



**QUARTERLY TECHNICAL PROGRESS REPORT
JANUARY 2012 - MARCH 2012
RCRA CORRECTIVE ACTION
IND 980 700 801**

**2915 DR. MARTIN LUTHER KING JR. BOULEVARD, ANDERSON, IN
REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL
RESPONSE TRUST**

**Prepared For:
Indiana Department of Environmental Management**

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1.0 INTRODUCTION

Conestoga-Rovers and Associates (CRA), on behalf of the Revitalizing Auto Communities Environmental Response (RACER) Trust, has prepared this Quarterly Technical Progress Report for the RACER Trust facility located at 2915 Dr. Martin Luther King Junior Boulevard in Anderson, Indiana (Facility or Site).

This Quarterly Technical Progress Report has been prepared to summarize activities related to the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI), Interim Measures (IM) activities, and Corrective Measures (CM) at the Facility for the period of January through March 2012.

2.0 SUMMARY OF RFI, INTERIM MEASURES, AND CORRECTIVE MEASURES ACTIVITIES

2.1 RCRA FACILITY INVESTIGATION/ENVIRONMENTAL INDICATORS DETERMINATION

RFI activities conducted during this reporting period included the preparation and submittal of the Residential Vapour Intrusion Assessment Technical Memorandum (CRA, March 7, 2012) and the preparation and submittal of the Supplemental RFI Results Technical Memorandum (CRA, March 7, 2012). Details of the activities are provided in the following paragraphs.

The RFI activities are considered 95-percent completed.

2.1.1 RESIDENTIAL VAPOUR INTRUSION ASSESSMENT

On March 7, 2012, on behalf of RACER Trust, CRA submitted a Residential Vapour Intrusion Technical Memorandum to summarize the soil and groundwater investigations at a residential property located downgradient of the Site. The purpose of the investigation was to assess the potential for vapor intrusion risks due to chlorinated volatile organic compound (VOC) impacts in nearby groundwater. The field activities were completed between November 16 and December 8, 2011. A summary of the findings from this investigation is provided in Section 3.0.

2.1.2 SUPPLEMENTAL RFI ACTIVITIES

On March 7, 2012, on behalf of RACER Trust, CRA submitted a Supplemental RFI Results Technical Memorandum to IDEM to summarize recent soil and groundwater investigations conducted at the Site to assess new Areas of Interest (AOIs) identified since completion of the Final RFI Report. The investigations included the former Bay M26/M27 area, the 310 Plater Pit area, delineation of the horizontal and vertical extent of ten areas of stained soil identified beneath the former concrete floor slab, and general surface soil screening in the northern portion of the former manufacturing building. The field activities were completed between November 16 and 29, 2011. A summary of the findings from these investigations is provided in Section 3.0.

2.2 INTERIM MEASURES

On January 31, 2012, on behalf of RACER Trust, AECOM submitted the 2011 Annual Groundwater Monitoring Report to IDEM summarizing the groundwater and surface water sampling activities performed in 2011.

On March 7, 2012, RACER Trust received IDEM's comments on the 2011 Annual Groundwater Monitoring Report. IDEM requested that RACER Trust submit the recommendations to revise the routine monitoring program, as presented in the 2011 Annual Groundwater Monitoring Report, under separate cover as modifications to the Site-Wide Groundwater Monitoring Plan.

Interim measures consist of routine groundwater and surface water monitoring and annual reporting. These activities are ongoing.

2.3 CORRECTIVE MEASURES

No corrective measures activities were conducted during this reporting period.

With the exception of submittal of the draft Corrective Measures Proposal (CRA, March 2008), the corrective measures activities have not commenced and are considered 0-percent complete.

3.0 SUMMARY OF FINDINGS

3.1 RCRA FACILITY INVESTIGATION/ENVIRONMENTAL INDICATORS DETERMINATION

A summary of the results from the Residential Vapour Intrusion Assessment Technical Memorandum and the Supplemental RFI Results Technical Memorandum are provided in the following paragraphs.

3.1.1 RESIDENTIAL VAPOUR INTRUSION ASSESSMENT

The purpose of the vapour intrusion assessment was to determine if there was a potentially unacceptable risk due to impacted groundwater volatilizing to indoor air at residential dwellings downgradient of the South Court Area. The results of the investigation indicate that there is no current risk due to vapor intrusion at the nearest downgradient residential property to the South Court Area. Pending IDEM approval, the results of this assessment will be verified through future groundwater sampling activities and reported in future annual groundwater monitoring reports.

