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Senior Environmental Engineer  
Hazardous Waste Section  
Waste Management & Radiological Protection Division  
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Date: August 1, 2024

Our Ref: 30214036

Subject: Plant 2 Area 2 Excavation and Plants 2 and 3 Exposure Barrier

Placement Completion Report

Plants 2 & 3 MID 980 700 827

Lansing, Michigan

Dear Ms. Matlock,

Arcadis of Michigan, LLC (Arcadis) has prepared this *Plant 2 Area 2 Excavation and Plants 2 and 3 Exposure Barrier Placement Completion Report* (Report) on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust for Plant 2 and Plant 3 properties located at 2800 West Saginaw Street and 2801 West Saginaw Street in Lansing, Michigan (Site). The Site location and layout are presented on **Figure 1**. Arcadis submitted the *Plant 2 Area 2 Excavation and Plants 2 and 3 Exposure Barrier Placement Work Plan* (Work Plan) to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) on November 7, 2023. EGLE provided a conditional approval of the Work Plan via email transmittal on December 6, 2023. Within the Work Plan it was identified that soil sample locations within Areas 2, 5-2, and 5-3 of Plant 2 and Area 18 of Plant 3 showed concentrations of arsenic and/or and benzo(a)pyrene, above EGLE Nonresidential Direct Contact Criteria (NRDCC) (December 2020, revised October 2023) that required corrective measures to be implemented. This Report summarizes the corrective actions completed in Areas 2, 5-2 and 5-3 at Plant 2 and Area 18 at Plant 3, in December 2023, to address the NRDCC exceedances to protect human health and environment. This Report also includes a brief summary of existing exposure barriers in place as corrective measures at Plant 3 in Areas 14 and 19. Refer to **Figures 2 and 3** for locations of areas addressed by corrective measures (excavation, existing exposure barrier and/or exposure barrier placement) at Plant 2 and Plant 3, respectively.

Within the December 6, 2023 EGLE conditional approval of the Work Plan, sent via email, it should be noted that soil sample location SB-A2-PA65 was marked as exceeding NRDCC on Figure 2 of the Work Plan but on the data table for the Work Plan it was shown as below NRDCC. The explanation for this is that the Work Plan table only contains sampling location data collected in 2021-2022 and not all historical data which includes original soil sample SB-A2-PA65 collected in 2012 that had an arsenic concentration that did exceed the NRDCC. As discussed in the *Plants 2 and 3 Soil Corrective Measures Summary*, dated May 3, 2023, additional soil sampling was conducted at this location and a statistical analysis was completed which verified that an exposure barrier was not necessary for this location based on a 95% upper confidence limit calculation.

## Plant 2 – Area 2

Location SB-A2-PD65 required a corrective measure as outlined in the Work Plan to address the NRDCC exceedance of arsenic (**Figure 4**). The corrective measure for Area 2 included excavation of the impacted location within the portion of the area with no impervious ground cover and the utilization of the existing concrete surface as an exposure barrier for the portion of the area with concrete cover (**Figure 4**).

### Mobilization and Site Preparation

Prior to beginning soil excavation activities, the following site preparation activities were completed.

- A licensed surveyor was retained to stake and mark out the extent of the excavation area planned at Plant 2 Area 2. The surveying activities were conducted on December 7<sup>th</sup>, 2023 with Arcadis personnel oversight. The proposed excavation boundaries were identified with wooden stakes and marking paint.
- Work zones and staging areas for vehicles and equipment were discussed with the excavation subcontractor retained to complete the work, Job Site Services, Inc. (JSS) out of Bay City, Michigan.
- Existing monitoring wells in the area were protected/marked for visual identification during excavation with orange cones and flagging, so as not to damage them during excavation activities.
- Utility clearance procedures were completed on December 11<sup>th</sup>, 2023 prior to initiation of excavation activities by JSS.
- The area of land to be excavated within Area 2 occupies less than one acre; therefore, a Sediment Erosion and Sedimentation Control (SESC) Plan was not required. However, soil removal activities were completed utilizing best management practices that minimize the potential for erosion and migration of soil to other areas.

Once surveyed and the utility clearance activities were completed, the area was clear to begin excavation activities as described below.

### Excavation of Arsenic Impacted Soils

Excavation of soil boring SB-A2-PD65 began at the location and moved westward towards soil boring SB-A2-PD64 which is below EGLE NRDCC for arsenic. The portion of soil boring location SB-A2-PD65 that is underneath the existing concrete surface to the east of the location was not excavated and the existing concrete is retained as an exposure barrier in this area.

Excavation activities commenced on December 12, 2023. The excavation was advanced to a depth of 3 feet 7 inches below ground surface (bgs), as arsenic impacted soil was present from 0-2 feet bgs. The horizontal extents of the excavation were extended to locations below EGLE NRDCC for arsenic to the north (historical investigation point), to the west (SB-A2-PD64) and, to the south (SB-A2-PE65), which were surveyed and staked in the field. Impacted soil was excavated by an excavator and placed directly into trucks staged on plastic sheeting used to collect excavation material that may have spilled from the excavator bucket during loading. The trucks were visually evaluated for spilled excavation material on the truck body or tires and any material observed was cleaned off before leaving the Site so that no soil tracking offsite occurred. The excavated material was transported offsite in one truck load as a total of 48.28 tons were removed from the excavation area for offsite disposal at C&C Landfill in Marshall, Michigan. Refer to **Attachment 1** for the waste manifest for material

disposed. No groundwater was observed to enter the excavation area so no water was managed during excavation activities.

Excavation soil verification sampling was conducted as described in the following section. Existing concrete with a thickness of at least 6-inches is present to the east of impacted soil boring SB-A2-PD65 and will remain as an exposure barrier.

The elevation of existing concrete that will remain as an exposure barrier will be surveyed at a date to be determined as other survey work is to be conducted in the near future at the Site.

## Excavation Soil Verification Sampling

Verification soil sampling was conducted within the excavated area, as proposed in the Work Plan, dated November 7, 2023, and approved by EGLE (on December 6, 2023 by email correspondence), utilizing EGLE Sampling Strategies and Statistics Training Materials document, dated 2002. The excavation area is a triangular shape consisting of an area of approximately 150 square feet, with approximate sidewall lengths of 20 feet. One soil verification sample was collected on the northern sidewall (GS-A2-NSidewall) and southern sidewall (GS-A2-SSidewall) at a depth of 1.5 feet below ground surface (bgs) and two (2) soil verification samples (GS-A2-Floor1 and GS-A2-Floor2) were collected from the floor of the excavation at 3 feet 7 inches bgs. A soil verification sample was not collected along the eastern sidewall since the soil further east is covered by existing concrete that will be utilized as an exposure barrier for any remaining soil exceeding NRDC for arsenic. Soil samples collected were submitted to Merit Laboratories of Lansing, Michigan for 24-hour rushed analysis of arsenic utilizing USEPA Method SW6020. The soil verification laboratory analytical results and comparison to EGLE NRDC for arsenic are provided in **Table 1** and the laboratory analytical report is provided in **Attachment 2**. All excavation soil verification samples collected were below EGLE NRDC for Arsenic of 37 milligrams per kilogram (mg/kg). Therefore, the excavation was backfilled as described in the section below.

## Site Restoration

Upon verification that soils above NRDC were removed based on the excavation soil samples collected and analyzed above (arsenic was detected in each sample but was below its NRDC), clean Class II sand backfill material was placed in 10-12-inch lifts and compacted in place with conventional construction equipment to approximately 3-inches from the surface. Backfilling activities were completed on December 14<sup>th</sup>, 2023. A 3-inch 22A gravel layer was placed as the surface cover. Materials utilized for backfill were obtained from a Michigan Department of Transportation (MDOT) Prequalified Supplier, and per the supplier were virgin, freshly quarried/mined material (**Attachment 3**). Refer to **Attachment 4** for a photograph log of the excavation activities in Area 2.

