNA 01162927				
4. Generator's Phone 217-741-6235			B. State Generator's ID							
5. Transporter 1 Company Name Cordes			6. US EPA ID Number		C. State Transporter's ID					
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone					
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464			10. US EPA ID Number		E. State Transporter's ID					
					F. Transporter's Phone					
					G. State Facility ID					
					H. State Facility Phone 616-688-5777					
GENERATOR	11. Description of Waste Materials				12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments	
	a. PNA Impacted Soils				No.	Type				
	WM Profile # 109577MI Exp Date: 05/18/2013				1	Truck	40.75	Tons		
	b.									
	WM Profile #									
c.										
WM Profile #										
d.										
WM Profile #										
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid				K. Disposal Location						
				Cell		Level				
				Grid						
15. Special Handling Instructions and Additional Information										
Purchase Order # 40-4048767				EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123						
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.										
Printed Name Earl Batenburg				Signature "On behalf of" RACER				Month	Day	Year
								6	14	12
17. Transporter 1 Acknowledgement of Receipt of Materials										
Printed Name Dick Simons				Signature Dick Simons				Month	Day	Year
								6	14	12
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed Name				Signature				Month	Day	Year
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.										
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.										
Printed Name Jim VanDam				Signature Jim VanDam				Month	Day	Year
								6	14	12

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY Blue- GENERATOR #2 COPY Yellow- GENERATOR #1 COPY
 Pink- FACILITY USE ONLY Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. MIK 156633412		Manifest Doc No.		2. Page 1 of 1							
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235			Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY			A. Manifest Number WMNA 01162926							
5. Transporter 1 Company Name Cordes 119-127			6. US EPA ID Number			C. State Transporter's ID							
7. Transporter 2 Company Name			8. US EPA ID Number			D. Transporter's Phone							
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464			10. US EPA ID Number			E. State Transporter's ID							
						F. Transporter's Phone							
						G. State Facility ID							
						H. State Facility Phone 616-688-5777							
GENERATOR	11. Description of Waste Materials				12. Containers		13. Total Quantity		14. Unit Wt./Vol.		I. Misc. Comments		
	a. PNA Impacted Soils WM Profile # 109577MI Exp Date: 05/18/2013				1 Truck		48.28		Tons				
	b. WM Profile #												
	c. WM Profile #												
	d. WM Profile #												
	J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid				K. Disposal Location								
				Cell				Level					
				Grid									
15. Special Handling Instructions and Additional Information													
Purchase Order # 40-4048767				EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123									
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.													
Printed Name Earl Batenburg				Signature "On behalf of" RACER				Month 6		Day 14		Year 12	
17. Transporter 1 Acknowledgement of Receipt of Materials													
Printed Name Grant Enlow				Signature				Month 6		Day 14		Year 12	
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed Name				Signature				Month		Day		Year	
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.													
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest													
Printed Name Jim Vondam				Signature Jim Vondam				Month 6		Day 14		Year 12	

TRANSPORTER

FACILITY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST	1. Generator's US EPA ID No. MIK156633412	Manifest Doc No.	2. Page 1 of	
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235	Generator's Site Address (If different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY	A. Manifest Number WMNA 01162925		
		B. State Generator's ID		
5. Transporter 1 Company Name Cordes	6. US EPA ID Number 293- C19-20	C. State Transporter's ID		
7. Transporter 2 Company Name	8. US EPA ID Number	D. Transporter's Phone		
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464	10. US EPA ID Number	E. State Transporter's ID		
		F. Transporter's Phone		
11. Description of Waste Materials	12. Containers	13. Total Quantity	14. Unit Wt./Vol.	
		a. PNA Impacted Soils		I. Misc. Comments
		WM Profile # 109577MI Exp Date: 05/18/2013		
		b.		
		WM Profile #		
c.				
WM Profile #		K. Disposal Location		
d.		Cell		
WM Profile #		Grid		
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid		Level		
15. Special Handling Instructions and Additional Information				
Purchase Order # 40-4048767		EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123		
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.				
Printed Name Earl Batenburg		Signature RACER	Month 6 Day 14 Year 12	
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed Name Rick Simons		Signature Rick S.	Month 6 Day 14 Year 12	
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed Name		Signature	Month Day Year	
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.				
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest				
Printed Name Jim Van Dam		Signature Jim Van Dam	Month 6 Day 14 Year 12	

GENERATOR TRANSPORTER FACILITY

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY Blue- GENERATOR #2 COPY Yellow- GENERATOR #1 COPY
Pink- FACILITY USE ONLY Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST	1. Generator's US EPA ID No. MIK156633412	Manifest Doc No.	2. Page 1 of 1				
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235	Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY	A. Manifest Number WMNA 01162924					
		B. State Generator's ID					
5. Transporter 1 Company Name Cordes 119-127	6. US EPA ID Number	C. State Transporter's ID					
7. Transporter 2 Company Name	8. US EPA ID Number	D. Transporter's Phone					
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464	10. US EPA ID Number	E. State Transporter's ID					
		F. Transporter's Phone					
		G. State Facility ID					
		H. State Facility Phone 616-688-5777					
11. Description of Waste Materials a. PNA Impacted Soils WM Profile # 109577MI Exp Date: 05/18/2013 b. WM Profile # c. WM Profile # d. WM Profile #	12. Containers		13. Total Quantity	14. Unit Wt./Vol.	15. Misc. Comments		
	No.	Type					
	1	Truck				50.89	Tons
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid		K. Disposal Location					
		Cell	Level				
		Grid					
15. Special Handling Instructions and Additional Information							
Purchase Order # 40-4048767		EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123					
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.							
Printed Name Earl Batenburg		Signature "On behalf of" RACER		Month 6	Day 14	Year 12	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature		Month 6	Day 14	Year 12	
Printed Name Craig Enlow		Signature					
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month	Day	Year	
Printed Name		Signature					
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.							
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.							
Printed Name Jim VanDam		Signature		Month 6	Day 14	Year 12	

GENERATOR

TRANSPORTER

FACILITY

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Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST	1. Generator's US EPA ID No. MFK156637412	Manifest Doc No.	2. Page 1 of 1					
3. Contractor's Mailing Address: CRA 200 W ALLEGAN STREET STE 300 PLAINWELL, MI 49080 ATTN: JENI QUIGLEY 4. Generator's Phone 217-741-6235		Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY						
5. Transporter 1 Company Name Cordes 293-PM		6. US EPA ID Number						
7. Transporter 2 Company Name		8. US EPA ID Number						
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464		10. US EPA ID Number						
11. Description of Waste Materials		12. Containers		13. Total Quantity	14. Unit Wt./Vol.	1. Misc. Comments		
		a. PNA Impacted Soils WM Profile # 109577MI Exp Date: 05/18/2013		No.	Type			
		b.						
		c.						
		d.						
		J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid		K. Disposal Location				
				Cell			Level	
				Grid				
15. Special Handling Instructions and Additional Information								
Purchase Order # 40-4048767		EMERGENCY CONTACT / PHONE NO.: James VanAssche/734-453-5123						
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.								
Printed Name Earl Batenburg		Signature "On behalf of" RACER			Month 6	Day 14	Year 12	
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed Name Rick Simons			Signature Rick S.			
					Month 6	Day 14	Year 12	
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed Name			Signature			
					Month	Day	Year	
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.								
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.								
Printed Name Jim Van Dam		Signature JVD			Month 6	Day 14	Year 12	

GENERATOR

TRANSPORTER

FACILITY

White - TREATMENT, STORAGE, DISPOSAL FACILITY COPY
Pink - FACILITY USE ONLY

Blue - GENERATOR #2 COPY
Gold - TRANSPORTER #1 COPY

Yellow - GENERATOR #1 COPY

ATTACHMENT B

SOIL CONTAINING PCB CLEANUP COMPLETION SUMMARY REPORT



SOIL CONTAINING PCB CLEANUP COMPLETION SUMMARY REPORT

FORMER GRAND RAPIDS METAL PLANT
300 36th STREET SW
WYOMING, MICHIGAN

DISCLAIMER:
SOME FORMATTING CHANGES MAY HAVE OCCURRED WHEN
THE ORIGINAL DOCUMENT WAS PRINTED TO PDF; HOWEVER,
THE ORIGINAL CONTENT REMAINS UNCHANGED.

MAY 2013
REF. NO. 017360 (30)

Prepared by:
**Conestoga-Rovers
& Associates**

200 W. Allegan Street, Suite 300
Plainwell, Michigan
U.S.A. 49080-1397

Office: (269) 685-5181
Fax: (269) 685-5223

web: <http://www.CRAworld.com>

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4.0 CLEANUP LEVELS.....	5
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LIST OF TABLES

(Following Text)

TABLE 6.1	SAMPLE KEY
TABLE 6.2	VERIFICATION SAMPLING ANALYTICAL RESULTS

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(Following Text)

APPENDIX A	SELF-IMPLEMENTING PLAN
APPENDIX B	WASTE DISPOSAL DOCUMENTATION

1.0 INTRODUCTION/APPLICABILITY

Conestoga-Rovers & Associates (CRA) has prepared this Soil Containing Polychlorinated Biphenyl (PCB) Cleanup Completion Summary Report (Report) on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust for the former Grand Rapids Metal Plant property located at 300 36th Street SW in Wyoming, Michigan (Site). The Site location is presented on Figure 1.1. A Site Plan is presented on Figure 1.2.

A Self-Implementing Plan (SIP) was prepared for PCB Area Nos. 1 and 2 and submitted to the United States Environmental Protection Agency (U.S. EPA) – Region 5, the Michigan Department of Environmental Quality (MDEQ), and the Kent County Health Department (KCHD) on June 7, 2012 in accordance with the procedures set forth in 40 Code of Federal Regulations (CFR) 761.61(a) of the Toxic Substances Control Act (TSCA) regarding the characterization and remediation of polychlorinated biphenyl (PCB) remediation waste. U.S. EPA conditionally approved the SIP in correspondence dated August 6, 2012. This Report has been prepared for submittal to the United States Environmental Protection Agency (U.S. EPA) – Region 5 in accordance with Condition No. 3 specified in U.S. EPA's August 6, 2012 approval of the SIP. A copy of the approved SIP is presented in Appendix A.

General Motors Corporation (GMC) initiated automotive manufacturing operations at the Site in 1936. Operations ceased at the Site on June 30, 2010. GMC filed for bankruptcy under Chapter 11 of the United States Bankruptcy Code on June 1, 2009. On July 10, 2009, pursuant to a bankruptcy court order, Motors Liquidation Company (MLC) retained ownership of the Site, and on October 20, 2010 entered into a settlement agreement with federal and state governmental authorities regarding MLC's environmental obligations at its remaining properties. According to the terms of the settlement agreement, RACER Trust became effective March 31, 2011 and interests in the Site were transferred to RACER Trust at that time to conduct, manage, and fund cleanup at the 89 sites formerly owned by MLC, including the Site. The Site was sold to Thunder Ventures, who then transferred the property to the City of Wyoming Brownfield Redevelopment Authority (WBRA) on June 28, 2011; however, RACER Trust retains certain responsibilities related to subsurface contamination associated with historical operations at the Site by GMC.

In 2012, the Site underwent redevelopment activities including decommissioning, demolition, and property re-grading by contractors on behalf of Thunder Ventures. The majority of the historical structures at the Site were decommissioned and demolished, and the Site is currently being marketed for future redevelopment.

Based on discussions with representatives of the WBRA, PCB Area Nos. 1 and 2 may be utilized in a manner in the future that would meet the definition of a High Occupancy Area under 40 CFR 761. The scope of the June 7, 2012 SIP was limited to specific subsurface areas of the Site only, identified as PCB Area Nos. 1 and 2. Additional areas where PCBs were detected in soil above the High Occupancy Area Cleanup Level of 1 part per million (ppm)/1 milligram per kilogram (mg/kg) for bulk remediation waste (without further conditions) are present at the Site outside the former Main Manufacturing Building footprint. These areas were not addressed in the SIP and will be further evaluated and addressed, as applicable, in accordance with 40 CFR 761.61 at a later date.

2.0 SITE CHARACTERIZATION

Site characterization was completed prior to removal activities as presented in the approved SIP. A copy of the SIP is presented in Appendix A.

3.0 NOTIFICATION AND CERTIFICATION

The SIP was filed with the U.S. EPA, MDEQ, and KCHD in accordance with 40 CFR 761(a)(3)(i) on June 7, 2012, which was greater than 30 days prior to the cleanup initiation date of August 22, 2012.

4.0 CLEANUP LEVELS

As discussed in Section 1.0 and in the SIP, the cleanup level utilized for this work was the High Occupancy Area Cleanup Level of 1 ppm/1 mg/kg for bulk remediation waste (without further conditions) in 40 CFR 761(a)(4)(i)(A).

5.0 SITE CLEANUP

The bulk PCB remediation waste removal activities were conducted on August 22, 2012. Additional details on the specific activities performed are presented below.

5.1 SOIL EXCAVATION ACTIVITIES

Prior to mobilization, the areas in which removal activities were required were identified by locating previously surveyed boring locations. The prior boring locations were utilized to mark the extents of the anticipated excavation boundaries.

Site preparation activities included constructing haul roads for waste transportation vehicles, construction of a temporary decontamination pad, and demarcation of excavation areas within their current demolition work areas.

Soils containing concentrations of PCBs greater than 1 ppm were excavated using a hydraulic excavator. Figures 5.1 and 5.2 show the final excavation extents of PCB Area No. 1 and PCB Area No. 2, respectively. Excavated soils were transferred directly from the excavation into haul trucks for transportation to the landfill. The trucks were equipped with covers to prevent the loss of any soils during transportation.

A total of approximately 45 tons or 30 cubic yards (cy) (based on a conversion of 1.5 tons per cy) of soil containing PCBs were removed from PCB Area No. 1. A total of approximately 121.5 tons or 81 cy of soil containing PCBs were removed from PCB Area No. 2. The soil removed from PCB Area No. 2 also included the soil pile adjacent to the excavation area that was generated by on-Site demolition activities. All soils were transported to and disposed of at Waste Management, Inc.'s Autumn Hills Landfill in Zeeland, Michigan, in accordance with 40 CFR 761.61(a)(5).

5.2 SOIL EXCAVATION BACKFILLING ACTIVITIES

Upon receipt of the analytical results for the verification soil samples indicating that PCBs were not detected at a concentration above 1 ppm (see Section 6.0), the excavations were backfilled. Crushed concrete fill generated on-Site during the demolition activities was utilized to backfill each excavation cavity. All final grading and compaction of fill materials was completed as part of the decommissioning and demolition scope of work.

5.3 DECONTAMINATION

Decontamination was completed in accordance with the self-implementing procedures described in 40 CFR 761.79(c)(2). Equipment which contacted PCB-impacted material, including the excavator and non-disposable sampling equipment, was decontaminated with a high-pressure steam cleaner and a detergent solution. Decontamination materials were disposed as described in Section 5.4.

5.4 TRANSPORTATION AND OFF-SITE DISPOSAL

Transportation and disposal were required for the waste stream in accordance with 40 CFR 761.61(a)(5)(v)(A) for bulk PCB remediation waste containing PCBs less than 50 ppm. A minimum 15-day notification was provided to the disposal facility prior to the first shipment of the waste.

Excavated materials were direct-loaded into trucks. Water generated during decontamination activities was left in the decontamination pad to allow for complete evaporation. The decontamination pad materials were stored in a 55-gallon drum that contained soil cuttings from the SIP investigation sampling. The soils, decontamination pad materials, and personal protective equipment (PPE) generated during implementation of the cleanup were disposed of at Autumn Hills Landfill in Zeeland, Michigan.

The waste manifests for the soils and other materials were prepared in accordance with 40 CFR 761 Subpart K *PCB Waste Disposal Records and Reports*. A copy of the disposal documentation is presented in Appendix B.

6.0 VERIFICATION SAMPLING

Verification sampling was conducted consistent with 40 CFR 761 Subpart O "Sampling to Verify Completion of Self-Implementing Cleanup and On-Site Disposal of Bulk PCB Remediation Waste and Porous Surfaces." Table 6.1 presents a sample key for the final verification samples.

After completion of excavation activities, verification samples were collected at five-foot intervals horizontally and vertically. The soils were composited in the field and sent to the laboratory for analysis. Laboratory analytical results from the sampling after excavation activities indicated that PCBs at concentrations above 1 ppm were no longer present in any of the excavation floor and sidewalls.

Figures 6.1 and 6.2 present the verification sample locations for PCB Area No. 1 and PCB Area No. 2, respectively. Table 6.2 presents the analytical results for the final verification samples. The complete data deliverables provided by the laboratories that performed the analysis of the samples during the PCB cleanup activities are available upon request.

7.0 CAP REQUIREMENTS

A cap was not utilized as part of this cleanup.

8.0 DEED RESTRICTIONS

Deed restrictions were not utilized as part of this cleanup.