3.1.2 SUPPLEMENTAL RFI ACTIVITIES

The investigations for the Supplemental RFI activities included delineation of chromium impacted soil and perched groundwater at the former Bay M26/M27 area, investigation of the 310 Plater Pit area, delineation of the horizontal and vertical extent of ten areas of stained soil identified beneath the former concrete floor slab, and general surface soil screening in the northern portion of the former manufacturing building. The Supplemental RFI investigation areas are presented on Figure 1. The result of each scope of work is summarized below.

3.1.2.1 FORMER BAY M26/M27 INVESTIGATION

The purpose of this investigation was to delineate the extent of chromium-impacted soil and perched groundwater within hydrogeologic Unit 1 (fill) in the vicinity of the chromium impacted water release during demolition activities. The results of the investigation indicate, with the exception of arsenic, the soil quality meets IDEM's Industrial Default Closure Limits (IDCLs). Arsenic is consistently detected in soil at concentrations above IDEM's IDCL, primarily since background arsenic concentrations

exceed the IDCL. Perched groundwater exhibits concentrations of arsenic, hexavalent chromium, copper, and cyanide above the IDCLs, the extent of which is not currently known.

3.1.2.2 310 PLATER PIT INVESTIGATION

The purpose of this investigation was to determine if the release of chromium impacted water during demolition activities resulted in impacts to nearby soil that may need to be remediated. The results of the investigation indicate that the chromium impacted water release did not result in impacts to soil above IDEM's IDCL for chromium. However, copper and lead concentrations north of the former pit and nickel concentrations south of the former pit were detected above IDEM's IDCLs and Site-specific background concentrations. The horizontal and vertical extent of these impacts is currently unknown.

3.1.2.3 SUB-SLAB CHROMIUM INVESTIGATION

The purpose of this investigation was to delineate the extent of chromium impacts to soil identified during demolition activities. The scope of work relied on the presence of visual impacts to soil. However, few sampled locations exhibited the yellow/green staining typical of chromium impacts. This may be due to the significant precipitation in the days leading up to and during the investigation as chromium staining is more prevalent when soil moisture content is low.

The results of the investigation indicate that, with the exception of arsenic, five of the ten targeted areas did not exhibit concentrations of metals above the IDCLs. However, it is noted that no surface/shallow soil samples (0 to 2 feet bgs) were collected at these areas. These areas are identified as Areas 5 through 9 on Figure 1. Area 5 is located in the center of the former manufacturing building in the vicinity of former 304 Plater (see Appendix A). Areas 6 through 9 are located along the western portion of the former main manufacturing building, west of the former plating operations.

Areas 1 through 3 border the former M26/M27 area and are in the vicinity of several former platers (see Appendix A). Cyanide was detected at Area 1 in one borehole above the IDCL, the eastern extent of which is not known. Hexavalent chromium was detected at Area 2 above the IDCL in one borehole but appears to be limited in extent. Copper was detected at Area 3 above the IDCL in one borehole, the western extent of which is

not known. It is noted that no surface/shallow soil samples (0 to 2 feet bgs) were collected at these areas.

Area 4 is located in the vicinity of SWMU 3 (309 Plating Area). Nickel was detected in one borehole above the IDCL but appears to be limited in extent. It is noted that noted that no surface/shallow soil samples (0 to 2 feet bgs) were collected at this area.

Area 10 is located south of the former plating operations, south of AOC 7 (400 Plater) and AOI 2 (Chromium Recovery Unit). Hexavalent chromium was detected in two boreholes above the IDCL, the western extent of which not known.

Based on 2010 groundwater sampling results, there is no evidence to suggest the presence of elevated metals in soil above IDCLs is significantly impacting groundwater quality in Unit 3 (sand).

3.1.2.4 SOIL GRID SAMPLING

Soil grid sampling was conducted, at IDEM's request, to investigate soil quality in the northern portion of the former manufacturing building. The results of the investigation indicate that, with the exception of arsenic detected consistently across the investigation area, only one grid sample exhibited concentrations of metals (cadmium and copper) above IDEM's IDCLs. VOCs, semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs), where detected, were detected at concentrations below IDEM's IDCLs. The location where cadmium and copper were detected above the IDCLs is in the general vicinity of a former sump that was identified when the plant was being remodeled to accommodate color plastic molding machines (AOI 3, Bay R4 Area). The vertical extent of the cadmium and copper impacts at this location are not currently known.

3.2 INTERIM MEASURES

Groundwater and surface water monitoring activities completed in 2011 were summarized in the 2011 Annual Groundwater Monitoring Report which was submitted to IDEM on January 31, 2012. A brief summary of conclusions from the 2011 Site-wide groundwater and surface water monitoring are provided below.

