UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

Received by RACER on March 9, 2022

REPLY TO THE ATTENTION OF

LR-16J

Mr. Grant Trigger
Cleanup Manager - Michigan
RACER Trust
500 Woodward Avenue, Suite 2650
Detroit, MI 48226

RE: **Final Decision and Response to Comments**
RACER Van Buren Township Landfill

Dear Mr. Trigger:

Please find enclosed for your records the U.S. Environmental Protection Agency's Final Decision and Response to Comments for the RACER Van Buren Township Landfill located at the intersection of Michigan Avenue and Ecorse Road in Van Buren Township, Michigan ("the Site"). Additional detail regarding the final remedy can be found in the Corrective Measures Study ("CMS") and Administrative Record. EPA expects that schedules and other details regarding the full implementation of the Final Decision will be provided in a Corrective Measures Implementation Work Plan ("CMI Work Plan").

RACER Trust may begin debris removal and begin placement of the ecological cover immediately, if RACER Trust chooses, and submit the CMI Work Plan following its implementation. EPA requests the CMI Work Plan be submitted within 90 days from receipt of this Final Decision.

If you have any questions, please contact Brandon Pursel of my staff, at 312-353-9229, or pursel.brandon@epa.gov.

Sincerely,

EDWARD NAM

Digitally signed by EDWARD NAM
Date: 2022.03.08 17:06:47 -06'00'

Edward Nam
Division Director
Land, Chemicals and Redevelopment Division

cc: Dave Favero (RACER Trust)

Enclosure

FINAL DECISION AND RESPONSE TO COMMENTS
REMEDY FOR SOIL AND GROUNDWATER CONTAMINATION

FOR

RACER VAN BUREN TOWNSHIP LANDFILL
INTERSECTION OF ECORSE ROAD AND ROUTE 12
VAN BUREN TOWNSHIP, MICHIGAN

I. INTRODUCTION

The U.S. Environmental Protection Agency, Region 5 ("EPA"), presents this Final Decision and Response to Comments ("FD/RC"), which identifies the final remedy selected for the RACER Trust Van Buren Township Landfill ("the Site"), located in Van Buren Township, Michigan. Included in this FD/RC is a summary of conditions found at the Site, the risks posed by those conditions, EPA's selected remedy, EPA's public participation activities, EPA's Response to Comments (Attachment 2), and an updated Index to the Administrative Record (Attachment 3). Prior to issuing this FD/RC, EPA presented the Statement of Basis (Attachment 4) to the public for review and comment for 30 days from September 2, 2021 to October 2, 2021. EPA received comments from RACER Trust and from a member of the public. The Statement of Basis is included in this FD/RC as Attachment 4.

II. SITE CONDITIONS AND PREVIOUS ACTIONS TAKEN

Location and Setting

The Site is situated on approximately 68 acres of undeveloped land located in Van Buren Township, Wayne County, Michigan. The Site is zoned for general industrial use, located in an area surrounded primarily by residential, mixed commercial, agricultural, industrial, and airport properties. The Site is bounded to the north by railroad tracks, to the east by GM's Service Parts Operations Warehouse, to the south by Ecorse Road, and to the west by Michigan Avenue. The Site is vacant and currently not in use, however it is currently marketed for sale or redevelopment. The Site is heavily wooded in many areas. The southern portion of the Site contains thick areas of brush and thatch, while the northern portion has several open areas with a mixture of tall grass and weeds.

Ownership History

Review of historical records and aerial photographs indicated that the Van Buren Development Company occupied the Site from approximately 1966 to 1969 and operated a landfill during this period. General Motors Corporation acquired the property in approximately 1969 and the Site has been vacant since the closure of the Van Buren Development Company landfill. RACER Trust was created in 2011 with the purpose of remediating and repurposing properties owned by the former General Motors Corporation prior to their bankruptcy in 2009.

Manufacturing, Releases, and Regulatory History
Review of historical photographs indicated that the Site was undeveloped and cultivated for agricultural purposes as early as 1940. Van Buren Development Company operated a landfill at the Site from 1966 to 1969, when it was purchased by General Motors Corporation, and it has been vacant ever since. Documentation obtained from the Wayne County Department of Environment, Land Resource Management Division, Solid Waste Technical Section indicated that various wastes including incinerator ash from the City of Detroit, demolition waste and domestic refuse from the City of Dearborn, wastepaper from Ford Motor Company, and liquid waste inside 55-gallon drums were landfilled at the Site. Automotive parts were also found during limited sampling activities and are expected to be scattered across the Site based on observations from field activities. Historical records indicated that some of the waste had high levels of sulfuric acid and had potentially contained heavy metals, polychlorinated biphenyls ("PCBs"), and other organic chemicals.

Physical Setting and Site Characteristics
Van Buren Township Landfill is heavily wooded with no structures or utilities on-site and the entire perimeter is fenced and provides habitat to several plants and animals with limited human access outside of environmental or redevelopment activities. The Site is located above an unconfined surficial aquifer, with shallow groundwater levels measured at roughly one foot below ground surface ("bgs") off-site to approximately 12 feet bgs on-site. The unconfined aquifer is located above lacustrine clay which serves as a lower confining unit. Due to the historic use of the Site, groundwater flow is unique and flows radially from the central portion of the Site.

There are no surface water bodies located on-site, however small ponds occasionally develop based on seasonal weather effects, otherwise known as vernal pools. These surface water bodies can be significant features for ecological habitats depending on their lifecycle. Occasional seeps are seen at the Site perimeter, which is common for Sites with historical landfilling activities. An ecological risk assessment was performed and particular avian receptors, mammalian receptors, plants and soil invertebrates were all identified to be susceptible to harmful exposure. Some localized risks to receptors exist for either individual species or entire groups which require attention; however, it is not consistent across the entire Site.

Regulatory History and Corrective Action Background
On March 29, 2011, Revitalizing Auto Communities Environmental Response ("RACER") Trust was created following the bankruptcy litigation for the former General Motors Corporation. As a result of this litigation, a Settlement Agreement among EPA and the State of Michigan, among others, was entered by the U.S. Bankruptcy Court for the Southern District of New York on March 29, 2011. This Settlement Agreement serves as a unique vehicle by which RACER Trust funds and manages the investigation and remediation of former General Motors Corporation properties. The Corrective Action program is responsible for ensuring that facilities investigate and clean up releases of hazardous waste and hazardous constituents at their properties and any releases that have spread beyond the property boundaries, and which pose a risk to human health or the environment.

RACER Trust and EPA entered into a Performance-based Voluntary Agreement in 2011 to investigate, and as necessary remediate all releases of hazardous wastes or constituents at or from the Site. The agreement was designed and implemented to protect human health and the environment. Furthermore, selected remedies, or clean-up actions, were chosen based upon the current and next anticipated use of the property, which was determined will remain non-residential. The property is currently vacant, and its future anticipated use is industrial or commercial redevelopment.

III. INVESTIGATIONS AND RISK ASSESSMENT

During the investigation phases, environmental media such as soil, groundwater, surface water, sediments, and biota are sampled and analyzed for contamination. Where contaminated media are found, subsequent sampling is usually completed to refine the Conceptual Site Model ("CSM") and define the extent of contamination (how far it may have traveled and how deeply it may have moved), and to collect enough information for analysis of exposure effects in risk assessments. After each sampling event or investigation phase, EPA evaluates the CSM to determine the adequacy of the data to support decision-making. If data are found to be inadequate, additional data collection is necessary in order to move forward.

All on-site risk assumptions used to evaluate on site conditions were consistent with industrial redevelopment as a goal. Off-site risk evaluations are performed with long term future use anticipated as residential. The areas of soil contamination of concern at the Site are generally shallow and pose a risk to ecological receptors. Other surface waste and debris pose a safety hazard and are artifacts of when the Site was not fenced or where trespassers dumped garbage and refuse. Institutional controls for the Site will include a non-residential deed restriction and an on-site prohibition against potable uses of groundwater. Should Site conditions change following a sale and if future use involves activities that result in Site features being altered, it will be necessary for EPA to revisit all exposure scenarios to evaluate the potential need for additional corrective measures at the Site.

EPA evaluated the potential for on-site and off-site exposures relating to groundwater use pathways at reasonable points of exposure. The on-site exposures EPA considered were those due to contaminants in soil and groundwater, as well as vapor-phase contaminants via inhalation because contaminants could migrate to indoor air from a source beneath any buildings. This is also known as the vapor intrusion pathway. Data from monitoring wells located on-site and off-site show that criteria pertaining to groundwater use for drinking water are exceeded for both the health-based state and federal criteria as well as aesthetic criteria pertaining to taste, color and smell. There are no buildings on-site, and the limited impacts from volatile organic compounds do not pose an unreasonable risk to receptors in any off-site buildings. Groundwater concentrations are not known to pose a risk to on-site Site workers due to an absence of complete exposure pathways, as discussed in Section IV. Off-site risks from exposure to groundwater impacted by releases from the Site were determined to not be complete in most instances as drinking water is supplied from the municipal system rather than from private, shallow wells. The primary risk driver associated with the Site is to on-site ecological receptors.

No potentially endangered ecosystems have been identified within the Site boundaries. Since all the ground surface is covered by structures, concrete, asphalt, or grass, there are no potential risks to endangered ecosystems.

Health Risk Screening Levels

EPA and the predecessor to RACER used default, pathway-specific Site Screening Levels ("SSLs") for the chemical compounds (Constituents of Concern ["COCs"]) used to evaluate the health risk significance of soil, groundwater and sediment contamination at the Site. This evaluation focused on the location of the Site, area land use, future land use, and the most likely pathways of human and ecological exposure to contaminants according to EPA guidance. EPA requires that the screening criteria for each SSL have an allowable risk threshold, with a non-cancer Hazard Index ("HI") of 1 or lower and a target cancer risk between 1×10^{-4} and 1×10^{-6} or lower (i.e., 1 in 1,000,000). The default screening levels used in the evaluation of contaminant data at RACER meet these criteria. Sometimes these default criteria are conservative and not representative of conditions on-site. For COCs that exceeded default criteria, site-specific SSLs were developed based on conditions that would be routinely encountered at the Site and demonstrated that the HI and target cancer risk were met under these exposure assumptions.

Published sources that were used to select SSLs included: 1) EPA Regional Screening Levels ("RSLs") for groundwater and on-site worker and trespasser soil exposure scenarios; 2) EPA Maximum Contaminant Levels (federal regulatory standards for drinking water including groundwater potentially used as drinking water); 3) Michigan Department of Environment, Great Lakes and Energy ("EGLE") Part 201 standards; 4) EPA Region 4 screening criteria for ecological pathways; and 5) EPA's National Recommended Water Quality Criteria. In addition to specific SSLs, literature-derived values were used to determine site-specific risks for ecological receptors.

Investigations Conducted

Groundwater investigations have been conducted at the Site since 2012, however other investigations occurred as long ago as 2003 when the former General Motors Corporation performed a geophysical investigation with an electromagnetic survey. The summaries of these investigations were used to ascertain the nature and extent of contamination and to monitor for any changes that may affect the corrective action process. The results of these investigations have been included in data reports and are evaluated against current and future non-residential uses on-site and residential uses off-site. In addition to these data reports, a screening level ecological risk assessment ("SLERA") and baseline ecological risk assessment ("BERA") was submitted in August 2016 and July 2017, respectively, quantifying site-specific risks.

Impacts to groundwater were found to be primarily from historic landfilling operations. During early phases of characterization work, automotive parts and other wastes were recovered and are believed to be the main contributors to inorganic impacts to groundwater, primarily iron. Subsurface soil impacts were minor or intermittent and detections of various constituents were consistent with local conditions, often referred to as background concentrations. Surface soil contamination concentrations exceeded criteria that are protective of some ecological receptors.

Exposure pathways accounted for current and potential future uses of the Site given the primary mission of RACER to prepare properties for future redevelopment.

IV. SUMMARY OF SITE RISKS

Potential Risks to Human Health

Iron is the primary contaminant of concern ("COC") associated with this Site and is present in both on-site and off-site groundwater. Other constituents such as benzene were detected in groundwater, however, the exceedances that were found were extremely limited, intermittent, and only slightly exceeded relevant criteria. Aluminum, arsenic, barium and manganese were also routinely detected however are not considered as COCs because their exceedances were not significant drivers of risk associated with complete risk exposure pathways. Iron exceeded both health-based state standards and the Maximum Contaminant Level ("MCL") on-site and off-site, promulgated pursuant to the Safe Drinking Water Act, 42 U.S.C. 300f *et seq*. The MCL for iron is based on taste, smell and odor and is much less than the state derived health-based standard.

Human health risks associated with soil are limited to the direct contact exposure pathway and the presence of lead. Despite the high iron concentrations in groundwater, soil analyses for this constituent demonstrate that iron concentrations are generally below state-wide background levels. Lead is detected in soil at intervals approximately 10 feet below ground surface at several locations, suggesting that construction workers or other workers associated with excavations in these areas are the most susceptible to exposure.

Potential Risks to the Environment

Ecological risks occur when plants or animals are exposed to contamination above screening levels that are known to cause an adverse health effect. EPA uses a Hazard Index (HI) to determine excess cumulative risk, where a HI greater than or equal to 1 is considered unacceptable. Localized risks to receptors exist in surface soil at the Site and were used to determine the overall contribution to site-wide hazard assessments. Avian and mammalian receptors, terrestrial plants and soil invertebrates are potential receptors identified in the ecological risk assessment.

Groundwater contamination is not believed to pose a risk to ecological receptors. Common ecological exposure pathways relating to groundwater typically originate where groundwater discharges into surface water. Surface water samples were collected from groundwater "seeps" along the Site perimeter and no significant detections of contaminants were reported. As part of the ecological risk assessment, vernal pools, or seasonal surface water bodies that form and may provide a temporary habitat to certain species, were also considered. These surface water bodies were determined to be a significant exposure route in the SLERA, however analysis performed in the BERA determined the actual risks were insignificant.

V. SCOPE OF CORRECTIVE ACTION

Short Term (1 year or less)

1) Minimize direct contact to soils and groundwater for identified receptors at risk from exposure.
2) Contain existing impacts and meet the criteria for the CA725 determination that human health exposures are under control.[1]
3) Contain existing impacts and meet the criteria for the CA750 determination that migration of contaminated groundwater is under control.[2]

Long Term (1 year or more)

1) Demonstrate that the quality of groundwater impacted by releases from the Site are stable or improving.
2) Ensure on-site and off-site institutional controls and engineering controls are maintained as long as contaminants remain in the subsurface above relevant screening criteria.
3) Groundwater wells must be monitored to confirm Corrective Action Objectives ("CAOs").
4) Meet CAOs for iron both on-site and off-site.

Soils

Final remedies must address soil impacts that exceed relevant risk criteria within a timeframe that is reasonable under the circumstances. Facilities must consider all reasonable scenarios in which a person or animal may come into contact with and be adversely impacted by soil contamination and evaluate remedial strategies that address those pathways. The CAO for the protection of human health against soil contamination is to prevent exposure to soil contaminated with on-site metals at concentrations above non-residential Regional Screening Levels ("RSLs") and the EGLE Part 201 criteria ("VAP"). RACER must also minimize ecological exposure to contaminated soil above site-specific risk screening criteria.