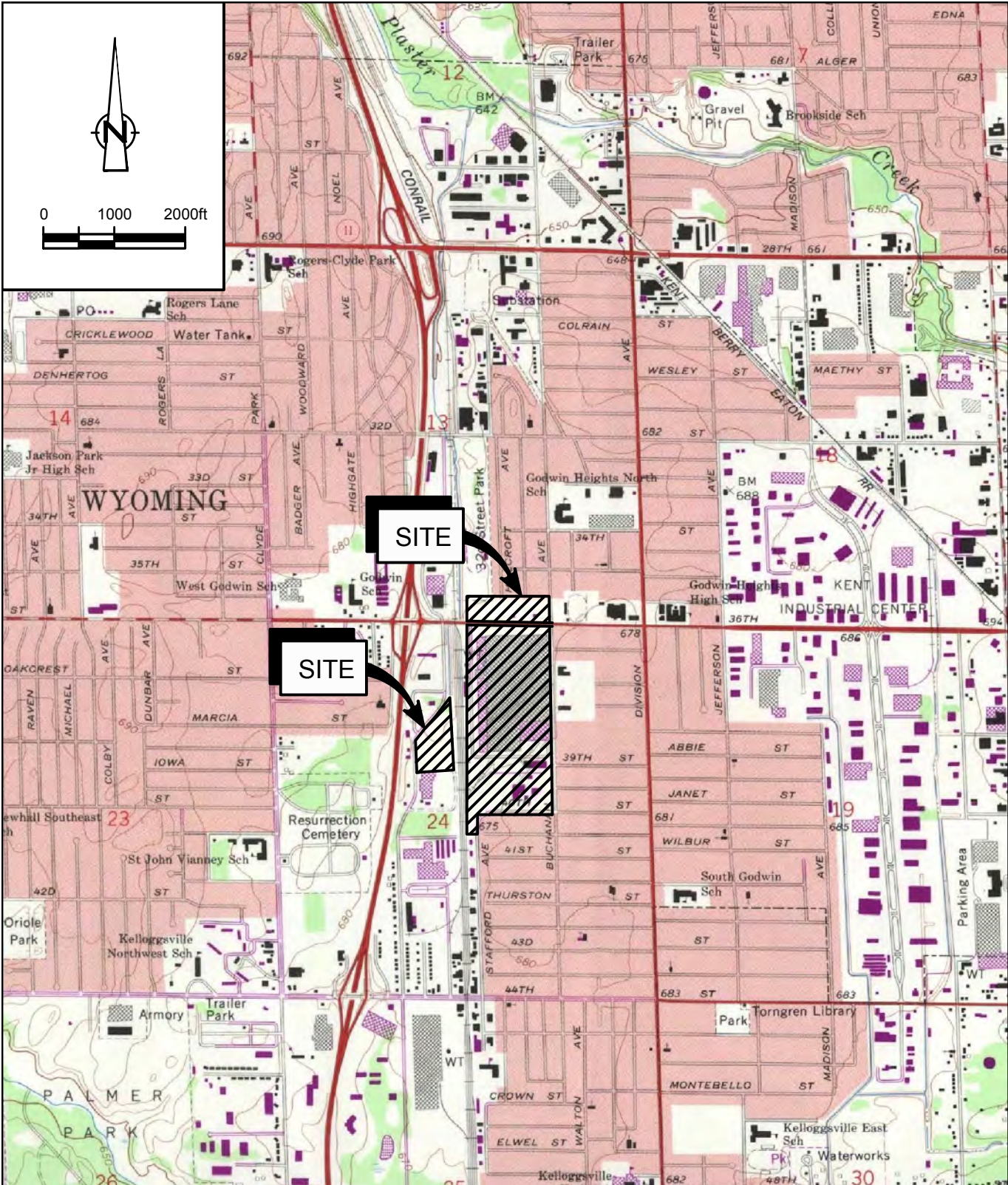
9.0 RECORDKEEPING

During completion of the cleanup activities, a logbook was maintained to document all activities completed on Site including weather, personnel participating in the cleanup activities, cleanup activities conducted, and other relevant information.

As identified in the SIP, all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrument/chemical analysis procedures used to assess or characterize the PCB contamination related to the investigation and cleanup activities will be maintained in the following location and accessible for inspection by U.S. EPA:

- Conestoga-Rovers & Associates, Inc.
Attn: Jennifer Quigley, P.E.
200 West Allegan Street, Suite 300
Plainwell, Michigan 49080-1397

Records will be kept consistent with 40 CFR 761.61(a)(9).



SOURCE: USGS QUADRANGLE MAP
 GRAND RAPIDS EST. MICHIGAN

figure 1.1



SITE LOCATION
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan

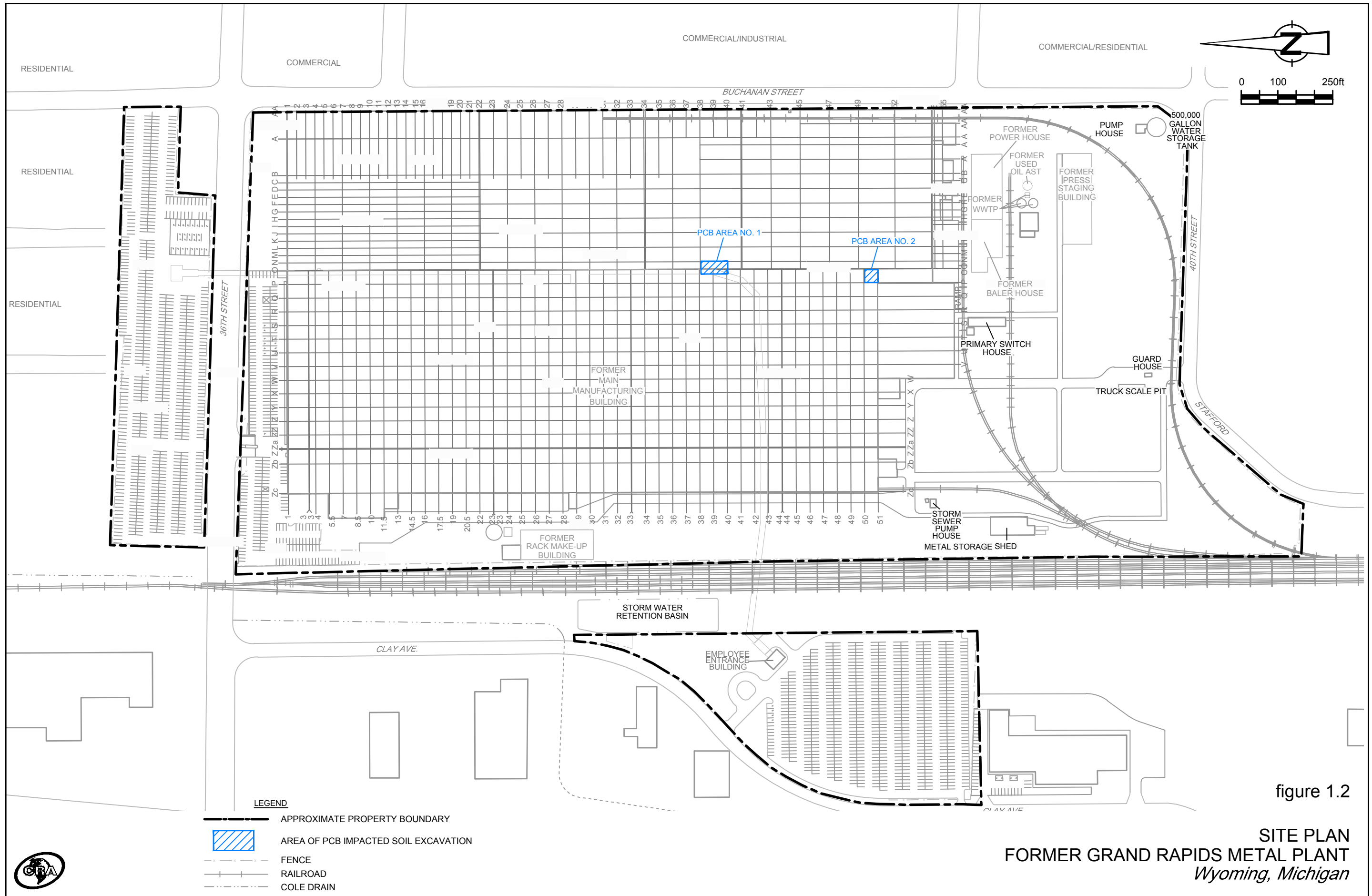
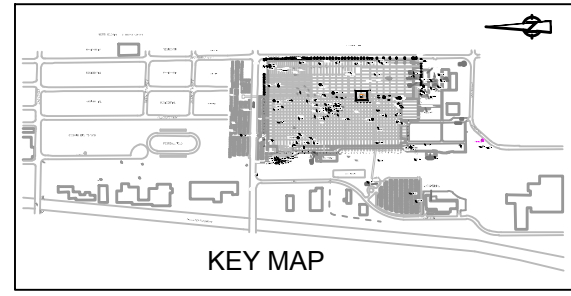
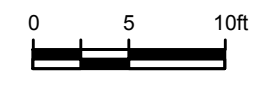


figure 1.2

SITE PLAN
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan

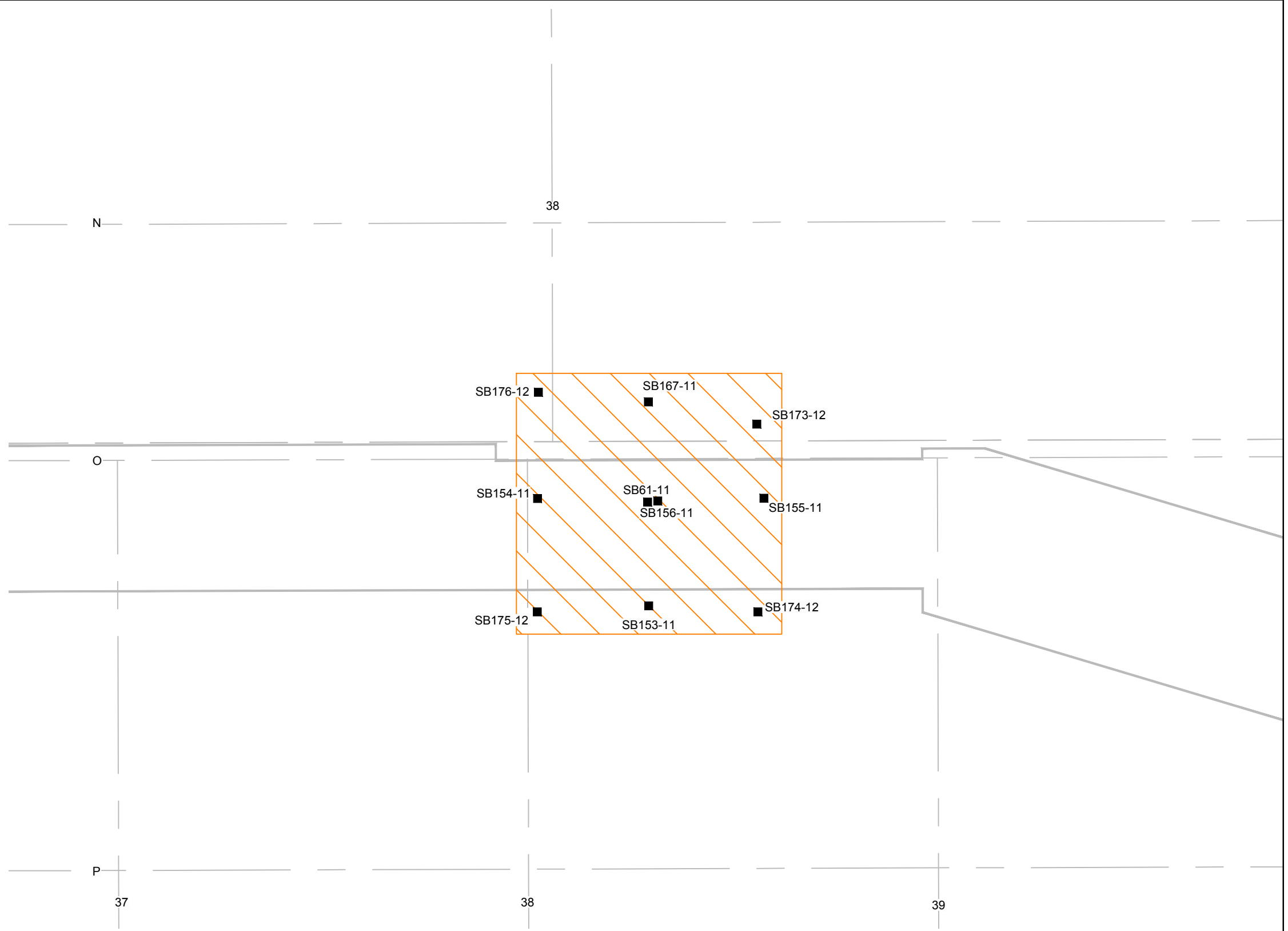




KEY MAP

LEGEND

- SB156-11 SOIL BORING LOCATION
- ▨ AREA OF EXCAVATION

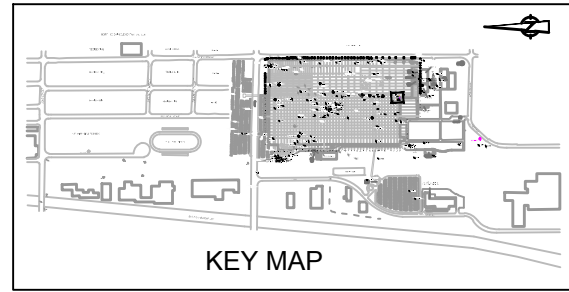
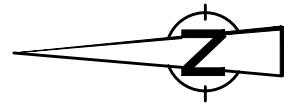


DRAFT

figure 5.1



PCB AREA NO. 1 - EXCAVATION AREA
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan



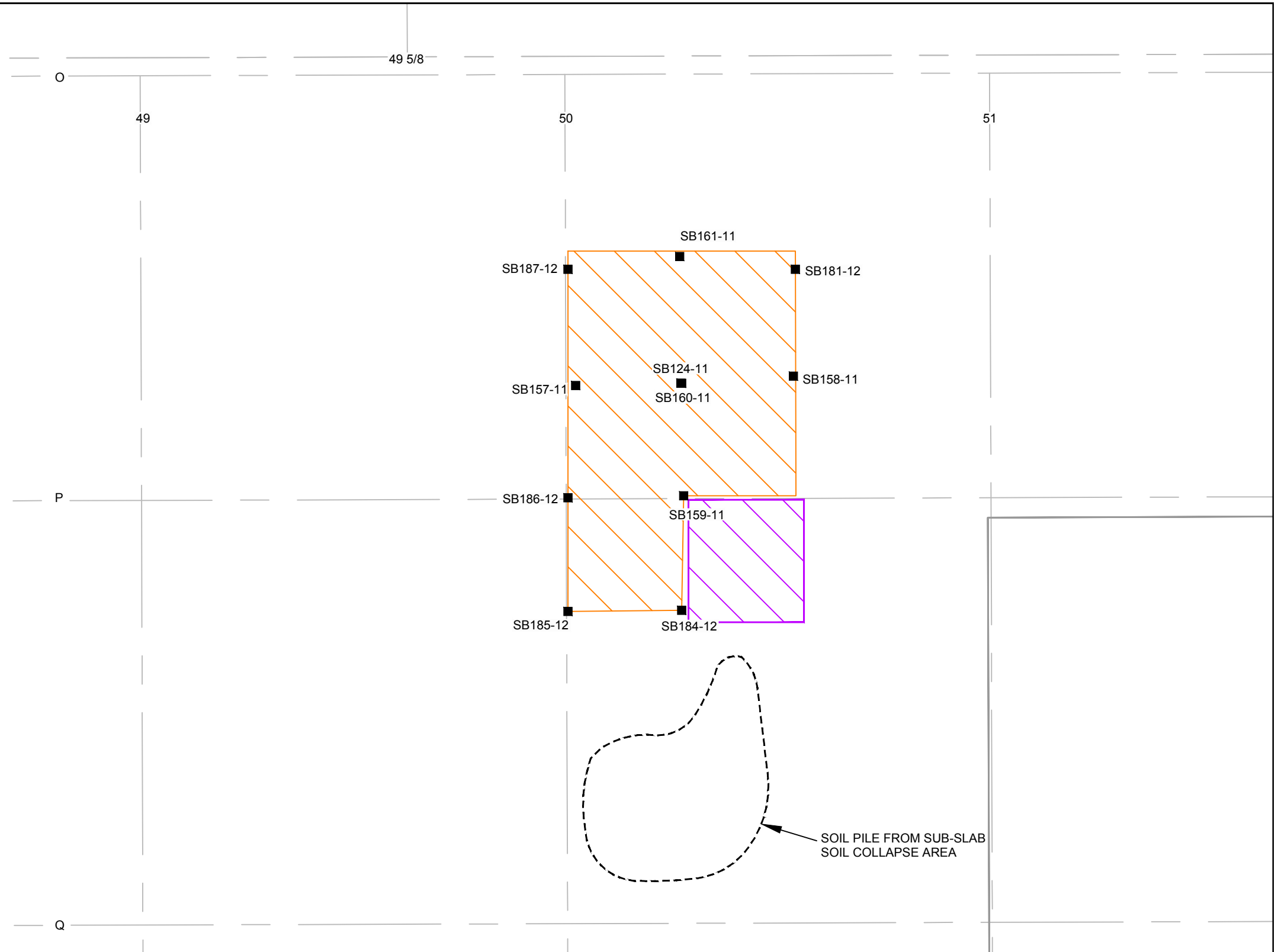


KEY MAP

LEGEND

- SB156-11 SOIL BORING LOCATION
-  AREA OF EXCAVATION
-  AREA OF PARTIAL SOIL COLLAPSE BENEATH SLAB DUE TO ADJACENT SLAB REMOVAL/ EXCAVATION

DRAFT

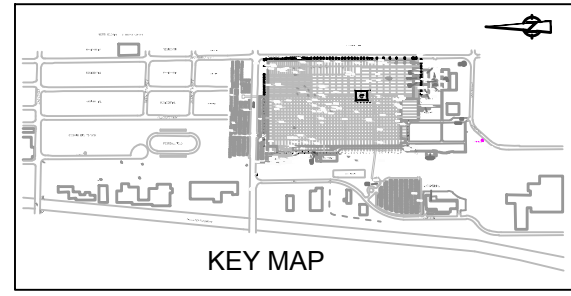
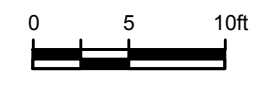