## Plant 2: Areas 5-2 and 5-3 and Plant 3: Area 18

Exceedances of benzo(a)pyrene were identified within several samples in Areas 5-2 and 5-3 at Plant 2 and at three locations (SB-A18-CJ150, SB-A18-CJ149, and SB-A18-CK149) within Plant 3 Area 18 above EGLE NRDC (**Figures 5, 6, and 7**) which required corrective action as outlined in the Work Plan. The corrective action completed in these areas included the placement of an exposure barrier, consisting of a geotextile layer and gravel cover, placed over the delineated exceedances in Areas 5-2 and 5-3 at Plant 2 and Area 18 at Plant 3. The estimated extents of the completed exposure barrier areas are presented in **Figures 5, 6, and 7**.

## Mobilization and Site Preparation

Prior to beginning exposure barrier placement activities, the following site preparation activities were completed.

- A licensed surveyor staked and marked out the extent of the area to be covered with the exposure barriers at Areas 5-2 and 5-3 at Plant 2 and Area 18 at Plant 3.
- Site features such as monitoring wells in the area were protected/cordoned off during cover placement activities. One such feature that was worked around was the biosparge conveyance hosing that traverse across Area 5-3 at Plant 2.
- Work zones and staging areas for vehicles and equipment were discussed with the exposure barrier placement subcontractor retained to complete the work, JSS.
- Although the majority of the ground surface in Areas 5-2, 5-3 and 18 is crushed concrete and gravel and/or fill material, vegetation was removed from the cover area, as necessary, prior to cover placement.

## Exposure Barrier Placement

Exposure barrier placement activities were conducted from December 11-14, 2023. Once the planned location of the exposure barriers for Areas 5-2, 5-3 and 18 for placement were surveyed and marked out, geotextile fabric was first placed over the existing ground surface to act as a demarcation layer beneath the gravel barrier. Overtop the geotextile fabric, a 6-inch to 1-foot layer of 22A road gravel was placed as the exposure barrier and graded to promote drainage and prevent ponding. Gravel utilized for the cover material was obtained from an MDOT Prequalified Supplier, and per the supplier was virgin, freshly quarried material (**Attachment 3**). Following completion of barrier placement, each of the areas was measured by JSS with a laser level to verify exposure barrier thickness met or exceeded the 6 inch approved thickness in all areas of the barrier placement. Photographs of the exposure barrier placement areas in Areas 5-2 and 5-3 at Plant 2 and Area 18 at Plant 3 are provided in **Attachment 4**.

## Existing Exposure Barriers and Notifications.

In order to provide a complete summary of exposure barriers at the Site in this report and as discussed in the *Plants 2 and 3 Soil Corrective Measures Summary*, dated May 3, 2023, two existing exposure barriers consisting of concrete cover are present in Areas 14 and 19 at Plant 3 (**Figures 8 and 9**). Within Area 14, soil impacts of cyanide above EGLE NRDCC exist. Within Area 19, soil impacts of arsenic above EGLE NRDCC exist. At each of these areas, impacts are present within the first foot of soil beneath the existing concrete cover. Therefore, in each of these areas the existing concrete exposure barrier will be inspected annually and maintained as necessary until an alternate frequency is approved by EGLE.

Furthermore, several isolated locations with soil impacts are present at the Site across Plants 2 and 3 and will be managed through the inclusion of a notification of impacts within the amended DRC planned to be completed for Plants 2 and 3.

## Exposure Barrier Survey and Annual Inspection

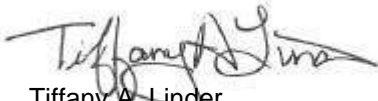
The recently placed exposure barriers and existing exposure barriers will be surveyed to be included within amended DRCs to be proposed for the Site. Corners of the exposure barriers will be surveyed for location and elevation, if not already available, and the surface elevation of the interior of the exposure barriers will also be

Ms. Christine Matlock  
EGLE  
August 1, 2024

collected to be included in the amended DRC. The survey activities will include placed and existing exposure barriers in Areas 2, 5-2, and 5-3 at Plant 2 and Areas 14, 18, and 19 at Plant 3.

All the existing exposure barriers and placed exposure barriers will initially be visually inspected annually to ensure they continue to operate as intended. The annual inspection frequency will be followed until an alternate frequency is approved by EGLE.

Sincerely,  
Arcadis of Michigan, LLC



Tiffany A. Linder  
Certified Project Manager

Email: [Tiffany.Linder@arcadis.com](mailto:Tiffany.Linder@arcadis.com)  
Direct Line: 810-225-1928

CC. Project file  
Dave Favero, RACER Trust  
Brendan Mullen, RACER Trust

Enclosures:

**Figures**

- Figure 1 – Site Location
- Figure 2 – Plant 2 Soil Corrective Measures
- Figure 3 – Plant 3 Soil Corrective Measures
- Figure 4 – Area 2 Excavation, Confirmation Soil Sampling, and Existing Exposure Barrier
- Figure 5 – Area 5-2 Exposure Barrier Placement
- Figure 6 – Area 5-3 Exposure Barrier Placement
- Figure 7 – Area 18 Exposure Barrier Placement
- Figure 8 – Area 14 Existing Exposure Barrier
- Figure 9 – Area 19 Existing Exposure Barrier

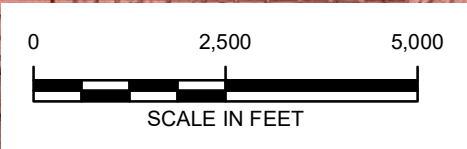
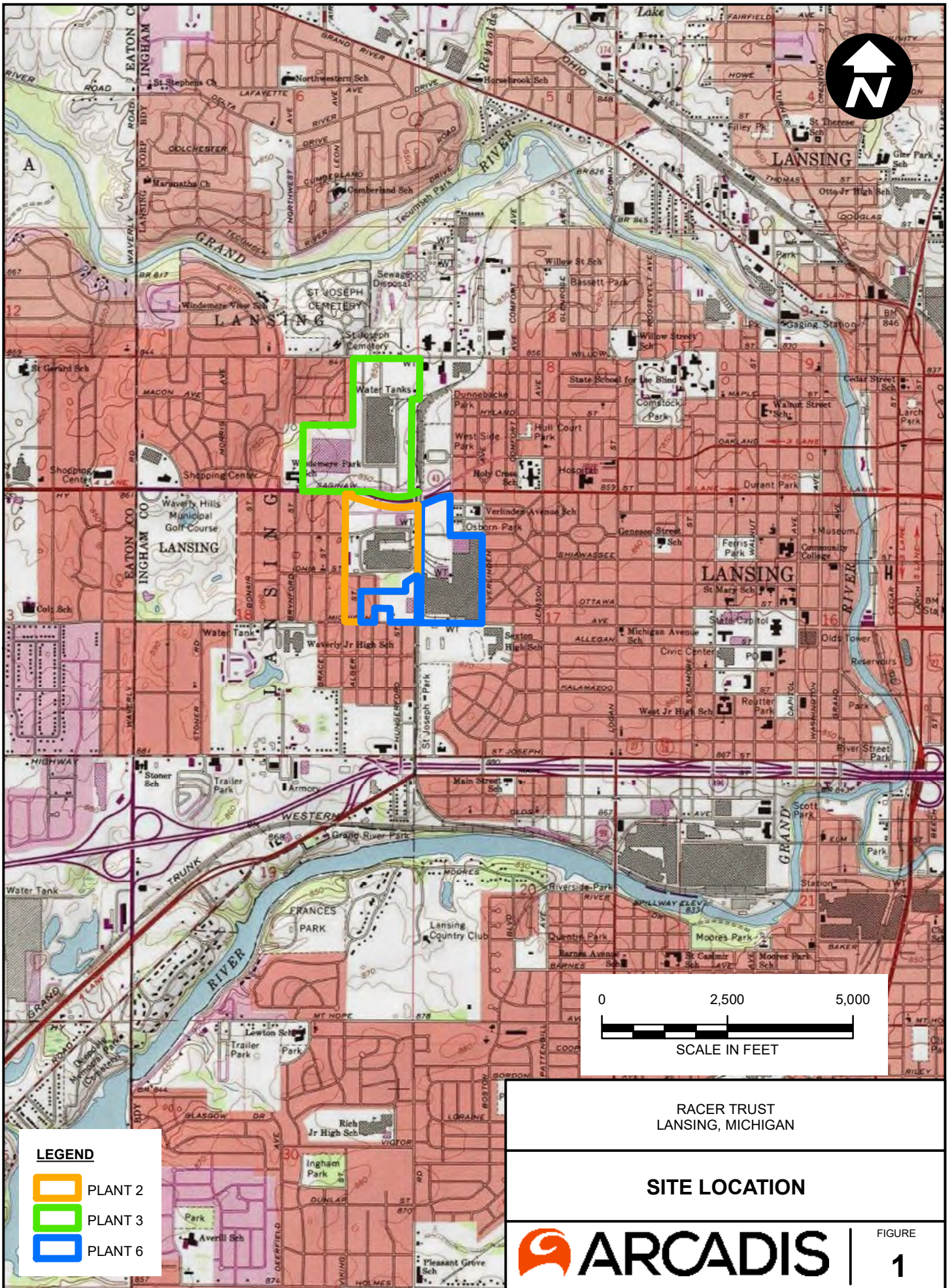
**Tables**

