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3 September 2013 File No. 37290-019

USEPA REGION 5 77 West Jackson Boulevard

Mail Code: LU-9J Chicago, IL 60604-3507

Attention: Gregory A. Rudloff, P.G.

Subject: Resource Conservation and Recovery Act (RCRA) Corrective Measures Proposal

Former General Motors Powertrain (GMPT) - Livonia Site

12200 Middlebelt, Livonia, Michigan

USEPA ID #MID000718874

Dear Mr. Rudloff:

Enclosed on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER) please find a compact disk containing Adobe® Acrobat® Reader files pertaining to the RCRA Corrective Measures Proposal for the referenced Site. Two hardcopies of this document are also enclosed.

The enclosed document proposes institutional controls for the referenced Site to be implemented via a Restrictive Covenant. A draft Restrictive Covenant will be submitted to you shortly under separate cover for your consideration.

If you have any questions concerning this information, or would like to discuss these matters in more detail, please do not hesitate to call us.

Sincerely yours,

HALEY & ALDRICH OF MICHIGAN, INC.

Derek C. Kaiding, P.E

Senior Project Manager - Vice President

June C. Karly

**Enclosures:** 

Resource Conservation and Recovery Act (RCRA) Corrective Measures Proposal for the Former GM Powertrain Division Livonia

12200 Middlebelt Road, Livonia, Michigan, USEPA ID #MID000718874

c: Livonia Civic Center Library; Attn.: Mr. Carl Katafiasz

RACER Trust; Attn.: Mr. Grant Trigger RACER Trust; Attn.: Mr. David Favero

Haley & Aldrich, Inc.; Attn.: Mr. James W. Little

# RESOURCE CONSERVATION AND RECOVERY ACT CORRECTIVE MEASURES PROPOSAL FOR THE FORMER GM POWERTRAIN DIVISION LIVONIA 12200 MIDDLEBELT ROAD, LIVONIA, MICHIGAN

**USEPA ID #MID000718874** 

by

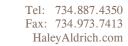
Haley & Aldrich of Michigan Ann Arbor, Michigan

for

Revitalizing Auto Communities Environmental Response Trust Detroit, Michigan

File No. 37290-019 3 September 2013







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## LIST OF ACRONYMS AND ABBREVIATIONS

AOI Area of Interest

AST Aboveground Storage Tank BGS Below Ground Surface

CMP Corrective Measures Proposal DWC Drinking Water Criteria

DWPC Drinking Water Protection Criteria

GM General Motors LLC
Haley & Aldrich Haley & Aldrich, Inc.
mg/L Milligrams per Liter

MDEQ Michigan Department of Environmental Quality

MI Michigan

Part 201 Part 201 of Michigan's Natural Resources and Environmental

Protection Act of 1994 (as amended)

PAHs Polynuclear Aromatic Hydrocarbons

RACER Trust Revitalizing Auto Communities Environmental Response Trust

RCRA Resource Conservation and Recovery Act

RFI RCRA Facility Investigation

TAL Target Analyte List
TCL Target Compound List

USEPA United States Environmental Protection Agency

UST Underground Storage Tank
VOCs Volatile Organic Compounds
WWTP Wastewater Treatment Plant



## 1. INTRODUCTION

#### 1.1 General

Haley & Aldrich of Michigan, Inc. (Haley & Aldrich) has prepared this Resource Conservation and Recovery Act (RCRA) Corrective Measures Proposal (CMP) on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER Trust) of Detroit, Michigan, for the former General Motors (GM) Powertrain property located at 12200 Middlebelt Road, Livonia, Wayne County, Michigan (the Site – Figure 1).

Despite no history of hazardous waste being stored at the Site for more than 90 days, and the Site not being subject to interim status operation under the Resource Conservation and Recovery Act (RCRA), RACER Trust entered into a Performance Based Corrective Action Agreement (Agreement) with Region 5 of the United States Environmental Protection Agency (USEPA) for the Site, with the effective date of 27 February 2012. Pursuant to the Agreement, RACER Trust has worked in cooperation with USEPA to complete a RCRA Facility Investigation (RFI) of potential releases of hazardous wastes or hazardous constituents at or from the Site (USEPA ID #MID000718874). This CMP has been prepared to fulfill the requirements of Section V.3 in the Agreement. Documents covering RACER Trust's RCRA corrective action program are listed in Section 7.