SOIL PILE FROM SUB-SLAB SOIL COLLAPSE AREA

figure 5.2

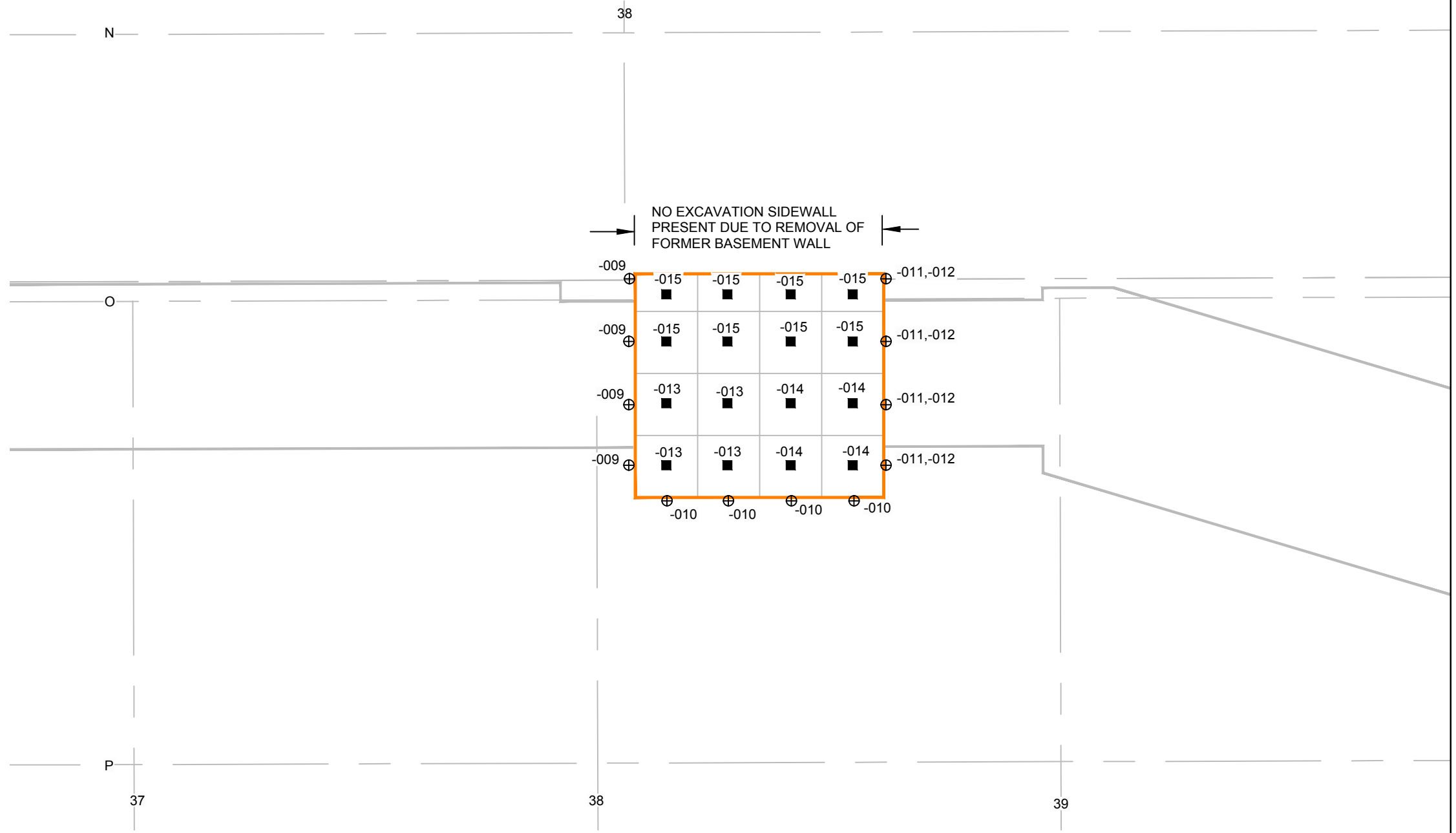
PCB AREA NO. 2 - EXCAVATION AREA
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan





KEY MAP

NO EXCAVATION SIDEWALL
PRESENT DUE TO REMOVAL OF
FORMER BASEMENT WALL



LEGEND

- LIMITS OF EXCAVATION
- COMPOSITE VERIFICATION SAMPLE GRAB LOCATION - FLOOR
- ⊕ COMPOSITE VERIFICATION SAMPLE GRAB LOCATION - SIDEWALL

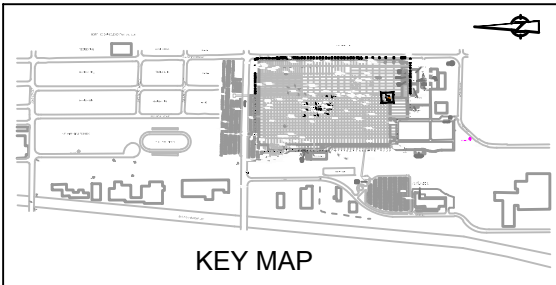
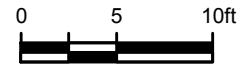
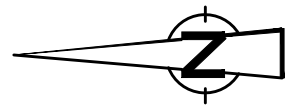
NOTE: "-009" DENOTES SUFFIX OF SAMPLE ID FOR CORRESPONDING COMPOSITE VERIFICATION SAMPLE PRESENTED IN TABLE 2.1.

DRAFT

figure 6.1

PCB AREA NO. 1 - VERIFICATION SAMPLE LOCATIONS
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan





KEY MAP

LEGEND

- LIMIT OF EXCAVATION
- COMPOSITE VERIFICATION SAMPLE GRAB LOCATION - FLOOR
- ⊕ COMPOSITE VERIFICATION SAMPLE GRAB LOCATION - SIDEWALL
- △ EX-SITU COMPOSITE SOIL SAMPLE GRAB LOCATION - SOIL PILE, Q-50

NOTE: "-009" DENOTES SUFFIX OF SAMPLE ID FOR CORRESPONDING COMPOSITE VERIFICATION SAMPLE PRESENTED IN TABLE 2.1.

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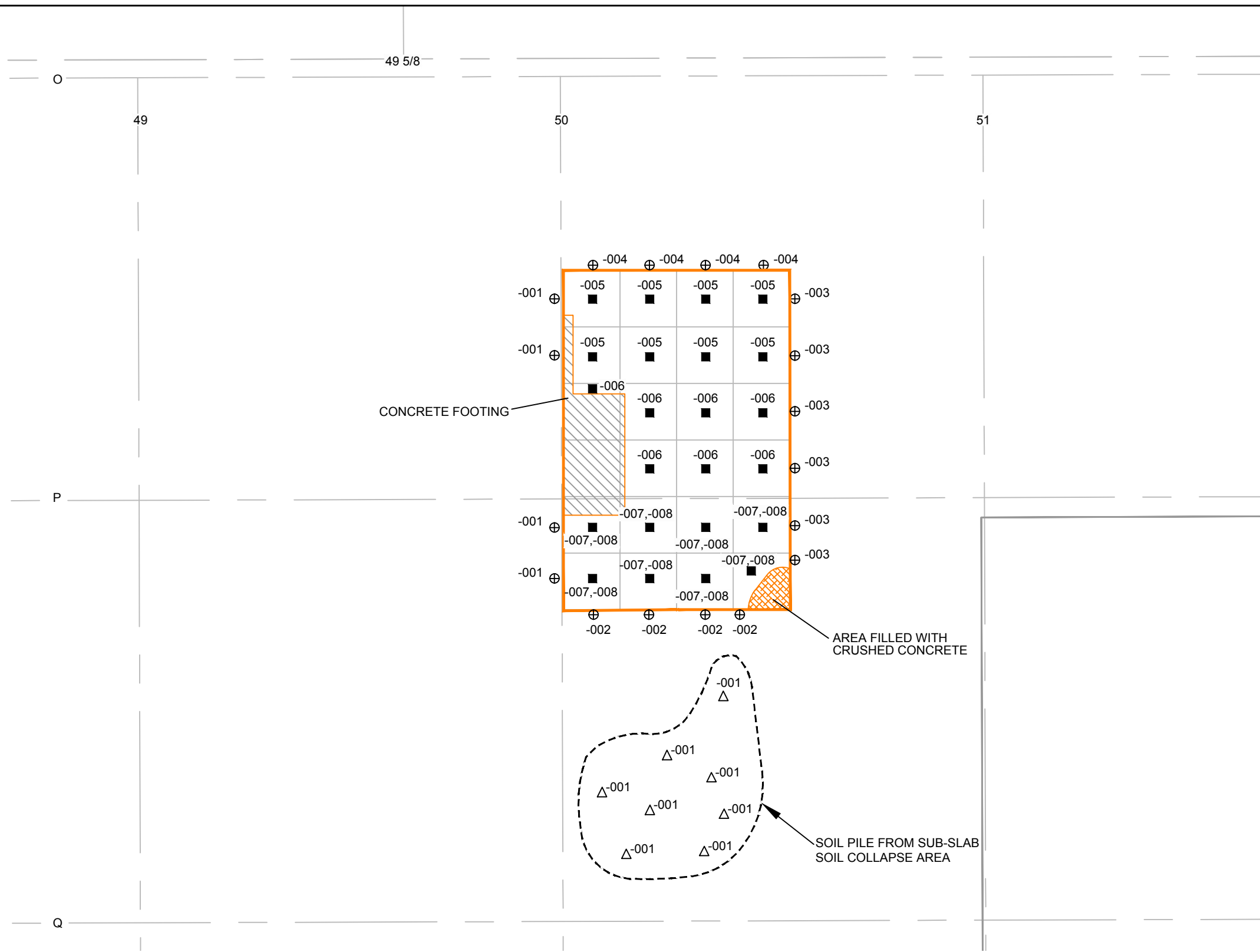


figure 6.2

PCB AREA NO. 2 - VERIFICATION SAMPLE LOCATIONS
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan



**VERIFICATION SAMPLE SUMMARY
SOIL CONTAINING PCB CLEANUP COMPLETION SUMMARY REPORT
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN**

<i>Sample Date</i>	<i>Sample Identification</i>	<i>Sample Location</i>	<i>Matrix</i>	<i>Sample Depth (ft bgs)</i>	<i>QC Sample</i>	<i>Analysis</i>
6/15/2012	SO-17360-061512-EB-001	PCB Area Soil Pile - Q-50	Soil	-		PCBs
8/22/2012	SO-17360-082212-EB-013	PCB Area No. 1 - Floor Composite -013	Soil	3		PCBs
8/22/2012	SO-17360-082212-EB-014	PCB Area No. 1 - Floor Composite -014	Soil	3		PCBs
8/22/2012	SO-17360-082212-EB-015	PCB Area No. 1 - Floor Composite -015	Soil	3	MS/MSD	PCBs
8/22/2012	SO-17360-082212-EB-009	PCB Area No. 1 - North Sidewall	Soil	1.5		PCBs
8/22/2012	SO-17360-082212-EB-011	PCB Area No. 1 - South Sidewall	Soil	1.5	Duplicate	PCBs
8/22/2012	SO-17360-082212-EB-012	PCB Area No. 1 - South Sidewall	Soil	1.5		PCBs
8/22/2012	SO-17360-082212-EB-010	PCB Area No. 1 - West Sidewall	Soil	1.5		PCBs
8/22/2012	SO-17360-082212-EB-004	PCB Area No. 2 - East Sidewall	Soil	1.5		PCBs
8/22/2012	SO-17360-082212-EB-005	PCB Area No. 2 - Floor Composite -005	Soil	3		PCBs
8/22/2012	SO-17360-082212-EB-006	PCB Area No. 2 - Floor Composite -006	Soil	3		PCBs
8/22/2012	SO-17360-082212-EB-007	PCB Area No. 2 - Floor Composite -007	Soil	3	Duplicate	PCBs
8/22/2012	SO-17360-082212-EB-008	PCB Area No. 2 - Floor Composite -008	Soil	3		PCBs
8/22/2012	SO-17360-082212-EB-001	PCB Area No. 2 - North Sidewall	Soil	1.5		PCBs
8/22/2012	SO-17360-082212-EB-003	PCB Area No. 2 - South Sidewall	Soil	1.5		PCBs
8/22/2012	SO-17360-082212-EB-002	PCB Area No. 2 - West Sidewall	Soil	1.5		PCBs

Notes:

PCBs - Polychlorinated Biphenyls

QC - Quality Control

MS/MSD - Matrix Spike /Matrix Spike Duplicate

TABLE 6.2

**VERIFICATION SAMPLING ANALYTICAL RESULTS
SOIL CONTAINING PCB CLEANUP COMPLETION SUMMARY REPORT
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN**

<i>Sample Location</i>		<i>PCB Area No. 1 North Sidewall</i>	<i>PCB Area No. 1 South Sidewall</i>	<i>PCB Area No. 1 South Sidewall</i>	<i>PCB Area No. 1 West Sidewall</i>	<i>PCB Area No. 1 Floor Composite -013</i>	<i>PCB Area No. 1 Floor Composite -014</i>
<i>Sample Identification</i>		SO-17360-082212-EB-009	SO-17360-082212-EB-011	SO-17360-082212-EB-012	SO-17360-082212-EB-010	SO-17360-082212-EB-013	SO-17360-082212-EB-014
<i>Sample Date</i>		8/22/2012	8/22/2012	8/22/2012	8/22/2012	8/22/2012	8/22/2012
<i>Sample Type</i>				Duplicate			
<i>Sample Depth</i>		(1.5-) ft BGS	(1.5-) ft BGS	(1.5-) ft BGS	(1.5-) ft BGS	(3) ft BGS	(3) ft BGS
	<i>Units</i>						
<i>Polychlorinated Biphenyls (PCBs)</i>							
Aroclor-1016 (PCB-1016)	ug/kg	350 U	350 U	350 U	350 U	350 U	350 U
Aroclor-1221 (PCB-1221)	ug/kg	350 U	350 U	350 U	350 U	350 U	350 U
Aroclor-1232 (PCB-1232)	ug/kg	350 U	350 U	350 U	350 U	350 U	350 U
Aroclor-1242 (PCB-1242)	ug/kg	350 U	350 U	350 U	350 U	350 U	350 U
Aroclor-1248 (PCB-1248)	ug/kg	350 U	350 U	350 U	350 U	350 U	350 U
Aroclor-1254 (PCB-1254)	ug/kg	11 J	350 U	350 U	7.7 J	24 J	15 J
Aroclor-1260 (PCB-1260)	ug/kg	350 U	350 U	350 U	350 U	350 U	350 U
Total PCBs	ug/kg	11 J	ND	ND	7.7 J	24 J	15 J

TABLE 6.2

**VERIFICATION SAMPLING ANALYTICAL RESULTS
SOIL CONTAINING PCB CLEANUP COMPLETION SUMMARY REPORT
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN**

<i>Sample Location</i>		<i>PCB Area No. 1 Floor Composite -015</i>	<i>PCB Area No. 2 East Sidewall</i>	<i>PCB Area No. 2 North Sidewall</i>	<i>PCB Area No. 2 South Sidewall</i>	<i>PCB Area No. 2 West Sidewall</i>
<i>Sample Identification</i>		SO-17360-082212-EB-015	SO-17360-082212-EB-004	SO-17360-082212-EB-001	SO-17360-082212-EB-003	SO-17360-082212-EB-002
<i>Sample Date</i>		8/22/2012	8/22/2012	8/22/2012	8/22/2012	8/22/2012
<i>Sample Type</i>						
<i>Sample Depth</i>		(3) ft BGS	(1.5-) ft BGS	(1.5-) ft BGS	(1.5-) ft BGS	(1.5-) ft BGS
	<i>Units</i>					
<i>Polychlorinated Biphenyls (PCBs)</i>						
Aroclor-1016 (PCB-1016)	ug/kg	350 U	350 U	340 U	350 U	340 U
Aroclor-1221 (PCB-1221)	ug/kg	350 U	350 U	340 U	350 U	340 U
Aroclor-1232 (PCB-1232)	ug/kg	350 U	350 U	340 U	350 U	340 U
Aroclor-1242 (PCB-1242)	ug/kg	350 U	350 U	340 U	350 U	340 U
Aroclor-1248 (PCB-1248)	ug/kg	350 U	350 U	340 U	350 U	340 U
Aroclor-1254 (PCB-1254)	ug/kg	38 J	350 U	51 J	130 J	340 U
Aroclor-1260 (PCB-1260)	ug/kg	26 J	350 U	340 U	20 J	340 U
Total PCBs	ug/kg	64 J	ND	51 J	150 J	ND

TABLE 6.2

**VERFICATION SAMPLING ANALYTICAL RESULTS
SOIL CONTAINING PCB CLEANUP COMPLETION SUMMARY REPORT
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN**

<i>Sample Location</i>		<i>PCB Area No. 2 Floor Composite -005</i>	<i>PCB Area No. 2 Floor Composite -006</i>	<i>PCB Area No. 2 Floor Composite -007</i>	<i>PCB Area No. 2 Floor Composite -008</i>	<i>PCB Area Soil Pile - Q-50</i>
<i>Sample Identification</i>		SO-17360-082212-EB-005	SO-17360-082212-EB-006	SO-17360-082212-EB-007	SO-17360-082212-EB-008	SO-17360-061512-EB-001
<i>Sample Date</i>		8/22/2012	8/22/2012	8/22/2012	8/22/2012	6/15/2012
<i>Sample Type</i>					<i>Duplicate</i>	
<i>Sample Depth</i>		<i>(3-) ft BGS</i>	<i>(3-) ft BGS</i>	<i>(3-) ft BGS</i>	<i>(3-) ft BGS</i>	-
	<i>Units</i>					
<i>Polychlorinated Biphenyls (PCBs)</i>						
Aroclor-1016 (PCB-1016)	ug/kg	350 U	350 U	350 U	340 U	340 U
Aroclor-1221 (PCB-1221)	ug/kg	350 U	350 U	350 U	340 U	340 U
Aroclor-1232 (PCB-1232)	ug/kg	350 U	350 U	350 U	340 U	340 U
Aroclor-1242 (PCB-1242)	ug/kg	350 U	350 U	350 U	340 U	340 U
Aroclor-1248 (PCB-1248)	ug/kg	350 U	350 U	350 U	340 U	340 U
Aroclor-1254 (PCB-1254)	ug/kg	13 J	37 J	12 J	7 J	340 U
Aroclor-1260 (PCB-1260)	ug/kg	350 U	350 U	350 U	340 U	340 U
Total PCBs	ug/kg	13 J	37 J	12 J	7 J	ND

APPENDIX A

SELF-IMPLEMENTING PLAN



SELF-IMPLEMENTING PLAN FOR THE REMEDICATION OF PCB-IMPACTED SOILS PURSUANT TO 40 CFR 761.61(a)

**FORMER GRAND RAPIDS METAL PLANT
300 36th STREET SW
WYOMING, MICHIGAN**

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THE ORIGINAL DOCUMENT WAS PRINTED TO PDF; HOWEVER,
THE ORIGINAL CONTENT REMAINS UNCHANGED.