- Table 1 – Area 2 Excavation Verification Soil Sample Results

**Attachments**

- Attachment 1 – Area 2 Soil Disposal Manifest and Weight Ticket for Excavated Material
- Attachment 2 – Excavation Confirmation Soil Sampling Analytical Report
- Attachment 3 – Clean Fill Certification Letter
- Attachment 4 – Photograph Log

# FIGURES



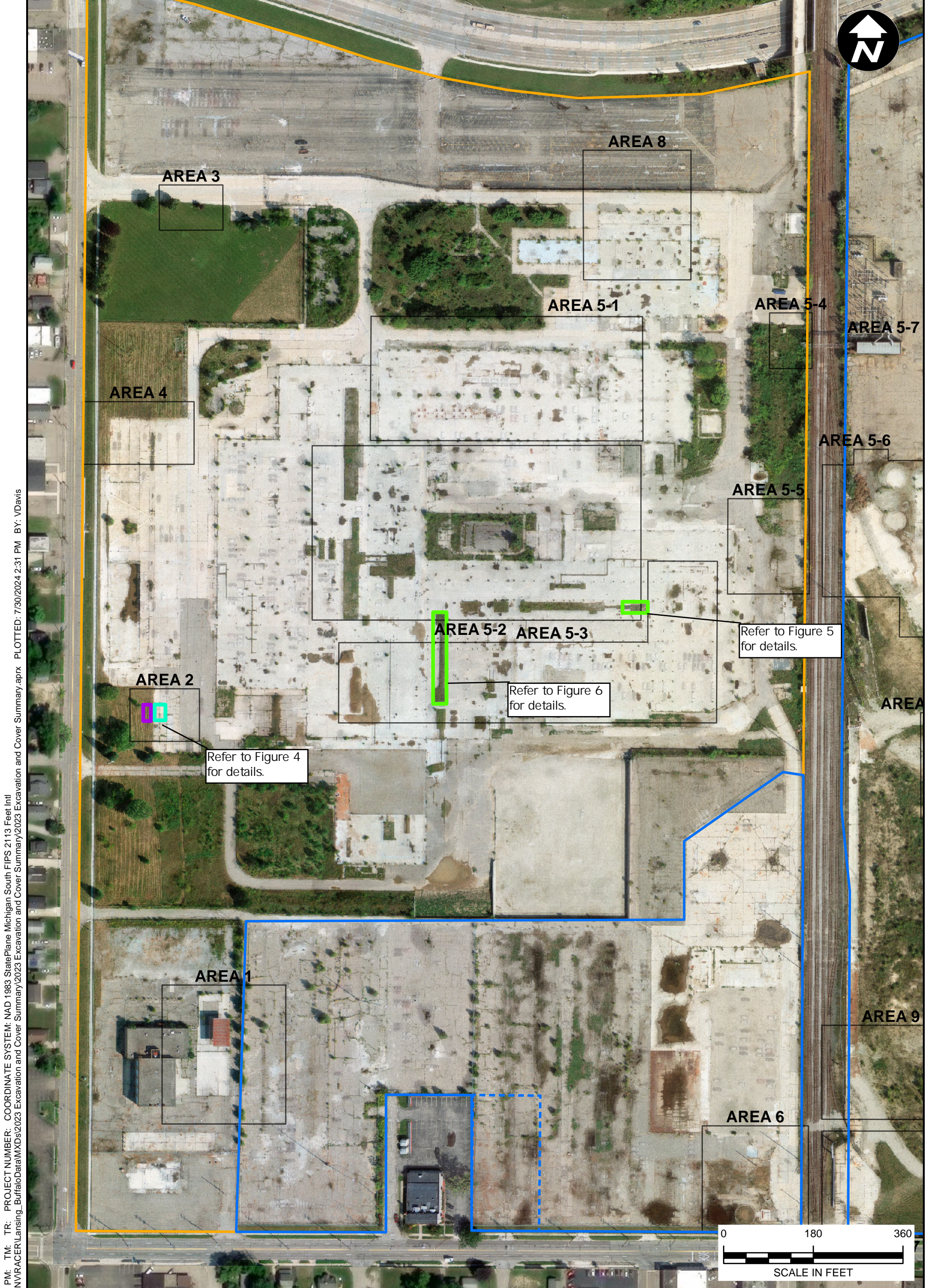
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LANSING, MICHIGAN

**SITE LOCATION**

 **ARCADIS** | FIGURE 1

**LEGEND**

-  PLANT 2
-  PLANT 3
-  PLANT 6



CITY: Novi DIV: ENV DB: TRY PIC: PM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl  
 \arcadis-us.com\app\GIS\Processing\ENVRACER\Lansing\_BuffaloData\MXDs\2023 Excavation and Cover Summary\2023 Excavation and Cover Summary.aprx PLOTTED: 7/30/2024 2:31 PM BY: VDavis

**LEGEND**

Approximate Extent of Exposure Barrier Placement	Approximate Extent of Excavation Conducted (December 2023)	Plant 2	AREA 2	RFI Phase II Investigation Area
Approximate Extent of Existing Exposure Barrier	Plant 3	Plant 6		
		Plant 6 - Sold		