The Resource Conservation and Recovery Act (RCRA) Facility Investigation Report (RFI Report) (Haley & Aldrich, March 2013 [Revised July 2013]) describes the procedures, methods and results of the field investigations conducted during the implementation of the RFI activities proposed in the RCRA Current Conditions Summary/RFI Work Plan (Haley & Aldrich, December 2011; Revised May 2012) (RFI Work Plan). The data collected per the RFI have been evaluated to characterize the nature and extent of hazardous constituents in the environmental media at the Site.

This CMP describes the proposed Corrective Measures for the Site. These Corrective Measures involve the establishment of deed restrictions that prohibit potable use of groundwater and limit the onsite property to nonresidential, commercial/industrial uses.

USEPA will select final Corrective Measures for the Site after a public comment period. Various citations are included throughout this CMP that reference information that can be found in the Revised RFI Report and/or other documents submitted to the USEPA during the RFI. A public repository of submitted documents has been maintained at the Livonia Civic Center Library (C/O: Mr. Carl Katafiasz) throughout the RFI.



# 1.2 Report Organization

This Report is organized as follows:

- Section 1 provides an introduction to this document;
- Section 2 provides a summary of the Site background information;
- Section 3 provides a summary of the RFI and associated data screening;
- Section 4 provides a summary of Site risk;
- Section 5 details the proposed Corrective Measures for the Site;
- Section 6 provides an overview of the schedule for implementation of the Final Corrective Measures; and
- Section 7 provides a list of references.



## 2. SITE BACKGROUND

# 2.1 Site Description and History

The Site is located at 12200 Middlebelt Road in Livonia, Michigan and measures approximately 40 acres in size. It is generally a square-shaped tract of land situated in a mixed industrial / commercial / residential area (Figures 1 and 2). The Site is located east of Middlebelt Road between Industrial Road and Plymouth Road, in Wayne County, Michigan. It is bordered on the north by CSX Railroad tracks. Commercial property is located beyond the railroad tracks to the north. The Site is bordered to the east and to the south by residential and commercial areas and to the west by a City of Livonia Fire Station and Middlebelt Road. Beyond Middlebelt Road, to the west, is a large industrial property.

The main structure at the Site is a single story building, which until June 2010, was used for machining and assembly operations associated with automotive manufacturing. Approximately 1.2 million square feet is under roof. Former onsite activities were associated with automotive engine manufacturing and assembly, warehousing, and operation of an air compressor building, as well as an onsite wastewater treatment plant (WWTP) used for management and treatment of process wastewater. An electric utility substation operated by DTE Energy is located on the northeast portion of the Site.

The original Site building was constructed in 1971 and operated as Livonia Machining, which encompassed approximately 20 percent of the existing floor space. In 1984, the facility was expanded to accommodate engine manufacturing operations and a new warehouse.

# 2.2 Site Geology and Hydrogeology

Site Geologic conditions were characterized during the RFI to a depth of approximately 35 feet below ground surface (bgs). The focus of the RFI was to characterize the nature and extent of any release(s) of hazardous waste and/or hazardous constituents at the Site which may pose an unacceptable risk to human health and the environment. Investigation locations were selected based on field conditions, and were biased based on historical process information, Site-specific physical parameters, observed potential evidence of contamination, and observed potential evidence of preferential pathways.

The Site and surrounding area is flat with layered lacustrine deposits consistent with a lake plain depositional environment. Below a surface dominated by concrete, fill material consists of sandy to clayey-sand. The surface fill material (dominated by sand) is generally encountered less than 10 feet bgs; however, it extends deeper adjacent to subgrade/basement structures. Across the Site, the fill material is underlain by a thick clay/silty-clay layer. Soil descriptions of the clay identify sand and gravel lenses, consistent with glacial tills.

Temporary monitoring wells were installed in soil borings with evidence of sufficient soil moisture likely to yield representative groundwater. Only 13 of the 70 soil borings were converted to temporary monitoring wells, as only these 13 borings exhibited evidence of wet soil conditions during drilling. One of the 13 temporary monitoring wells was observed to be dry during the second phase RFI activities conducted in November and December 2012. One other temporary monitoring well did not



consistently yield groundwater volumes sufficient for sampling. Two of the temporary monitoring wells were installed 10 feet deeper than the other wells due to adjacent building conditions (existing basement). All 13 temporary monitoring wells are planned to be properly abandoned (pressure grouting) later this year.