**JUNE 2012
REF. NO. 017360 (28)**

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1.0 INTRODUCTION/PURPOSE OF REPORT

Conestoga-Rovers & Associates (CRA) has prepared this Self-Implementing Plan (SIP) on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust for the former Grand Rapids Metal Plant property located at 300 36th Street SW in Wyoming, Michigan (Site). The Site location is presented on Figure 1.1. This SIP has been prepared for submittal to the United States Environmental Protection Agency (U.S. EPA) – Region 5, the Michigan Department of Environmental Quality (MDEQ), and the Kent County Health Department (KCHD) in accordance with the procedures set forth in 40 Code of Federal Regulations (CFR) 761.61(a) of the Toxic Substances Control Act (TSCA) regarding the characterization and remediation of polychlorinated biphenyl (PCB) remediation waste.

General Motors Corporation (GMC) initiated automotive manufacturing operations at the Site in 1936. Operations ceased at the Site on June 30, 2010. GMC filed for bankruptcy under Chapter 11 of the United States Bankruptcy Code on June 1, 2009. On July 10, 2009, pursuant to a bankruptcy court order, Motors Liquidation Company (MLC) retained ownership of the Site, and on October 20, 2010 entered into a settlement agreement with federal and state governmental authorities regarding MLC's environmental obligations at its remaining properties. According to the terms of the settlement agreement, RACER Trust became effective March 31, 2011 and interests in the Site were transferred to RACER Trust at that time to conduct, manage, and fund cleanup at the 89 sites formerly owned by MLC, including the Site. The Site was sold to the City of Wyoming Brownfield Redevelopment Authority (WBRA) on June 28, 2011; however, RACER Trust retains certain responsibilities related to subsurface contamination associated with historical operations at the Site by GMC. As such, the scope of this SIP is limited to specific subsurface areas of the Site only, as described in subsequent sections.

The Site is currently undergoing redevelopment activities including decommissioning, demolition, and property re-grading by contractors on behalf of the WBRA. The majority of the historical structures at the Site have been decommissioned and demolished, or are undergoing demolition at this time.

This SIP is being filed with the U.S. EPA, MDEQ, and the KCHD in accordance with 40 CFR 761.61(a)(3)(i). RACER Trust respectfully requests an expedited review of this SIP in order to assist the on-going redevelopment efforts of the WBRA's contractors in the removal of the former Main Manufacturing Building slab and re-grading activities in a timely manner.

2.0 SITE BACKGROUND/HISTORY

2.1 SITE DESCRIPTION

The Site is located at 300 36th Street SW and consists of approximately 88 acres of land. The Site historically included an approximately 2 million square-foot Main Manufacturing Building and several outlying buildings and ancillary structures (Wastewater Treatment Plant [WWTP], Power House, Press Staging Building, Primary Switch House, Baler House, Rack Make-Up Building, South Fire Pump House, West Fire Pump House, Storm Sewer Pump House, Cooling Tower Pump House, Metal Storage Shed, and Guard House), asphalt and concrete-paved areas, a stormwater retention pond, and vegetated and landscaped areas. The majority of the historical structures at the Site have been decommissioned and demolished, or are undergoing demolition at this time. Figure 2.1 presents a Site plan.

2.2 ENVIRONMENTAL SETTING

The Site is located in a mixed industrial, commercial, residential and recreational area in the City of Wyoming, Michigan with Buchanan Ave SW and mixed industrial/residential to the east, mixed recreational and residential to the north, railroad tracks and mixed commercial/industrial to the west, and 40th Street SW and residential to the south as further discussed below.

The Site is abutted to the north by Price and Company, Godwin Heights Public Schools athletic fields and residential properties, with Hillcroft Park located beyond.

The Site is abutted to the east by Buchanan Street followed by an Amoco gas station, Tint Factory, N&A Auto Repair, Prestige Transport, LLC, Steil Property Management, RSP Investment Property, Inc., MSC Industrial Supply Co., Clean Rooms International, Independent Glass, Chase Creative Unlimited, Ter Molen & Hart Sheet Metal, Tracer Tool & Die Co., United Auto Workers (UAW) Hall, Conical Tapered Mills, a vacant commercial/industrial building, a vacant lot, Mark Maker Company, and residential properties.

The Site is abutted to the south by 40th Street followed by Accurate Alignment & Brake and residential properties.

The Site is abutted to the west by railroad tracks, Cole Drain, Consumers high-tension power lines, Consumers Service Center, The Macomb Group, and Clay Avenue followed by Ryder Truck, Cummins, a vacant commercial/industrial building, K-Mac Plastics,

Floyd's Electric, Consolidated Metal Products, Inc., Rose Pest Solutions, Donald Engineering, and Earl Jourdan Auto Parts.

2.3 SITE HISTORY

GMC initiated automotive manufacturing operations at the Site in 1936. Additional buildings were constructed and the Site was expanded several times between 1937 and 2006. Primary operations conducted at the Site consisted of metal fabrication and assembly for consumer vehicles. Operations ceased at the Site on June 30, 2010. The Site is currently on the Michigan Act 451, Part 201 Site List (Site Identification No. 41000115) and RACER Trust is conducting Site-wide investigation and monitoring activities associated with the listing.

The Site is currently undergoing redevelopment activities including decommissioning, demolition, and property re-grading by contractors on behalf of the WBRA. The majority of the historical structures at the Site have been decommissioned and demolished, or are undergoing demolition at this time.

2.4 HISTORICAL USAGE OF PCBs

As part of initial facility decommissioning, a draft Facility Environmental Assessment (FEA) was performed by CRA in October 2010, which included an evaluation of above grade potential PCB-containing or impacted materials. Additionally, as part of the on-going investigations and assessments being conducted at the Site associated with the Michigan Act 451, Part 201 listing, a Current Conditions Report (CCR) was prepared by CRA in December 2010, which included an evaluation of potential PCB-containing materials. As previously indicated, the scope of this SIP is limited to specific subsurface areas of the Site only, as described in subsequent sections.

The scope of work for the FEA and CCR included a Site walkthroughs of accessible Site structures, interviews with Site personnel, and a Site file review to identify potential PCB-containing materials known or suspected to have been used at the Site. Information was compiled on Site during the Site inspection, file review and interviews by CRA. Information obtained included Site drawings, Site environmental records, and copies of miscellaneous lists (equipment, wastes, etc.).

According to historical document reviews and interviews with Site personnel, the known historical uses of PCBs at the Site included: fluorescent light ballasts, hydraulic oils in machinery, and dielectric oil within transformers and capacitors. Potential PCB-

containing materials or PCB-containing materials observed included: dielectric fluids; impacted concrete and metal surfaces; light ballasts; natural gas lines; non-electrical oil-containing equipment such as elevators, air compressors and dock levelers; and solid PCB bulk product materials (i.e., floor block).

3.0 SITE CHARACTERIZATION

As identified in Section 2.3, the Site is on the Michigan Act 451, Part 201 sites list and is currently undergoing investigation and cleanup on a voluntary basis. Numerous subsurface investigations have been conducted at the Site between 1981 and 2012, which primarily evaluated non-PCB related areas of concern.

This section addresses specific subsurface evaluations conducted relative to delineation of two areas (PCB Area No. 1 and PCB Area No. 2) where PCBs were identified during a Site-wide investigation at concentrations above the High Occupancy Area Cleanup Level of 1 ppm/1 mg/kg for bulk remediation waste (without further conditions) set forth in TSCA. These two areas are being addressed at this time as the new property owner implements redevelopment activities in the area of the former Main Manufacturing Building footprint. Additional areas of PCB detections in soil above the 1 mg/kg High Occupancy Area Cleanup Level are present at the Site outside the former Main Manufacturing Building footprint; however, are not addressed in this SIP. These areas will be further evaluated and addressed, as applicable, in accordance with 40 CFR 761.61 at a later date.

3.1 SOIL BORING INSTALLATION/SOIL SAMPLING

PCB Area Nos. 1 and 2 were investigated in February and September 2011, and April 2012 through the installation of soil borings and the collection of soil samples.

Soil borings were advanced utilizing a rotasonic or direct-push (i.e., Geoprobe®) drill rig with continuous Macrocore® sampling. The Macrocore® samples were logged, examined by a CRA geologist for visual/olfactory evidence of impact, and screened with an 11.7 electron volt (eV) bulb photoionization detector (PID). The stratigraphic soil boring logs are presented in Appendix A. Soil samples, including Quality Assurance/Quality Control (QA/QC) samples, were collected from the soil boring locations for laboratory analysis as described in Sections 3.1.1 and 3.1.2. A sample summary is presented in Table 3.1.

Soil cuttings were screened with an 11.7 eV bulb PID and examined for visual/olfactory indication of contamination. All soil cuttings were containerized in Department of Transportation (DOT)-approved 55-gallon drums labeled for future characterization and off-Site disposal.

Upon completion of soil sample collection, each soil boring was abandoned by backfilling the soil boring annulus with bentonite chips to the ground surface and properly hydrating.

A survey was completed for the soil boring locations. Soil boring locations and elevations were surveyed, with elevations to the nearest 0.01-foot. The elevations were referenced to a designated above mean sea level benchmark.

3.1.1 PCB AREA NO. 1

A Site-wide investigation was conducted in February 2012. As part of this investigation, one soil boring, SB61-11, was advanced in the central portion of the former Main Manufacturing Building. Soil samples were collected for chemical analysis from the 1 to 3-foot interval immediately beneath the concrete floor slab (0 to 1-foot interval was comprised on concrete floor slab) and from the 18 to 20-foot interval (immediately above the water table). The soil samples were submitted to the laboratory for chemical analysis for PCBs, Target Compound List (TCL) volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PNAs), and Target Analyte List (TAL) metals (minus earth metals). Based on the analytical results, PCBs were detected in the soil sample collected from 1 to 3 feet bgs from SB61-11 at a concentration of 4.4 mg/kg.

Based on the detection of PCBs above 1 mg/kg in the shallow soil sample collected from SB61-11, five additional soil borings were advanced in September 2011, SB153-11 through SB156-11 and SB167-11. Soil borings SB153-11 through SB155-11 and SB167-11 were advanced on 10-foot spacing directly to the north, south, east, and west of SB61-11 and SB156-11 was advanced adjacent to SB61-11. Soil samples were collected from SB153-11 through SB155-11 and SB167-11 for chemical analysis for PCBs in 2-foot intervals beginning immediately beneath the concrete floor slab and continuing to approximately 10 feet bgs. Soil samples collected from the interval immediately beneath the floor slab were analyzed by the laboratory, with the underlying 2-foot interval samples placed on hold at the laboratory pending receipt of the initial analysis for the known impacted interval. Soil samples were collected from SB156-11 for chemical analysis for PCBs in 2-foot intervals beginning immediately beneath the concrete floor slab and continuing to approximately 10 feet bgs. The soil samples collected from the 0.5 to 2.5-foot and 2.5 to 4.0-foot intervals were analyzed by the laboratory, with the underlying 2-foot interval samples placed on hold at the laboratory pending receipt of the initial analysis for the known impacted interval. Based on the analytical results, PCBs were not detected in any of the samples collected. Therefore, the deeper samples were not analyzed by the laboratory.

Based on the results of the February and September 2011 investigations, four additional soil borings, SB173-12 through SB176-12, were advanced in April 2012. Soil borings SB173-12 through SB176-12 were advanced on 10-foot spacing to the northeast, northwest, southeast, and southwest of SB61-11/SB156-11 to complete the required delineation grid of the area. Soil samples were collected from SB173-12 through SB176-12 for chemical analysis for PCBs in 2-foot intervals beginning immediately beneath the concrete floor slab and continuing to approximately 10 feet bgs. It should be noted that in SB173-12, the concrete slab was 2 feet thick, so the interval for the initial soil sample was the 2 to 4-foot interval, with refusal from concrete encountered below this level. Soil samples collected from the interval immediately beneath the floor slab and the subsequent interval were analyzed by the laboratory, with the underlying 2-foot interval samples placed on hold at the laboratory pending receipt of the initial analysis for the known impacted interval. Based on the analytical results, PCBs were not detected in any of the samples collected at a concentration above 1 mg/kg. Therefore, the deeper samples were not analyzed by the laboratory.

Stratigraphic soil boring logs are presented in Appendix A. Table 3.1 presents a sample summary. Table 3.2 presents a summary of PCB analytical results for PCB Area No. 1. Figure 3.1 presents the sample locations and results for PCBs.

3.1.2 PCB AREA NO. 2

A Site-wide investigation was conducted in February 2011. As part of this investigation, one soil boring, SB124-11, was advanced in the central portion of the former Main Manufacturing Building. Soil samples were collected for chemical analysis from the 1 to 3-foot interval immediately beneath the concrete floor slab (0 to 1-foot interval was comprised on concrete floor slab) and from the 17 to 19-foot interval (immediately above the water table). The soil samples were submitted to the laboratory for chemical analysis for PCBs, TCL VOCs, PNAs, and TAL metals (minus earth metals). Based on the analytical results, PCBs were detected in the soil sample collected from 1 to 3 feet bgs from SB124-11 at a concentration of 1.3 mg/kg.

Based on the detection of PCBs above 1 mg/kg in the shallow soil sample collected from SB124-11, five additional soil borings were advanced in September 2011, SB157-11 through SB161-11. Soil borings SB157-11 through SB159-11 and SB161-11 were advanced on 10-foot spacing directly to the north, south, east, and west of SB124-11 and SB160-11 was advanced adjacent to SB124-11. Soil samples were collected from SB157-11 through SB159-11 and SB161-11 for chemical analysis for PCBs in 2-foot intervals beginning immediately beneath the concrete floor slab and continuing to approximately 10 feet bgs. Soil samples collected from the interval immediately beneath the floor slab were

analyzed by the laboratory, with the underlying 2-foot interval samples placed on hold at the laboratory pending receipt of the initial analysis for the known impacted interval. Soil samples were collected from SB160-11 for chemical analysis for PCBs in 2-foot intervals beginning immediately beneath the concrete floor slab and continuing to approximately 10 feet bgs. The soil samples collected from the 0.5 to 2.5-foot and 2.5 to 4.0-foot intervals were analyzed by the laboratory, with the underlying 2-foot interval samples placed on hold at the laboratory pending receipt of the initial analysis for the known impacted interval. Based on the analytical results, PCBs were detected in the soil sample collected from the 0.6 to 2.6-foot interval from SB159-11 at a concentration of 1.1 mg/kg. Therefore, the soil samples from the 2.6 to 4-foot and 4 to 6-foot intervals were analyzed by the laboratory. The analytical results for the deeper interval samples collected from SB159-11 and the shallow interval samples from the remainder of the borings did not indicate the presence of PCBs at concentrations above 1 mg/kg. Therefore, additional deeper samples were not analyzed by the laboratory

Based on the results of the February and September 2011 investigations, seven additional soil borings, SB181-12 through SB187-12, were planned for April 2012 to complete the required delineation grid of the area. Upon mobilization to the Site to conduct the delineation activities, it was identified that previous soil excavation activities had been conducted in the area immediately to the southwest of the delineation area and the concrete and underlying partially collapsed soil to the southwest of SB159-11 area was determined to be unstable and unsafe for the situation of the drill rig for the advancement of soil borings, SB182-12 and SB183-12. According to individuals associated with the on-going redevelopment activities, the materials that were excavated to the south-southwest of the delineation area were stockpiled on the concrete floor slab of the former Main Manufacturing Building immediately adjacent to the delineation and excavated areas. This material appears to be approximately 30 cubic yards in volume. An 8-point composite sample of this material will be collected to confirm that PCBs are not detected at a concentration of 1 ppm in the excavated material. Soil borings SB181-12 and SB184-12 through SB187-12 were advanced on 10-foot spacing to the northeast, northwest, southeast, and southwest of SB124-11/SB160-11 and SB159-11. Soil samples were collected from SB181-12 and SB184-12 through SB187-12 for chemical analysis for PCBs in 2-foot intervals beginning immediately beneath the concrete floor slab and continuing to approximately 10 feet bgs. Soil samples collected from the interval immediately beneath the floor slab and the subsequent interval were analyzed by the laboratory, with the underlying 2-foot interval samples placed on hold at the laboratory pending receipt of the initial analysis for the known impacted interval. Based on the analytical results, PCBs were not detected in any of the samples collected at a concentration above 1 mg/kg. Therefore, the deeper samples were not analyzed by the laboratory.

Stratigraphic soil boring logs are presented in Appendix A. Table 3.1 presents a sample summary. Table 3.3 presents a summary of PCB analytical results for PCB Area No. 2. Figure 3.2 presents the sample locations and results for PCBs.

3.2 ANALYTICAL METHODS

The soil samples were submitted under chain-of-custody protocols to Test America Laboratories of North Canton, Ohio or TriMatrix Laboratories of Grand Rapids, Michigan. The soil samples were extracted and analyzed for individual Aroclors (Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260) and total PCBs utilizing U.S.EPA Method 3540C/3550C for extraction/preparation and Method 8082/8082A for chemical analysis consistent with SW-846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" 3rd Edition, and promulgated updates, November 1986.

Copies of analytical reports will be maintained and available for review by U.S. EPA as identified in Section 6.0.

3.3 DATA VALIDATION

All analytical data was assessed utilizing quality control criteria established by the Quality Assurance Project Plan (QAPP) for the on-going Part 201 investigation work at the Site. Data validation memoranda outlining the details of the data validation will be maintained and available for review by U.S. EPA as identified in Section 6.0.

4.0 CLEANUP PLAN/REMEDIATION APPROACH

Based on the pre-cleanup characterization results, soil materials within the boundaries of the delineation to less than 1 ppm will be removed via excavation for off-Site disposal.

Soils will be removed to approximately 3 feet bgs for PCB Area Nos. 1 and 2. Approximately 250 cubic yards of material is anticipated to be removed from PCB Area No. 1 and approximately 390 cubic yards of material is anticipated to be removed from PCB Area No. 2 for off-Site disposal. For PCB Area No. 2, soil will also be removed from the area originally anticipated to be delineated through soil borings SB182-12 and SB183-12, to the extent of the area previously excavated during redevelopment activities (see Section 3.1.2). The anticipated extent of the proposed excavations for PCB Area Nos. 1 and 2 is presented on Figures 3.1 and 3.2, respectively.