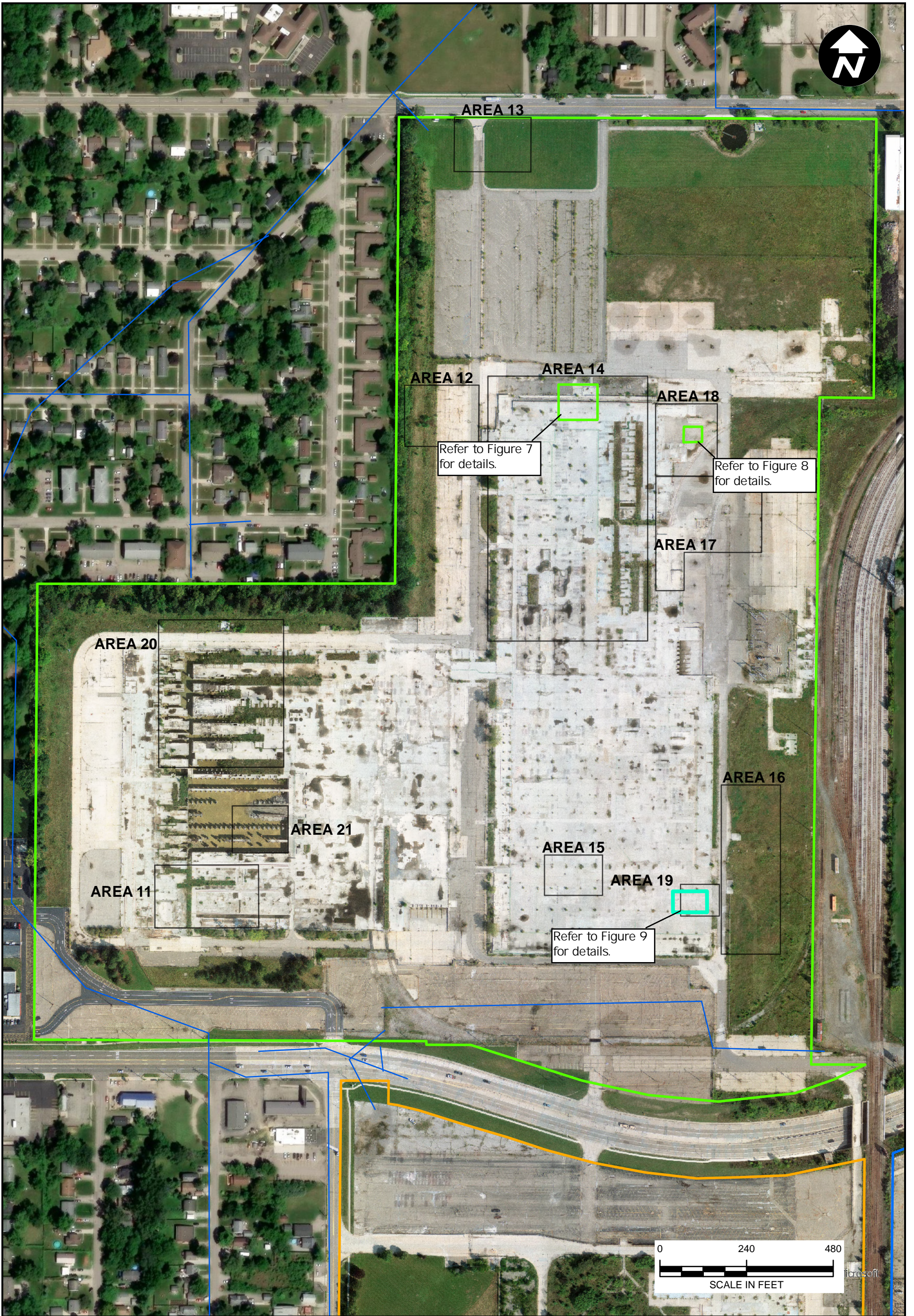
**NOTES:**  
 1. COORDINATE SYSTEM IS IN NAD\_1983\_StatePlane\_Michigan\_South\_FIPS\_2113\_Feet\_Intl

RACER TRUST  
 PLANT 2  
 LANSING, MICHIGAN

**PLANT 2 SOIL CORRECTIVE MEASURES**

FIGURE

2



LEGEND

- Approximate Extent of Exposure Barrier Placement
- Approximate Extent of Existing Exposure Barrier
- Plant 2
- Plant 3
- Plant 6
- Plant 6 - Sold
- AREA 2**  RFI Phase II Investigation Area

NOTES:  
 1. COORDINATE SYSTEM IS IN NAD\_1983\_StatePlane\_Michigan\_South\_FIPS\_2113\_Feet\_Intl  
 AERIAL IMAGERY: 30-SEPT-2021

RACER TRUST  
 PLANT 3  
 LANSING, MICHIGAN

**PLANT 3 SOIL CORRECTIVE MEASURES**


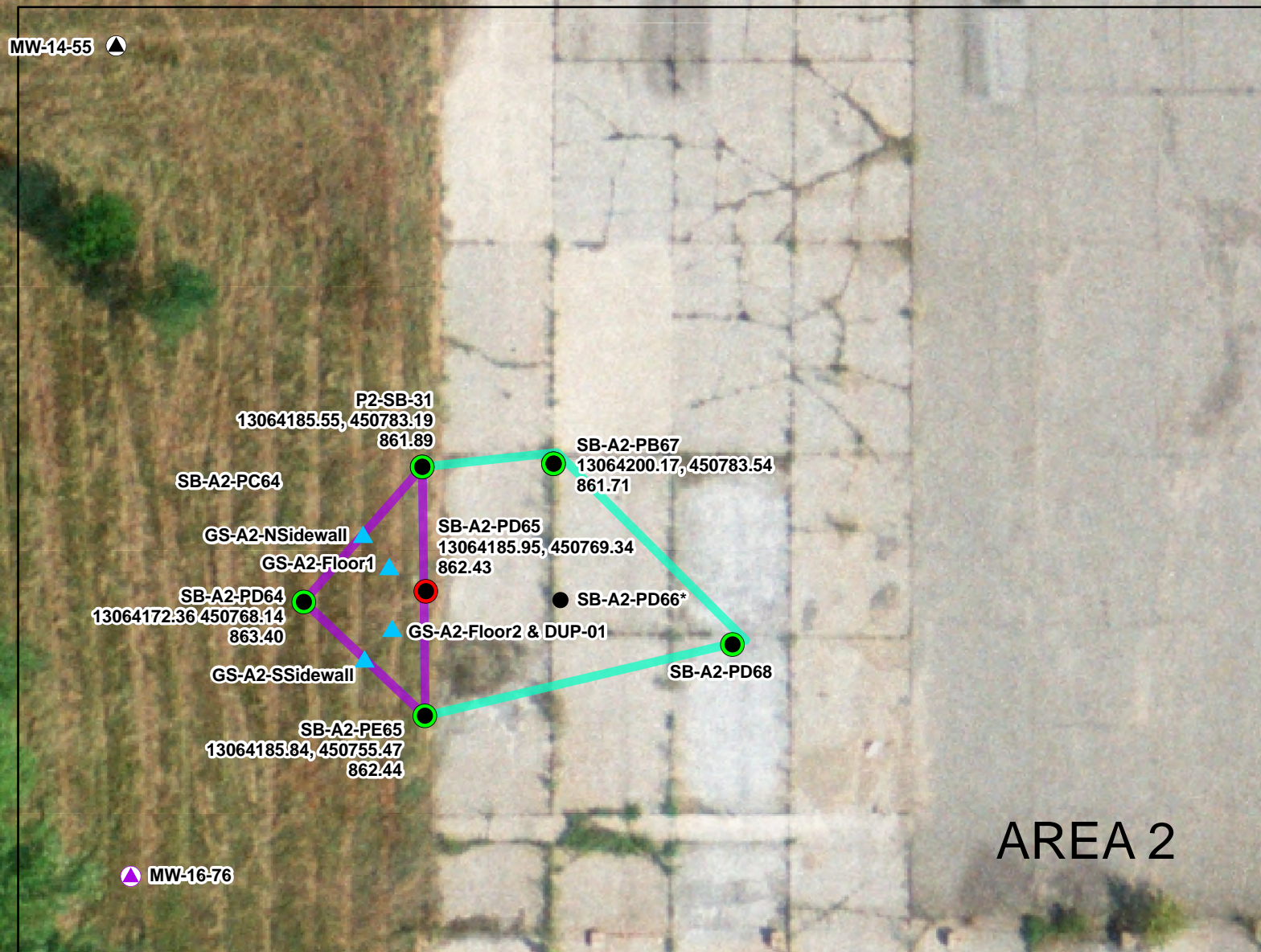


FIGURE  
**3**



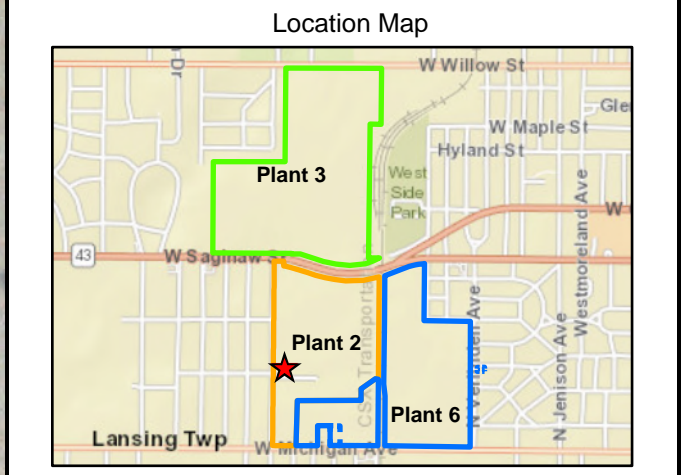
**LEGEND**

- Perched Zone Monitoring Well
- Weathered Bedrock Monitoring Well
- Sampling Location
- Does Not Exceed Direct Contact Criteria for Arsenic
- Exceeds Direct Contact Criteria for Arsenic
- Sidewall and Floor Sample Locations
- Existing Exposure Barrier
- Arsenic Excavation Area (December 2023)
- AREA 2** RFI Phase II Investigation Area