- Existing perimeter wells contained no VOC contaminants above associated laboratory reporting limits in 2011.

- There are significant long term decreasing VOC trends at several wells in and near the South Court source area.
- A decreasing trend for cis-1,2-dichloroethene is apparent near the source area of the former Wastewater Treatment Plant (WWTP) Area plume, however, there are increasing trends for cis-1,2-dichloroethene and vinyl chloride at several monitoring wells scattered throughout the central and southeastern part of the former WWTP Area plume. Increasing trends are particularly prevalent for vinyl chloride in downgradient areas of the plume.
- Three sampling events (April, July, and October) occurred at the surface monitoring points Pond Intake and Pond North at the Meadowbrook Golf Course central irrigation pond. Vinyl chloride exceeding drinking water screening criteria was reported at Pond North during each event and at Pond Intake in July and October.
- Based on the 2011 monitoring, the golf course irrigation pond appears to be within the former WWTP Area plume, and the plume is expanding in the direction of the pond.

3.3 CORRECTIVE MEASURES

No corrective measures activities were conducted during this reporting period.

**4.0 SUMMARY OF CHANGES TO RFI, INTERIM
AND/OR CORRECTIVE MEASURES**

There were no changes to RFI, Interim Measures, or Corrective Measures during the reporting period.

5.0 SUMMARY OF CONTACTS WITH REPRESENTATIVES OF LOCAL COMMUNITY, PUBLIC INTEREST GROUPS, OR STATE GOVERNMENT

On January 9, 2012, IDEM approved the 2012 Budget Authorization Request.

On January 31, 2012, AECOM, on behalf of RACER Trust, submitted the 2011 Annual Groundwater Monitoring Report to IDEM.

On January 31, 2012, CRA, on behalf of RACER Trust, submitted the Quarterly Technical Progress Report for October 2011 through December 2011 to IDEM.

On March 7, 2012, RACER Trust received comments from IDEM on the 2011 Annual Groundwater Monitoring Report.

On March 7, 2012, CRA, on behalf of RACER Trust, submitted the Residential Vapor Intrusion Assessment Technical Memorandum to IDEM.

On March 7, 2012, CRA, on behalf of RACER Trust, submitted the Supplemental RFI Results Technical Memorandum to IDEM.

6.0 SUMMARY OF PROBLEMS OR POTENTIAL PROBLEMS

There were no problems identified during the reporting period.

7.0 ACTIONS TAKEN TO RECTIFY PROBLEMS

There were no problems identified during the reporting period.

8.0 CHANGES IN PERSONNEL

There were no changes to personnel during the reporting period.

9.0 PROJECTED WORK FOR APRIL THROUGH JUNE 2012

Projected work for April through June 2012 includes the following:

- Semi-annual groundwater monitoring in accordance with the recommendations made in the GMP and 2011 Annual Groundwater Monitoring Program Report
- Response to IDEM's March 7, 2012 comments on the 2011 Annual Groundwater Monitoring Report
- Review of recent investigation results and proposed next steps with IDEM
- Disposal of investigation derived waste generated during the Annual Groundwater Monitoring Program and the additional investigations conducted at the Site
- Preparation and submittal of revisions to the Final RFI Report to address IDEM's September 14, 2011 comments