Based on the pre-cleanup characterization, all materials have a PCB concentration of less than 50 ppm. These materials will be disposed of at Waste Management's Autumn Hills Landfill in Zeeland, Michigan, in accordance with 40 CFR 761.61 (a)(5).

5.0 SOIL VERIFICATION

Pre-cleanup characterization was conducted in accordance with the requirements of 40 CFR 761 Subpart N. As identified in Sections 3.0 and 4.0, results were compared to the cleanup standard of 1.0 ppm for bulk PCB remediation waste located in high-occupancy areas per 40 CFR 761.61(a)(4)(i)(A) and excavation will be conducted in the delineated extent to this cleanup level. No further verification sampling is proposed under 40 CFR 761; however, one additional floor soil sample from PCB Area No. 1 and one additional floor soil sample from PCB Area No. 2 will be collected for analysis for PCBs to meet MDEQ requirements.

6.0 PLAN CERTIFICATION

Pursuant to 40 CFR 761.61 (a)(3)(i)(E), all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrument/chemical analysis procedures used to assess or characterize the PCB contamination related to the investigation and cleanup activities specified herein will be maintained in the following location and accessible for inspection by U.S. EPA:

- Conestoga-Rovers & Associates, Inc.
Attn: Jennifer Quigley, P.E.
200 West Allegan Street, Suite 300
Plainwell, Michigan 49080-1397

Barbara Van Duren
Property Owner's Representative Signature

6/6/12
Date

Barbara Van Duren
Property Owner's Representative Printed Name

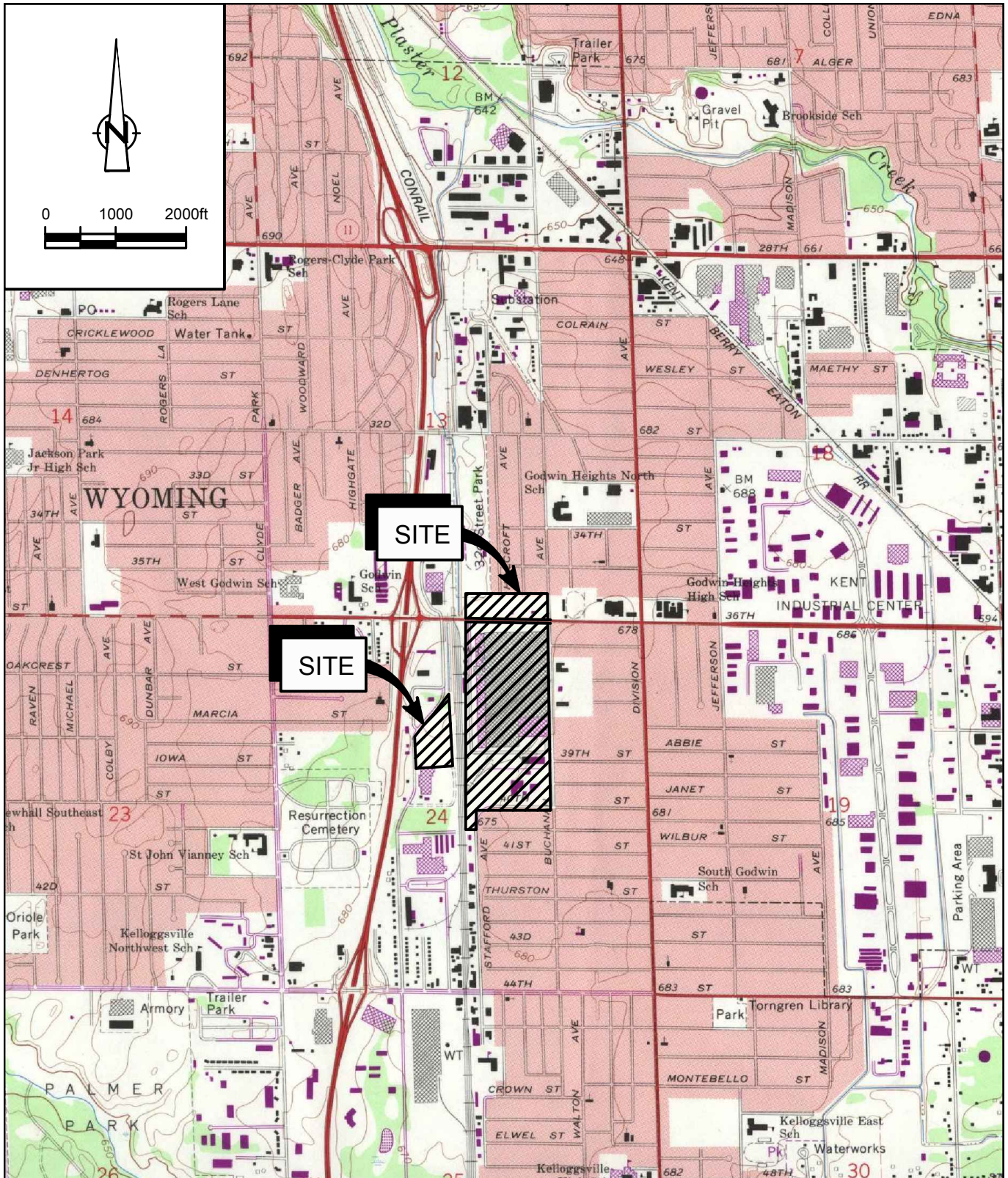
1155 28th Street SW, Wyoming, MI 49509
Address of Property Owner

Jennifer Quigley FOR DAVE FAVERO
Cleanup Party's Representative Signature

6/1/12
Date

David Favero, Deputy Cleanup Manager
Cleanup Party's Representative Printed Name

2930 Ecorse Road, Ypsilanti, MI 48198
Address of Cleanup Party



SOURCE: USGS QUADRANGLE MAP;
 GRAND RAPIDS WEST, MICHIGAN

figure 1.1



SITE LOCATION
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan

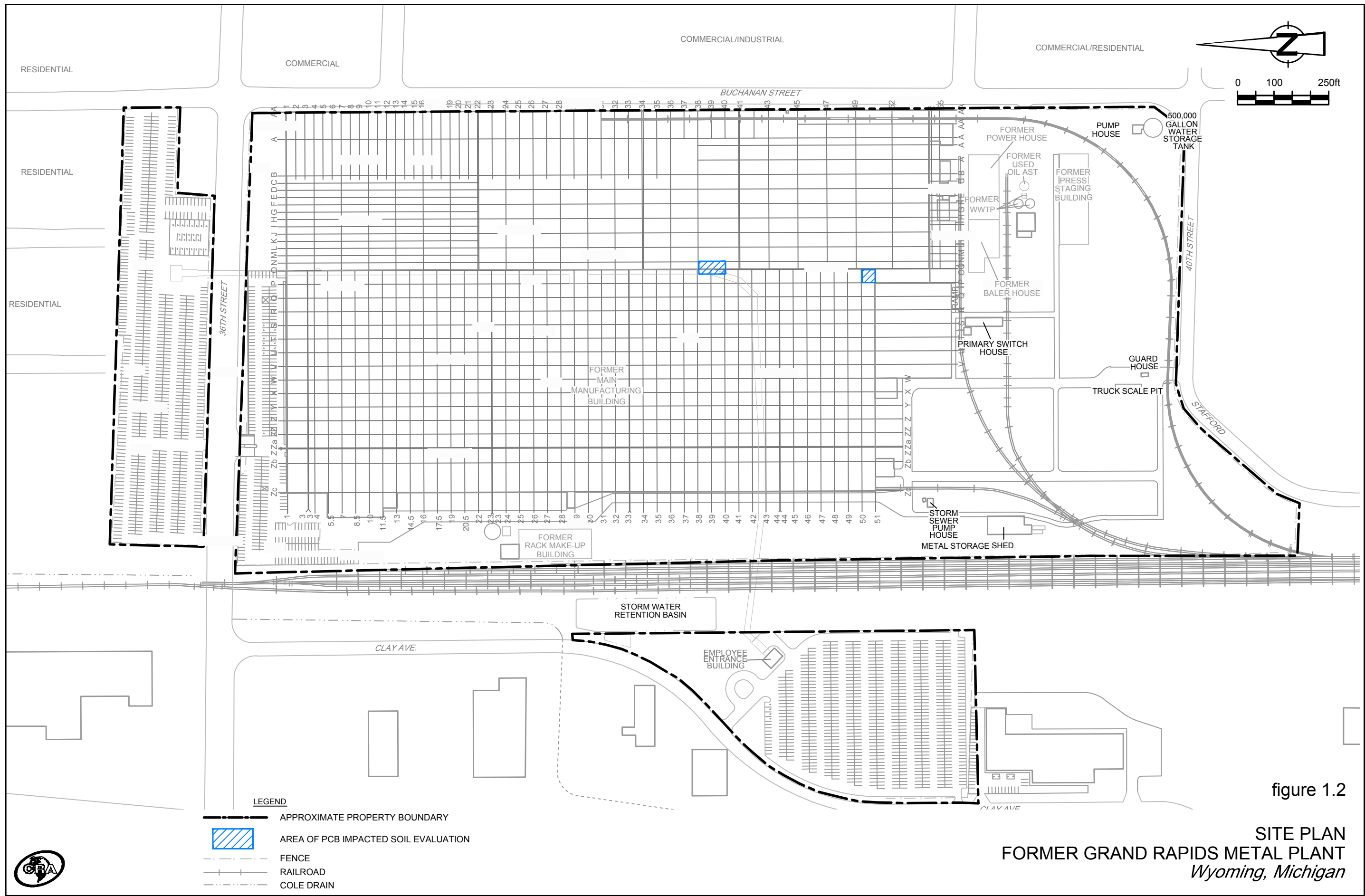
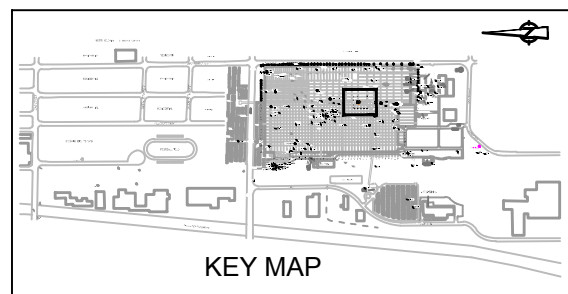
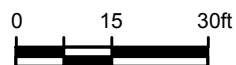


figure 1.2

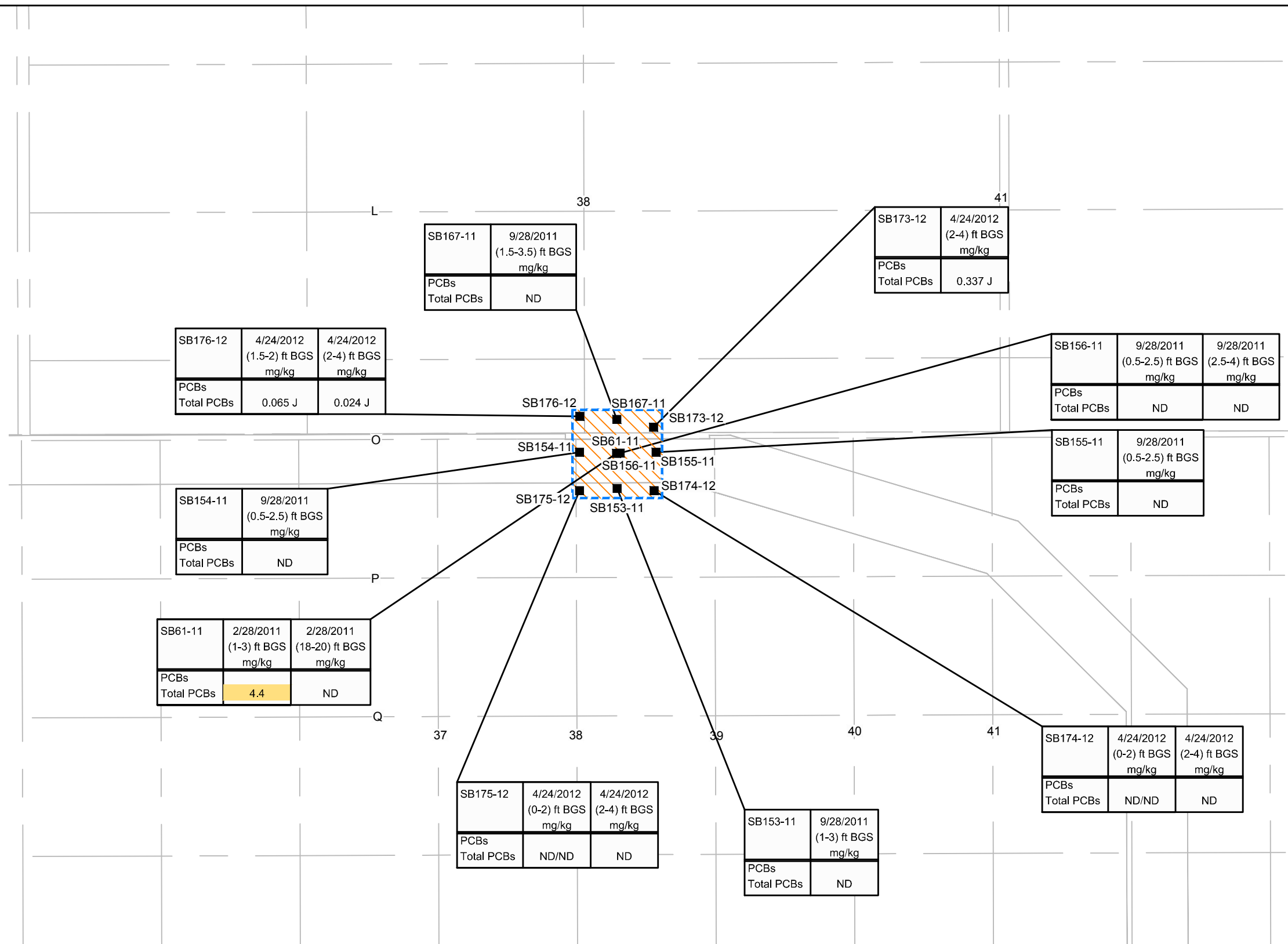
SITE PLAN
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan





LEGEND

- SB156-11 SOIL BORING LOCATION
- EXCEEDS CLEANUP LEVEL OF 1ppm
- ND PCBs NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
- ▭ PCB MATERIALS TO BE EXCAVATED AND DISPOSED OFF-SITE
- ▭ AREA DELINEATED BY 3-METER GRID

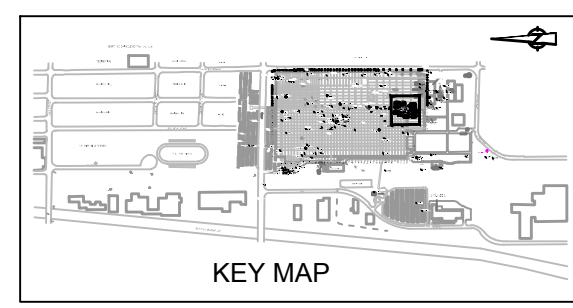
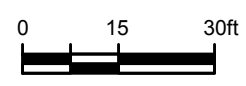
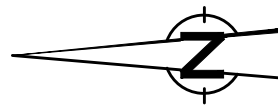


DRAFT

figure 3.1

PCB AREA NO. 1 - DELINEATION SAMPLE LOCATIONS
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan





LEGEND

- SB156-11 SOIL BORING LOCATION
- EXCEEDS CLEANUP LEVEL OF 1ppm
- ND PCBs NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
- ▭ PCB MATERIALS TO BE EXCAVATED AND DISPOSED OFF-SITE
- ▨ AREA DELINEATED BY 3-METER GRID
- ▨ AREA OF PARTIAL SOIL COLLAPSE BENEATH SLAB DUE TO ADJACENT SLAB REMOVAL/ EXCAVATION

DRAFT

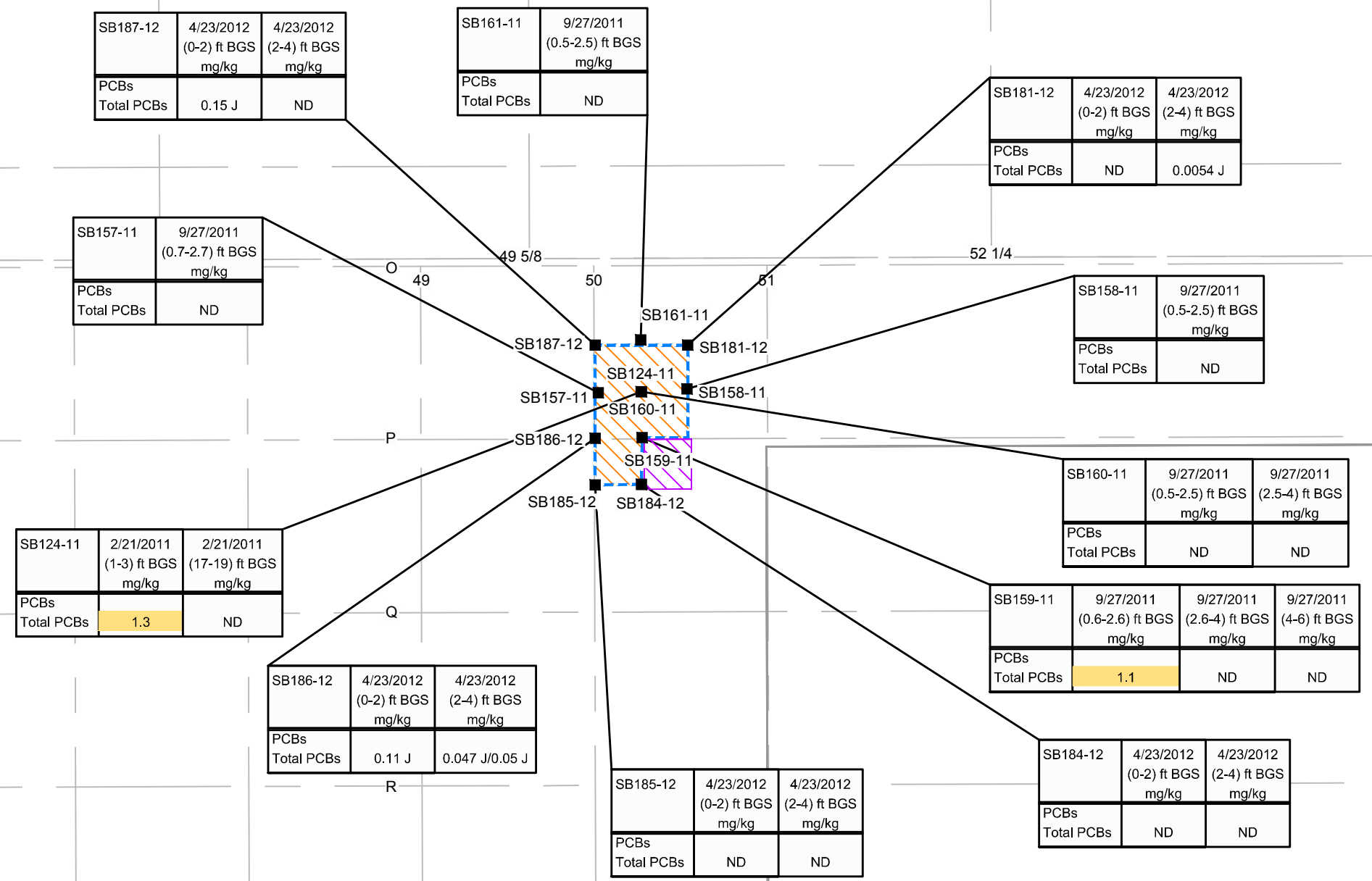


figure 3.2

PCB AREA NO. 2 - DELINEATION SAMPLE LOCATIONS
FORMER GRAND RAPIDS METAL PLANT
Wyoming, Michigan



SAMPLE SUMMARY
SELF IMPLEMENTING PLAN
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