The shallow groundwater encountered at the Site is on average less than 10 feet below ground surface. Shallow groundwater potentiometric surface elevations recorded in December 2012 ranged approximately from 629 to 631 feet above mean sea level in the northeastern portion of the Site near the WWTP, approximately from 627 to 628 in the southwestern portion of the Site, and were nearly flat within the center of the Site at about 626 above mean sea level. These potentiometric surface gradient trends indicate localized flow toward the center of the Site. Although this is plausible, since subsurface structures (e.g., sewers) could be influencing the flow of shallow Site groundwater, it is believed that the flow of shallow Site groundwater would be limited by low hydraulic conductivity of the clay-rich glacial till layer.

## 2.3 Land Use

The Site and the immediate surrounding area have been significantly developed with much of the ground surface covered by buildings and pavement and consisting of commercial and industrial development, residential development, and public roadways. The Site is located in a mixed industrial, residential and commercial area. Residential neighborhoods are adjacent to the southern boundary of the Site and in the areas east of the Site. Towards the north and west the land is developed with light industrial and commercial properties.

The Site is currently for sale and is mostly inactive, except for approximately 5 percent of the main building, which is leased to Bay Logistics of Spring Lake, Michigan for warehousing uses. The full perimeter of the Site is fenced, and there is 24-hour security on the property.

# 2.4 Groundwater Use/ Water Supply

The City of Livonia prohibits groundwater well installations and potable use of groundwater through its City Ordinance 13.40.030 (Ord. 2823, § 1, 2009). This Ordinance governs groundwater use of the Site and surrounding regions. The State of Michigan requires licensure of all groundwater well drillers operating in the State, and Wayne County requires permits be issued for all drinking water well installations. These various overlapping requirements provided strict control over drinking water well installations in this area.

Groundwater use near the Site was explored by reviewing publically available information gathered from the Internet. This groundwater use survey was conducted for more than a one-mile radius of the Site in October 2012 (http://deq.state.mi.us/well-ogs/default.asp and http://wellviewer.rsgis.msu.edu/viewer.htm). Of the 61 wells identified in the Township and Range of the Site, 12 private wells were identified in the sections adjacent to, or within a one mile radius, of the Site. Of the 12 private wells, 3 were identified as domestic wells, only 1 of which appears to be located potentially downgradient of the Site (approximately 5,500 feet). Drinking water is supplied to



the Site by the City of Livonia through the Detroit Water and Sewage Department, with the ultimate source of drinking water to the Site being the Detroit River.

# 2.5 Future Site Redevelopment Plans

The Site is anticipated to remain in its current state until it is sold for future industrial use.



## 3. SUMMARY OF RFI ACTIVITIES AND ASSOCIATED DATA SCREENING

The RFI identified 36 Areas of Interest (AOIs) at the Site warranting investigation. These areas were identified to have the potential presence of hazardous waste or hazardous constituents due to past release(s) to the environment. For discussion purposes, each AOI was assigned a number. The locations of these AOIs are illustrated on Figure 2, and include the following:

01	Teal Dock/Former Rail/Truck Bay/Chip Bunkers	22	Dump station
02	South Gallery	23	Dump station
04	East Gallery	26	Paint booth area
05	Wash/Dump station	27	Below grade process flumes
06	West Gallery	28	Below grade process waste conveyances
07	Dump station	29	Former Railroad Spur
08	Former paint shop/shed	30	12434 Middlebelt - former gas station
09	Oil sump	31	Fire pump house (post 1989)
10	Equipment pit	32	Former fire pump house (pre-1989)
11	Dump station	33	WWTP main building and exterior wash pad
12	Equipment pits (2) - containment beneath heavy equipment	34	Less than 90-day Hazard Waste Storage Area
13	Wash/Dump station	36	Oil Storage Building
14	Equipment pit - containment beneath heavy equipment	37	ASTs (2)
15	Equipment pit - containment beneath heavy equipment	38	Detroit Edison Substation
16	Dump station	39	Equipment pit
17	Former 750-gallon UST	40	Sump for equipment pit
18	Dump station	41	Equipment pit
19	Trash compactor and oil pump station	42	Dump station

The RFI activities included the drilling of 70 test borings, collection and analysis of 61 soil samples, installation of 13 temporary monitoring wells, and collection and analysis of 11 groundwater water samples.