Groundwater

EPA expects final remedies to return groundwater to its maximum beneficial use within a timeframe that is reasonable under the circumstances. For facilities associated with aquifers that are either currently used for drinking water supply or have the potential to be used for drinking water supply, EPA will require the groundwater meet National Primary Drinking Water Standard MCLs promulgated pursuant to the Safe Drinking Water Act, 42 U.S.C. §§ 300f *et seq*., and codified at 40 C.F.R. Part 141, or to EPA RSLs for tap water for chemicals for which there are

[1] Environmental Indicators ("EI") are measures used by the Resource Conservation and Recovery Act (RCRA) Corrective Action Program to track progress at Corrective Action sites in environmental terms. A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

[2] A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

no applicable MCLs. This can be a short-term or long-term goal based on the remedial strategy selected.

The CAOs for the protection of human health and the environment for groundwater are as follows:

1) Prevent drinking water exposure to groundwater contaminants identified during Site groundwater monitoring that exceed Michigan EGLE Part 201 health-based state criteria and federal screening criteria. The health-based criteria for iron, 2,000 µg/L for residential uses off-site, and 5,600 µg/L for non-residential uses on-site, may change as state and federal criteria are revised.[3]
2) Maintain existing infiltration controls as long as the property remains undeveloped and vacant.[4]
3) Ensure impacts to groundwater from other site-related contaminants do not worsen.

Indoor Air

EPA expects final remedies to address pathways that pose risks to occupants of buildings that may be impacted by subsurface contamination within a timeframe that is reasonable given the circumstances. Facilities must consider all reasonable scenarios in which contaminants may migrate into indoor air and evaluate remedial strategies that address those pathways. The CAO for the protection of human health for indoor air is to prevent vapor intrusion from VOCs in groundwater to occupied buildings should the property be sold or redeveloped with buildings or other structures where the vapor intrusion exposure pathway may be complete.

VI. SELECTED FINAL REMEDY

Current conditions at the Site indicate the complete exposure pathways that are of concern due to releases from the Site are: groundwater impacts affecting the on-site and off-site potential drinking water and soil impacts affecting ecological receptors and future on-site construction workers. Given RACER Trust's requirement to position its properties for sale and redevelopment, the overall remedy considers both scenarios where the Site remains in its current state and the scenario where the Site is sold for redevelopment. Following the issuance of this FD/RC and prior to the implementation of the final remedy, RACER shall develop a Corrective Measures Implementation ("CMI") Work Plan that briefly describes and summarizes how they intend to carry out these activities.

[3] Other contaminants not considered to be COCs, such as aluminum, arsenic and manganese are also subject to this CAO as long as their concentrations exceed state and federal screening criteria. RACER Trust will continue to monitor for these and other site-related constituents and ensure exposure to groundwater contaminated with these constituents does not occur.

[4] RACER Trust was created with the requirement of "conducting, managing, and funding remediation at [the Site], while positioning [it] for redevelopment." EPA expects the Site will be sold and redeveloped in the future and expects site features that likely contribute to reduced infiltration to be altered. Should these features be disturbed or removed, an alternative infiltration management method(s) will be required pending EPA concurrence. EPA will consider this alternative method to be a "non-significant" change to the remedy unless the method is believed to be less protective than current controls.

Soil Remedy

1) Land use restrictions via a Restrictive Covenant that limit land use to industrial uses, require soil management restrictions by requiring the Facility owner to manage soils, media and/or debris in accordance with state and federal regulations. RACER must also maintain any existing caps and vegetation and manage any potential Facility-wide vapor intrusion as long as the Site remains in its current vacant, undeveloped state.
2) Ecological soil cover placed over select contaminated areas on site to minimize the risk of exposure for ecological receptors identified in the Environmental Risk Assessment.
3) Surficial waste cleanup to remove waste dumped on the site prior to the addition of a perimeter fence at the site.

Groundwater Remedy

1) Groundwater use restrictions on-site will prevent exposure to contaminants above EGLE's Non-Residential Drinking Water Protection Criteria and prevent exacerbation of site-related contamination.
2) RACER will work with local governmental bodies to ensure no off-site drinking water wells are installed at neighboring properties by those property owners or tenants to prevent exposure to contaminants above the EGLE Part 201 Residential Drinking Water Protection Criteria.
3) RACER will establish a long-term groundwater monitoring plan which will be used to evaluate trends and make any needed decisions in the future regarding the CAOs.

EPA has decided that controls at the Site will be maintained through a Restrictive Covenant that will, at minimum:

1) Delineate the approximate Area of Disturbance.
2) Include a prohibition on potable use of on-site groundwater. Well installation would be restricted to only applications consistent with response activities for the purpose of groundwater monitoring or other remedial activities. Dewatering would be limited to short term construction purposes. Care would be taken to prevent further migration or exacerbation of remaining contamination on-site and all applicable regulations and best management practices are followed.
3) Include a non-residential property-use restriction.
4) Include a requirement that a Soil Management Plan be developed prior to the start of any excavation work to protect workers who may have to excavate contaminated soil in the future.
5) Include a notice that will be placed on the deed requiring the vapor intrusion pathway be considered if property use is ever proposed to change in the future.

EPA will re-evaluate its final remedy decision for the RACER site if the Agency learns that conditions, such as land use, have changed in ways that may increase risk of human or environmental exposure to contamination, or if any vapor intrusion investigation identifies a complete vapor intrusion pathway. If any engineered structures are to be constructed, existing site features altered or if the Site owner/operator considers the use of the contaminated property for purposes other than non-residential, EPA will revisit this Final Decision and may require additional corrective measures. EPA may also require revisions to the proposed Restrictive Covenant or other actions necessary to address risks to human health or the environment.

EPA will document all the above-described institutional controls by entering restrictive covenants on the property deed. These covenants will be enforceable by EGLE and by EPA. EPA will also require that existing municipal ordinances regarding groundwater use be monitored to ensure provisions for prohibiting potable well installation off-site most groundwater use on-site remain in place.

RACER must ensure all controls and long-term remedies are maintained and operate as intended. RACER will submit an annual certification that all controls are in place and remain effective. In addition, long-term remedies will be reviewed and inspected on a five-year basis, as long as necessary, to ensure the remedy is functioning as intended; the exposure assumptions, toxicity data, screening criteria and cleanup levels, and CAOs are still valid; and any information that comes to light that could call into question the protectiveness of the remedy is considered.

VII. CRITERIA ON WHICH THE FINAL REMEDY SELECTION IS BASED

As explained further in EPA's Statement of Basis for the proposed Final Remedy Decision, EPA has evaluated its Final Remedy using the following criteria:

1) Overall protectiveness of human health and the environment;
2) Attainment of media cleanup objectives;
3) Control of the sources of releases;
4) Long-term reliability and effectiveness;
5) Reduction of toxicity, mobility, and volume of waste;
6) Short-term effectiveness;
7) Implementability;
8) Cost;
9) Community acceptance of remedy; and
10) State support and acceptance of remedy

VIII. EVALUATION OF THE SELECTED REMEDY

Criteria 1 and 2 have largely been achieved for groundwater contamination as there are no complete pathways based on current conditions where exposure points are considered. On-site groundwater is not currently used for any purpose other than for investigations, and shallow off-site groundwater that is impacted by Site releases is not in use for potable purposes. EPA expects that contaminant concentrations will remain stable or decrease based on the lack of any on-site industrial activities, and the additional groundwater and site use restrictions will satisfy Criterion 4. Long-term objectives will be met following the execution of the institutional controls, completion of ecological cover placement and long-term monitoring. After these activities are completed, Criteria 1, 2, 3, 4 and 6 will be fully met.

The removal of surficial waste and placement of ecological cover will satisfy Criterion 5. This activity, in addition to the other remedies and execution of the RC are very implementable and can be done at little cost, and therefore satisfies Criterion 7. In their entirety, the costs are

reasonable for the current and expected future conditions of the Site and the off-site area around the Site, satisfying Criterion 8.

Finally, the Statement of Basis was publicly noticed on September 2, 2021 and a public comment period was open for 30 days allowing anybody from the public to comment on the proposed remedy. EPA received few comments, none of which expressed disapproval of the final remedy proposal, which indicates the proposed remedy was acceptable. EPA also met with staff from EGLE on October 30, 2019 to seek feedback regarding the proposal, and similarly received no opposition. Based on the lack of significant comments from the public or EGLE, Criteria 8 and 9 are satisfied.

IX. PUBLIC PARTICIPATION ACTIVITIES

EPA held a 30-day public comment period for the proposed remedy identified in the Statement of Basis from September 2, 2021 to October 2, 2021. On September 2, 2021, EPA gave notice of the comment period through the *Belleville Area Independent*. EPA offered to hold a public meeting if requested by concerned parties. EPA did not receive a request for a public meeting and no public meeting was held.

During the public comment period, the Statement of Basis, Public Notice, and Administrative Record were available for public inspection in the Belleville Area District Library, 167 4th Street, Belleville, Michigan and at the EPA Region 5 Records Center, 77 West Jackson Boulevard, Chicago, Illinois. Records were also available on a public-facing website created specifically for the public comment period and public noticing.

X. DECLARATION

Based on the information in the Final Decision and Response to Comments and the Administrative Record compiled for this corrective action decision at the RACER Van Buren Township Landfill in Van Buren Township, Michigan, EPA has determined that the Final Remedy is appropriate and is protective of human health and environment for the anticipated current and future uses of the property.

EDWARD NAM
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Date: 2022.03.08 17:07:18 -06'00'

Edward Nam
Division Director
Land, Chemicals and Redevelopment Division

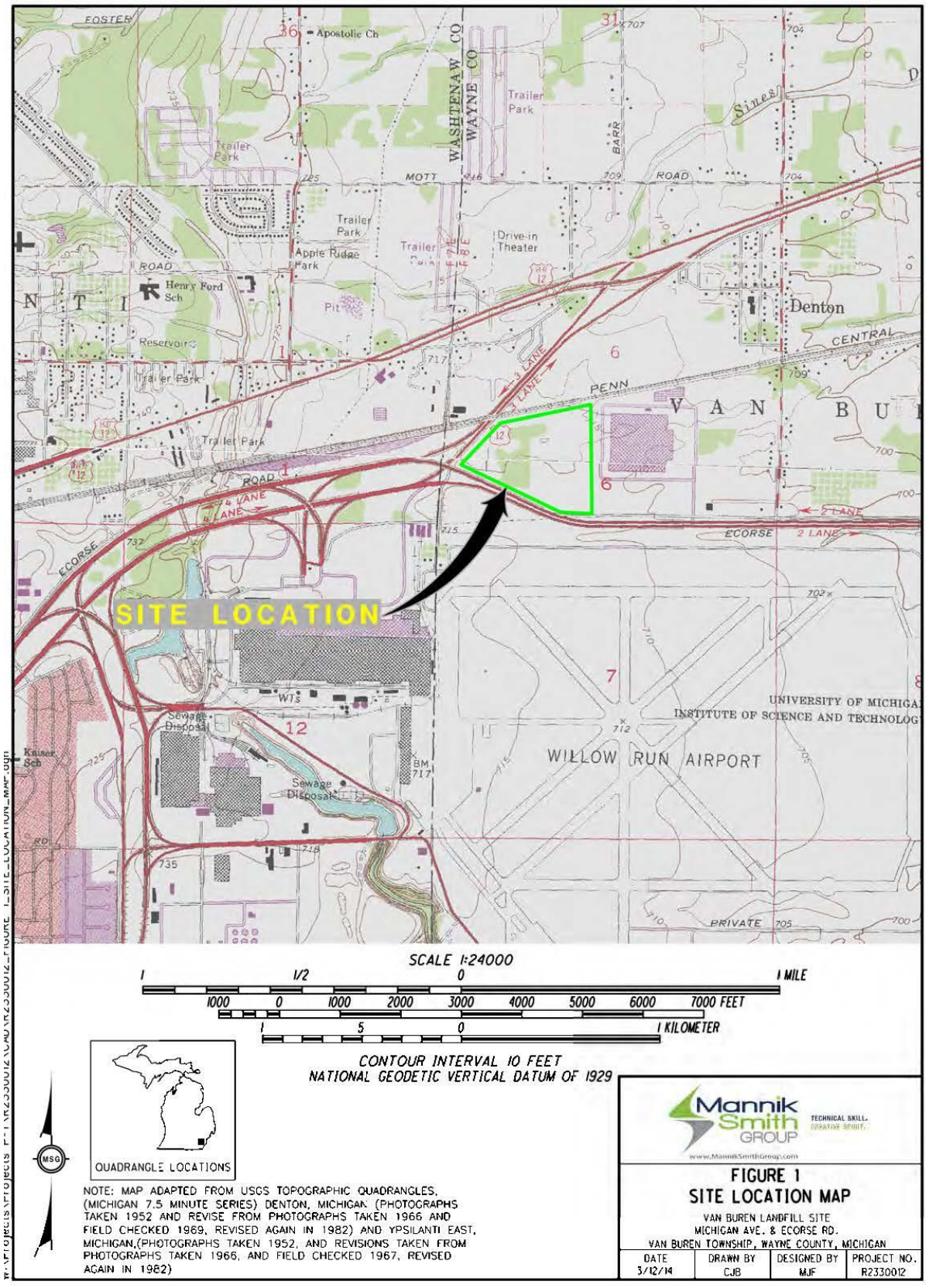
Date

ATTACHMENT 1

SITE LOCATION

FINAL DECISION & RESPONSE TO COMMENTS
RACER – VAN BUREN TOWNSHIP LANDFILL

EXHIBIT 1


SITE LOCATION
Denton
WILLOW RUN AIRPORT
UNIVERSITY OF MICHIGA
INSTITUTE OF SCIENCE AND TECHNOLOG
Trailer Park
Apple Ridge Park
Drive-in Theater
Henry Ford Sch
Kaiser Sch
Sewage Disposal
Reservoir
Pit
MOTT
ROAD
ECORSE
PENN
CENTRAL
WASHTENAW CO
WAYNE CO
PRIVATE
SCALE 1:24000
1 1/2 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 5 0 1 KILOMETER
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
QUADRANGLE LOCATIONS
NOTE: MAP ADAPTED FROM USGS TOPOGRAPHIC QUADRANGLES, (MICHIGAN 7.5 MINUTE SERIES) DENTON, MICHIGAN (PHOTOGRAPHS TAKEN 1952 AND REVISE FROM PHOTOGRAPHS TAKEN 1966 AND FIELD CHECKED 1969, REVISED AGAIN IN 1982) AND YPSILANTI EAST, MICHIGAN,(PHOTOGRAPHS TAKEN 1952, AND REVISIONS TAKEN FROM PHOTOGRAPHS TAKEN 1966, AND FIELD CHECKED 1967, REVISED AGAIN IN 1982)
Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
FIGURE 1
SITE LOCATION MAP
VAN BUREN LANDFILL SITE
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN
DATE 3/12/14
DRAWN BY CJB
DESIGNED BY MJF
PROJECT NO. R2330012

ATTACHMENT 2

RESPONSE TO COMMENTS

FINAL DECISION & RESPONSE TO COMMENTS
RACER – VAN BUREN TOWNSHIP LANDFILL

FINAL DECISION AND RESPONSE TO COMMENTS
REMEDY FOR SOIL AND GROUNDWATER CONTAMINATION

FOR

RACER VAN BUREN TOWNSHIP LANDFILL
INTERSECTION OF ECORSE ROAD AND ROUTE 12
VAN BUREN TOWNSHIP, MICHIGAN

A public comment period ran from September 2, 2021 to October 2, 2021, allowing the public and other stakeholders to submit thoughts and concerns to the EPA on the proposed Statement of Basis. EPA received few comments from the public, received comments from RACER Trust, and received no requests for a public meeting during the public comment period. Comments received during the public comment period are included herein in italics. EPA's responses to those comments are as follows.