<i>Sample Date</i>	<i>Sample Identification</i>	<i>Sample Location</i>	<i>Matrix</i>	<i>Sample Depth (ft bgs)</i>	<i>QC Sample</i>	<i>Analysis</i>
2/21/2011	SO-17360-022111-DR-105	SB124-11	Soil	1 to 3		PCBs
2/21/2011	SO-17360-022111-DR-106	SB124-11	Soil	17 to 19		PCBs
2/28/2011	SO-17360-022811-DR-134	SB61-11	Soil	1 to 3		PCBs
2/28/2011	SO-17360-022811-DR-135	SB61-11	Soil	18 to 20		PCBs
9/27/2011	S-17360-092711-EM-009	SB159-11	Soil	0.6 to 2.6		PCBs
9/27/2011	S-17360-092711-EM-010	SB159-11	Soil	2.6 to 4		PCBs
9/27/2011	S-17360-092711-EM-011	SB159-11	Soil	4 to 6		PCBs
9/27/2011	SO-17360-092711-EM-012	SB159-11	Soil	6 to 8		PCBs ¹
9/27/2011	SO-17360-092711-EM-013	SB159-11	Soil	8 to 10		PCBs ¹
9/27/2011	S-17360-092711-EM-014	SB158-11	Soil	0.5 to 2.5		PCBs
9/27/2011	SO-17360-092711-EM-015	SB158-11	Soil	2.5 to 4		PCBs ¹
9/27/2011	SO-17360-092711-EM-016	SB158-11	Soil	4 to 6		PCBs ¹
9/27/2011	SO-17360-092711-EM-017	SB158-11	Soil	6 to 8		PCBs ¹
9/27/2011	SO-17360-092711-EM-018	SB158-11	Soil	8 to 10		PCBs ¹
9/27/2011	S-17360-092711-EM-019	SB161-11	Soil	0.5 to 2.5		PCBs
9/27/2011	SO-17360-092711-EM-020	SB161-11	Soil	2.5 to 4		PCBs ¹
9/27/2011	SO-17360-092711-EM-021	SB161-11	Soil	4 to 6		PCBs ¹
9/27/2011	SO-17360-092711-EM-022	SB161-11	Soil	6 to 8		PCBs ¹
9/27/2011	SO-17360-092711-EM-023	SB161-11	Soil	8 to 10		PCBs ¹
9/27/2011	S-17360-092711-EM-024	SB160-11	Soil	0.5 to 2.5		PCBs
9/27/2011	S-17360-092711-EM-025	SB160-11	Soil	2.5 to 4		PCBs
9/27/2011	SO-17360-092711-EM-026	SB160-11	Soil	4 to 6		PCBs ¹
9/27/2011	SO-17360-092711-EM-027	SB160-11	Soil	6 to 8		PCBs ¹
9/27/2011	SO-17360-092711-EM-028	SB160-11	Soil	8 to 10		PCBs ¹
9/27/2011	S-17360-092711-EM-029	SB157-11	Soil	0.7 to 2.7		PCBs
9/27/2011	SO-17360-092711-EM-030	SB157-11	Soil	2.7 to 5		PCBs ¹
9/27/2011	SO-17360-092711-EM-031	SB157-11	Soil	5 to 7		PCBs ¹
9/28/2011	S-17360-092811-EM-038	SB154-11	Soil	0.5 to 2.5		PCBs
9/28/2011	SO-17360-092811-EM-039	SB154-11	Soil	2.5 to 4		PCBs ¹
9/28/2011	SO-17360-092811-EM-040	SB154-11	Soil	4 to 6		PCBs ¹
9/28/2011	SO-17360-092811-EM-041	SB154-11	Soil	6 to 8		PCBs ¹
9/28/2011	SO-17360-092811-EM-042	SB154-11	Soil	8 to 10		PCBs ¹
9/28/2011	S-17360-092811-EM-043	SB156-11	Soil	0.5 to 2.5		PCBs
9/28/2011	S-17360-092811-EM-044	SB156-11	Soil	2.5 to 4		PCBs
9/28/2011	SO-17360-092811-EM-045	SB156-11	Soil	4 to 6		PCBs ¹
9/28/2011	SO-17360-092811-EM-046	SB156-11	Soil	6 to 8		PCBs ¹
9/28/2011	SO-17360-092811-EM-047	SB156-11	Soil	8 to 10		PCBs ¹
9/28/2011	S-17360-092811-EM-048	SB155-11	Soil	0.5 to 2.5		PCBs
9/28/2011	SO-17360-092811-EM-049	SB155-11	Soil	2.5 to 4		PCBs ¹
9/28/2011	SO-17360-092811-EM-050	SB155-11	Soil	4 to 6		PCBs ¹
9/28/2011	SO-17360-092811-EM-051	SB155-11	Soil	6 to 8		PCBs ¹
9/28/2011	SO-17360-092811-EM-052	SB155-11	Soil	8 to 10		PCBs ¹
9/28/2011	S-17360-092811-EM-053	SB153-11	Soil	1 to 3		PCBs
9/28/2011	SO-17360-092811-EM-054	SB153-11	Soil	3 to 5		PCBs ¹
9/28/2011	SO-17360-092811-EM-055	SB153-11	Soil	5 to 7		PCBs ¹
9/28/2011	SO-17360-092811-EM-056	SB153-11	Soil	7 to 9		PCBs ¹
9/28/2011	SO-17360-092811-EM-057	SB153-11	Soil	9 to 10		PCBs ¹
9/28/2011	S-17360-092811-EM-058	SB167-11	Soil	1.5 to 3.5		PCBs
9/28/2011	SO-17360-092811-EM-059	SB167-11	Soil	3.5 to 5.5		PCBs ¹
9/28/2011	SO-17360-092811-EM-060	SB167-11	Soil	5.5 to 7.5		PCBs ¹
9/28/2011	SO-17360-092811-EM-061	SB167-11	Soil	7.5 to 9.5		PCBs ¹
4/23/2012	SO-17360-042312-EB-001	SB186-12	Soil	0 to 2		PCBs
4/23/2012	SO-17360-042312-EB-002	SB186-12	Soil	2 to 4		PCBs
4/23/2012	SO-17360-042312-EB-003	SB186-12	Soil	2 to 4	Duplicate (-002)	PCBs
4/23/2012	SO-17360-042312-EB-004	SB186-12	Soil	4 to 6		PCBs ¹
4/23/2012	SO-17360-042312-EB-005	SB186-12	Soil	4 to 6	Duplicate (-004)	PCBs ¹
4/23/2012	SO-17360-042312-EB-006	SB186-12	Soil	6 to 8	MS/MSD	PCBs ¹
4/23/2012	SO-17360-042312-EB-007	SB186-12	Soil	8 to 10		PCBs ¹
4/23/2012	SO-17360-042312-EB-008	SB185-12	Soil	0 to 2		PCBs
4/23/2012	SO-17360-042312-EB-009	SB185-12	Soil	2 to 4		PCBs
4/23/2012	SO-17360-042312-EB-010	SB185-12	Soil	4 to 6		PCBs ¹

SAMPLE SUMMARY
SELF IMPLEMENTING PLAN
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

<i>Sample Date</i>	<i>Sample Identification</i>	<i>Sample Location</i>	<i>Matrix</i>	<i>Sample Depth (ft bgs)</i>	<i>QC Sample</i>	<i>Analysis</i>
4/23/2012	SO-17360-042312-EB-011	SB185-12	Soil	6 to 8		PCBs ¹
4/23/2012	SO-17360-042312-EB-012	SB185-12	Soil	8 to 10		PCBs ¹
4/23/2012	SO-17360-042312-EB-013	SB184-12	Soil	0 to 2		PCBs ¹
4/23/2012	SO-17360-042312-EB-014	SB184-12	Soil	2 to 4		PCBs ¹
4/23/2012	SO-17360-042312-EB-015	SB184-12	Soil	4 to 6		PCBs ¹
4/23/2012	SO-17360-042312-EB-016	SB184-12	Soil	6 to 8		PCBs ¹
4/23/2012	SO-17360-042312-EB-017	SB184-12	Soil	6 to 8	Duplicate (-016)	PCBs ¹
4/23/2012	SO-17360-042312-EB-018	SB184-12	Soil	8 to 10		PCBs ¹
4/23/2012	SO-17360-042312-EB-019	SB187-12	Soil	0 to 2		PCBs ¹
4/23/2012	SO-17360-042312-EB-020	SB187-12	Soil	2 to 4		PCBs ¹
4/23/2012	SO-17360-042312-EB-021	SB187-12	Soil	4 to 6		PCBs ¹
4/23/2012	SO-17360-042312-EB-022	SB187-12	Soil	6 to 8		PCBs ¹
4/23/2012	SO-17360-042312-EB-023	SB187-12	Soil	8 to 10		PCBs ¹
4/23/2012	SO-17360-042312-EB-024	SB181-12	Soil	0 to 2	MS/MSD	PCBs ¹
4/23/2012	SO-17360-042312-EB-025	SB181-12	Soil	2 to 4		PCBs ¹
4/23/2012	SO-17360-042312-EB-026	SB181-12	Soil	4 to 6		PCBs ¹
4/23/2012	SO-17360-042312-EB-027	SB181-12	Soil	6 to 8		PCBs ¹
4/23/2012	SO-17360-042312-EB-028	SB181-12	Soil	8 to 10		PCBs ¹
4/24/2012	S-17360-042412-EM-052	SB176-12	Soil	1.5 to 2	MS/MSD	PCBs ¹
4/24/2012	S-17360-042412-EM-053	SB176-12	Soil	2 to 4		PCBs ¹
4/24/2012	S-17360-042412-EM-054	SB176-12	Soil	4 to 6		PCBs ¹
4/24/2012	S-17360-042412-EM-055	SB176-12	Soil	6 to 8		PCBs ¹
4/24/2012	S-17360-042412-EM-056	SB176-12	Soil	8 to 10	MS/MSD	PCBs ¹
4/24/2012	S-17360-042412-EM-057	SB175-12	Soil	0 to 2		PCBs ¹
4/24/2012	S-17360-042412-EM-058	SB175-12	Soil	0 to 2	Duplicate (-057)	PCBs ¹
4/24/2012	S-17360-042412-EM-059	SB175-12	Soil	2 to 4		PCBs ¹
4/24/2012	S-17360-042412-EM-060	SB175-12	Soil	4 to 6		PCBs ¹
4/24/2012	S-17360-042412-EM-061	SB175-12	Soil	6 to 8		PCBs ¹
4/24/2012	S-17360-042412-EM-062	SB175-12	Soil	8 to 10	Duplicate (-062)	PCBs ¹
4/24/2012	S-17360-042412-EM-063	SB175-12	Soil	8 to 10		PCBs ¹
4/24/2012	S-17360-042412-EM-064	SB174-12	Soil	0 to 2		PCBs ¹
4/24/2012	S-17360-042412-EM-065	SB174-12	Soil	0 to 2		PCBs ¹
4/24/2012	S-17360-042412-EM-066	SB174-12	Soil	2 to 4		PCBs ¹
4/24/2012	S-17360-042412-EM-067	SB174-12	Soil	4 to 6		PCBs ¹
4/24/2012	S-17360-042412-EM-068	SB174-12	Soil	4 to 6	Duplicate (-067)	PCBs ¹
4/24/2012	S-17360-042412-EM-069	SB174-12	Soil	6 to 8		PCBs ¹
4/24/2012	S-17360-042412-EM-070	SB174-12	Soil	8 to 10		PCBs ¹
4/24/2012	S-17360-042412-EM-071	SB173-12	Soil	2 to 4		PCBs ¹

Notes:

PCBs - Polychlorinated Biphenyls

QC - Quality Control

MS/MSD - Matrix Spike / Matrix Spike Duplicate

¹ - The sample was submitted to the analytical laboratory on hold, but not analyzed.

TABLE 3.2

**SUMMARY OF ANALYTICAL RESULTS FOR PCB AREA NO. 1
SELF IMPLEMENTING PLAN
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN**

Sample Location			<i>SB61-11</i>	<i>SB61-11</i>	<i>SB153-11</i>	<i>SB154-11</i>	<i>SB155-11</i>	<i>SB156-11</i>	<i>SB156-11</i>
Sample Identification	Toxic		<i>SO-17360-022811-DR-134</i>	<i>SO-17360-022811-DR-135</i>	<i>S-17360-092811-EM-053</i>	<i>S-17360-092811-EM-038</i>	<i>S-17360-092811-EM-048</i>	<i>S-17360-092811-EM-043</i>	<i>S-17360-092811-EM-044</i>
Sample Date	Substances		<i>2/28/2011</i>	<i>2/28/2011</i>	<i>9/28/2011</i>	<i>9/28/2011</i>	<i>9/28/2011</i>	<i>9/28/2011</i>	<i>9/28/2011</i>
Sample Depth	Control		<i>(1-3) ft BGS</i>	<i>(18-20) ft BGS</i>	<i>(1-3) ft BGS</i>	<i>(0.5-2.5) ft BGS</i>	<i>(0.5-2.5) ft BGS</i>	<i>(0.5-2.5) ft BGS</i>	<i>(2.5-4) ft BGS</i>
Sample Type	Act ⁽¹⁾								
<i>Units</i>									
<i>PCBs</i>									
Aroclor-1016 (PCB-1016)	ug/kg	--	2900 U	270 U	34 U	35 U	34 U	35 U	35 UJ
Aroclor-1221 (PCB-1221)	ug/kg	--	2900 U	270 U	34 U	35 U	34 U	35 U	35 UJ
Aroclor-1232 (PCB-1232)	ug/kg	--	2900 U	270 U	34 U	35 U	34 U	35 U	35 UJ
Aroclor-1242 (PCB-1242)	ug/kg	--	2900 U	270 U	34 U	35 U	34 U	35 U	35 UJ
Aroclor-1248 (PCB-1248)	ug/kg	--	2900 U	270 U	34 U	35 U	34 U	35 U	35 UJ
Aroclor-1254 (PCB-1254)	ug/kg	--	4400	270 U	34 U	35 U	34 U	35 U	35 UJ
Aroclor-1260 (PCB-1260)	ug/kg	--	2900 U	270 U	34 U	35 U	34 U	35 U	35 UJ
Total PCBs	ug/kg	1000	4400	ND	ND	ND	ND	ND	ND

Notes:

⁽¹⁾ Cleanup Level of 1 ppm for Bulk PCB Remediation Waste
for High Occupancy Areas without further conditions per
40 CFR 761.61(a)(4)(i)(A)

4400 Exceeds 1 ppm Cleanup Level

U - Not present at or above the associated value.

J - Estimated concentration.

-- Criteria not available

TABLE 3.2

**SUMMARY OF ANALYTICAL RESULTS FOR PCB AREA NO. 1
SELF IMPLEMENTING PLAN
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN**

Sample Location		<i>SB167-11</i>	<i>SB173-12</i>	<i>SB174-12</i>	<i>SB174-12</i>	<i>SB174-12</i>	<i>SB174-12</i>	<i>SB175-12</i>	<i>SB175-12</i>
Sample Identification	Toxic	<i>S-17360-092811-EM-058</i>	<i>S-17360-042412-EM-071</i>	<i>S-17360-042412-EM-064</i>	<i>S-17360-042412-EM-065</i>	<i>S-17360-042412-EM-066</i>	<i>S-17360-042412-EM-066</i>	<i>S-17360-042412-EM-057</i>	<i>S-17360-042412-EM-058</i>
Sample Date	Substances	<i>9/28/2011</i>	<i>4/24/2012</i>	<i>4/24/2012</i>	<i>4/24/2012</i>	<i>4/24/2012</i>	<i>4/24/2012</i>	<i>4/24/2012</i>	<i>4/24/2012</i>
Sample Depth	Control	<i>(1.5-3.5) ft BGS</i>	<i>(2-4) ft BGS</i>	<i>(0-2) ft BGS</i>	<i>(0-2) ft BGS</i>	<i>(2-4) ft BGS</i>	<i>(2-4) ft BGS</i>	<i>(0-2) ft BGS</i>	<i>(0-2) ft BGS</i>
Sample Type	Act ⁽¹⁾				<i>Duplicate</i>				<i>Duplicate</i>
<i>Units</i>									
<i>PCBs</i>									
Aroclor-1016 (PCB-1016)	ug/kg	--	35 U	360 U	350 U	350 U	350 U	350 U	350 U
Aroclor-1221 (PCB-1221)	ug/kg	--	35 U	360 U	350 U	350 U	350 U	350 U	350 U
Aroclor-1232 (PCB-1232)	ug/kg	--	35 U	360 U	350 U	350 U	350 U	350 U	350 U
Aroclor-1242 (PCB-1242)	ug/kg	--	35 U	27 J	350 U	350 U	350 U	350 U	350 U
Aroclor-1248 (PCB-1248)	ug/kg	--	35 U	360 U	350 U	350 U	350 U	350 U	350 U
Aroclor-1254 (PCB-1254)	ug/kg	--	35 U	180 J	350 U	350 U	350 U	350 U	350 U
Aroclor-1260 (PCB-1260)	ug/kg	--	35 U	130 J	350 U	350 U	350 U	350 U	350 U
Total PCBs	ug/kg	1000	ND	337 J	ND	ND	ND	ND	ND

Notes:

⁽¹⁾ Cleanup Level of 1 ppm for Bulk PCB Remediation Waste
for High Occupancy Areas without further conditions per
40 CFR 761.61(a)(4)(i)(A)

Exceeds 1 ppm Cleanup Level

U - Not present at or above the associated value.