Analytical results for soil and groundwater samples collected at the Site were compared to conservative screening criteria to determine if potentially significant releases to the environment had occurred, and if the field investigation adequately characterized these potentially significant releases. The screening criteria for each medium are summarized below and were identified to be applicable to the Site based on the conceptual Site model for human exposures discussed in the RFI Report.

Key aspects of the conceptual Site model include the following points:



- There is currently no on-site groundwater use, nor on-site residential land use, and RACER Trust planned at the start of the RFI to establish institutional controls as part of remedial actions for the Site to: 1) prevent any future on-site groundwater use; and 2) prevent any future residential land use.
- Although off-site use of groundwater for potable purposes is not expected, potential exposure risk to off-site residences is mitigated by controls discussed in Section 2.4.

Site characterization data were compared with screening criteria that are developed by the Michigan Department of Environmental Quality (MDEQ) to facilitate implementation of Part 201 (Part 201 Criteria)\*.

The following Part 201 Criteria were used to evaluate the Site soil characterization data:

- Part 201 Nonresidential Drinking Water Protection Criteria;
- Part 201 Nonresidential Indoor and Ambient Air Criteria; and
- Part 201 Nonresidential Direct Contact Criteria;

The following Part 201 Criteria were used to evaluate the Site groundwater characterization data:

- Part 201 Nonresidential Drinking Water Criteria;
- Part 201 Nonresidential Volatilization to Indoor Air Inhalation Criteria;
- Part 201 Nonresidential Groundwater Contact Criteria;
- Water Solubility Levels;
- Flammability and Explosivity Levels; and
- Acute Inhalation Levels.

A potentially significant release of hazardous constituents to the environment at an area is considered when the highest site-related concentrations of constituents detected in soil or groundwater at the area are higher than any of the screening criteria.

Updated by MDEQ on 28 September 2012.



## 4. SUMMARY OF SITE RISK

As discussed in Section 3.8 of the RFI Report, the Site does not provide naturalized areas for wildlife, and potential receptors are limited to urban wildlife (raccoons, gophers, rodents and various avian species) or transitory presence. The Site does not provide any quality habitat for ecological receptors. Based on current and foreseeable land use of the Site and area, terrestrial and/or aquatic exposure of ecological receptors is considered nominal and/or incomplete. Therefore, further ecological assessment was not required to document no significant risk to ecological receptors.

As for the assessment of human health risk, the entire RFI data set was subject to Part 201 Criteria screening as discussed in Section 3. As noted previously, the RFI was designed to determine if a release of hazardous waste or hazardous constituents had occurred, and where a potentially significant release is identified, to characterize the nature and extent of hazardous constituents in the environmental media. The Site characterization data obtained for each of the AOIs investigated during this RFI were judged to be adequate and appropriate for RCRA Corrective Action decision-making. As noted in Section 4.1 of the RFI Report, the presence of constituent concentrations higher than the Part 201 Criteria may not mean that the media necessarily poses a significant risk to human health or the environment. It only means that the potential to pose a significant risk should be further evaluated with consideration for additional site-specific factors.

As discussed in Section 4.2 of the RFI Report constituents detected at the Site as part of the RFI include primarily select metals at various locations, PAHs at one location, and select VOCs at only seven locations. Arsenic and lead are the only constituents that were exhibited to be present at the Site in soil and/or groundwater at concentrations exceeding corresponding Part 201 Criteria.

Specifically, two soil samples, one each from AOI-04 and AOI-06, exhibited the presence of arsenic above the Part 201 Nonresidential Drinking Water Protection Criterion (DWPC) at depths of 8 to 10 feet and 22 to 24 feet bgs, respectively. The arsenic concentrations found in these samples also exceed the Part 201 State Default Background Screening Criterion for arsenic; however, both of these concentrations fall well below the State-wide maximum arsenic background level determined by MDEQ's *Michigan Background Soil Survey 2005* (2005 Soil Survey [MDEQ, 2005]). Accordingly, these arsenic in soil exceedances are believed to be present as a result of natural conditions (i.e., types of soil deposits), and are not believed to be attributed to Site operations, since arsenic is not known to have been used at the Site, nor is likely to have been a component of Site-related activities.