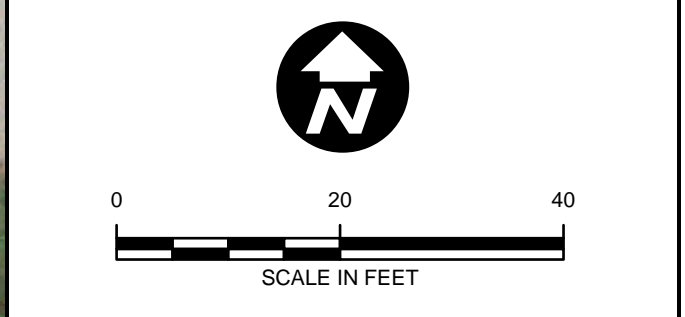
NOTE: SIDEWALL SAMPLES COLLECTED APPROXIMATELY 1.5' BELOW GROUND SURFACE IN THE APPROXIMATE CENTER OF THE NORTHERN AND SOUTHERN SIDEWALLS.

AERIAL IMAGERY: 30-SEPT-2021

\*SOIL BORING COULD NOT BE COMPLETED DUE TO THICKNESS/STRENGTH OF CONCRETE.



COORDINATE SYSTEM IS IN  
 NAD\_1983\_StatePlane\_Michigan\_South\_FIPS\_2113\_Feet\_Intl



RACER TRUST  
 PLANT 2  
 LANSING, MICHIGAN

**AREA 2  
 EXCAVATION, CONFIRMATION SOIL SAMPLING,  
 AND EXISTING EXPOSURE BARRIER**



**LEGEND**

- Sampling Location
- Does Not Exceed Direct Contact Criteria for Benzo(A)Pyrene (Green dot)
- Exceeds Direct Contact Criteria for Benzo(A)Pyrene (Red dot)
- ▲ Perched Zone Monitoring Well (Black triangle)
- ▭ Exposure Barrier Placement (Green outline)

AERIAL IMAGERY: 30-SEPT-2021

**Location Map**

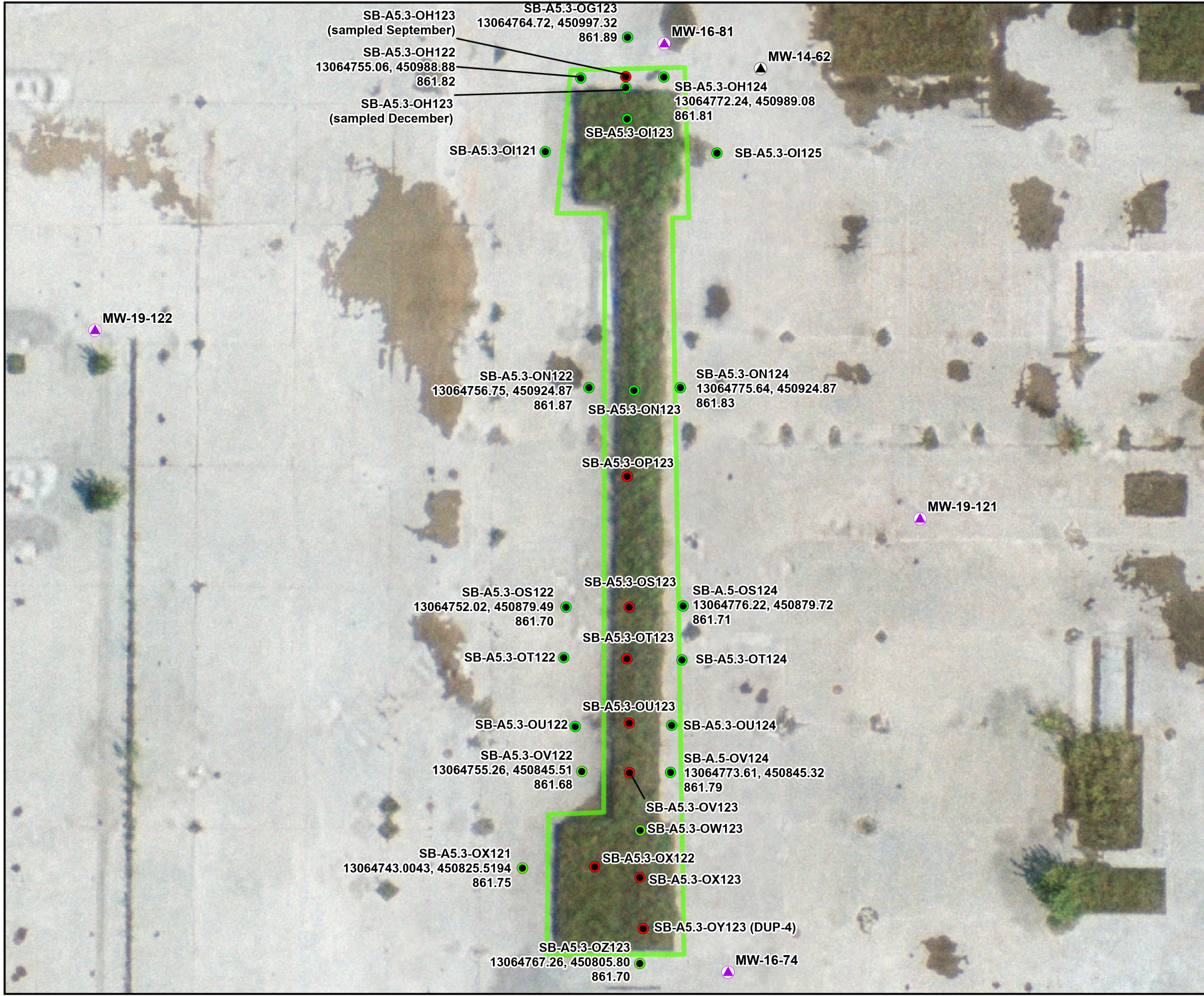
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SCALE IN FEET

COORDINATE SYSTEM IS IN  
NAD\_1983\_StatePlane\_Michigan\_South\_FIPS\_2113\_Feet\_Intl

RACER TRUST  
PLANT 2  
LANSING, MICHIGAN

**AREA 5-2  
EXPOSURE BARRIER PLACEMENT**

**ARCADIS** | FIGURE 5



**LEGEND**

- Sampling Location
- Does Not Exceed Direct Contact Criteria for Benzo(A)Pyrene
- Exceeds Direct Contact Criteria for Benzo(A)Pyrene
- ▲ Perched Zone Monitoring Well
- ▲ Weather Bedrock Monitoring Well
- █ Exposure Barrier Placement

AERIAL IMAGERY: 30-SEPT-2021

**Location Map**

0 20 40  
SCALE IN FEET

COORDINATE SYSTEM IS IN  
NAD\_1983\_StatePlane\_Michigan\_South\_FIPS\_2113\_Feet\_Intl