COMMENTS FROM RACER TRUST

RACER Trust Comment 1: *RACER Trust was created during the former General Motors Corporation (Former GMC) bankruptcy litigation. An Environmental Response Trust (ERT) Consent Decree and Settlement Agreement (SA) among the Former GMC-related Debtors, the United States, certain states including the State of Michigan, the Saint Regis Mohawk Tribe, and EPLET, LLC, (not individually but solely in its representative capacity as Administrative Trustee of the Trust) was entered by the U.S. Bankruptcy Court for the Southern District of New York on March 29, 2011. Pursuant to the SA, RACER Trust became effective on March 31, 2011, and at that time assumed title and certain interests in 89 Former GMC properties, including the Site. The SA also gave RACER Trust the mission of conducting, managing, and funding remediation at these properties, while positioning them for redevelopment. The Trust's obligations and ability to remediate this Site are ultimately subject to the SA's terms and conditions.*

EPA Response: Acknowledged. This additional information regarding RACER Trust and its history will be added to the Final Decision in an effort to provide that additional context behind the final remedy decision at the Van Buren Township Landfill site.

RACER Trust Comment 2: *An alternate Site location map is provided as Exhibit 1 to this Attachment to clarify the Site's location.*

EPA Response: The figure used in the Statement of Basis came from a previous report, which inadvertently identified the neighboring GM property as the site location. This figure, which identifies the correct property, will be added to the end of the Final Decision and Response to Comments in the Figures appendix.

RACER Trust Comment 3: *RACER Trust points out that the Site stopped taking waste and was capped prior to the passage of the Resource Conservation and Recovery Act; RCRA hazardous waste was never accepted at the Site for treatment, storage, or disposal; a permit application to*

treat, store, or dispose of RCRA hazardous waste has never been filed for the Site; and the Site was never part of a larger facility for which a permit application to treat, store, or dispose of RCRA hazardous waste was ever filed. Therefore, the Site is not subject to RCRA Corrective Action requirements. However, USEPA and RACER Trust agreed to enter into a Performance Based Corrective Action Agreement that provided for releases of hazardous constituents at the Site to be addressed pursuant to the RCRA Corrective Action process because the RCRA Corrective Action process is an established approach to address releases of hazardous constituents and achieve a remedy protective of human health and the environment.

EPA Comment 4: Acknowledged. The language regarding hazardous waste and obligations under RCRA Corrective Action was included in the September 30, 2011 Performance-Based Voluntary Agreement ("VPBA") and was carried into the Statement of Basis. EPA reserves its right to exercise its obligation and authority to require investigations where those activities are suspected to have taken place. EPA directs readers to the VPBA to understand the terms of that agreement.

RACER Trust Comment 4: *It appears that "IDEM DCLs" are inadvertently referenced instead of EGLE Part 201 Criteria.*

EPA Response: Concur. EGLE Part 201 and EPA RSLs are the correct criteria to be referenced at the RACER Van Buren Township Landfill.

RACER Trust Comment 5: *As noted in the SoB in the Groundwater section on page 7, drinking water wells within a one-mile radius of the Site are screened 85 to 100 feet below ground surface, which is below the clay layer at the Site. The clay layer serves as a lower confining layer for any contaminants as described in the Hydrogeological Setting section on pages 3 and 4. As there is a preferred deeper unit from which wells obtain water in the area and the shallow saturated unit containing concentrations of iron above drinking water at the Site is not currently used for water supply, RACER Trust believes the shallow saturated unit has little to no potential to be used for a water supply source.*

It appears that "soils" are inadvertently identified instead of "groundwater" for Corrective Action Objectives (CAOs) in the sentence introducing the specific CAOs.

EPA Response: The shallow water bearing zones in the subsurface both on-site and off-site do not appear to be in use for any potable purpose near the Site at this time, however it is not appropriate to use current groundwater use as a basis for future, potential use. According to EPA guidance, *Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action* (EPA, 2004), it is appropriate to consider the groundwater use designation when selecting screening criteria. Few water bearing sources can be considered Class III groundwaters, which are defined as not current or potential sources of drinking water due to total dissolved solids above 10,000 mg/L or are contaminated beyond the capabilities of any treatment system or technology.

EPA agrees that the very shallow groundwater is unlikely to be used as a source of drinking water in the foreseeable future given the availability of another source below the confining unit,

however whether that occurs is ultimately the purview of the State of Michigan, Wayne County, and Van Buren Township provided federal drinking water standards are complied with. EPA believes the use of health-based drinking water screening criteria to establish corrective action objectives is appropriate. Restoring groundwater to its maximum beneficial use, which at the Site would be consistent with a Class II designation, are appropriate for long-term objectives.

RACER Trust Comment 6: *It appears that AK Steel and a RCRA First Corrective Measures Study Report, July 2019 are inadvertently identified instead of RACER Trust and the September 2018 Corrective Measures Study for the Site.*

It is noted that in addition to health and safety plans, Michigan has due care requirements for owners and operators to take actions to ensure that the contamination does not cause unacceptable exposures, and the contamination is not exacerbated or worsened.

EPA Response: Concur, the correct reference on Page 11, Section VI is RACER Trust and the September 2018 Corrective Measures Study.

RACER Trust Comment 7: *RACER Trust's SA funding provides its financial ability/assurance to complete remediation (i.e., Environmental Action) related to the Site. Pursuant to SA Paragraph 96, the United States, the States that are a party to the Settlement Agreement, including Michigan, and the Saint Regis Mohawk Tribe agreed to not seek from RACER Trust additional financial assurance that would otherwise be required of a non-ERT party under environmental law.*

EPA Response: Acknowledged. The provision in the Statement of Basis regarding financial assurance has been removed from the Final Decision document.

COMMENTS FROM THE PUBLIC

Public Comment 1: *Voluntary Approach – The SB indicates the Site was addressed by U.S. EPA Region 5 under the Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) program, however it should be noted that the Site is not subject to RCRA CA because (1) General Motors Corporation purchased the property in 1969, well before the RCRA regulations came into effect in 1976, and, as a condition of that purchase it required the prior owner to cease all landfilling and cap the landfilled area, and (2) General Motors Corporation did not apply for a permit to treat, store or dispose of RCRA hazardous waste at the Site, thus it cannot be subject to RCRA CA. GM LLC understands that while U.S. EPA may unilaterally choose to conduct the investigation and remediation using the RCRA Corrective Action technical standards, this is merely a procedural decision and that choice of cleanup programs does not make the facility, nor any contiguous property, subject to RCRA CA. U.S. EPA should clearly state this in the Final Decision so as not to create any uncertainty about the application of RCRA CA to this facility.*

EPA Response: Acknowledged. The language regarding hazardous waste and obligations under RCRA Corrective Action was included in the September 30, 2011 VPBA and was carried into

the Statement of Basis. EPA reserves its right to exercise its obligation and authority to require investigations where those activities are suspected to have taken place. EPA directs readers to the VPBA to understand the terms of that agreement.

Public Comment 2: *Ownership History – U.S. EPA uses the term "GM" in the SB without discerning between General Motors Corporation and General Motors LLC. General Motors Corporation owned the Site from 1969 until its bankruptcy in 2009. General Motors LLC is a wholly different company, that is not a successor to General Motors Corporation nor affiliated in any way, and never held any interest in the Site. The use of the term "GM" could cause confusion with the public and therefore the Final Decision should clarify that General Motors Corporation was an owner of the Site.*

EPA Response: Concur. The Final Decision will explicitly state "General Motors Corporation" where ownership history of the Van Buren Township Landfill is discussed.

Public Comment 3: *Site Location Map – The Site location map within the SB incorrectly identifies the GM Service Part Operations (SPO) as the "Site." The RACER Van Buren Landfill east of the GM SPO is the correct location. Please update the Site Location Map to reflect the RACER Van Buren Landfill as the "Site".*

EPA Response: Concur. The figure used in the Statement of Basis came from a previous report, which inadvertently identified the neighboring GM property as the site location. This figure, which identifies the correct property, will be added to the end of the Final Decision and Response to Comments in the Figures appendix.

ATTACHMENT 3

INDEX TO THE ADMINISTRATIVE RECORD

FINAL DECISION & RESPONSE TO COMMENTS
RACER – VAN BUREN TOWNSHIP LANDFILL

U.S. ENVIRONMENTAL PROTECTION AGENCY

ADMINISTRATIVE RECORD
FOR THE

VAN BUREN TOWNSHIP/MICHIGAN AVENUE SITE
VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN
EPA ID NO. TMP 000 000 673

ORIGINAL

FINAL DECISION AND RESPONSE TO COMMENTS
MARCH 1, 2022
SEMS ID: 967766

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1	951469	Undated	Moore, T., U.S. EPA	Favero, D., RACER Trust	Letter - Change in EPA Corrective Action Project Manager	1
2	951493	Undated	State of Michigan, Van Buren Township	General Public	Off-Site Water Well Locations	1
3	953130	Undated	Mannik Smith Group	Favero, D., RACER Trust	Site Investigation Health and Safety Plan	28
4	951496	10/1/86	Javandel, I. and Tsang, C., Lawrence Berkely Laboratory	_ __ _ _	Capture Zone Type Curves: A Tool for Aquifer Cleanup	10
5	951490	7/11/03	Saunders, B., BBL Environmental Services	Rindhage, F., General Motors Corporation	Letter - Geophysical Investigation	6
6	951488	12/16/03	Saunders, B., BBL Environmental Services	Rindhage, F., General Motors Corporation	Letter Report for Clearing and Fence Installation	7
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10	951491	4/1/07	Van Buren Township	_ __ _ _	Water Utilities - Section 6 SW	1
11	951470	9/30/11	Cisneros, J., U.S. EPA	Kehne, J., Hill & Kehne, LLC	Performance-Based Corrective Action Agreement w/Cover Letter	10
12	954795	10/11/11	Conestoga-Rovers & Associates (CRA)	U.S. EPA	Current Conditions Report - Revision 0 (Draft for Review) (Redacted)	296
13	951487	4/2/12	_ __ _ _	_ __ _ _	Technical Review - 2/12 Sampling & Analysis Plan and Fundamental Quality Assurance Project Plan	4
14	951448	4/13/12	Favero, D., RACER Trust	Black, C., U.S. EPA	Semi-Annual Progress Report - 10/11-3/12	3
15	953132	5/8/12	Meincke, C., Conestoga-Rovers & Associates (CRA)	Black, C., U.S. EPA	Response to U.S. EPA Technical Review of Sampling and Analysis Plan and Fundamental Quality Assurance Project Plan	9
16	953156	6/11/12	Conestoga-Rovers & Associates (CRA)	Black, C., U.S. EPA and Favero, D., RACER	Sampling and Analysis Plan and Quality Assurance Project Plan - Revision 1 (Redacted)	381
17	954781	12/1/12	Mannik Smith Group	RACER Trust	Phase IA Site Characterization	419
18	953135	10/7/13	Biehl, F. and Friedhoff, M., Mannik Smith Group	Black, C., U.S. EPA	Memo - Phase IB Site Investigation	10

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20	954790	3/12/14	Biehl, F. and Friedhoff, M., Mannik Smith Group	Black, C., U.S. EPA	Memo - Phase II Site Investigation	70
21	954791	3/12/14	Biehl, F. and Friedhoff, M., Mannik Smith Group	Black, C., U.S. EPA	Memo - Phase II Site Investigation - Laboratory Analytical Data Reports (2013 Sampling)	444
22	951463	4/14/14	Biehl, F., Mannik Smith Group	Black, C., U.S. EPA	Semi-Annual Progress Report - 10/13-3/14	4
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26	951450	4/16/15	Biehl, F., Mannik Smith Group	Black, C., U.S. EPA	Semi-Annual Progress Report - 10/14-3/15	4
27	953161	6/16/15	Anchor QEA	RACER Trust	Draft Ecological Risk Assessment - Steps 5-8 of Process	104
28	954793	9/2/15	Biehl, F. and Near, A., Mannik Smith Group	Black, C., U.S. EPA	Memo - Phase IV Site Investigation	62
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33	953201	3/25/16	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	November 2015 Semi-Annual Ground Water Sampling Results - General Motors Property	37
34	951451	4/15/16	Biehl, F., Mannik Smith Group	Pursel, B., U.S. EPA	Semi-Annual Progress Report - 10/15-3/16	4
35	951467	5/26/16	Mazur, D., U.S. EPA	Pursel, B., U.S. EPA	Memo - Review of BERA - Baseline Ecological Risk Assessment	7
36	953195	8/1/16	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	April 2016 Semi-Annual Ground Water Sampling Results	178
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38	954757	8/1/16	Anchor QEA	RACER Trust	Draft Ecological Risk Assessment - Steps 1-2 of Process	474
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40	951495	9/14/16	Pursel, B., U.S. EPA	Favero, D., RACER Trust	Letter - Draft Ecological Risk Assessment - Steps 1 and 2	1
41	951453	10/17/16	Biehl, F., Mannik Smith Group	Pursel, B., U.S. EPA	Semi-Annual Progress Report - 4/16-9/16	4
42	951498	1/18/17	Biehl, F., Mannik Smith Group	Pursel, B., U.S. EPA	RACER Soil pH Sampling Work Plan	4
43	953159	1/31/17	Volosin, J. and Haury, D., Anchor QEA	Pursel, B., U.S. EPA	Memo - Analysis of Chemical Constituent Outliers	8

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48	951492	5/22/17	Pursel, B., U.S. EPA	Favero, D., RACER Trust	Letter - Approval with Modifications of the Draft Ecological Risk Assessment - Steps 3-8	2
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52	951464	9/19/17	Dodds, J., U.S. EPA	Pursel, B., U.S. EPA	Memo - Technical Review of Ecological Risk Assessment Process	1
53	951454	10/13/17	Biehl, F., Mannik Smith Group	Pursel, B., U.S. EPA	Semi-Annual Progress Report - 4/17-9/17	4
54	954776	2/2/18	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	Fall 2017 Semi-Annual Ground Water Sampling Results	210

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57	953197	7/10/18	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	Spring 2018 Semi-Annual Ground Water Sampling Results - Wells on Adjacent General Motors Property	44
58	953157	9/11/18	Mannik Smith Group	Pursel, B., U.S. EPA	Draft Corrective Measures Study	148
59	951461	10/15/18	Biehl, F., Mannik Smith Group	Pursel, B., U.S. EPA	Semi-Annual Progress Report - 4/18-9/18	4
60	953193	12/18/18	Favero, D., RACER Trust	Pursel, B., U.S. EPA	Data Graphs - Monitoring Wells Iron Concentrations and Turbidity Levels	30
61	951462	4/11/19	Biehl, F., Mannik Smith Group	Pursel, B., U.S. EPA	Semi-Annual Progress Report - 10/18-3/19	4
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69	953126	12/11/19	Biehl, F. and Martinez, J., Mannik Smith Group	Fails, W., General Motors Group	Letter - Notice of Migration of Contamination	8
70	953127	12/11/19	Biehl, F. and Martinez, J., Mannik Smith Group	Michigan Department of Transportation (MDOT)	Letter - Notice of Migration of Contamination	8
71	953128	12/11/19	Biehl, F. and Martinez, J., Mannik Smith Group	Aufdenkampe, S., Norfolk Southern Corporation	Letter - Notice of Migration of Contamination	8
72	953129	12/11/19	Biehl, F. and Martinez, J., Mannik Smith Group	Plum, R., Subaru Research and Development, Inc.	Letter - Notice of Migration of Contamination	8
73	964389	3/4/20	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	Memo - Fall 2019 Semi-Annual Ground Water Monitoring Results	313
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78	966467	7/2/21	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	Memo - Spring 2021 Semi-Annual Ground Water Monitoring Results	272
79	967760	9/2/21	U.S. EPA	File	Statement of Basis for Proposed Soil and Groundwater Cleanup	37
80	972809	3/1/22	Nam, E., U.S. EPA	Trigger, G., RACER Trust	Final Decision and Response to Comments - Remedy for Soil and Groundwater Contamination	65