Arsenic was also detected in groundwater above Part 201 Nonresidential Drinking Water Criterion (DWC) in samples collected from AOI-06, AOI-10, AOI-27, AOI-28, AOI-33, and AOI-40; however, like noted above regarding soil, the concentrations of arsenic detected in groundwater in these areas are also believed to be present as a result of natural conditions (i.e., types of soil deposits), and are not believed to be attributed to Site operations. This conclusion is based on the following points:

 Arsenic is not known to have been used at the Site, nor is likely to have been a component of Site-related activities;



- All but one exceedance of the DWC for arsenic are associated with unfiltered samples, indicating the presence of arsenic in Site groundwater is associated nearly exclusively with filterable soil particulates;
- Variability of arsenic concentrations between sampling events and among samples of each event is low (i.e., similar order of magnitude on a well-to-well comparison); and
- All exceedances of DWC for arsenic are within the collective range of concentrations typical of well water of Wayne County and the adjacent Washtenaw County (greater than 0.05 mg/L), as described in MDEQ public outreach information<sup>†</sup>.

Lead was initially detected in groundwater at the Site at select locations in August 2012 exceeding the corresponding DWC, but the subsequent analyses of groundwater samples deemed to be more representative of Site conditions (collected in December 2012), indicated Site groundwater not to be contaminated with lead above the associated Part 201 Criteria.

 $<sup>^\</sup>dagger \ http://www.michigan.gov/documents/deq/deq-wd-gws-wcu-arsenicwellwater\_270592\_7.pdf.$ 



## 5. PROPOSED CORRECTIVE MEASURES

Current conditions address all potential unacceptable exposures associated with the Site, because groundwater is not used on-site for any purpose, nor is it used in the surrounding areas due to the controls discussed in Section 2.4, and no part of the Site is used for residential purposes. As discussed in Section 2.5, the Site is expected to remain industrial into the foreseeable future, given its current asset value and marketability.

Corrective Measures are proposed to be implemented at the Site to address the following objectives involving potential future exposures:

- Prohibit future on-site potable use of groundwater; and
- Prohibit future on-site exposure via residential pathways.

Site-wide institutional controls are proposed to be implemented as the overall final corrective action for the Site to address these objectives. These institutional controls will be established through deed restrictions in the form of a Restrictive Covenant which will be recorded with the Wayne County Registry of Deeds. This Restrictive Covenant will run with the property associated with the Site, and will be binding on the property owner; future owners; and their successors and assigns, lessees, easement holders, and any authorized agents, employees, or persons acting under their direction and control. Specifically, controls under the Restrictive Covenant will include restrictions that will maintain continued non-residential, commercial/industrial use of the Site, and will prohibit any future potable use of groundwater. These restrictions would run with the property in perpetuity, unless additional evaluation and/or remediation is approved by USEPA and implemented. The area subject to Site-wide deed restrictions is illustrated as the full perimeter boundary of the Site on Figure 3.

Information collected during the RFI indicates that the proposed Corrective Measures will be sufficient to protect human health and the environment, and will effectively ensure that the human health risk screening assumptions on future on-site land and groundwater use remain valid. The associated effectiveness will be achieved in a short term time frame. RACER Trust is committed to facilitating the redevelopment of the property as a non-residential, commercial/industrial property. Although these proposed Corrective Measures will not reduce toxicity, mobility, or volume of contaminants, this is not necessary, since the contaminant of concern (arsenic) has been linked to natural occurrences.

The proposed Corrective Measures can be implemented via administrative procedures, and with no direct impact to the surrounding community.

The proposed Corrective Measures can be completed with reasonable costs. The estimated costs to implement these measures are summarized as follows:

## ■ Site-wide Institutional Controls:

\$25,000

(Consisting of a Restrictive Covenant that invokes on-site land and groundwater use deed restrictions)



Based on information currently available, the proposed Corrective Measures for the Site represent a reasonable and effective, performance-based final remedy for the Site, which will have no direct impact to the local community, and that can be implemented in less than 180 days at a reasonable cost.

A draft Restrictive Covenant will be submitted under separate cover subsequent to this CMP.



#### 6. SCHEDULE

The following schedule is proposed for Corrective Measures implementation for this Site:

- A draft Restrictive Covenant will be submitted to USEPA under separate cover subsequent to this CMP:
- RACER Trust will finalize the Restrictive Covenant within 30 days of receiving USEPA comments/edits concerning the draft version submitted subsequent to this CMP;
- RACER Trust will facilitate the recording of the final Restrictive Covenant with the Wayne County Registry of Deeds within 30 days upon USEPA's final approval of the Restrictive Covenant and issuance of its Final Decision for the Site:
- Within 60 days upon recording the Restrictive Covenant with the Wayne County Registry of Deeds, RACER Trust will submit to USEPA for review and approval a draft Corrective Action Complete with Controls Determination;
- RACER Trust will finalize the draft Corrective Action Complete with Controls Determination within 30 days upon receiving USEPA comments/edits.