RACER TRUST  
PLANT 2  
LANSING, MICHIGAN

**AREA 5-3  
EXPOSURE BARRIER PLACEMENT**

ARCADIS

FIGURE  
**6**

AREA 14

AREA 18

MW-13-38

MW-13-41

MW-18-90

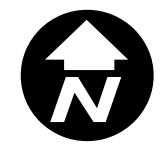
SB-A18-CI149 13065023.99, 454095.02 859.95	SB-A18-CI150 13065033.86 454095.06 859.99
SB-A18-CJ148 13065014.12, 454085.14 860.17	SB-A18-CJ150 SB-A18-CJ151 13065043.86, 454085.06 859.74
SB-A18-CK148 13065012.80, 454075.05 860.32	SB-A18-CK149 SB-A18-CK150 13065033.86, 454075.06 859.59

LEGEND

- Perched Zone Monitoring Well
- Deep Overburden Monitoring Well
- Bedrock Monitoring Well
- Sample Location
- Does Not Exceed Direct Contact Criteria for Benzo(A)Pyrene
- Exceeds Direct Contact Criteria for Benzo(A)Pyrene
- Delineation Boring Location Could Not Be Completed Due to Former Concrete Building Slab in this Location, Which Provides Existing Exposure Barrier
- Exposure Barrier Placement
- AREA 2 RFI Phase II Investigation Area

AERIAL IMAGERY: 30-SEPT-2021

Location Map



COORDINATE SYSTEM IS IN  
 NAD\_1983\_StatePlane\_Michigan\_South\_FIPS  
 \_2113\_Feet\_Intl

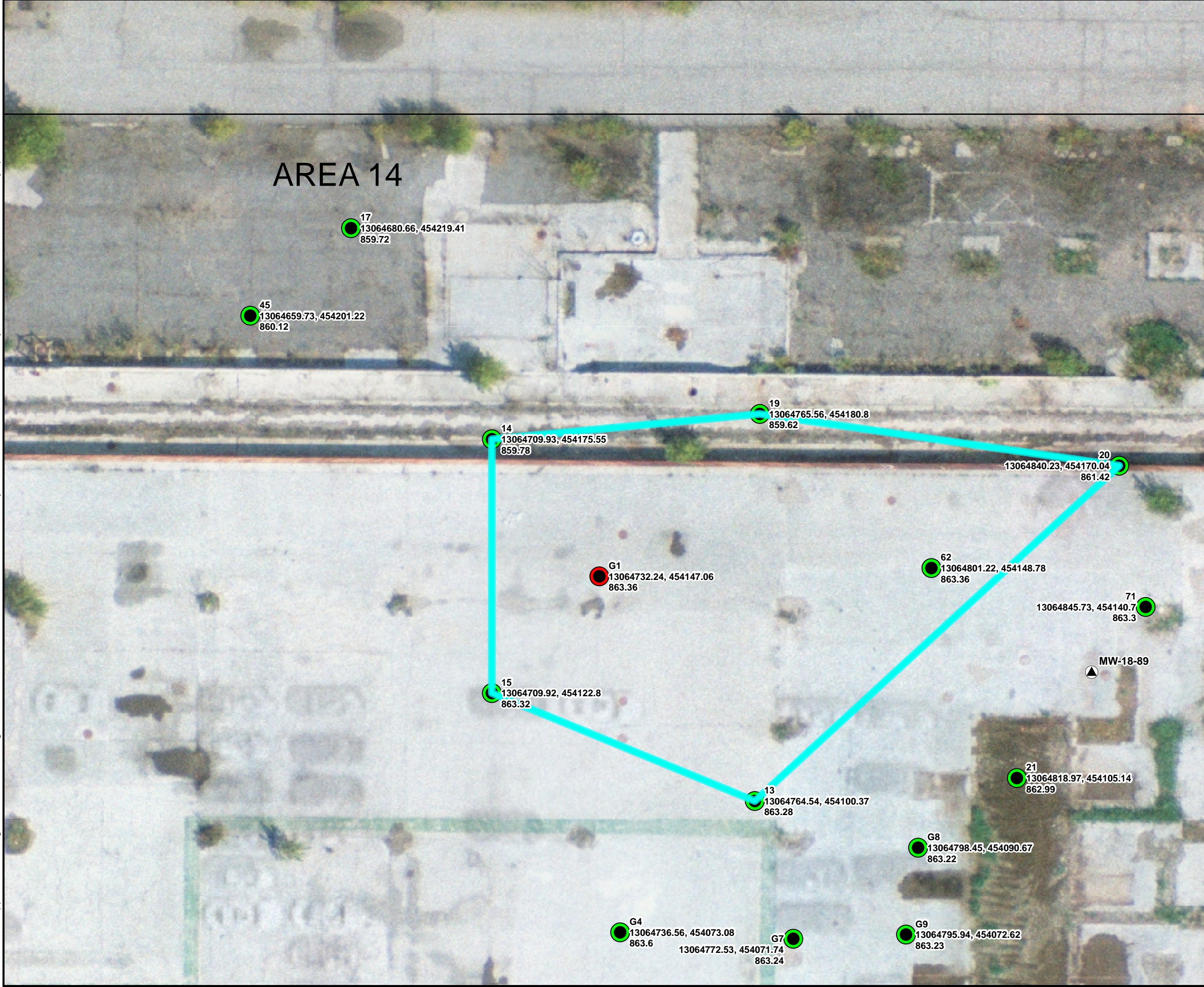
RACER TRUST  
 PLANT 3  
 LANSING, MICHIGAN

AREA 18 EXPOSURE  
 BARRIER PLACEMENT



FIGURE

7



# AREA 14

17  
 13064680.66, 454219.41  
 859.72

45  
 13064659.73, 454201.22  
 860.12

14  
 13064709.93, 454175.55  
 859.78

19  
 13064765.56, 454180.8  
 859.62

20  
 13064840.23, 454170.04  
 861.42

G1  
 13064732.24, 454147.06  
 863.36

62  
 13064801.22, 454148.78  
 863.36

71  
 13064845.73, 454140.7  
 863.3

MW-18-89

15  
 13064709.92, 454122.8  
 863.32

13  
 13064764.54, 454100.37  
 863.28

21  
 13064818.97, 454105.14  
 862.99

G8  
 13064798.45, 454090.67  
 863.22

G4  
 13064736.56, 454073.08  
 863.6

13064772.53, 454071.74  
 863.24

G7

G9  
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 863.23

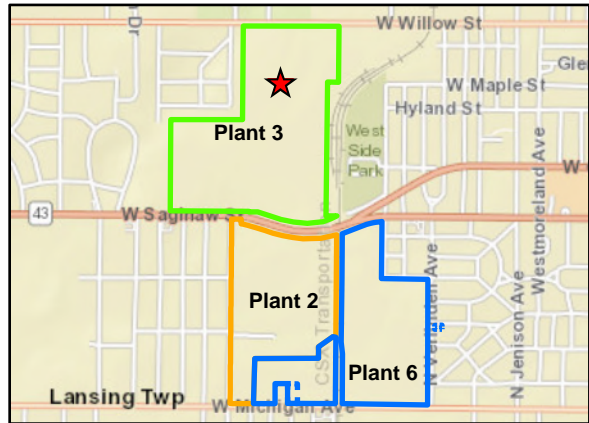
## LEGEND

- Perched Zone Monitoring Well
- Does Not Exceed Direct Contact Criteria for Cyanide at 2 FT or Less Below Ground Surface
- Exceeds Direct Contact Criteria for Cyanide at 2 FT or Less Below Ground Surface
- Delineation Boring Location Could Not Be Completed Due to Former Concrete Building Slab in this Location, Which Provides Existing Exposure Barrier
- Existing Exposure Barrier