J - Estimated concentration.

-- Criteria not available

TABLE 3.2

SUMMARY OF ANALYTICAL RESULTS FOR PCB AREA NO. 1
SELF IMPLEMENTING PLAN
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location			SBI175-12	SBI176-12	SBI176-12
Sample Identification	Toxic		S-17360-042412-EM-059	S-17360-042412-EM-052	S-17360-042412-EM-053
Sample Date	Substances		4/24/2012	4/24/2012	4/24/2012
Sample Depth	Control		(2-4) ft BGS	(1.5-2) ft BGS	(2-4) ft BGS
Sample Type	Act ⁽¹⁾				
<i>Units</i>					
PCBs					
Aroclor-1016 (PCB-1016)	ug/kg	--	340 U	350 U	350 U
Aroclor-1221 (PCB-1221)	ug/kg	--	340 U	350 U	350 U
Aroclor-1232 (PCB-1232)	ug/kg	--	340 U	350 U	350 U
Aroclor-1242 (PCB-1242)	ug/kg	--	340 U	14 J	350 U
Aroclor-1248 (PCB-1248)	ug/kg	--	340 U	350 U	350 U
Aroclor-1254 (PCB-1254)	ug/kg	--	340 U	350 U	350 U
Aroclor-1260 (PCB-1260)	ug/kg	--	340 U	51 J	24 J
Total PCBs	ug/kg	1000	ND	65 J	24 J

Notes:

⁽¹⁾ Cleanup Level of 1 ppm for Bulk PCB Remediation Waste for High Occupancy Areas without further conditions per 40 CFR 761.61(a)(4)(i)(A)

Exceeds 1 ppm Cleanup Level

U - Not present at or above the associated value.

J - Estimated concentration.

-- Criteria not available

TABLE 3.3

**SUMMARY OF ANALYTICAL RESULTS FOR PCB AREA NO. 2
SELF IMPLEMENTING PLAN
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN**

Sample Location			<i>SB124-11</i>	<i>SB124-11</i>	<i>SB157-11</i>	<i>SB158-11</i>	<i>SB159-11</i>	<i>SB159-11</i>	<i>SB159-11</i>
Sample Identification	Toxic	<i>SO-17360-022111-DR-105</i>	<i>SO-17360-022111-DR-106</i>	<i>S-17360-092711-EM-029</i>	<i>S-17360-092711-EM-014</i>	<i>S-17360-092711-EM-009</i>	<i>S-17360-092711-EM-010</i>	<i>S-17360-092711-EM-011</i>	
Sample Date	Substances	<i>2/21/2011</i>	<i>2/21/2011</i>	<i>9/27/2011</i>	<i>9/27/2011</i>	<i>9/27/2011</i>	<i>9/27/2011</i>	<i>9/27/2011</i>	<i>9/27/2011</i>
Sample Depth	Control	<i>(1-3) ft BGS</i>	<i>(17-19) ft BGS</i>	<i>(0.7-2.7) ft BGS</i>	<i>(0.5-2.5) ft BGS</i>	<i>(0.6-2.6) ft BGS</i>	<i>(2.6-4) ft BGS</i>	<i>(4-6) ft BGS</i>	
Sample Type	Act ⁽¹⁾								
<i>Units</i>									
<i>PCBs</i>									
Aroclor-1016 (PCB-1016)	ug/kg	--	340 U	270 U	34 U	33 U	170 U	34 U	34 U
Aroclor-1221 (PCB-1221)	ug/kg	--	340 U	270 U	34 U	33 U	170 U	34 U	34 U
Aroclor-1232 (PCB-1232)	ug/kg	--	340 U	270 U	34 U	33 U	170 U	34 U	34 U
Aroclor-1242 (PCB-1242)	ug/kg	--	340 U	270 U	34 U	33 U	170 U	34 U	34 U
Aroclor-1248 (PCB-1248)	ug/kg	--	340 U	270 U	34 U	33 U	170 U	34 U	34 U
Aroclor-1254 (PCB-1254)	ug/kg	--	1300	270 U	34 U	33 U	1100	34 U	34 U
Aroclor-1260 (PCB-1260)	ug/kg	--	340 U	270 U	34 U	33 U	170 U	34 U	34 U
Total PCBs	ug/kg	1000	1300	ND	ND	ND	1100	ND	ND

Notes:

Notes:

⁽¹⁾ Cleanup Level of 1 ppm for Bulk PCB Remediation Waste
for High Occupancy Areas without further conditions per
40 CFR 761.61(a)(4)(i)(A)

Exceeds 1 ppm Cleanup Level

U - Not present at or above the associated value.

J - Estimated concentration.

-- Criteria not available

TABLE 3.3

**SUMMARY OF ANALYTICAL RESULTS FOR PCB AREA NO. 2
SELF IMPLEMENTING PLAN
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN**

Sample Location			<i>SB160-11</i>	<i>SB160-11</i>	<i>SB161-11</i>	<i>SB181-12</i>	<i>SB181-12</i>	<i>SB184-12</i>	<i>SB184-12</i>
Sample Identification	Toxic	<i>S-17360-092711-EM-024</i>	<i>S-17360-092711-EM-025</i>	<i>S-17360-092711-EM-019</i>	<i>SO-17360-042312-EB-024</i>	<i>SO-17360-042312-EB-025</i>	<i>SO-17360-042312-EB-013</i>	<i>SO-17360-042312-EB-014</i>	
Sample Date	Substances	9/27/2011	9/27/2011	9/27/2011	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
Sample Depth	Control	(0.5-2.5) ft BGS	(2.5-4) ft BGS	(0.5-2.5) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	
Sample Type	Act ⁽¹⁾								
		<i>Units</i>							
<i>PCBs</i>									
Aroclor-1016 (PCB-1016)	ug/kg	--	34 U	34 U	34 U	350 U	340 U	350 U	340 U
Aroclor-1221 (PCB-1221)	ug/kg	--	34 U	34 U	34 U	350 U	340 U	350 U	340 U
Aroclor-1232 (PCB-1232)	ug/kg	--	34 U	34 U	34 U	350 U	340 U	350 U	340 U
Aroclor-1242 (PCB-1242)	ug/kg	--	34 U	34 U	34 U	350 U	340 U	350 U	340 U
Aroclor-1248 (PCB-1248)	ug/kg	--	34 U	34 U	34 U	350 U	340 U	350 U	340 U
Aroclor-1254 (PCB-1254)	ug/kg	--	34 U	34 U	34 U	350 U	340 U	350 U	340 U
Aroclor-1260 (PCB-1260)	ug/kg	--	34 U	34 U	34 U	350 U	5.4 J	350 U	340 U
Total PCBs	ug/kg	1000	ND	ND	ND	ND	5.4 J	ND	ND

Notes:

Notes:

⁽¹⁾ Cleanup Level of 1 ppm for Bulk PCB Remediation Wa
for High Occupancy Areas without further conditions pe
40 CFR 761.61(a)(4)(i)(A)

Exceeds 1 ppm Cleanup Level

U - Not present at or above the associated value.

J - Estimated concentration.

-- Criteria not available

TABLE 3.3

SUMMARY OF ANALYTICAL RESULTS FOR PCB AREA NO. 2
SELF IMPLEMENTING PLAN
FORMER GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location			SB185-12	SB185-12	SB186-12	SB186-12	SB186-12	SB187-12	SB187-12
Sample Identification	Toxic	SO-17360-042312-EB-008	SO-17360-042312-EB-009	SO-17360-042312-EB-001	SO-17360-042312-EB-002	SO-17360-042312-EB-003	SO-17360-042312-EB-019	SO-17360-042312-EB-020	
Sample Date	Substances	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
Sample Depth	Control	(0-2) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS	
Sample Type	Act ⁽¹⁾					Duplicate			
<i>Units</i>									
<i>PCBs</i>									
Aroclor-1016 (PCB-1016)	ug/kg	--	350 U	350 U	1800 U	360 U	360 U	350 U	340 U
Aroclor-1221 (PCB-1221)	ug/kg	--	350 U	350 U	1800 U	360 U	360 U	350 U	340 U
Aroclor-1232 (PCB-1232)	ug/kg	--	350 U	350 U	1800 U	360 U	360 U	350 U	340 U
Aroclor-1242 (PCB-1242)	ug/kg	--	350 U	350 U	1800 U	360 U	360 U	350 U	340 U
Aroclor-1248 (PCB-1248)	ug/kg	--	350 U	350 U	1800 U	360 U	360 U	350 U	340 U
Aroclor-1254 (PCB-1254)	ug/kg	--	350 U	350 U	110 J	50 J	47 J	150 J	340 U
Aroclor-1260 (PCB-1260)	ug/kg	--	350 U	350 U	1800 U	360 U	360 U	350 U	340 U
Total PCBs	ug/kg	1000	ND	ND	110 J	50 J	47 J	150 J	ND

Notes:

Notes:

⁽¹⁾ Cleanup Level of 1 ppm for Bulk PCB Remediation Wa
for High Occupancy Areas without further conditions pe
40 CFR 761.61(a)(4)(i)(A)

Exceeds 1 ppm Cleanup Level

U - Not present at or above the associated value.

J - Estimated concentration.

-- Criteria not available

APPENDIX A

STRATIGRAPHIC SOIL BORING LOGS



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

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 510664.87 EASTING: 12773559.48	681.07							
	CONCRETE								
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	680.27		1-3' -105 1MC		80		0.1	
4								0.2	
6					2MC		85		0.2
8		672.07						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 - with fine to coarse gravel at 10.0ft BGS	669.07		3MC		70		0.3	
12	SP/GP-SAND AND GRAVEL, compact, fine to coarse sand, fine gravel, poorly graded, medium brown, moist	666.07						0.2	
14	SP-SAND, with fine to coarse gravel, compact, fine to coarse grained, poorly graded, light brown, moist - trace fine gravel at 16.0ft BGS							0.2	
16				4MC 17-19' -106		70		0.2	
18								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 - trace fine gravel, fine to medium grained, trace coarse grained at 21.0ft BGS								
22									
24									
26	END OF BOREHOLE @ 25.0ft BGS	656.07							

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

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

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	TEMP MONITORING WELL	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 511113.56 EASTING: 12773581.31	GROUND SURFACE 681.06							
	WOOD BLOCK FLOOR	680.86							
	CONCRETE	680.36							
2	SP-SAND (FILL), trace silt, compact, fine grained, poorly graded, brown, moist - trace fine gravel, dark brown at 1.9ft BGS - orange brown at 3.0ft BGS			(1-3' -134 1MC)		85			0.2
4	- light brown at 6.0ft BGS								0.2
6	- fine to medium grained, trace coarse grained, brown at 8.1ft BGS			2MC		75			0.2
8									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 - with fine gravel at 13.5ft BGS	669.56		3MC		70			0.3
14									0.5
16	- fine grained, trace medium to coarse grained at 16.1ft BGS - fine to medium grained, trace coarse grained, trace fine to coarse gravel at 17.3ft BGS - with fine gravel, fine to coarse grained at 18.4ft BGS - trace fine gravel at 18.9ft BGS - wet at 20.0ft BGS			4MC		90			0.5
18									0.4
20				(18-20' -135)					0.5
22									0.4
24	SM-SAND, some silt, compact, fine grained, poorly graded, brown, wet	658.76		5MC		80			0.5
26	SP-SAND, trace silt, with fine gravel, compact, fine to coarse grained, poorly graded, brown, wet	657.16							0.5
28	END OF BOREHOLE @ 25.0ft BGS	656.06							
30	NOTE: ABANDONED FOLLOWING SAMPLE COLLECTION AND BACKFILLED WITH BENTONITE CHIPS								
32									
34									

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

OVERBURDEN LOG: 017360-T05WIN.GPJ, CRA, CORP.GDT, 6/2/11

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

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

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 511113.46 EASTING: 12773571.84	GROUND SURFACE 681.08						
2	CONCRETE	680.28	<p>BACKFILLED WITH BENTONITE CHIPS</p>	1-3' -053 1GP		60		0.1
4	SP-SAND, trace silt, compact, fine grained, poorly graded, brown, moist			3-5' -054				2.0
6	- light tan at 2.9ft BGS			5-7' -055				0.0
8	- dark brown at 3.5ft BGS			2GP 7-9' -056		65		0.0
10	- orange brown at 4.4ft BGS			9-10' -057				
10	END OF BOREHOLE @ 10.0ft BGS	671.08						

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

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

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

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 511123.58 EASTING: 12773581.62	GROUND SURFACE 681.06						
2	CONCRETE	680.56	<p>BACKFILLED WITH BENTONITE CHIPS</p>	0.5-2.5' -038				0.0
4	SP-SAND, trace silt and fine gravel, compact, fine grained, poorly graded, orange brown, moist - brown from 3.5 to 3.9ft BGS			1GP 2.5-4' -039	50			0.0
6				4-6' -040				0.0
8				6-8' -041 2GP	60			0.0
10	- with medium gravel at 9.1ft BGS			8-10' -042				0.0
10	END OF BOREHOLE @ 10.0ft BGS	671.06						
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

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

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

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

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 511102.95 EASTING: 12773581.65	GROUND SURFACE 681.03							
2	CONCRETE	680.53	<p style="text-align: center;">← BACKFILLED WITH BENTONITE CHIPS</p>	0.5-2.5' -048				0.0	
4	SP-SAND, trace silt, compact, fine grained, poorly graded, light brown, moist			1GP 2.5-4' -049	50			0.1	
6	- orange brown from 3.9 to 4.0ft BGS - orange brown at 4.1ft BGS			4-6' -050				0.0	
8				6-8' -051 2GP	70			0.0	
10		671.03		8-10' -052				0.0	
10	END OF BOREHOLE @ 10.0ft BGS								

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

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

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

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE						
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)		
	NORTHING: 511112.63 EASTING: 12773581.4	681.04								
	CONCRETE	680.54	<p>BACKFILLED WITH BENTONITE CHIPS</p>	0.5-2.5' -043	50	50			1.2	
2	SP-SAND, trace silt, compact, fine grained, poorly graded, brown, moist			1GP						
4	- orange brown at 3.8ft BGS			2.5-4' -044						0.0
6				4-6' -045						0.0
8				6-8' -046 2GP		70				0.0
10	END OF BOREHOLE @ 10.0ft BGS	671.04		8-10' -047					0.0	

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

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

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

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 510674.12 EASTING: 12773559.28	GROUND SURFACE 681.07							
	CONCRETE	680.37	<p style="text-align: center;">← BACKFILLED WITH BENTONITE CHIPS</p>	0.7-2.7' -029				0.0	
2	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist			1GP		50			
4	- few medium gravel from 4.0 to 4.5ft BGS			2.7-5' -030				0.0	
6	- REFUSAL at 7.0ft BGS	674.07	2GP 5-7' -031		60			0.0	
8	END OF BOREHOLE @ 7.0ft BGS								
10									
12									
14									
16									
18									
20									
22									
24									
26									
28									
30									
32									
34									

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

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

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

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 510654.99 EASTING: 12773560.11	GROUND SURFACE 681.04							
2	CONCRETE	680.54		0.5-2.5' -014	60			0.0	
4	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist - black, potential fly-ash, lightweight from 3.5 to 3.7ft BGS			1GP 2.5-4' -015			0.0		
6				4-6' -016	70		0.0		
8				6-8' -017 2GP			0.0		
10	END OF BOREHOLE @ 10.0ft BGS	671.04		8-10' -018			0.0		

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

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

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

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 510664.63 EASTING: 12773549.59	GROUND SURFACE 681.05						
2	CONCRETE	680.45	<p>BACKFILLED WITH BENTONITE CHIPS</p>	0.6-2.6 -009	70			0.0
4	SP-SAND, trace silt, compact, fine grained, poorly graded, light brown, moist - rock debris from 2.1 to 2.3ft BGS			1GP 2.6-4' -010				
6	- trace fine gravel from 4.1 to 4.4ft BGS			4-6' -011	60			0.0
8				6-8' -012 2GP				
10	END OF BOREHOLE @ 10.0ft BGS	671.05		8-10' -013				

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

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


CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

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

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 510664.8 EASTING: 12773559.48 GROUND SURFACE	681.04							
2	CONCRETE	680.54	 <p>BACKFILLED WITH BENTONITE CHIPS</p>	0.5-2.5' -024	70				0.0
4	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist - black, potential fly-ash, lightweight from 3.5 to 3.6ft BGS			1GP 2.5-4' -025					0.0
6				4-6' -026	65	0.0			
8				6-8' -027 2GP		0.0			
10	END OF BOREHOLE @ 10.0ft BGS	671.04		8-10' -028		0.0			

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

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

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

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 510664.98 EASTING: 12773570.64	681.09							
	GROUND SURFACE								
	CONCRETE	680.59							
2	SP-SAND, trace silt, compact, fine grained, poorly graded, orange brown, moist			0.5-2.5' -019					0.0
4	- black, potential fly-ash, lightweight from 3.5 to 3.7ft BGS			1GP 2.5-4' -020	75				0.0
6				4-6' -021					0.0
8				6-8' -022 2GP	80				0.0
10	END OF BOREHOLE @ 10.0ft BGS	671.09		8-10' -023				0.0	
12									
14									
16									
18									
20									
22									
24									
26									
28									
30									
32									
34									