It is anticipated that USEPA will conduct the following activities prior to approving RACER Trust's Corrective Action Complete with Controls Determination:

- Issue a Statement of Basis for the Site following approval of the Restrictive Covenant;
- Publish a Public Notice concerning the Statement of Basis
- Conduct a Public Hearing concerning the Statement of Basis, if needed;
- Publish a Public Notice concerning the Corrective Action Complete with Controls Determination;
- Conduct a Public Hearing concerning the Corrective Action Complete with Controls Determination, if needed;

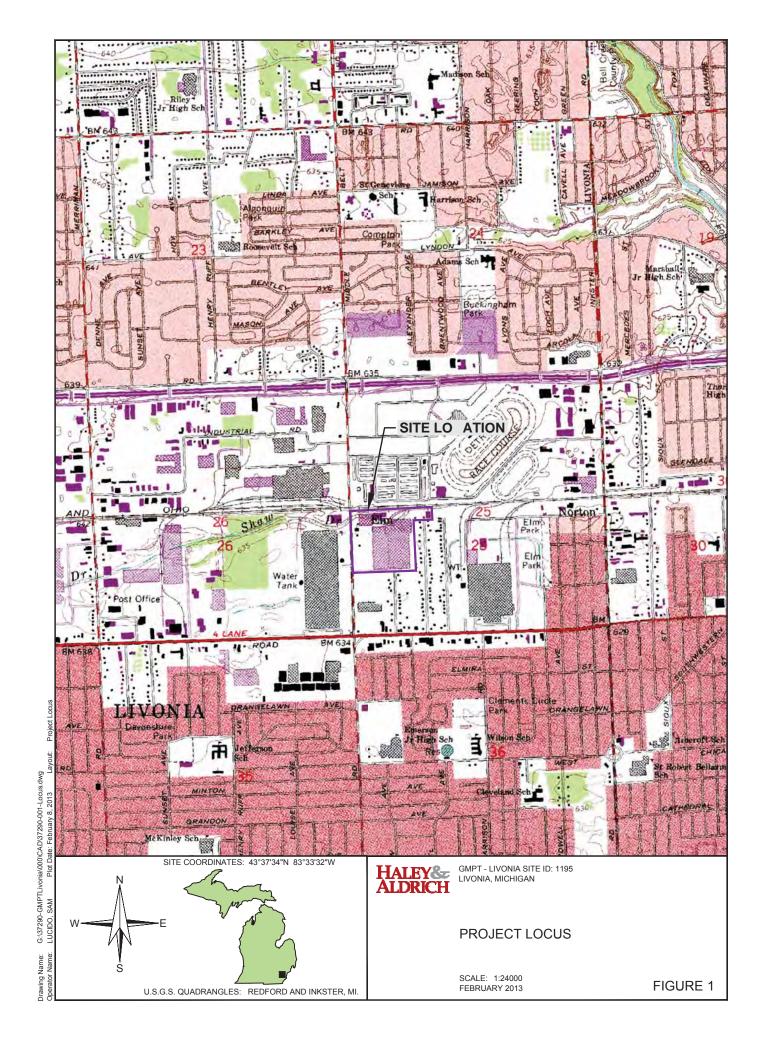
RACER Trust will continue to report project updates, including changes to the above schedule of activities, to USEPA via annual reports that are submitted by 15 March each year, until Corrective Measures are complete.