AREA 2 RFI Phase II Investigation Area

AERIAL IMAGERY: 30-SEPT-2021

## Location Map



SCALE IN FEET

COORDINATE SYSTEM IS IN  
 NAD\_1983\_StatePlane\_Michigan\_South\_FIPS  
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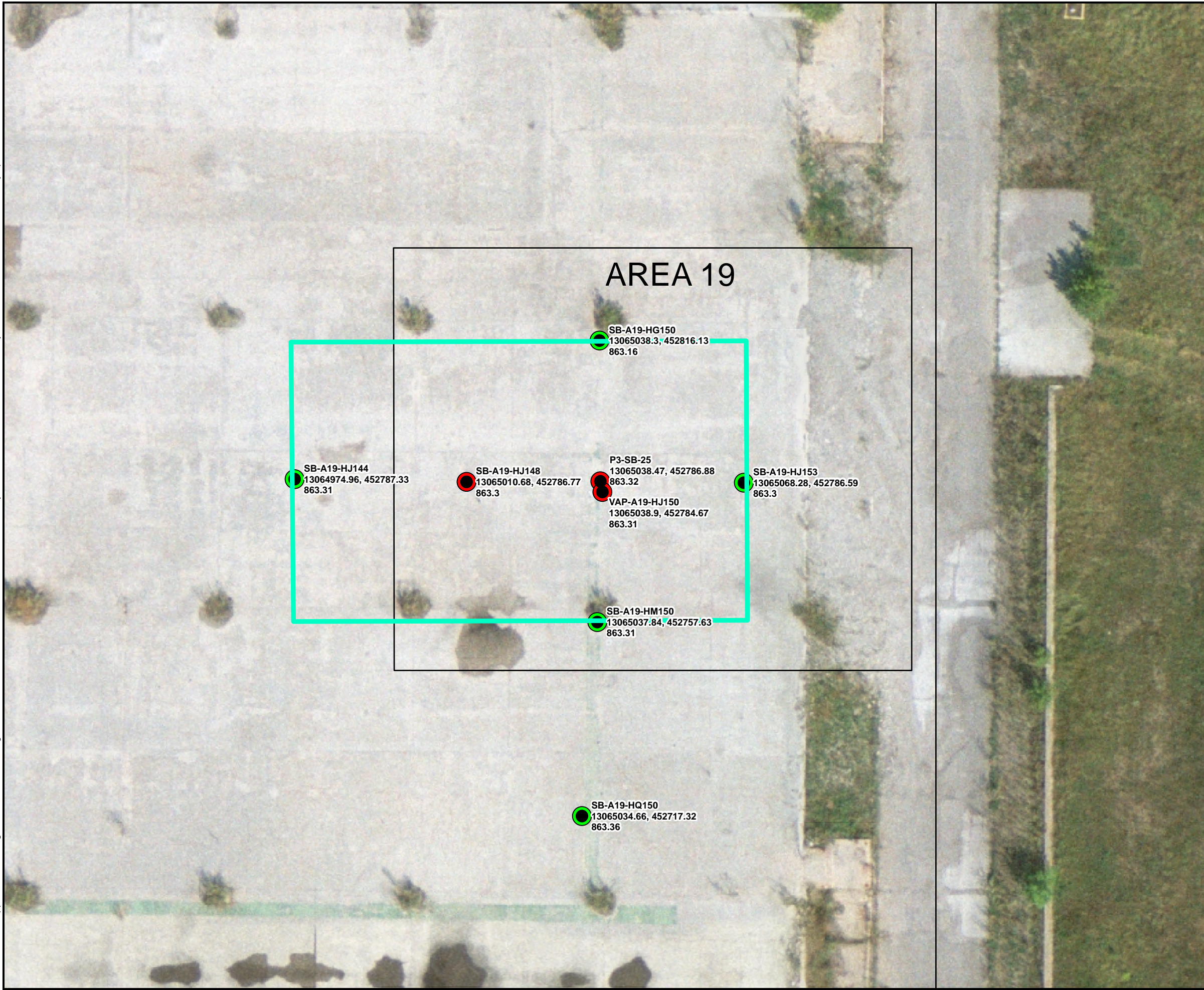
RACER TRUST  
 PLANT 3  
 LANSING, MICHIGAN

## AREA 14 EXISTING EXPOSURE BARRIER



FIGURE

8




**LEGEND**

- Does Not Exceed Direct Contact Criteria for Arsenic at 2 FT or Less Below Ground Surface
- Exceeds Direct Contact Criteria for Arsenic at 2 FT or Less Below Ground Surface
- Delineation Boring Location Could Not Be Completed Due to Former Concrete Building Slab in this Location, Which Provides Existing Exposure Barrier
- Existing Exposure Barrier
- AREA 2 RFI Phase II Investigation Area


AERIAL IMAGERY: 30-SEPT-2021

**Location Map**

  
 0 20 40  
 SCALE IN FEET  
 COORDINATE SYSTEM IS IN  
 NAD\_1983\_StatePlane\_Michigan\_South\_FIPS  
 \_2113\_Feet\_Intl

RACER TRUST  
 PLANT 3  
 LANSING, MICHIGAN

**AREA 19 EXISTING EXPOSURE BARRIER**


FIGURE  
**9**

# TABLES

**Table 1: Excavation Verification Soil Sample Results**  
**RACER Trust Lansing Plant 2**  
**Lansing, Michigan**

Location ID:		EGLE Non-residential Direct Contact Criteria (October 12, 2023)	GS-A2-Floor1	GS-A2-Floor2	GS-A2-Floor2	GS-A2-NSidewall	GS-A2-SSidewall	
Date Collected:			12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	
Sample Name:	Units		GS-A2-FLOOR1_121223	DUP-01_20231212	GS-A2-FLOOR2_121223	GS-A2-NSIDEWALL_121223	GS-A2-SSIDEWALL_121223	
Depth:			3.7 ft bgs	3.7 ft bgs	3.7 ft bgs	1.5 ft bgs	1.5 ft bgs	
<b>Metals</b>								
Arsenic	37	mg/kg	37	1.85	4.73	4.77	5.24	22.6
<b>GENCHEM</b>								
Total solids	--	%	--	88	86	88	84	84

Notes:  
mg/kg Milligrams per kilogram  
ft bgs feet below ground surface

# **Attachment 1**

**Area 2 Soil Disposal Manifest and Weight Ticket for Excavated Material**

C&C LANDFILL 269-266-5570  
14800 P Drive North Marshall, MI 49068

Y6

1406200

Margaret R.

12/12/23 2:56 pm 12/12/23 3:29 pm  
CRA1ATS27/837

000690  
JOB SITE SERVICES  
4395 WILDER ROAD  
BAY CITY, MI 48706  
Contract:50072318389  
Generator:RACER Trust Lansing

SCALE IN GROSS WEIGHT 159,700 NET TONS 48.28  
SCALE OUT TARE WEIGHT 63,140 NET WEIGHT 96,560

INBOUND  
INVOICE

0.00 YD Tracking QTY  
48.28 tn SW-CONT SOIL

Origin:INGHAM COUNTY 1004

**SAFETY**

*It's the Right Thing!*

Thank you for your business!  
Hours: Mon-Fri 7:00 AM to 4:30 PM  
Sat 7:00 AM to Noon

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPBL (06/13)

C&C LANDFILL 269-266-5570  
14800 P Drive North -Marshall, MI 49068

Y6

1406200

Margaret R.