ATTACHMENT 4

STATEMENT OF BASIS

FINAL DECISION & RESPONSE TO COMMENTS
RACER – VAN BUREN TOWNSHIP LANDFILL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

STATEMENT OF BASIS

For

Proposed Soil and Groundwater Cleanup

At

RACER Van Buren Township Landfill
Ecorse Road and Route 12, Van Buren Township, Michigan

TABLE OF CONTENTS

ATTACHMENTS

ACRONYMS

AOC	Area of Concern
AOC	Administrative Order on Consent
AOI	Area of Interest
AST	Above Ground Storage Tank
BGS	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Total Xylenes
BUSTR	Bureau of Underground Storage Tank Regulations
CAO	Corrective Action Objective
CMS	Corrective Measures Study
ESL	Ecological Screening Level
EPA	U.S. Environmental Protection Agency
HHRA	Human Health Risk Assessment
HI	Hazard Index
IC	Institutional Control
MCL	Maximum Contaminant Level (Drinking Water)
LNAPL	Light Non-aqueous Phase Liquid
PA/VSI	Preliminary Assessment/Visual Site Inspection
PCB	Polychlorinated biphenyl
PRG	Preliminary Remediation Goal
RCRA	Resource Conservation and Recovery Act
RSL	Regional Screening Level
RFI	RCRA Facility Investigation Report
SB	Statement of Basis
SVOCs	Semi-volatile Organic Compounds
SWMU	Solid Waste Management Unit
TSCA	Toxic Substances Control Act
U.S.C.	United States Code
UST	Underground Storage Tank
VISLs	Vapor Intrusion Screening Levels
VOCs	Volatile Organic Compounds
WQS	Water Quality Standards

SECTION I: INTRODUCTION AND PURPOSE OF STATEMENT OF BASIS

The primary purpose of this Statement of Basis ("SB") document is to invite written comments from the public on the approach being considered by the U.S. Environmental Protection Agency (EPA) to remediate and manage contaminated environmental media at Van Buren Township Landfill, located at the intersection of Ecorse Road and Route 12, Van Buren Township, Wayne County, Michigan ("Site") (see Figure One). EPA's proposed remedy at the Site is intended to address contaminated soils and groundwater at the Site. The remedy considers the ecological features and characteristics of the property in addition to site-wide potential exposure routes and off-site impacts to groundwater.to protect people currently using the Site, ecological receptors and future industrial workers from harmful health effects caused by exposure to contamination. The details of the proposed remedy are provided below.

EPA invites written comments from the public on the proposed remedy. Additionally, if requested by a member of the public, EPA will host a public meeting to answer questions and receive additional comments. Public comments will be used to inform EPA's final decision regarding the remedy selection. EPA will publish a *Final Decision and Response to Comments* document conveying EPA's decision about how the Site will be remediated, within 30 days after the close of the comment period. See page 19 for instructions on how to provide comments to EPA on the SB and for the open comment period dates.

This document summarizes information that can be found in greater detail in the Corrective Measures Proposal (Corrective Measures Study, RACER Trust, September 2018) and other documents contained in the Administrative Record for this Facility.

Voluntary Approach

In 2011, Revitalizing Auto Communities Environmental Response (RACER) Trust and EPA entered into a Performance-based Voluntary Agreement to investigate, and as necessary remediate, all releases of hazardous wastes or constituents at or from the Site. The work agreed to by EPA was designed and implemented to protect human health and/or the environment. The RCRA program oversees the cleanup of the Site under the Corrective Action program. The Corrective Action program is responsible for ensuring that facilities investigate and clean up releases of hazardous waste and hazardous constituents at their properties and any releases that have spread beyond the property boundaries, and which pose a risk to human health or the environment. The selected remedies, or clean-up actions, were chosen based upon the current and next anticipated use of the property, which will remain non-residential. The property is currently vacant, and its future anticipated use is industrial or commercial redevelopment.

Remedy Summary

After reviewing the results of soil and groundwater sampling, past environmental practices, historical investigations and remedial activities, EPA is proposing that RACER Trust establish engineering and site-wide institutional controls, address surficial waste across the Site, protect plants, animals and other ecological inhabitants, and ensure current and future users of the Site and neighboring properties are not adversely impacted by contamination left in place. For a full explanation of the proposed remedies, see Section VI: Proposed Final Remedy and Evaluation of Alternatives.

Proposed Remedies

- Land use restrictions at the Site to limit future use to non-residential, which would require any evaluation of future non-residential structures to include assessments and mitigation of the vapor intrusion pathway. The existing vegetative cover will also be required to be maintained as it is expected to be curtailing infiltration and the mobility of groundwater contamination;
- Establish engineering and institutional controls at the Site to eliminate the pathway of contaminated surface and subsurface soil exposure during any future construction and excavation activities to protect construction workers;
- Site-wide Contaminated Soil Management at the Site to manage all soils, media, and/or other debris in accordance with the applicable requirements of all relevant state and federal regulations.
- Groundwater Use Restrictions at the Site to prohibit the installation of groundwater supply wells other than for purposes pertaining to groundwater monitoring and/or other remedial activities, and protect construction workers from exposure to contaminated groundwater at the Site;
- Monitored Stability at the Site to verify elevated contaminants of concern (COCs) at the Site are stable or decreasing;
- Surficial waste cleanup to address any exposed surficial debris and waste piles from the entire Area of Disturbance (AOD). Any material removed will be hauled and disposed of off-site at an appropriate permitted disposal site.
- Ecological cover six inches thick at ecological Zones with receptors that are adversely impacted by surficial soil contamination.
- Long Term Stewardship/Five Year Remedy Review: EPA will require RACER to establish a long-term stewardship plan, including monitoring and reporting, for the duration of time contamination remains on-site and off-site above unrestricted use levels.

SECTION II: SITE BACKGROUND

Location and Setting

The Site is situated on approximately 68 acres of undeveloped land located in Van Buren Township, Wayne County, Michigan. The Site is zoned for general industrial use, located in an area surrounded by mixed commercial, agricultural, industrial, residential, and airport properties. The Site is bounded to the north by railroad tracks, to the east by GM's Service Parts Operations (SPO) Warehouse, to the south by Ecorse Road, and to the west by Michigan Avenue. The Site is vacant and currently not in use however is currently marketed for sale or redevelopment. The Site is heavily wooded in many areas. The southern portion of the Site contains thick areas of brush and thatch, while the northern portion has several open areas with a mixture of tall grass and weeds.

Ownership History

Review of historical records and aerial photographs indicated that the Van Buren Development Company occupied the Site from approximately 1966 to 1969 and operated a landfill during this period. General Motors (GM) acquired the property in approximately 1969 and the Site has been vacant since the closure of the Van Buren Development Company landfill. RACER Trust was created in 2011 with the purpose of remediating and repurposing properties owned by the former General Motors Corporation prior to their bankruptcy in 2009.

Documentation obtained from the Wayne County Department of Environment (WCDOE), Land Resource Management Division, Solid Waste Technical Section indicated that various wastes including incinerator ash from the City of Detroit, demolition waste and domestic refuse from the City of Dearborn, waste paper from Ford Motor Company, and liquid waste inside 55- gallon drums were landfilled at the Site. Other historical information on record at WCDOE indicated that approximately 1,500 to 1,800 gallons of sludge generated from treatment of crankcase oils from Dearborn Refinery may have been disposed at the Site on a daily basis.

Manufacturing, Release, and Regulatory History
Review of historical photographs indicated that the Site was undeveloped and cultivated for agricultural purposes as early as 1940. Van Buren Development Company operated a landfill at the Site from 1966 to 1969, when it was purchased by General Motors, and it has been vacant ever since. Documentation obtained from the Wayne County Department of Environment (WCDOE), Land Resource Management Division, Solid Waste Technical Section indicated that various wastes including incinerator ash from the City of Detroit, demolition waste and domestic refuse from the City of Dearborn, waste paper from Ford Motor Company, and liquid waste inside 55-gallon drums were landfilled at the Site. Automotive parts were also found during limited sampling activities and are expected to be scattered across the site based on observations from field activities. Historical records indicated that some of the waste had high levels of sulfuric acid and had potentially contained heavy metals, polychlorinated biphenyls (PCBs), and other organic chemicals.

Environmental Indicators
EPA developed two "environmental indicators" (EIs) to track conditions that affect human health and groundwater impacts at RCRA facilities. The Human Exposure EI is used to identify whether there are any unacceptable human exposures to contamination at the Facility, and the Groundwater EI is used to identify whether any contaminated groundwater from the Facility is stabilized and not migrating. These EIs are used to assess whether early intervention (such as an interim measure to prevent people drinking contaminated groundwater) is needed. The EI evaluations use available environmental data such as measurements of contaminants in groundwater within a decision matrix.

EPA has determined that EIs are appropriate for the Site provided that remedial actions are successfully executed. Following the implementation of the proposed remedies discusses in this SB, EPA will evaluate the conditions on-site and off-site and issue final determinations accordingly.

Physical Setting and Site Characteristics
As stated above, the Site is heavily wooded with no structures or utilities on-site. The entire perimeter is fenced and provides habitat to several plants and animals with limited human access outside of environmental or redevelopment activities.

<u>Hydrogeological Setting</u>
The Site is located above an unconfined surficial aquifer, with shallow groundwater levels measured at roughly one foot below ground surface (bgs) off-site to approximately 12 feet bgs

on-site. The unconfined aquifer is located above lacustrine clay which serves as a lower confining unit. Due to the historic use of the Site, groundwater flow is unique and flows radially from the central portion of the Site.

Surface Water

There are no surface water bodies located on-site, however small ponds occasionally develop based on seasonal weather effects, otherwise known as vernal pools. These surface water bodies can be significant features for ecological habitats depending on their lifecycle. Occasional seeps are seen at the Site perimeter, which is common for Sites with historical landfilling activities.

Ecological Setting

The Site is currently heavily wooded and vegetated and serves as a host to number of ecological receptors. An ecological risk assessment was performed and particular avian receptors, mammalian receptors, plants and soil invertebrates were all identified to be susceptible to harmful exposure. Some localized risks to receptors exist for either individual species or entire groups which require attention, however it is not consistent across the entire Site. Site-wide risk management activities do not appear to be required when the entire property is considered.

Interim Measures Taken

No interim measures have been proposed at the Site at this time.

SECTION III: SUMMARY OF ENVIRONMENTAL INVESTIGATION

The purpose of a Corrective Action Remedial Facility Investigation ("RFI") is to determine whether hazardous waste or hazardous constituents were released into the environment at a Site, and if so, to evaluate the significance of the releases in terms of risk to human health and the environment. The investigation is governed by a conceptual site model ("CSM") which illustrates Site physical characteristics, sources of contaminants, their fate and transport, affected environmental media, and potentially exposed people (in categories such as office and construction workers) and ecological receptors (plants and animals).

During the investigation phases, environmental media such as soil, groundwater, surface water, sediments, and biota are sampled and analyzed for contamination. Where contaminated media are found, subsequent sampling is usually completed to refine the CSM and define the extent of contamination (how far it may have traveled and how deeply), and to collect enough information for analysis of exposure effects in risk assessments. After each sampling event or investigation phase, EPA evaluates the CSM to determine the adequacy of the data to support decision-making. If found to be inadequate, additional data collection is necessary.

Site Investigation Summary of Results

EPA and RACER Trust entered into a Performance-Based Voluntary Agreement on September 29, 2011 to begin activities pertaining to investigation, stabilization, and remediation of hazardous wastes or substances as they relate to the Site. The results of these investigations have been included in Phase I – Phase IV reports and subsequent semi-annual groundwater monitoring reports, and results are evaluated against current and future residential and non-residential uses. The combined data from these various investigations is referred to as the RCRA Site Investigation (RFI). Each Phase was performed based on information that was available, and

subsequent phases were built on the additional information that was gathered as the investigation progressed.

Areas of Interest (AOIs) were targeted in these reports based on historical land use and previous investigations performed outside of the corrective action process. However, after it was concluded that detected constituents were not necessarily localized within particular AOIs, the decision was made to group all AOIs together into a revised Area of Disturbance (AOD), which allowed for a more site-wide approach. Investigations demonstrate that several contaminants are present in soil and groundwater, where iron is the most persistent groundwater contaminant that poses risks both on and off the Site from historic activities.

RACER submitted its first draft Corrective Measures Study (CMS) to EPA on October 2, 2015 to propose corrective measures for the past release of hazardous contaminants, and revised CMS on September 11, 2018. An addendum focusing on a more robust assessment of corrective measures Alternatives was submitted on May 20, 2019 following discussions between EPA and RACER. For additional Facility investigation details, see the Phase I – Phase IV reports cited above and the ERA. Facility documents can be found at https://www.epa.gov/hwcorrectiveactionsites/hazardous-waste-cleanup-racer-van-buren-township-landfill-van-buren-township and the document repository (see Section VII for additional information).

SECTION IV: SUMMARY OF RISK EVALUATION

Human Health Risk Evaluation

The information and data collected in the RFI are used to determine whether the contamination present an unacceptable risk to human health. This is done in a human health risk assessment. EPA has developed a cancer risk range that it deems acceptable to protect the public. Cancer risk is often expressed as the maximum number of new cases of cancer projected to occur in a population due to exposure to the cancer-causing substance over a 70-year lifetime. For example, a cancer risk of one in one million means that in a population of one million people, not more than one additional person would be expected to develop cancer as a result of the exposure to the substance causing that risk. EPA utilizes the acceptable exposure level, or "risk goal" defined within the National Contingency Plan (NCP) for site enforcement and cleanup decisions. The NCP defines the acceptable excess upper lifetime cancer risk as generally a range between $1x10^{-6}$ – $1x10^{-4}$ for determining remediation goals. The Michigan Department of Environment, Great Lakes and Energy (EGLE) has developed a set of risk-based cleanup standards that are at the midpoint of EPA's acceptable risk range (1 in 100,000 or $1x10^{-5}$) and therefore, EPA has decided the EGLE standards are appropriate to use as the media cleanup standards for this Facility.

If the contaminants are noncancerous but could cause other health problems, then a hazard index quotient is used. To be acceptable to the EPA, the hazard index (HI) quotient for all contaminants must be less than one. The hazard index is the ratio of the concentration of a contaminant to its human health screening value.

Contaminants of Concern were identified by screening the analytes from different media against EGLE Part 201 Health-Based criteria. EGLE has calculated this criteria to protect human health

and the environment from contaminants present in residential and non-residential settings. The Part 201 criteria for iron exceeds EPA's Maximum Contaminant Level (MCL), however the MCL for this contaminant is considered to be aesthetic, or relating to taste, color and odor rather than health-based.