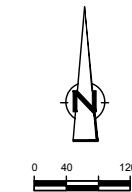
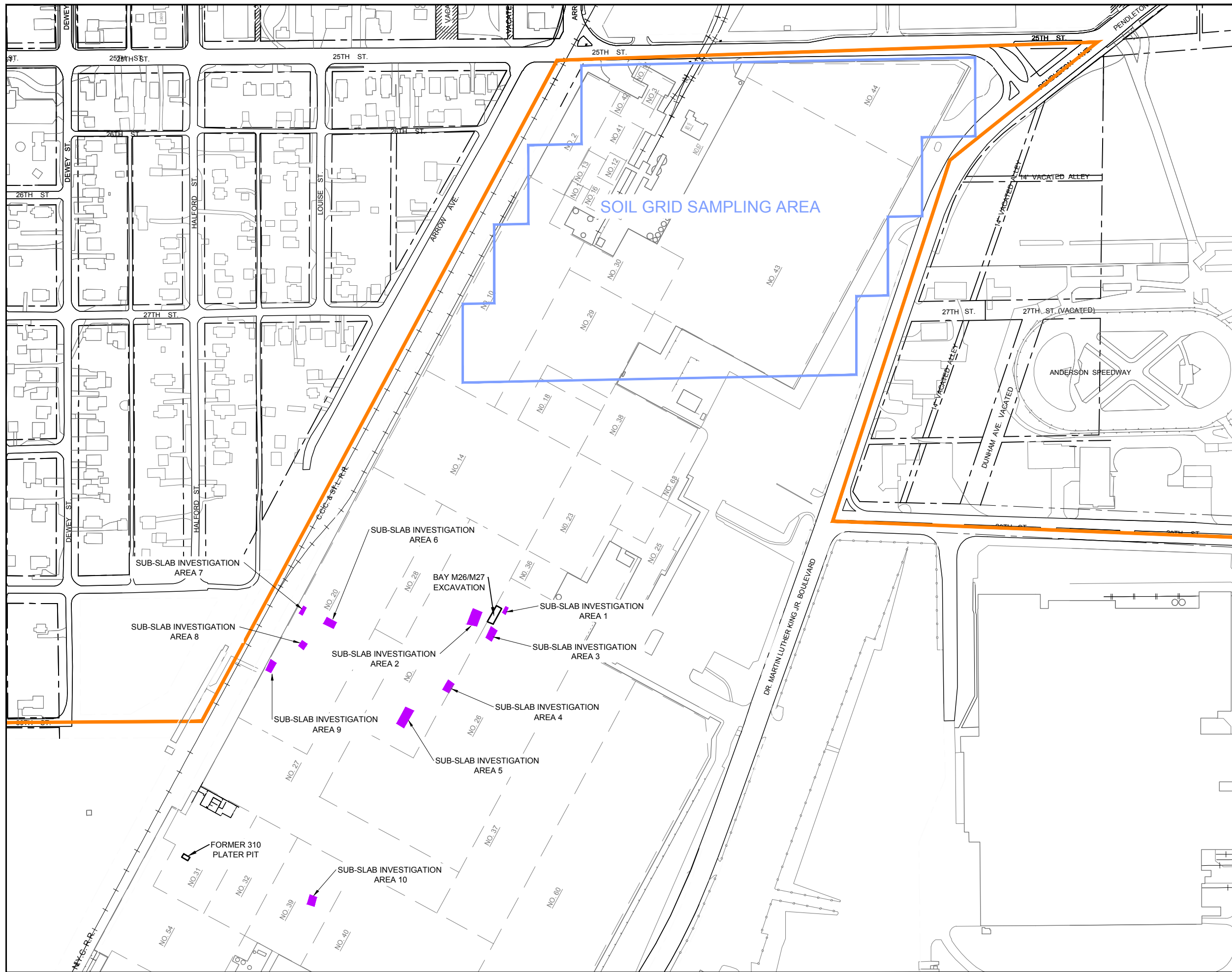
10.0 REPORTS AND DATA

The 2011 Annual Groundwater Monitoring Report was submitted to IDEM on January 31, 2012. IDEM comments on the Report were received on March 7, 2012 via electronic mail.

The Quarterly Technical Progress Report, October 2011 through December 2011, was submitted to IDEM on January 31, 2012.

The Residential Vapor Intrusion Assessment Technical Memorandum was submitted to IDEM on March 7, 2012.

The Supplemental RFI Results Technical Memorandum was submitted to IDEM on March 7, 2012.



- LEGEND**
- SITE BOUNDARY
 - PROPERTY BOUNDARY
 - RAILROAD
 - FENCE LINE
 - BUILDING
 - MANHOLE
 - CATCHBASIN

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

QUARTERLY TECHNICAL PROGRESS REPORT
JANUARY 2012-MARCH 2012

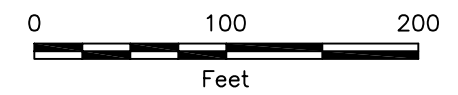
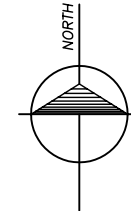
MLK BOULEVARD SITE

SUPPLEMENTAL RFI
INVESTIGATION AREAS



Source Reference: CITY OF ANDERSON, INDIANA NAD83 SPCS 1301 IN East zone in US survey Ft			
Project Manager: S. R.	Reviewed By: R.C.	Date: APRIL 2012	
Scale: 1" = 150'	Project N°: 017302-00	Report N°: 024	Drawing N°: figure 1

APPENDIX A
FORMER PLATING OPERATIONS



- Legend**
- NO. 37 Building Designation
 - Exterior Building Wall (Prior to Excavation)
 - x-x- Fence Line
 - + + + Railroad
 - - - Property Boundary
 - Recent Plater Removed by GM
 - Other Former Plater Location
 - Underground
 - Area of Stained Soil Beneath Concrete
 - Existing Monitoring Well
 - Previous Soil Boring