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

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

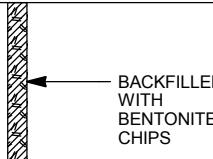
CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB173-12
 DATE COMPLETED: April 24, 2012
 DRILLING METHOD: ROTOSONIC
 FIELD PERSONNEL: E. MICKELSON

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 511103.6 EASTING: 12773588.4	GROUND SURFACE 681.10							
2	CONCRETE	679.60		1RS	2'-4" -071				0.0
4	SP-SAND, trace fine gravel and silt, compact fine grained, poorly graded, dark brown, moist	677.10							0.0
4	- REFUSAL at 4.0ft BGS END OF BOREHOLE @ 4.0ft BGS								
6									
8									
10									
12									
14									
16									
18									
20									
22									
24									
26									
28									
30									
32									
34									

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/1/12

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB174-12
 DATE COMPLETED: April 24, 2012
 DRILLING METHOD: ROTOSONIC
 FIELD PERSONNEL: E. MICKELSON

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 511103.5 EASTING: 12773571.3	GROUND SURFACE 680.80							
2	CONCRETE SP-SAND, trace fine gravel and silt, compact, fine grained, poorly graded, brown, moist - 1" thick piece of slag at 1.8ft BGS	680.30	<p style="text-align: center;">BACKFILLED WITH BENTONITE CHIPS</p>	0-2' -064/065				0.0	
4	- no gravel, light brown at 4.7ft BGS			1RS 2-4' -066				0.0	
6				4-6' -067/068				0.0	
8				6-8' -069 2RS				0.0	
10	- with fine gravel at 9.3ft BGS			8-10' -070				0.0	
10	END OF BOREHOLE @ 10.0ft BGS	670.80							
12									
14									
16									
18									
20									
22									
24									
26									
28									
30									
32									
34									

OVERBURDEN LOG: 017360-T05WIN.GPJ CRA_CORP.GDT 6/1/12

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB175-12
 DATE COMPLETED: April 24, 2012
 DRILLING METHOD: ROTOSONIC
 FIELD PERSONNEL: E. MICKELSON

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 511123.6 EASTING: 12773571.3	GROUND SURFACE 681.00						
2	CONCRETE	680.50	<p style="text-align: center;">BACKFILLED WITH BENTONITE CHIPS</p>	0-2' -057/058				0.0
4	SP-SAND, trace fine gravel and silt, compact, fine grained, poorly graded, brown, moist			1RS 2-4' -059				0.0
6	- no gravel, light brown at 4.0ft BGS			4-6' -060				0.0
8				6-8' -061 2RS				0.0
10	- trace gravel, brown at 9.8ft BGS	671.00		8-10' -062/063				0.0
	END OF BOREHOLE @ 10.0ft BGS							

OVERBURDEN LOG 017360-T05WIN.GPJ CRA_CORP.GDT 6/1/12

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

CHEMICAL ANALYSIS





STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB176-12
 DATE COMPLETED: April 24, 2012
 DRILLING METHOD: ROTOSONIC
 FIELD PERSONNEL: E. MICKELSON

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 511123.5 EASTING: 12773591.3	GROUND SURFACE 681.40						
2	CONCRETE	679.90	<p style="text-align: center;">← BACKFILLED WITH BENTONITE CHIPS</p>	1.5'-2' -052				0.0
4	SP-SAND, with fine gravel, trace silt, compact, fine grained, poorly graded, brown, moist - shards of glass at 2.8ft BGS			1RS 2-4' -053				0.0
6				4-6' -054				0.0
8	- 0.03" small black slag seam at 7.2ft BGS			6-8' -055 2RS				0.0
10	END OF BOREHOLE @ 10.0ft BGS	671.40		8-10' -056				0.0
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

OVERBURDEN LOG: 017360-T05WIN.GPJ CRA_CORP.GDT 6/1/12

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB181-12
 DATE COMPLETED: April 23, 2012
 DRILLING METHOD: ROTOSONIC
 FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 510654.8 EASTING: 12773569.5	GROUND SURFACE 681.00							
2	CONCRETE	680.50		0-2' -024		75			0.1
4	SP-SAND, trace fine gravel, compact, fine grained, poorly graded, dark brown, moist - trace cinders and coarse gravel at 2.0ft BGS - 6" layer of slag, cinders, coal fragments, black at 3.6ft BGS - light brown at 4.0ft BGS			1DP 2-4' -025					0.2
6				4-6' -026	0.3				
8				6-8' -027 2DP	60	0.1			
10	- trace silt at 9.5ft BGS	671.00		8-10' -028	0.2				
	END OF BOREHOLE @ 10.0ft BGS								

OVERBURDEN LOG: 017360-T05WIN.GPJ CRA_CORP.GDT 6/1/12

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB184-12
 DATE COMPLETED: April 23, 2012
 DRILLING METHOD: ROTOSONIC
 FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 510664.8 EASTING: 12773539.5	681.00							
	GROUND SURFACE								
	CONCRETE	680.50	<p>BACKFILLED WITH BENTONITE CHIPS</p>	0-2' -013				0.1	
2	SP-SAND, trace fine gravel, compact, fine grained, poorly graded, brown, moist - dark brown at 2.5ft BGS			1DP 2-4' -014		60		0.1	
4	- trace coarse gravel, light brown at 3.5ft BGS - 2.5" seam of slag, cinders, coal fragments, black at 4.0ft BGS			4-6' -015				0.7	
6				6-8' -016/ 017 2DP		75		0.3	
8	- trace silt at 7.5ft BGS			8-10' -018				0.2	
10	END OF BOREHOLE @ 10.0ft BGS	671.00							
12									
14									
16									
18									
20									
22									
24									
26									
28									
30									
32									
34									

OVERBURDEN LOG: 017360-T05WIN.GPJ CRA_CORP.GDT 6/1/12

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

CHEMICAL ANALYSIS





STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB185-12
 DATE COMPLETED: April 23, 2012
 DRILLING METHOD: ROTOSONIC
 FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 510674.8 EASTING: 12773539.4	GROUND SURFACE 681.10						
2	CONCRETE	680.60		0-2' -008				0.2
4	SP-SAND, trace fine and coarse gravel, compact, fine grained, poorly graded, brown, moist - trace coal fragments at 3.0ft BGS			1DP 2-4' -009	60			0.2
6	- light brown at 4.0ft BGS			4-6' -010				0.1
8	- brown at 5.0ft BGS			6-8' -011 2DP	75			0.8
10	- trace cinders, slag, coal fragments at 6.0ft BGS			8-10' -012				0.3
10	- trace silt, light brown at 6.5ft BGS							
10	END OF BOREHOLE @ 10.0ft BGS	671.10						

OVERBURDEN LOG: 017360-T05WIN.GPJ CRA_CORP.GDT 6/1/12

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB186-12
 DATE COMPLETED: April 23, 2012
 DRILLING METHOD: ROTOSONIC
 FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 510674.8 EASTING: 12773549.4	GROUND SURFACE 681.00						
2	CONCRETE	680.50		0-2' -001				0.2
4	SP-SAND, fine and coarse gravel, compact, poorly graded, brown, moist			1DP 2-4' -002/ 003	25			0.3
6	- dark brown from 4.5 to 5.0ft BGS			4-6' -004/ 005				0.7
8	- trace coal fragments, dark brown and black coal smears, possible fly ash at 7.5ft BGS			6-8' -006 2DP	25			0.4
10	- light brown at 8.0ft BGS			8-10' -007				0.1
10	END OF BOREHOLE @ 10.0ft BGS	671.00						
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

OVERBURDEN LOG: 017360-T05WIN.GPJ CRA_CORP.GDT 6/1/12

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

CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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

HOLE DESIGNATION: SB187-12
 DATE COMPLETED: April 23, 2012
 DRILLING METHOD: ROTOSONIC
 FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	BOREHOLE	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
	NORTHING: 510674.8 EASTING: 12773569.5	GROUND SURFACE 681.00							
2	CONCRETE SP-SAND, trace fine gravel, compact, fine grained, poorly graded, brown, moist - trace cinders and slag at 2.5ft BGS - 1" seam of black slag, coal fragments and cinders at 3.0ft BGS - 3" seam of black slag, coal fragments and cinders at 3.5ft BGS - light brown at 3.7ft BGS - brown at 5.0ft BGS	680.50	<p style="text-align: center;">BACKFILLED WITH BENTONITE CHIPS</p>	0-2' -019				0.2	
4				1DP 2-4' -020	85		0.5		
6				4-6' -021			0.3		
8				6-8' -022 ZDP	50		0.0		
10		671.00		8-10' -023			0.1		
	END OF BOREHOLE @ 10.0ft BGS								

OVERBURDEN LOG: 017360-T05WIN.GPJ CRA_CORP.GDT 6/1/12

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

CHEMICAL ANALYSIS

APPENDIX B

WASTE DISPOSAL DOCUMENTATION



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No.	Manifest Doc No.	2. Page 1 of 1			
3. Generator's Mailing Address: RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548		Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY		A. Manifest Number WMNA T 69636			
4. Generator's Phone 217-741-6235		B. State Generator's ID					
5. Transporter 1 Company Name <i>Cardey #293</i>		6. US EPA ID Number		C. State Transporter's ID			
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone			
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464		10. US EPA ID Number		E. State Transporter's ID			
				F. Transporter's Phone			
				G. State Facility ID			
				H. State Facility Phone 616-688-5777			
GENERATOR	11. Description of Waste Materials		12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
	a. PCB Impacted Soils		No.	Type			
	WM Profile # 110321MI		1	Truck	45649	Kg	
	b.						
	WM Profile #						
	c.						
WM Profile #							
d.							
WM Profile #							
J. Additional Descriptions for Materials Listed Above Color: Brown to grey, No Odor, Solid OSD 8/22/12 Load 001			K. Disposal Location				
			Cell		Level		
			Grid				
15. Special Handling Instructions and Additional Information							
Purchase Order # 40-4048767		EMERGENCY CONTACT / PHONE NO.:			James VanAssche/ 734-453-5123		
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.							
Printed Name Earl Batenburg		Signature "On behalf of" RACER TRUST			Month 8	Day 22	Year 12
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed Name Rick Simons			Signature Rub S		
					Month 8	Day 22	Year 12
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed Name			Signature		
					Month	Day	Year
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.							
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.							
Printed Name Barb Vandam		Signature B Vandam			Month 8	Day 22	Year 12

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY

Blue- GENERATOR #2 COPY

Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY

Gold- TRANSPORTER #1 COPY



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No.		Manifest Doc No.		2. Page 1 of 1																												
3. Generator's Mailing Address: RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548			Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY			A. Manifest Number WMNA T 69615																												
4. Generator's Phone 217-741-6235			5. Transporter 1 Company Name <i>Cordes #293</i>			B. State Generator's ID																												
6. US EPA ID Number			7. Transporter 2 Company Name			C. State Transporter's ID																												
8. US EPA ID Number			9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464			D. Transporter's Phone																												
10. US EPA ID Number			11. Description of Waste Materials			E. State Transporter's ID																												
			<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">12. Containers</th> <th rowspan="2">13. Total Quantity</th> <th rowspan="2">14. Unit Wt./Vol.</th> <th rowspan="2">15. Misc. Comments</th> </tr> <tr> <th>No.</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Truck</td> <td style="text-align: center;">40633</td> <td style="text-align: center;">Kg</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			12. Containers		13. Total Quantity	14. Unit Wt./Vol.	15. Misc. Comments	No.	Type	1	Truck	40633	Kg																	F. Transporter's Phone	
12. Containers		13. Total Quantity				14. Unit Wt./Vol.	15. Misc. Comments																											
No.	Type																																	
1	Truck	40633				Kg																												
11. Description of Waste Materials			12. Containers			G. State Facility ID																												
a. PCB Impacted Soils						H. State Facility Phone 616-688-5777																												
WM Profile # 110321MI																																		
b.																																		
WM Profile #																																		
c.																																		
WM Profile #																																		
d.																																		
WM Profile #																																		
J. Additional Descriptions for Materials Listed Above			K. Disposal Location																															
Color: Brown to grey, No Odor, Solid																																		
OSD 8/22/12 Load 003																																		
15. Special Handling Instructions and Additional Information			Cell																															
			Grid																															
Purchase Order # 40-4048767			EMERGENCY CONTACT / PHONE NO.:			James VanAssche / 734-453-5123																												
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.																																		
Printed Name <i>Earl Batenburg</i>			Signature "On behalf of" <i>[Signature]</i> RACER TRUST			Month Day Year 8 22 12																												
17. Transporter 1 Acknowledgement of Receipt of Materials			Printed Name <i>Rick Simons</i>			Signature <i>[Signature]</i>																												
						Month Day Year 8 22 12																												
18. Transporter 2 Acknowledgement of Receipt of Materials			Printed Name			Signature																												
						Month Day Year																												
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.																																		
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.																																		
Printed Name <i>Barb Vandam</i>			Signature <i>[Signature]</i>			Month Day Year 8 22 12																												

GENERATOR

TRANSPORTER

HACER

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NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No.	Manifest Doc No.	2. Page 1 of 1			
3. Generator's Mailing Address: RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548		Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY		A. Manifest Number WMNA	T 69635		
4. Generator's Phone 217-741-6235				B. State Generator's ID			
5. Transporter 1 Company Name <i>Cordes</i>		6. US EPA ID Number		C. State Transporter's ID			
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone			
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464		10. US EPA ID Number		E. State Transporter's ID			
				F. Transporter's Phone			
				G. State Facility ID			
				H. State Facility Phone 616-688-5777			
GENERATOR	11. Description of Waste Materials		12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
	a. PCB Impacted Soils		No.	Type			
	WM Profile # 110321MI		1	Truck	49124	Kg	
	b.						
	WM Profile #						
	c.						
WM Profile #							
d.							
WM Profile #							
J. Additional Descriptions for Materials Listed Above			K. Disposal Location				
Color: Brown to grey, No Odor, Solid OSD 8/22/12 LOAD 002							
15. Special Handling Instructions and Additional Information			Cell		Level		
			Grid				
Purchase Order # 40-4048757		EMERGENCY CONTACT / PHONE NO.:			James VanAssche / 734-453-5123		
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.							
Printed Name Earl Batenburg		Signature "On behalf of" RACER TRUST			Month 8	Day 22	Year 12
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed Name PAI Kooiker			Signature <i>[Signature]</i>		
					Month 8	Day 22	Year 12
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed Name			Signature		
					Month	Day	Year
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.							
20. Facility Owner or Operator. Certification of receipt of non-hazardous materials covered by this manifest							
Printed Name Bans Vandam		Signature <i>[Signature]</i>			Month 8	Day 22	Year 12

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Customer Summary Report

Criteria: 08/08/2012 12:00 AM to 09/05/2012 11:59 PM

Business Unit Name: Autumn Hills Landfill - S03730 (USA)

Date: Sep 05 2012, 1:42:30 PM - Central Standard Time

Profile: 110321MI

Ticket Date	Ticket ID	Customer	Generator	Manifest	Truck	Material
8/22/2012	360567	CRA	129-RACERTRUST300	T69636	CON293-15	Cont Soil Sp. W.-Tons
8/22/2012	360582	CRA	129-RACERTRUST300	t69635	CON101-53	Cont Soil Sp. W.-Tons
8/22/2012	360603	CRA	129-RACERTRUST300	T69615	CON293-15	Cont Soil Sp. W.-Tons
Material Total	3					

Origin	Rate	Rate Unit	Rate Qty	Yards	Tons	Material Revenue	Tax Revenue	Surcharge Revenue	Total
MI-KENT	\$13.00	TON	56.19	40	56.19	\$730.47	\$0.00	\$386.96	\$1,117.43
MI-KENT	\$13.00	TON	60.98	40	60.98	\$792.74	\$0.00	\$418.66	\$1,211.40
MI-KENT	\$13.00	TON	50.01	40	50.01	\$650.13	\$0.00	\$346.07	\$996.20
			167.18	120	167.18	\$2,173.34	\$0.00	\$1,151.69	\$3,325.03



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No.		Manifest Doc No.		2. Page 1 of 1									
3. Generator's Mailing Address: RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 4. Generator's Phone: 217-741-6235			Generator's Site Address (if different than mailing): RACER TRUST 300 36TH STREET SW GRAND RAPIDS, MI 49548 KENT COUNTY			A. Manifest Number WMNA T 69617									
5. Transporter 1 Company Name K+D Industrial Services			6. US EPA ID Number MI0072790710			C. State Transporter's ID MI-275									
7. Transporter 2 Company Name			8. US EPA ID Number			D. Transporter's Phone 616-784-8900									
9. Designated Facility Name and Site Address Autumn Hills Landfill 700 56th Ave Zeeland, MI 49464			10. US EPA ID Number			E. State Transporter's ID									
						F. Transporter's Phone									
						G. State Facility ID									
						H. State Facility Phone 616-688-5777									
GENERATOR	11. Description of Waste Materials				12. Containers		13. Total Quantity		14. Unit Wt./Vol.		15. Misc. Comments				
	a. PCE Impacted Soils				1. DM		363		Kg		(55 gal)				
	WM Profile # 110321MI														
	b.														
	WM Profile #														
	c.														
WM Profile #															
d.															
WM Profile #															
J. Additional Descriptions for Materials Listed Above				K. Disposal Location											
Color: Brown to grey, No Odor, Solid															
O.S.D. 4/12/13															
Load 001				Cell				Level							
Grid															
15. Special Handling Instructions and Additional Information															
Purchase Order # 40-4057407				EMERGENCY CONTACT / PHONE NO.:				James VanAssche / 734-453-5123							
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.															
Printed Name: Earl Batendug				Signature "On behalf of": RACER TRUST				Month: 4		Day: 12		Year: 13			
17. Transporter 1 Acknowledgement of Receipt of Materials				Printed Name: Kenneth Simpson				Signature: <i>[Signature]</i>		Month: 4		Day: 12		Year: 13	
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed Name:				Signature:		Month:		Day:		Year:	
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.															
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Printed Name: Barb Vandam				Signature: <i>[Signature]</i>				Month: 4		Day: 12		Year: 13			

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