Table 1: Iron in Groundwater Above Relevant Drinking Water Criteria

Constituent	**Iron (Total)**		
Non-Residential Health-Based Drinking Water Criterion (µg/L)	**5,600**		
Residential Health-Based Drinking Water Criterion (µg/L)	**2,000**		
Well ID	**Result (µg/L)**	**Date Sampled**	**Location of Well**
MW-1A	19000	4/15/2021	On-site
MW-3A	7800	4/13/2021	On-site
MW-4A	16000	4/13/2021	On-site
MW-5A	7000	4/16/2021	Off-site
MW-6A*	4300	4/13/2021	On-site
MW-7A	8900	4/14/2021	On-site
MW-8A	7300	4/14/2021	Off-site
MW-9A	32000	4/16/2021	Off-site
MW-10A	22000	4/15/2021	On-site
MW-11A	1400	4/15/2021	On-site
MW-12A	10000	4/13/2021	On-site
MW-17A	2500	4/14/2021	On-site
MW-18A	1900	4/13/2021	Off-site
MW-19A	8300	4/13/2021	Off-site
MW-20A*	14000	4/13/2021	Off-Site
MW-22A	8500	4/14/2021	Off-site
MW-23A	14000	4/14/2021	Of-site
MW-24A*	31000	4/14/2021	Off-site
MW-27A	2600	4/13/2021	On-site
MW-29A	2400	4/13/2021	On-site
MW-31A*	150000	4/12/2021	Off-site
MW-32A	4100	4/12/2021	Off-site
MW-33A	3800	4/12/2021	Off-site
MW-34A	2000	4/13/2021	Off-site

* Samples are significantly higher than dissolved samples, indicating well integrity issues.

The acceptable target risk level for the IDEM DCLs has been set at $1x10^{-5}$ excess cancer risk (meaning one in one hundred thousand persons may experience an additional lifetime cancer risk) and at a hazard quotient value of 1 for non-cancer health risks. These target levels are derived from a combination of default exposure parameters, chemical/physical properties of contaminants, toxicological data and other relevant criteria to evaluate the impact of chemicals on human health

Groundwater
Various metals and VOCs have historically been discovered at the Site with iron identified as the most persistent contaminant located on-site and off-site. With the exception of iron, the exceedances and locations of exceedances are generally intermittent and do not represent a plume, therefore iron is believed to be the primary contaminant of concern. Local zoning ordinances provide protection from exposure to any Site related contaminants above relevant screening criteria. The 2018 Van Buren Township Water Quality Report, which can be found in the Administrative Record, showed no detectable concentrations of site related contaminants in effluent from the treatment works. Twelve wells are documented within a 1-mile radius of the Site, some of which are documented as drinking water wells and are screened 85 to 100 feet below ground surface. The depths these wells are screened at are beneath the aforementioned lacustrine clay layer which provides protection from any downward migration of Site related contaminants.

Soils
Human health risks associated with soil are limited to the direct contact exposure pathway and lead. Despite the high iron concentrations in groundwater, soil analyses for this constituent demonstrate that iron concentrations are generally below state-wide background levels. Lead is detected in soil at intervals approximately 10 feet below ground surface at several locations, suggesting that constructions workers or other workers associated with excavations in these areas are the most susceptible to exposure.

Ecological Risk Evaluation
The information and data collected in the RFI are used to determine whether the contamination present an unacceptable risk to the environment. Ecological risks occur when a plant or animal can come in contact with a contaminant long enough and at a high enough concentration that the contaminant can cause an adverse effect. EPA uses a Hazard Index (HI) to determine excess cumulative risk, where a HI greater than or equal to 1 is considered unacceptable.

Table 2 Wildlife, Earthworm, and Plant Hazard Indices, Metals Only.

Surface Soil Zone[1,2,3]	Shrew	Vole	Robin	Woodcock	Dove	Earthworms	Plants
7	10.5, 3.1	0.7	12.5, 3.6	9.2, 2.8	2.1	17.8	22.3
4	4.9, 2.7	0.7	4.7, 2.3	3.5, 1.8	1.2	5.2	10.9
1	5.5, 2.9	0.6	5.7, 3.7	4.2, 2.2	1.2	5.5	10.1
5	4.9, 2.5	0.5	5.1, 2.6	3.8, 2.0	1.1	4.9	9.1
8	6.4, 3.0	0.6	6.7, 3.2	4.9, 2.5	1.3	4.2	8.7
2	4.6, 2.6	0.5	4.5, 2.3	3.3, 1.8	1	3.3	6.6
6	3.9, 2.0	0.4	3.9, 1.8	2.9, 1.4	0.8	3.3	6.1
9	3, 1.7	0.4	2.9, 1.5	2.1, 1.2	0.7	3	4.2
3	1.9, 1.1	0.2	1.8, 1.0	1.4, 0.8	0.4	1	2.1
10	1.4, 0.9	0.2	1.4, 0.9	1, 0.7	0.4	1	2
Zones 1 to 10	**3.10, 1.72**	**0.39**	**3.11, 1.72**	**2.29, 1.26**	**0.74**	**2.42**	**4.76**

Source: RACER Trust. DRAFT Corrective Measures Study. p. 132. September 11, 2018.

Table 2, above, includes the HIs for the identified receptors at each zone selected in the ERA The Baseline Ecological Risk Assessment and the Screening Level Ecological Risk Assessment analyzed the effects of on-site contamination on ecological receptors at both localized locations and site-wide and found that the site in its entirety does not pose a great risk to receptor groups. Localized risks to receptors exist, however, and were determined to contribute to site-wide hazard assessments. Avian and mammalian receptors, terrestrial plants and soil invertebrates are potential receptors identified in the Ecological Risk Assessment (ERA).

SECTION V: CORRECTIVE ACTION OBJECTIVES

The proposed final remedy and associated remedial goals are designed to protect human health and the environment by mitigating risk to current and potential future receptors. EPA's short-term goals for this Facility are:

a. All current human exposures to contamination at or from the Site must be under control. That is, significant or unacceptable exposures do not exist for all media known or reasonably suspected to be contaminated with hazardous wastes or hazardous constituents above risk-based levels, for which there are complete pathways between contamination and human receptors.
b. Migration of contaminated groundwater at or from the Site must be stabilized. That is, the migration of all groundwater known or reasonably suspected to be contaminated with hazardous wastes or hazardous constituents above acceptable levels is stabilized to remain within any existing areas of contamination as defined by monitoring locations designated at the time of the demonstration. In addition, any discharge of groundwater to surface water is either insignificant or currently acceptable according to an appropriate interim assessment. RACER must collect monitoring and measurement data in the future as necessary to verify that migration of any contaminated groundwater is stabilized.

EPA's long-term goals for the remedy being proposed are:

a. Protecting human health and the environment;
b. Attaining the applicable media cleanup standards;
c. Controlling the sources of the releases to the extent practicable; and
d. Managing any remediation waste in compliance with the applicable standards.

Presented below are the cleanup objectives, or Corrective Action Objectives (CAOs), for the affected media on-site and off-site.

Soils

The CAOs for the protection of human health for soils are preventing exposure to soil contaminated with metals above residential Regional Screening Levels (RSLs) and EGLE Part 201 screening criteria.

Groundwater

EPA expects final remedies to return groundwater to its maximum beneficial use within a timeframe that is reasonable given the particular circumstances of the project. For facilities associated with aquifers that are either currently used for water supply or have the potential to be used for water supply, EPA will require the groundwater be remediated to National Primary

Drinking Water Standard Maximum Contaminant Levels (MCLs) promulgated pursuant to 42 U.S.C. §§ 300f et seq. of the Safe Drinking Water Act and codified at 40 C.F.R. Part 141, or to EPA RSLs for tap water for chemicals for which there are no applicable MCLs. The CAOs for the protection of human health for soils are as follows:

a. Prevent exposure to groundwater contaminated with iron, VOCs, arsenic and other contaminants previously detected above screening criteria at the Site;
b. Demonstrate groundwater contamination associated with the Site is stable or decreasing;
c. Continue implementing the final corrective measures and demonstrate efficient plume contraction and stabilization such that the CAOs are achieved on-site and off-site and EGLE Part 201 health-based screening criteria are met and maintained at the property line point of compliance with and without active remedial measures.

Time Frames

Short-term and long-term goals have been developed to protect human health and environment while accounting for land use at or near the Facility. The goals at this Facility can be summarized as ensuring groundwater can continue to be used for its maximum beneficial uses wherever practical and ensuring current and future on-site and off-site receptors are not at risk from exposure to releases from the Site. RACER must monitor the groundwater contamination to ensure that iron and benzene contamination levels do not cause any harm to downgradient receptors. RACER must also ensure the exposure pathways to surface and subsurface soils and debris are addressed. Finally, RACER must ensure ecological impacts are mitigated to the extent practicable and maintain site features such that groundwater contamination is not exacerbated, or risks of exposure are not increased. The criteria RACER will be evaluated against are as follows:

<u>Short Term (1 year or less)</u>

- Minimize direct contact to soils and groundwater for identified receptors at risk from exposure;
- Contain existing impacts and meet the criteria for the CA725 determination that human health exposures are under control;
- Contain existing impacts and meet the criteria for the CA750 determination that migration of contaminated groundwater is under control;

<u>Long Term (1 year or more)</u>

- Demonstrate that the quality of groundwater impacted by releases from RACER is stable or improving;
- Ensure on-site and off-site institutional controls, engineering controls;
- Groundwater wells must be monitored to confirm CAOs;
- Meet CAOs for iron both on-site and off-site

Considering the historic use of the Site as a landfill, soil and groundwater is contaminated across the property and especially within the AOD. Human health and ecological risks must continue to be controlled or reduced wherever possible, and future use of this Site must consider the remedy being implemented.

Table 4: Corrective Action Objectives

Environmental Media	Corrective Action Objectives				
	Human Health Residential	Human Health Non-Residential	Ecological Receptors	Cross-media Transfer	Resource Restoration
Groundwater	Iron Prevent drinking water exposure above 2,000 µg/L. Benzene Prevent drinking water exposure above 5 µg/L	Iron Prevent drinking water exposure above 5,600 µg/L. Benzene Prevent drinking water exposure above 5 µg/L	N/A	Prevent vapor intrusion from VOCs in groundwater to occupied buildings should the property be sold or redeveloped	Ensure impacts to groundwater from site related contaminants do not worsen
Soil	N/A	Prevent direct exposure to lead in subsurface soil above risk criteria	Reduce the sitewide hazard index regarding ecological exposure to site wide soil contamination	N/A	N/A
Surface Water	N/A	N/A	N/A	N/A	N/A
Air (Indoor)	N/A	Prevent vapor intrusion from VOCs in groundwater to occupied buildings should the property be sold or redeveloped	N/A	N/A	N/A
Other	N/A	N/A	Maintain vegetative cover site-wide	N/A	N/A

SECTION VI: PROPOSED FINAL REMEDY AND EVALUATION OF ALTERNATIVES

The proposed final remedy and associated CAOs is designed to protect human health and the environment by mitigating risk to current and potential receptors. AK Steel evaluated remedial options for the Facility, which are detailed in the Corrective Measures Study Report (*RCRA FIRST Corrective Measures Study Report*, July 2019). EPA has threshold and balancing criteria to determine the applicability of each remedial alternative in relation to the specific circumstances of the impacts defined at the site.

The three remedial Threshold Criteria are the following:

1. Protect human health and the environment based on reasonably anticipated land use(s), both now and in the future
2. Achieve media cleanup objectives appropriate to the assumptions regarding current and reasonably anticipated land use(s), and current and potential beneficial uses of water resources
3. Control the sources of releases to achieve elimination or reduction of any further releases of hazardous wastes or hazardous constituents that may threaten human health and the environment

The seven remedial Balancing Criteria are the following:

1. Long-term reliability and effectiveness (long-term effectiveness should consider reasonably anticipated future land uses)
2. Reduction of toxicity, mobility, and volume of waste
3. Short-term effectiveness
4. Implementability (technical feasibility and availability of services and materials)
5. Cost
6. Community acceptance of remedy
7. State/support agency acceptance

EPA's proposed remedy will include several of the Alternative components being considered below. Some Alternatives are best implemented for the entire site rather than for specific units or areas, while other Alternatives are best implemented for a specific unit or area only. For example, EPA's proposed remedy for a certain area might include treating groundwater in one portion of the Facility, but other less contaminated media might be left in place. Another component of the remedy would involve implementing a health and safety plan to assure that construction workers would use the appropriate personal protective equipment when digging down into the deeper soils that remain contaminated

Proposed Final Remedy
EPA's proposed remedy includes the following components:

- Soil Remedy
  Alternative 1: Land use restrictions would limit land use to industrial uses, require soil management restrictions by requiring the Facility owner to manage soils, media and/or debris in accordance with state and federal regulations. RACER must also maintain any existing caps and vegetation and manage any potential Facility wide vapor intrusion.

  Alternative 5: Ecological cover placed at select areas on-site will minimize the risks of exposure to contaminated soil from ecological receptors identified in the ERA.

  Alternative 12: Surficial waste cleanup efforts will address the dumping activities that took place prior to the construction of the perimeter fencing and other sources of debris across the Site

- Groundwater
  Alternative 2: Groundwater use restrictions on-site will prevent exposure to contaminants above EGLE's Non-Residential Drinking Water Protection Criteria and prevent exacerbation of site-related contamination.

  Alternative 3: RACER will work with local government bodies to ensure no off-site drinking water wells are installed at neighboring properties to prevent exposure to contaminants above the Residential Drinking Water Protection Criteria.

  Alternative 8: RACER will establish a long-term groundwater monitoring plan which will be used to evaluate trends and make any needed decisions in the future regarding the CAOs.

Institutional Controls
Institutional Control ("IC") remedies restrict land or resource use at a Site through legal instruments. ICs are distinct from engineered or construction remedies. ICs preclude or minimize exposures to contamination or protect the integrity of a remedy by limiting land or resource use through means such as rules, regulations, building permit requirements, well-drilling prohibitions and other types of ordinances. For an IC to become part of a remedy, there must be binding documentation such as land-use restrictions in the environmental covenant, local zoning restrictions, or rules restricting private wells.

Financial Assurance
RACER must demonstrate a financial ability to complete corrective action, including constructing the proposed remedy and monitoring Site conditions following remedy construction, as needed, by securing an appropriate financial instrument, consistent with the requirements of 40 C.F.R §§ 264.142 and 264.144. RACER will develop a detailed cost-estimate as part of the corrective measures implementation work plan. RACER may use any of the following financial mechanisms to make the demonstration: financial trust, surety bonds, letters of credit, insurance, and/or qualification as a self-insurer (corporate guaranty) by means of

a financial test. After successfully completing the construction phase of the remedy, RACER may request that EPA reduce the amount of the financial assurance to the amount necessary to cover the remaining costs of the remedy, including any yearly operation and maintenance costs. RACER may make similar requests of EPA as the operation and maintenance phase of the remedies proceeds and ceases.

Long Term Care
RACER must ensure all controls and long-term remedies are maintained and operate as intended. RACER will submit an annual certification that all controls are in place and remain effective. In addition, long term remedies will be reviewed and inspected on a five-year basis to ensure the remedy is functioning as intended, the exposure assumptions, toxicity data, cleanup levels, and CAOs are still valid, and any information that comes to light that could call into question the protectiveness of the remedy is considered.