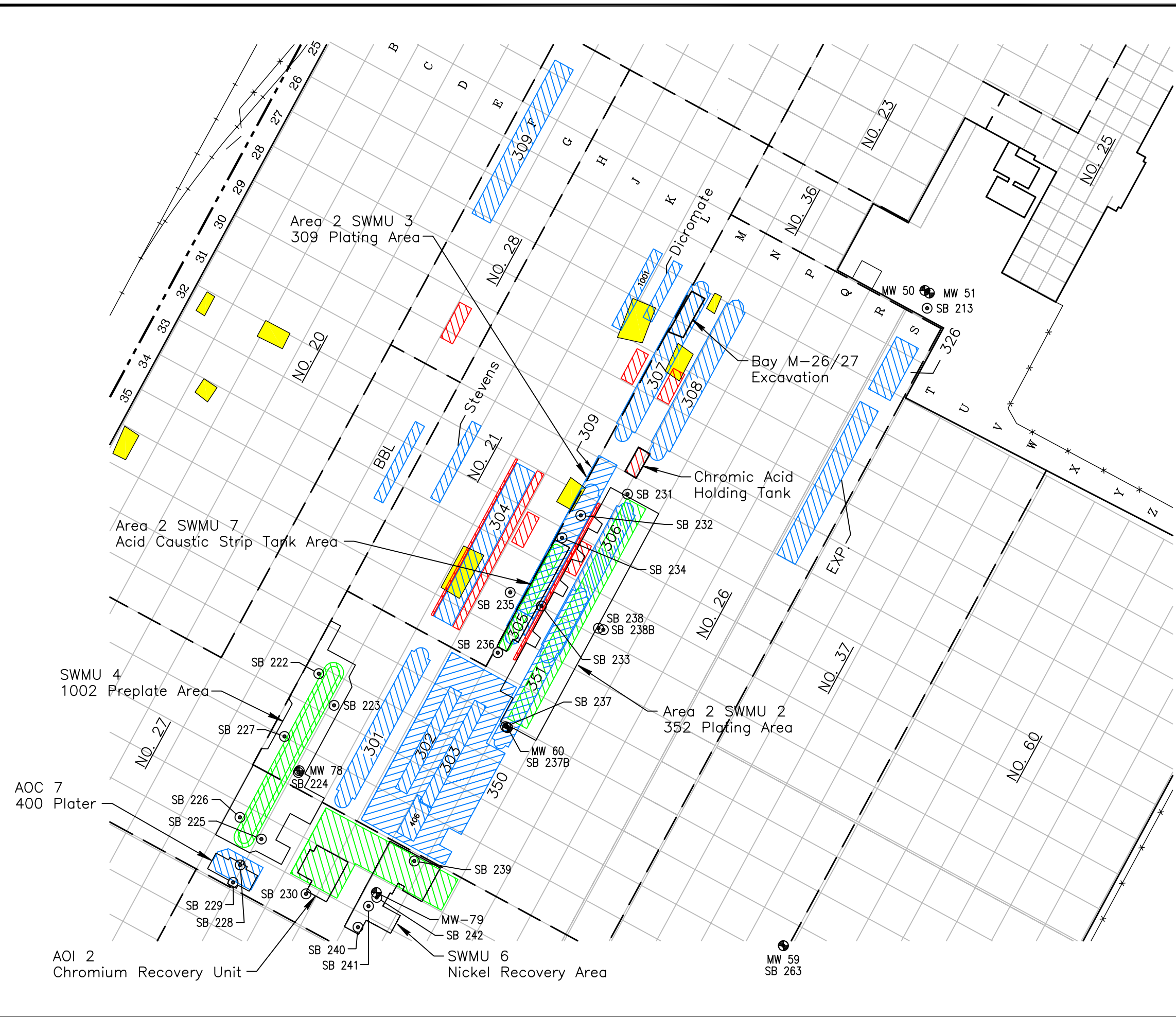
- Notes:**
1. Locations of former platers and building walls based on compilations by GM (2007).
 2. Locations of soil borings, monitoring wells, bay M-26/27 excavation, chromic acid holding tank, and selected building columns based on field survey.

EARTH TECH | AECOM

CHROMIC ACID HOLDING TANK AND M-26/27 EXCAVATION LOCATION MAP

GENERAL MOTORS CORPORATION
MLK BOULEVARD FACILITY
ANDERSON, INDIANA

FILE NAME: Bay M2627 Fg2.dwg	DRN NLW	PROJECT NO. 62806	DATE NOV/2008	FIGURE NO. 2
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Plotted By: nancy.wilzbocher
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 Plot File Date Created: Nov/21/2008
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