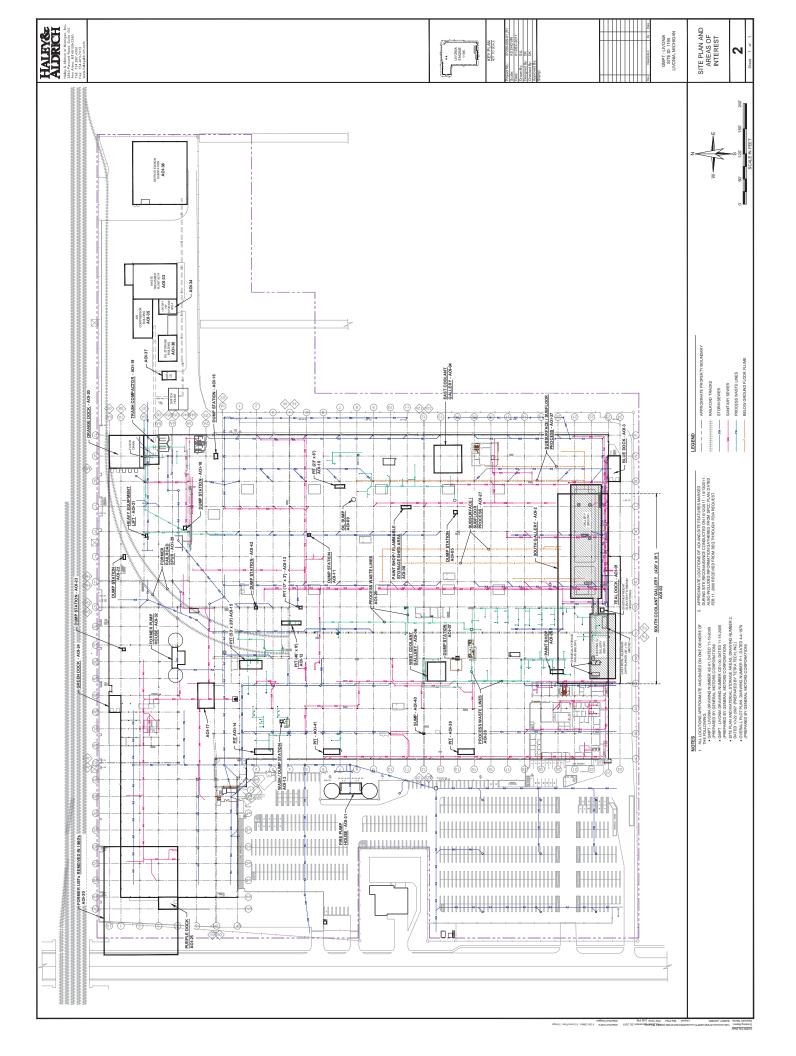


# 7. REFERENCES

- Haley & Aldrich of Michigan, Inc., Resource Conservation and Recovery Act Facility Investigation Quality Assurance Project Plan For The Former GM Powertrain Division Livonia 12200 Middlebelt Road, Livonia, Michigan, USEPA ID #MID000718874, 29 December 2011/Revised 31 May 2012).
- Haley & Aldrich of Michigan, Inc., Documentation of Environmental Indicator Determination, RCRA Corrective Action Environmental Indicator (EI) RCRIS code (CA725) Current Human Exposures Under Control, 15 March 2013.
- Haley & Aldrich of Michigan, Inc., Documentation of Environmental Indicator Determination, RCRA Corrective Action Environmental Indicator (EI) RCRIS code (CA750) – Migration of Contaminated Groundwater Under Control, 15 March 2013.
- Haley & Aldrich of Michigan, Inc., Resource Conservation and Recovery Act Facility Investigation Report For The Former GM Powertrain Division Livonia 12200 Middlebelt Road, Livonia, Michigan, USEPA ID #MID000718874, 15 March 2013; Revised 25 July 2013).
- Michigan Department of Environmental Quality, Arsenic in Well Water, http://www.michigan.gov/documents/deq/deq-wd-gws-wcu-arsenicwellwater 270592 7.pdf.
- Michigan Department of Environmental Quality, Hazardous Waste Technical Support Unit Hazardous Waste Section Waste and Hazardous Materials Division, Michigan Background Soil Survey 2005, MDEQ – MBSS 2005.
- United States Environmental Protection Agency (USEPA) and Revitalizing Auto Communities Environmental Response Trust (RACER), Performance Based Corrective Action Agreement Between The United States Environmental Protection Agency and Revitalizing Auto Communities Environmental Response Trust for GMPT-Livonia Site, signed by Michael O. Hill, Chief Operating Officer and General Counsel, RACER and Margaret M. Guerriero, Director, Land and Chemicals Division, USEPA Region 5, 30 January 2012 and 27 February 2012, respectively.









SCALE IN FEET

FIGURE 3

\\DTR\COMMON\37290-GMPTL\VONIA\009\CAD\37290-009-03.DWG