If any five-year review indicates that changes to the selected remedy are appropriate, EPA would determine whether the proposed changes are non-significant, significant, or fundamental changes to the remedy. EPA may approve non-significant changes without public comment. EPA would inform the public about any significant or fundamental changes to the remedy.

Summary of Alternatives
The CMS included several alternatives that were considered as part of remedy selection. Below is a summary of each Alternative:

- Alternative 1: Land Use Restrictions
  A Restrictive Covenant (RC) would be employed to reduce the risk of potential exposures to future Site users from any remaining contaminants. The RC would restrict land use to nonresidential which would prohibit future Site uses that are not consistent with nonresidential screening and cleanup criteria. Construction on the property would require an assessment of vapor intrusion or incorporation of engineering controls to prevent exposure to any remaining contaminants that contribute to the vapor intrusion pathway. Activities that would disturb exacerbate remaining contamination or interfere with other corrective measures would be prohibited.

- Alternative 2: Ground Water Use Restriction
  The proposed RC would restrict groundwater use on-site in addition to the land use restrictions summarized in Alternative 1. Well installation would be restricted to only applications consistent with response activities for the purpose of groundwater monitoring or other remedial activities. Dewatering would be limited to short term construction purposes. Care would be taken to prevent further migration or exacerbation of remaining contamination on-site and all applicable regulations and best management practices are followed.

- Alternative 3: Off-site Institutional Controls
  A proposal for off-site institutional controls is intended to restrict off-site exposure to contaminants that have migrated from the Site. The controls would be proposed to landowners to prevent groundwater use. A proposal to local government units to execute

a groundwater use ordinance as part of a corrective measure would be considered as an alternative to recommending specific proposals to each property owner. Few wells are currently located within a one-mile radius of the Site, and publicly available well logs demonstrate that residential wells within this baseline are screened beneath the confining clay layer, preventing downward migration.

- Alternative 4: Low Permeability Cap/Cover
  A cap would be placed in areas where discrete or localized exceedances of relevant screening criteria exist across the Site. The cap would be comprised of soil, clay or other media that would facilitate vegetation growth over time, or asphalt or concrete to control infiltration over a larger footprint. If this Alternative is selected, any site-wide controls would include the maintenance of any cap.

- Alternative 5: Ecological Cover
  An ecological cover is proposed across portions of the Site, or the Area of Disturbance (AOD) specifically. Several ecological Zones were identified in the ERA, and the CMS provided several scenarios where ecological cover would be placed to reduce site-wide risk. It was determined that placing cover on Zones 5 and 7 is the most practical application of this Alternative to reduce risk to identified receptors. This Alternative would require that any RC or other land use restriction include maintenance and prevent removal, excavation and disturbance of the ecological cover. Exceptions would be made for repair or maintenance or other activities provided EPA is notified and approves of the activity.

- Alternative 6: Targeted Excavation
  Targeted excavation is considered as an Alternative and would take place within the AOD or anywhere else where exceedances of screening criteria are shallow to reduce volume of contaminants leaching into groundwater. Evaluation of the Alternative includes excavation and backfilling with clean soil, as well as transportation and disposal of excavated wastes.

- Alternative 7: Low Permeability Subsurface Enclosure
  An Alternative of enclosing the Site with a low permeability system that would prevent any off-site migration of groundwater impacted by site-related contaminants was proposed in the CMS. The enclosure would be installed in the subsurface and placed around the perimeter of the Site at a depth adequate to capture contaminated groundwater.

- Alternative 8: Ground Water Monitoring
  Groundwater monitoring will continue into the remedial phase in order to evaluate trends both on-site and off-site. Metals and VOCs will be monitored, and trends including groundwater chemistry will be evaluated throughout the lifecycle of the selected remedy Alternative or Alternatives. The results of monitoring activities will inform future recommendations and modifications, should any be necessary. Activities would be accompanied by site inspections to assess the individual components of and the overall integrity of the remedial strategy.

- Alternative 9: Targeted Pump and Treat
  The pump and treat Alternative would include the construction and installation of perimeter wells and a treatment system to capture contaminated groundwater and remove contaminants above relevant screening criteria. The system would curb off-site migration and reduce the toxicity of groundwater contaminated from historic Site operations. Treated groundwater would be discharged on-site in accordance with National Pollutant Discharge Elimination System requirements or to publicly owned treatment works, both of which would require a permit.

- Alternative 10: Leachate Collection System
  A leachate collection system was proposed as another Alternative, which would serve to passively collect groundwater as it migrates downgradient from the Site, which would then be pumped and treated on-site or shipped off-site for treatment or disposal. The system would consist of collection pipes placed perpendicular to the direction of groundwater flow underlain by sand, gravel and a geotextile filter to control drainage. The proposed Alternative would be designed to reduce the migration of leachate out of the Site, much like a traditional and modern landfill design.

- Alternative 11: Phytoremediation
  Phytohydraulics and Phytosequestration are both components of phytoremediation, which is a proposed Alternative that utilizes site features. This Alternative will rely on existing vegetation to slow infiltration of precipitation and limit both vertical and horizontal movement of groundwater, both of which are likely occuring in the present state. This Alternative would require that the health of the Site-wide or AOD vegetation is monitored and remains healthy as along as contamination is present above relevant screening criteria.

- Alternative 12: Surficial Waste Cleanup
  The Site contains debris remaining from historic use and possibly from trespassers while the Site has been vacant. This Alternative would consist of the removal and disposal of debris across the Site.

- Alternative 13: No Action
  A No Action Alternative is considered as a corrective measure only as a baseline by which to compare other possible Alternatives. It would go no further than leaving the site in its current state, surrounded by a chain link fence without any institutional or engineering controls, RCs or active or passive remedies, or the maintenance of any cover or vegetation of any kind.

The proposed remedy must be reviewed against the remedy selection criteria, noting how it compares to the other options under consideration. This Section profiles the attributes of RACER's proposed remedy against the remedy selection criteria, noting how it compares to the other remedial options under consideration. The evaluation of each Alternative are as follows:

- Overall Protection:
  The overall protection of human health is effectively addressed at the Site by all proposed remedies other than Alternatives 13. The toxicity and volume of the contaminated soils remaining on-site will not be reduced by Alternatives 1, 2 or 3, however exposure will be limited or prevented completely. Institutional controls will prevent potential unacceptable exposure of residents and workers to contaminated soil and groundwater. Appropriate worker safety and health requirements for the proper handling of any hazardous materials during remedial activities also will be required. The remaining remedies would address site-wide and off-site impacts directly by reducing or eliminating the toxicity and volume of waste in the environment.

- Attainment of Media Cleanup Standards:
  Each Alternative was measured against its ability to achieve compliance with applicable groundwater protection standards. Determination of compliance would be performed by monitoring the existing on-site and off-site wells to determine the trend and stability of any contamination left in place. Only Alternatives 6, 9 and 10 would result in achieving the cleanup standards. RACER will include a groundwater monitoring plan using existing wells to assess the compliance with the groundwater standards for iron and other constituents that have been identified as a result of Site history.

- Controlling the Sources of Releases:
  Contributions of groundwater contamination are expected to be ongoing and persistent indefinitely due to the historic use of the Site as a landfill. Alternative 6 is the only Alternative that would address the source or sources of release. Subsurface waste that is believed to be the primary source of groundwater contamination will remain in place, complicating traditional efforts to control sources of releases. As a result, exposure is the primary focus of the CMS. Human exposures are expected to be controlled by Alternatives 1, 2, 3, 11 and 12. Ecological exposure to any sources of risk is expected to be mitigated by Alternative 5.

- Compliance with Waste Management Standards:
  Alternatives 6, 7, 9 and 10 are Alternatives which would function to reduce migration of contaminated groundwater off-site however would result in significant quantities of regulated wastes requiring waste management. The remaining Alternatives would not result in significant accumulation of hazardous waste; however, RACER must comply with all state and federal regulations that apply to the management of any remediation waste that is generated during the implementation of the remedy. Accordingly, RACER must provide to EPA all documentation that any excavation, management, and off-site disposal of contaminated soils or groundwater will comply with State and Federal regulations.

- Long-term Reliability and Effectiveness:
  The proposed remedy will require long term stewardship to ensure that all Alternatives continue to be implemented and that all future site owners are aware of controls in place at the Site. Limiting future groundwater use and land use will ensure that pathways that contribute to any future exposure of potential human receptors are mitigated. Placing

additional controls and documenting expected operation and maintenance of Alternatives 5 and 11, if applicable, will ensure long-term protection of ecological receptors as well. Other Alternatives would require extensive construction, operation and maintenance to ensure longevity and effectiveness. The Site is currently being marketed for sale and potential redevelopment, and operation and maintenance would have implications on redevelopment potential. Any remedies that required active operation and maintenance would be required to continue regardless of Site ownership, which was considered during remedy selection.

- Reduction of Toxicity, Mobility, or Volume of Wastes:
  Alternatives 4, 6, 9 and 10 would likely reduce the toxicity, mobility or volume of wastes and impacted groundwater, and Alternatives 5, 11 and 12 would reduce the toxicity or stabilize the groundwater impacts. The selected remedy requires that the existing vegetative cover will be maintained under the presumption that it is having a favorable impact toward reducing the mobility of contaminated groundwater as infiltration is being reduced. Generally, the proposed remedy is reliant on exposure control to be an effective approach rather than source control or reduction. It is not expected that the toxicity and mobility will increase based on the contamination trends over time, nonetheless the Alternatives will monitor the stability to confirm groundwater impacts do not worsen.

- Short-term Effectiveness:
  Alternatives 1, 2 and 3 provide the greatest improvement over the shortest period of time. The Site has been lying vacant for approximately 50 years with few controls in place during that time. The proposed remedies can be implemented quickly following the approval of a Corrective Measures Implementation plan. Alternative 6 would be the quickest Alternative that would reduce or eliminate sources of contamination, however would result in significant quantities of waste to be managed, transported or disposed of. Other Alternatives have little if any immediate short-term effect.

- Implementability:
  It is expected that all Alternatives other than Alternative 3, 7 9 and 10 should be simple to implement. It is not known whether property owners or local government units would be receptive of adopting property specific controls limiting groundwater use. The availability of municipal water and the lack of wells downgradient of the Site suggests that the off-site drinking water exposure pathway is an incomplete pathway even without these controls. There may be local and state requirements regarding the format of the required Site deed restriction or other institutional controls. Alternatives 7 and 10 would require significant disturbances to existing site features or would require extensive construction or maintenance. Alternative 9 would result in significant amounts of groundwater that would require on-site treatment prior to discharge.

- Cost:
  Costs were estimated for each Alternative. Costs could be considered in deciding between two or more corrective measure Alternatives that were equally acceptable when evaluated for technical, human and ecological health, environmental and institutional criteria. As the Site was historically used as a landfill, a large volume of waste will

remain in the subsurface requiring a remedy and cost estimate that reflects the long-term life cycle of a landfill.

Table 4: Estimated Costs of Active Considered Alternatives

	Low Permeability Cap or Cover	Targeted Excavation	Surficial Waste Cleanup	Ecological Cover
Capital Cost	$1,026,030	$1,940,370	$17,240	$567,785
Annual Cost	$8,784	$3,592	--	$4,200
30-Year Cost	$1,289,550	$2,048,130	$17,240	$702,785

	Targeted Pump and Treat	Leachate Collection System	Low Permeability Subsurface Enclosure
Capital Cost	$343,770	$2,854,062	$8,688,302
Annual Cost	$52,582	$58,160	$72,160
30-Year Cost	$1,921,230	$4,598,862	$10,853,102

Table 5: Estimated Costs of Proposed Alternatives

Corrective Measure:	Cost	
Land Use Restriction:	Capital Costs	$144,598
	Annual Cost	$6,980
	30 Year Cost	$353,998
Ground Water Use Restriction:	Capital Costs	$10,478
	Annual Cost	$2,592
	30 Year Cost	$88,238
Off-Site Institutional Controls:	Capital Costs	$128,660
	Annual Cost	$2,592
	30 Year Cost	$206,420
Surficial Waste Cleanup:	Capital Costs	$17,240
	Annual Cost	$0
	30 Year Cost	$17,240
Ecological Cover:	Capital Costs	$576,785
	Annual Cost	$4,200
	30 Year Cost	$702,785
Ground Water Monitoring:	Capital Costs	$13,424
	Annual Cost	$25,930
	30 Year Cost	$791,324
Total Costs	**Capital Cost**	**$891,185**
	Annual Costs	**$42,294**
	30 Year Costs	**$2,160,005**

Some Alternatives came with excessive costs that are deemed to be prohibitive. Alternatives 4, 6, 7, 9 and 10 would have required a retrofit or significant disturbance of Site features to implement and maintain or would have resulted in excessive volumes of waste that would be generated due to the size and characteristics of the Site. In addition, a lengthy operational period of the system is expected and would cause this Alternative to be cost prohibitive. Table 4 highlights the estimated costs of the active alternatives that were considered, and Table 5 represents the estimated costs of the selected alternatives.

- Community Acceptance.
  The proposed remedy is expected to be non-intrusive and undisruptive to the surrounding community. Nonetheless, EPA will evaluate community acceptance of the proposed remedy during the public comment period, and it will be described in the Final Decision and Response to Comments.

- State Acceptance
  EPA conferred with the Remedial Advisory Team (RAT) within the Michigan Department of Environment, Great Lakes and Energy (EGLE) to discuss the proposed remedy. EGLE provided feedback that has been incorporated into this Statement of Basis, and as a result, is expected to concur with the proposed remedy

SECTION VII: PUBLIC PARTICIPATION

EPA requests feedback from the community on the proposal to select the proposed remedy as the final remedy for the Site. On September 2, 2021, EPA placed an announcement in the Belleville Area Independent (http://bellevilleareaindependent.com/) to notify the public of the availability of this Statement of Basis document, its supporting Administrative Record, and the opportunity to request a public meeting on EPA's proposed corrective action for the Site. The public comment period will last thirty (30) calendar days from the date of the public notification in the local newspaper, from September 2, 2021 to October 2, 2021. We encourage community members to submit any comments regarding the proposed remedy in writing by October 2, 2021. If requested during the public comment period, EPA will also host a public meeting to receive feedback directly. Send comments to EPA in writing at the EPA address listed below. To submit comments or to request a public meeting, contact EPA Project Manager below

Following the 30-day public comment period, EPA will prepare a *Final Decision and Response to Comments* document that will identify the selected remedy for the Site. The Response to Comments document will address all significant written comments and any significant oral comments generated at a public meeting, if a meeting is held. EPA will make the *Final Decision and Response to Comments* document available to the public. If such comments or other relevant information would cause EPA to propose significant changes to the currently proposed remedy, EPA will seek additional public comments on any proposed revised remedy.

At the conclusion of the comment period, EPA will summarize public comments and prepare the Response to Comments and Final Decision document, which will become part of the EPA Administrative Record. To send written comments or obtain further information, contact:

Brandon Pursel
U.S. EPA Region 5
77 W. Jackson Blvd. (M/C LR-16J)
Chicago, IL 60604
Ph: (312)-353-9229
E-mail: pursel.brandon@epa.gov

The Administrative Record contains all information considered when making this proposal. The Administrative Record (documents about the Site) may be reviewed at these locations (please call for hours):

Belleville Area District Library
167 4th St
Belleville, MI 48111
(734) 699-3291

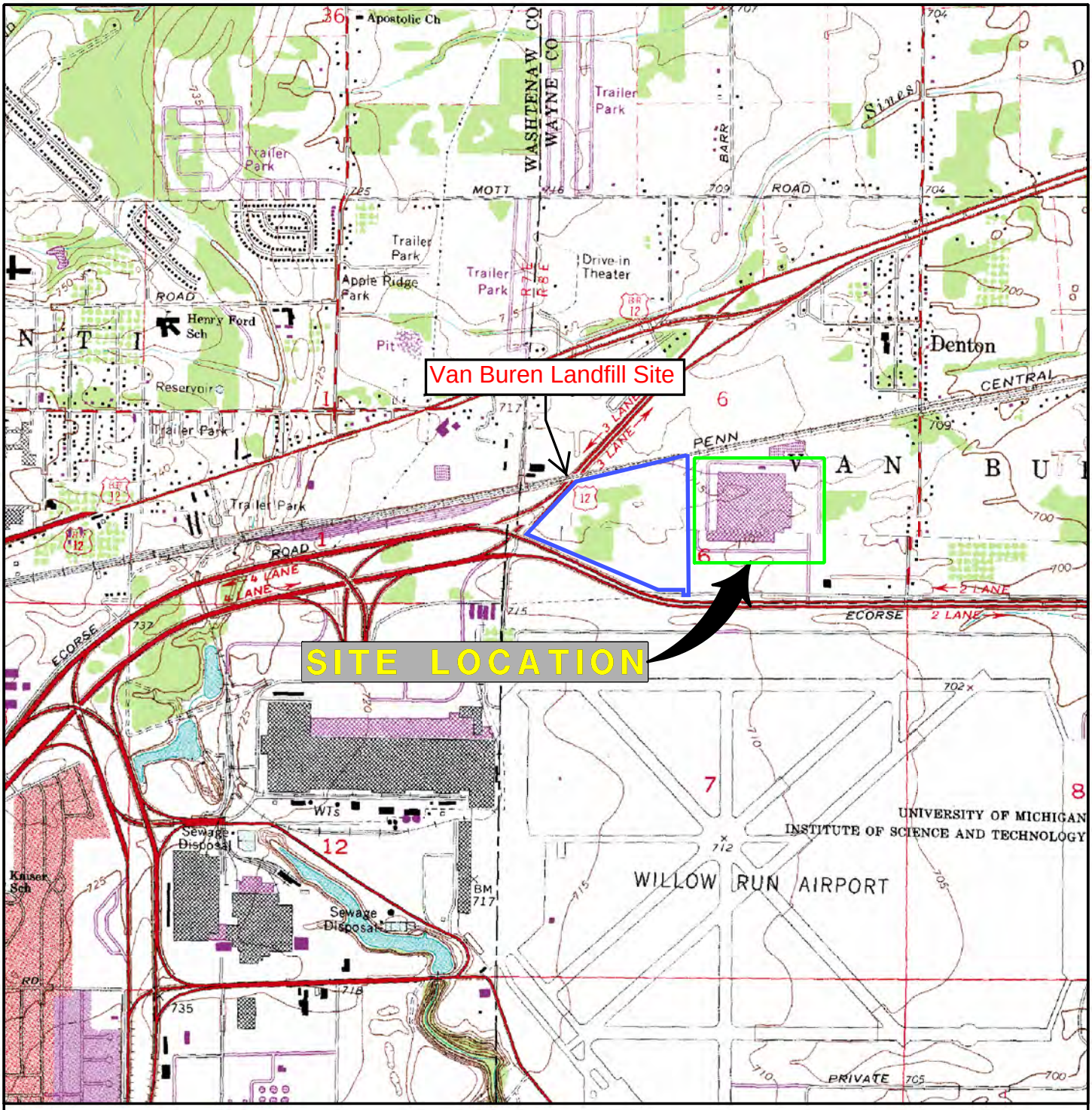
U.S. EPA, Region 5
Land and Chemicals Division Records Center
77 West Jackson Boulevard, 7th Floor
Chicago, Illinois 60604
(312) 353-5821
Hours: Mon-Fri, 8:30 a.m. - 5:00 p.m.

EPA will summarize and address all comments received during the public comment period in a *Final Decision and Response to Comments* document. The preferred remedy in the *Statement of Basis* is a preliminary determination. Should another option be selected as the remedy based upon public comment, new information, or a re-evaluation of existing information, any significant differences from the *Statement of Basis* will be explained in the *Response to Comments*. The *Response to Comments* will be incorporated into the Administrative Record and made available to the public in the information repositories.

APPENDIX 1

FIGURES

STATEMENT OF BASIS
VAN BUREN TOWNSHIP LANDFILL
VAN BUREN TOWNSHIP, MI



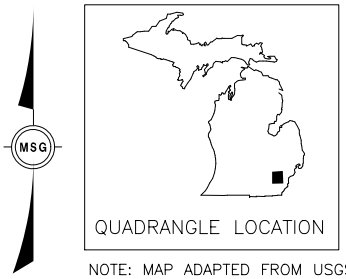
SCALE 1:24000

1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929



NOTE: MAP ADAPTED FROM USGS TOPOGRAPHIC, DENTON, MICH., MAP DATED 1969, PHOTOREVISED 1973 & 1980 AND YPSILANTI EAST, MICH., MAP DATED 1967, PHOTOREVISED 1983, QUADRANGLES, (MICHIGAN 7.5 MINUTE SERIES).

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FIGURE 1

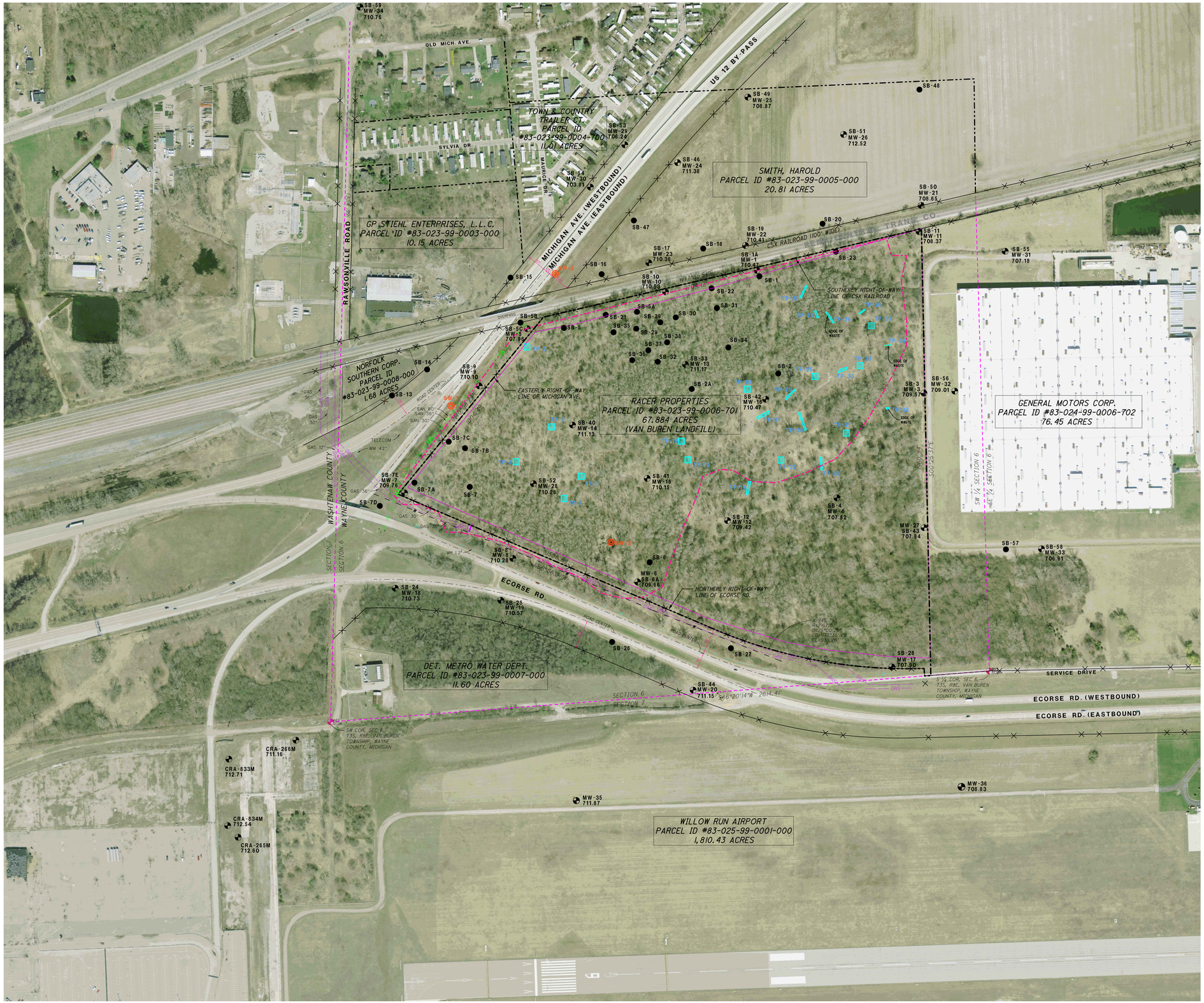
SITE LOCATION MAP

General Motors Site
Ecorse Road
Van Buren Township, Wayne County, Michigan

DATE	DRAWN BY	DESIGNED BY	PROJECT NO.
7/23/2015	CJB	MJF	R2330017

7/23/2015 7:58:01 AM

C:\r2330017_GM_PhaseIV_Location_Map.dgn



GRAPHIC SCALE

0' 200' 400'

LEGEND

- PROPERTY LINE
- R/W LINE
- FENCE
- EXTENT OF EARTH DISTRUBANCE BASED ON APRIL 26, 1970 AERIAL PHOTO
- GAS — EXISTING GAS MAIN
- FO — EXISTING FIBER OPTIC CABLE
- W — EXISTING FIRE WATER
- W — EXISTING WATER MAIN
- GROUND WATER ELEVATION CONTOUR (FEET ABOVE MSL)
- ST (3) THREE EX. PARALLEL STORM SEWERS
- SURFACE WATER SAMPLE LOCATION
- SOIL BORING LOCATION
- 712.36 MONITORING WELL LOCATION WITH GROUND WATER ELEVATION (FEET ABOVE MSL)
- TP-32 TEST PIT LOCATION

GENERAL NOTES:

1. AERIAL PHOTO FROM SEMCOG DATED 2010.
2. UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/QAPP AND MISS DIG UTILITY MARKINGS.

NO.	DATE	BY	DESCRIPTION
1	7/14/14	CJB	PHASE III SITE INVESTIGATION SAMPLING LOCATIONS

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VAN BUREN LANDFILL SITE (11070)
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TWP., WAYNE CO. MICHIGAN

FIGURE 2
SITE MAP

8/28/2019

W:\Projects\Projects P-TX\R2330025\CAD\BASE\R2330025_Fig2_SITE _MAP.dgn

MDEQ Part 201 Non-Residential Health Based Clean Up Criteria

Al = 4,100 ug/l
Fe = 5,600 ug/l
Mn = 2,500 ug/l

MDEQ Part 201 Residential Health Based Clean Up Criteria

Al = 300 ug/l
Fe = 2,000 ug/l
Mn = 860 ug/l

CHEMICAL ABBREVIATIONS

B = Benzene
Ba = Barium
As = Dissolved Arsenic
Fe = Dissolved Iron
Mn = Manganese
BC = Below Applicable Criteria

LEGEND

- PROPERTY LINE
- R/W LINE
- FENCE
- EXTENT OF EARTH DISTRUBANCE BASED ON APRIL 26, 1970 AERIAL PHOTO
- GAS — EXISTING GAS MAIN
- FO — EXISTING FIBER OPTIC CABLE
- W — EXISTING FIRE WATER
- W — EXISTING WATER MAIN
- EXISTING STORM
- ST (3) THREE EX. PARALLEL STORM SEWERS
- SURFACE WATER SAMPLE LOCATION
- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- TP-32 TEST PIT LOCATION

GENERAL NOTES:

1. AERIAL PHOTO FROM SEMCOG DATED 2010.
2. UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/QAPP AND MISS DIG UTILITY MARKINGS.
3. OFF-SITE LOCATIONS COMPARED TO RESIDENTIAL CRITERIA. ON-SITE LOCATIONS COMPARED TO NON-RESIDENTIAL CRITERIA.
4. ALL RESULTS EXPRESSED IN MICROGRAMS PER LITER.
5. ONLY EXCEEDENCES OF NON-RESIDENTIAL HEALTH-BASED DRINKING WATER CRITERIA AND RESIDENTIAL HEALTH-BASED DRINKING WATER CRITERIA ARE SHOWN.
6. ONLY EXCEEDENCES OF DISSOLVED METALS ARE SHOWN. THERE ARE EXCEEDENCES OF TOTAL METALS NOT DISPLAYED IN THE FIGURE (REFER TO TABLE).

NO.	DATE	BY	DESCRIPTION
1	7/14/14	CJB	PHASE III SITE INVESTIGATION SAMPLING LOCATIONS

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VAN BUREN LANDFILL SITE (11070)
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TWP., WAYNE CO. MICHIGAN

FIGURE 3
MONITORING WELL ANALYTICAL SUMMARY THROUGH APRIL 2021
SEMI-ANNUAL GROUNDWATER MONITORING (EXCEEDENCES ONLY)

6/15/2021

W:\Projects\Projects P-T\R2330027\CAD\BASE\R2330027-MW_Analytical_Summary FIG_3-April_2021.dgn

Key Concerns & Corrective Measures

Key Concerns

A) Metals (aluminum, manganese, and iron dissolved in groundwater) migrating off-site (and metals, VOCs, and SVOCs present on-site)
B) Direct contact with impacted soils or waste materials within landfill during utility or construction projects.
C) Possible soil vapor intrusion issue with regard to any future structures built on-site.
D) The BERA identified some potential risks to avian and mammalian wildlife receptors, soil invertebrates and vegetation within the AOD.

Corrective Measures

1. Land Use Restrictions:
   - Site-wide Land Use Restrictions: Limit land uses of entire Site to non-residential, including recreational uses only (addresses concerns A, B, and C).
   - Site Wide Soil Containment Restrictions: Prohibit excavation of soils that would exacerbate the migration of contaminants, unless for remedial purposes or if managed in accordance with applicable regulations (addresses concerns A, B, and C).
2. Ground Water Use Restrictions:
   - Site-wide Ground Water Use Restrictions: Prohibit the construction and use of wells and other devices on Site to extract ground water for any purpose, except as part of remedial activities or ground water monitoring (addresses concern A).
   - Off-site Ground Water Use Restrictions: Prohibit the construction and use of wells and other devices on surrounding properties to extract ground water for drinking water purposes (addresses concern A).
3. Vapor Intrusion Exposure Restriction:
   - Site-wide Vapor Intrusion Exposure Restrictions (no buildings): Prohibit the construction of new buildings unless such construction incorporates engineering controls designed to eliminate the potential for subsurface vapor phase hazardous substances to migrate into the new structure(s) at concentrations greater than applicable criteria; or, unless prior to construction of any new structure, an evaluation of the potential for any hazardous substances to volatilize into indoor air assures the protection of persons who may be present in the buildings and is in compliance with Section 21304c of the NREPA (addresses concern C).
4. Surficial Waste Cleanup: Remove significant surficial debris piles from the site in order to reduce sources to surface water or direct contact (addresses concern A).
5. Phytoremediation:
   - Phytohydraulics: Use of vegetation present on-site as a means of continued hydraulic control, both vertically and horizontally. Also reduces storm water infiltration to water table (addresses concern A).
6. Monitoring: Ongoing sampling of monitoring wells to be used for assessment of plume stability and effectiveness of corrective measures (addresses concern A).

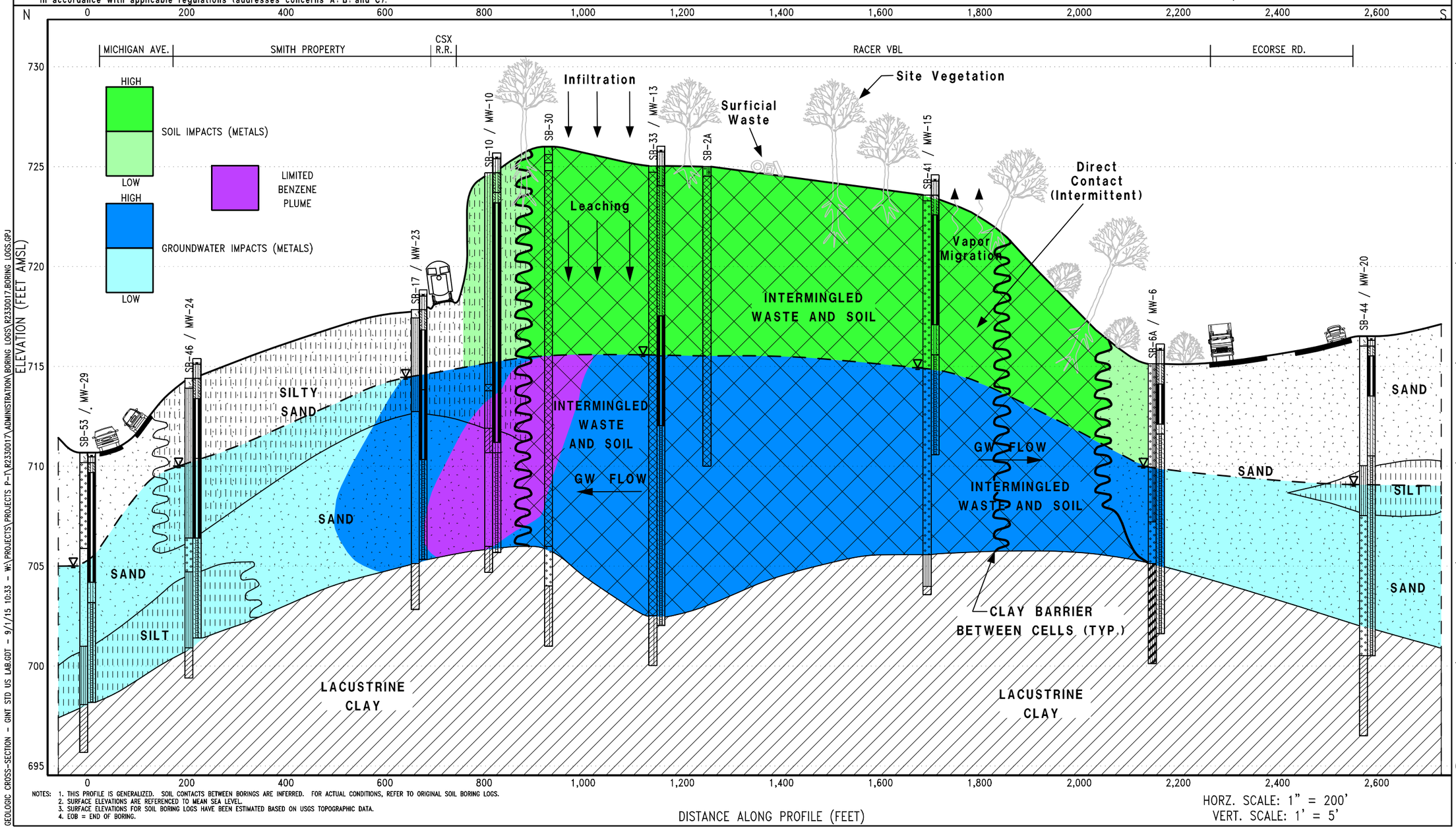
USCS LEGEND:

Silty SAND; (FILL); Poorly-graded SAND; TOPSOIL; CLAY-Low Plasticity; Well-graded Silty SAND; SILT; Silty CLAY-High Plasticity

WELL COMPONENTS LEGEND:

Silty CLAY-Low Plasticity; Protective Casing; Sandy SILT; Bentonite Seal: 1 pipe group, 1 pipe; Well-graded SAND; No Backfill (just pipe): 1 pipe group, 1 pipe; Pipe Cap: 1 pipe group, 1 pipe; Natural Collapse: 1 pipe group, 1 pipe; Cement Seal: 1 pipe group, 1 pipe; Filter Packs: 1 pipe group, 1 pipe; Well Screens: 1 pipe group, 1 pipe; Top Cap: 1 pipe group, 1st pipe

▽ = Groundwater Elevations (March 2015)
— — = Water Table Level



NOTES:
1. THIS PROFILE IS GENERALIZED. SOIL CONTACTS BETWEEN BORINGS ARE INFERRED. FOR ACTUAL CONDITIONS, REFER TO ORIGINAL SOIL BORING LOGS.
2. SURFACE ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL.
3. SURFACE ELEVATIONS FOR SOIL BORING LOGS HAVE BEEN ESTIMATED BASED ON USGS TOPOGRAPHIC DATA.
4. EOB = END OF BORING.

HORZ. SCALE: 1" = 200'
VERT. SCALE: 1' = 5'

GEOLOGIC CROSS-SECTION - GINT STD US LAB.GDT - 9/1/15 10:33 - W:\PROJECTS\PROJECTS P-T\R23300017\ADMINISTRATION\BORING LOGS\R23300017.BORING LOGS.GPJ

W:\Projects\Projects P-T\R23300024\ADMIN\CMS\R23300017_XSection_A-A'.dgn

9/10/2018

CROSS SECTION
1 9/30/15 CdB

FIGURE 4
CONCEPTUAL SITE MODEL

VAN BUREN LANDFILL SITE (11070)
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TWP., WAYNE CO. MICHIGAN

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APPENDIX 2

INDEX TO THE ADMINISTRATIVE RECORD

STATEMENT OF BASIS
VAN BUREN TOWNSHIP LANDFILL
VAN BUREN TOWNSHIP, MI

U.S. ENVIRONMENTAL PROTECTION AGENCY

PENDING ADMINISTRATIVE RECORD
FOR THE

VAN BUREN TOWNSHIP/MICHIGAN AVENUE SITE
VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN
EPA ID NO. TMP 000 000 673

ORIGINAL

STATEMENT OF BASIS
SEPTEMBER 2, 2021
SEMS ID:

NO.	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	951469	Undated	Moore, T., U.S. EPA	Favero, D., RACER Trust	Letter - Change in EPA Corrective Action Project Manager	1
2	951493	Undated	State of Michigan, Van Buren Township	General Public	Off-Site Water Well Locations	1
3	953130	Undated	Mannik Smith Group	Favero, D., RACER Trust	Site Investigation Health and Safety Plan	28
4	951496	10/1/86	Javandel, I. and Tsang, C., Lawrence Berkely Laboratory	_ __ _ _	Capture Zone Type Curves: A Tool for Aquifer Cleanup	10
5	951490	7/11/03	Saunders, B., BBL Environmental Services	Rindhage, F., General Motors Corporation	Letter - Geophysical Investigation	6
6	951488	12/16/03	Saunders, B., BBL Environmental Services	Rindhage, F., General Motors Corporation	Letter Report for Clearing and Fence Installation	7
7	951497	4/1/05	U.S. EPA	_ __ _ _	Fact Sheet - Cost-Effective Design of Pump and Treat Systems	38

NO.	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
8	954780	2/13/07	Saunders, B., Encore Environmental Consortium, LLC (EEC)	General Motors Worldwide Real Estate	Phase I Environmental Site Assessment (Redacted)	318
9	951489	4/1/07	Van Buren Township	_ __ _ _	Sanitary Utilities - Sewer Line Map	1
10	951491	4/1/07	Van Buren Township	_ __ _ _	Water Utilities - Section 6 SW	1
11	951470	9/30/11	Cisneros, J., U.S. EPA	Kehne, J., Hill & Kehne, LLC	Performance-Based Corrective Action Agreement w/Cover Letter	10
12	954795	10/11/11	Conestoga-Rovers & Associates (CRA)	U.S. EPA	Current Conditions Report - Revision 0 (Draft for Review) (Redacted)	296
13	951487	4/2/12	_ __ _ _	_ __ _ _	Technical Review - 2/12 Sampling & Analysis Plan and Fundamental Quality Assurance Project Plan	4
14	951488	4/13/12	Favero, D., RACER Trust	Black, C., U.S. EPA	Semi-Annual Progress Report - 10/11-3/12	3
15	953132	5/8/12	Meincke, C., Conestoga-Rovers & Associates (CRA)	Black, C., U.S. EPA	Response to U.S. EPA Technical Review of Sampling and Analysis Plan and Fundamental Quality Assurance Project Plan	9
16	953156	6/11/12	Conestoga-Rovers & Associates (CRA)	Black, C., U.S. EPA and Favero, D., RACER	Sampling and Analysis Plan and Quality Assurance Project Plan - Revision 1 (Redacted)	381
17	954781	12/1/12	Mannik Smith Group	RACER Trust	Phase IA Site Characterization	419
18	953135	10/7/13	Biehl, F. and Friedhoff, M., Mannik Smith Group	Black, C., U.S. EPA	Memo - Phase IB Site Investigation	10

NO.	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
19	954782	11/20/13	Biehl, F. and Friedhoff, M., Mannik Smith Group	Black, C., U.S. EPA	Memo - Phase IB Site Investigation	510
20	954790	3/12/14	Biehl, F. and Friedhoff, M., Mannik Smith Group	Black, C., U.S. EPA	Memo - Phase II Site Investigation	70
21	954791	3/12/14	Biehl, F. and Friedhoff, M., Mannik Smith Group	Black, C., U.S. EPA	Memo - Phase II Site Investigation - Laboratory Analytical Data Reports (2013 Sampling)	444
22	951463	4/14/14	Biehl, F., Mannik Smith Group	Black, C., U.S. EPA	Semi-Annual Progress Report - 10/13-3/14	4
23	953196	8/1/14	Anchor QEA	RACER Trust	Ecological Risk Assessment - Steps 1-4 of Process	64
24	954792	9/4/14	Biehl, F. and Near, A., Mannik Smith Group	Black, C., U.S. EPA	Memo - Phase III Site Investigation	916
25	951449	10/15/14	Biehl, F., Mannik Smith Group	Black, C., U.S. EPA	Semi-Annual Progress Report - 4/14-9/14	4
26	951450	4/16/15	Biehl, F., Mannik Smith Group	Black, C., U.S. EPA	Semi-Annual Progress Report - 10/14-3/15	4
27	953161	6/16/15	Anchor QEA	RACER Trust	Draft Ecological Risk Assessment - Steps 5-8 of Process	104
28	954793	9/2/15	Biehl, F. and Near, A., Mannik Smith Group	Black, C., U.S. EPA	Memo - Phase IV Site Investigation	62
29	953133	10/2/15	Mannik Smith Group	Black, C., U.S. EPA	Corrective Measures Study	47
30	951452	10/16/15	Biehl, F., Mannik Smith Group	Black, C., U.S. EPA	Semi-Annual Progress Report - 4/15-9/15	4
31	953134	12/17/15	Biehl, F., Mannik Smith Group	_ __ _ _	2015 Ground Water Sampling Report	88

NO.	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
32	953202	3/25/16	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	November 2015 Semi-Annual Ground Water Sampling Results	70
33	953201	3/25/16	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	November 2015 Semi-Annual Ground Water Sampling Results - General Motors Property	37
34	951451	4/15/16	Biehl, F., Mannik Smith Group	Pursel, B., U.S. EPA	Semi-Annual Progress Report - 10/15-3/16	4
35	951467	5/26/16	Mazur, D., U.S. EPA	Pursel, B., U.S. EPA	Memo - Review of BERA - Baseline Ecological Risk Assessment	7
36	953195	8/1/16	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	April 2016 Semi-Annual Ground Water Sampling Results	178
37	953194	8/1/16	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	April 2016 Semi-Annual Ground Water Sampling Results - Wells on Adjacent General Motors Property	37
38	954757	8/1/16	Anchor QEA	RACER Trust	Draft Ecological Risk Assessment - Steps 1-2 of Process	474
39	951465	8/8/16	Dodds, J., U.S. EPA	Pursel, B., U.S. EPA	Memo - Options for the Development of Lowest Observable Adverse Effect Level-based Toxicity Reference Values	2
40	951495	9/14/16	Pursel, B., U.S. EPA	Favero, D., RACER Trust	Letter - Draft Ecological Risk Assessment - Steps 1 and 2	1
41	951453	10/17/16	Biehl, F., Mannik Smith Group	Pursel, B., U.S. EPA	Semi-Annual Progress Report - 4/16-9/16	4
42	951498	1/18/17	Biehl, F., Mannik Smith Group	Pursel, B., U.S. EPA	RACER Soil pH Sampling Work Plan	4
43	953159	1/31/17	Volosin, J. and Haury, D., Anchor QEA	Pursel, B., U.S. EPA	Memo - Analysis of Chemical Constituent Outliers	8

NO.	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
44	954758	2/24/17	Pursel, B., U.S. EPA	Biehl, F. and Martinez, J., Mannik Smith Group	Fall 2016 Semi-Annual Ground Water Sampling Results	179
45	953158	3/7/17	Volosin, J. and Haury, D., Anchor QEA	Pursel, B., U.S. EPA	Memo - Soil pH Sampling Results with Attachments	23
46	951466	5/4/17	Dodds, J., U.S. EPA	Pursel, B., U.S. EPA	Memo - Technical Review and Comments on BERA - Draft Ecological Risk Assessment	3
47	951494	5/4/17	Dodds, J., U.S. EPA	Pursel, B., U.S. EPA	Memo - Technical Review of the Draft Ecological Risk Assessment - Steps 3-8	2
48	951492	5/22/17	Pursel, B., U.S. EPA	Favero, D., RACER Trust	Letter - Approval with Modifications of the Draft Ecological Risk Assessment - Steps 3-8	2
49	953160	7/6/17	Anchor QEA	RACER Trust	Draft Ecological Risk Assessment - Steps 3-8 of Process	239
50	954759	7/14/17	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	Spring 2017 Semi-Annual Ground Water Sampling Results	183
51	953203	7/14/17	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	Spring 2017 Semi-Annual Ground Water Sampling Results - Wells on Adjacent General Motors Property	44
52	951464	9/19/17	Dodds, J., U.S. EPA	Pursel, B., U.S. EPA	Memo - Technical Review of Ecological Risk Assessment Process	1
53	951454	10/13/17	Biehl, F., Mannik Smith Group	Pursel, B., U.S. EPA	Semi-Annual Progress Report - 4/17-9/17	4
54	954776	2/2/18	Biehl, F. and Martinez, J., Mannik Smith Group	Pursel, B., U.S. EPA	Fall 2017 Semi-Annual Ground Water Sampling Results	210

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