12/12/23 2:56 pm 12/12/23 3:29 pm  
CRA1ATS27/837

000690  
JOB SITE SERVICES  
4395 WILDER ROAD  
BAY CITY, MI 48706  
Contract:50072318389  
Generator:RACER Trust Lansing

SCALE IN GROSS WEIGHT 159,700 NET TONS 48.28  
SCALE OUT TARE WEIGHT 63,140 NET WEIGHT 96,560

INBOUND  
INVOICE

0.00 YD Tracking QTY  
48.28 tn SW-CONT SOIL

Origin:INGHAM COUNTY 1004

**SAFETY**


*It's the Right Thing!*

Thank you for your business!  
Hours: Mon-Fri 7:00 AM to 4:30 PM  
Sat 7:00 AM to Noon

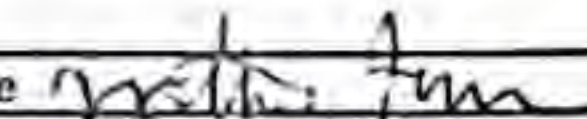
The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

If waste is asbestos waste, complete Sections I, II, III and IV  
 If waste is NOT asbestos waste, complete Sections I, II and III

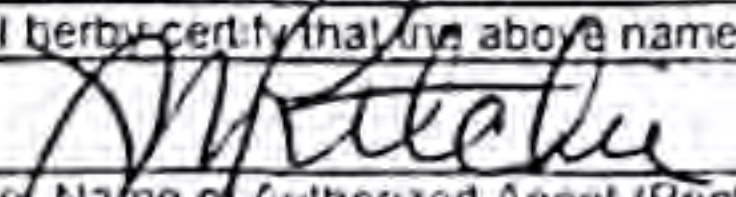
### I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of <b>0-1</b>		
d. Generator's Name and Location: RACER Trust Lansing 2800 West Saginaw Lansing, MI 48909 f. Phone: 810-225-1928 - Tiffany Linder			e. Generator's Mailing Address: RACER Trust 1505 Woodward Avenue Suite 200 Detroit, MI 48226 g. Phone: SAME			
If owner of the generating facility differs from the generator, provide:			i. Owner's Phone No.:			
h. Owner's Name:			i. Owner's Phone No.:			
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers		n. Total Quantity	o. Unit Wt/Vol
			No.	Type		
50072318389 Account # 690	12/6/2024	Soil Impacted with Arsenic	1	TR	50 <sup>g</sup>	
					48.28	
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.						
Tiffany Linder					12/12/2023	
p. Generator Authorized Agent Name (Print)			q. Signature		r. Date	

### II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: <b>Crandall Brothers Trucking</b> <b>800 Island Hwy Charlotte, NC 28213</b>		
b. Phone: <b>(917) 543-2390</b>		
c. Driver Name (Print): <b>Nathan Ferguson</b>	d. Signature: 	e. Date: <b>12/12/23</b>

### III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: <b>C&amp;C LANDFILL</b> 14800 P DRIVE NORTH MARSHALL, MI 49068 b. Phone: 269-781-9742		c. US EPA Number	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
		f. Signature: <b>1406200</b>	g. Date: <b>12/12/23</b>
e. Name of Authorized Agent (Print)		f. Signature	g. Date

### IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address		c. Responsible Agency Name and Address:	
b. Phone:		d. Phone:	
e. Special Handling Instructions and Additional Information			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both      % Friable      % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print)		h. Signature	i. Date
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			

# CRANDELL BROS. TRUCKING CO.

800 Island Hwy.  
Charlotte, MI 48813  
(517) 543-2930

590264

Customer Name <i>Jobsite Services</i>	Date <i>12/12/23</i>
------------------------------------------	-------------------------

Job Name <i>Racers Lansing</i>
-----------------------------------

Address
---------

Driver <i>Nathan</i>	Truck <i>1A</i>	Pit <i>C+C landfill</i>
-------------------------	--------------------	----------------------------

<input type="checkbox"/> Class 2 Sand	<input type="checkbox"/> 21AA Limestone	<input type="checkbox"/> Red Dirt
<input type="checkbox"/> Class 3 Sand	<input type="checkbox"/> 21AA Cr Concrete	<input type="checkbox"/> Fill Sand
<input type="checkbox"/> 22A	<input type="checkbox"/> 1X3	<input type="checkbox"/> Screened Topsoil
<input type="checkbox"/> 23A	<input type="checkbox"/> Peastone	<input type="checkbox"/> Unscreened Topsoil
<input type="checkbox"/> Other _____		

<input type="checkbox"/> Ton	<input checked="" type="checkbox"/> Cubic Yard	<input type="checkbox"/> Hourly
------------------------------	------------------------------------------------	---------------------------------

Load Size <i>train</i>	No. of Loads <i>1</i>	Total Qty. <i>40 yds</i>
---------------------------	--------------------------	-----------------------------

Start Time <i>12:45PM</i>	Stop Time <i>3:48PM</i>	Total Hours <i>3 hrs</i>
------------------------------	----------------------------	-----------------------------

	Load Time
	Net Tons

Drivers Signature <i>Nathan</i>
------------------------------------

Customer Signature <i>[Signature]</i>	Sign Out Time
------------------------------------------	---------------

IF DELIVERY REQUIRES DRIVING INSIDE CURB, CUSTOMER ASSUMES ALL RISKS OF DAMAGE TO WALKS, DRIVEWAYS, BUILDINGS, TREES, LAWNS, FENCES, AND UNDERGROUND CABLES, PIPES, WIRES, ETC.

WHITE OFFICE      YELLOW CUSTOMER COPY      PINK OFFICE      GOLD OFFICE

# **Attachment 2**

**Excavation Confirmation Soil Sampling Analytical Report**



# Analytical Laboratory Report

Report ID: S56731.01(01)+QC01  
Generated on 12/13/2023

Report to

Attention: Kaitlyn Hunt  
Arcadis  
28550 Cabot Drive  
Suite 500  
Novi, MI 48377

Phone: O:248-809-4013 C:947-777-5215 FAX:  
Email: Kaitlyn.Hunt@arcadis.com

Additional Contacts: Marina Samp, Tiffany Linder, Caitlin Cisco

Report produced by

Merit Laboratories, Inc.  
2680 East Lansing Drive  
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:  
John Lavery (johnlavery@meritlabs.com)  
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56731.01-S56731.05  
Project: RACER Lansing 30171056  
Collected Date(s): 12/12/2023  
Submitted Date/Time: 12/12/2023 14:40  
Sampled by: Jonathan Lust  
P.O. #: 30171056

Table of Contents

- Cover Page (Page 1)
- General Report Notes (Page 2)
- Report Narrative (Page 2)
- Laboratory Accreditations (Page 3)
- Qualifier Descriptions (Page 3)
- Glossary of Abbreviations (Page 3)
- Method Summary (Page 4)
- Sample Summary (Page 5)
- QC Report (Pages 11-19)

Maya Murshak  
Technical Director



# Analytical Laboratory Report

## General Report Notes

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Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Starred (\*) analytes are not NY NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

All accreditations/certifications held by this laboratory are listed on page 3. Not all accreditations/certifications are applicable to this report.

For a specific list of accredited analytes, please feel free to contact the laboratory or visit <https://www.meritlabs.com/certifications>.

## Report Narrative

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There is no additional narrative for this analytical report



# Analytical Laboratory Report

## Laboratory Accreditations (For Reference Only)

Authority	Accreditation ID
Michigan DEQ	#9956
DOD ELAP & ISO/IEC 17025:2017	#69699 PJLA Testing
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

## Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

## Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



# Analytical Laboratory Report

## Method Summary

Method	Version
SM2540B	Standard Method 2540 B 2015
SW3050B	SW 846 Method 3050B Revision 2 December 1996
SW6020A	SW 846 Method 6020A Revision 1 February 2007



# Analytical Laboratory Report

## Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56731.01	GS-A2-NSidewall_121223	Soil	12/12/23 14:00
S56731.02	GS-A2-SSidewall_121223	Soil	12/12/23 14:00
S56731.03	GS-A2-Floor1_121223	Soil	12/12/23 14:00
S56731.04	GS-A2-Floor2_121223	Soil	12/12/23 14:00
S56731.05	DUP-01	Soil	12/12/23 00:01



# Analytical Laboratory Report

Lab Sample ID: S56731.01

Sample Tag: GS-A2-NSidewall\_121223

Collected Date/Time: 12/12/2023 14:00

Matrix: Soil

COC Reference: 169916

### Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR

### Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/13/23 08:50	JRH	

### Inorganics

Method: SM2540B, Run Date: 12/12/23 19:50, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	84	1		%	1		

### Metals

Method: SW6020A, Run Date: 12/13/23 09:56, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	5.24	0.20		mg/kg	259	7440-38-2	



# Analytical Laboratory Report

Lab Sample ID: S56731.02

Sample Tag: GS-A2-SSidewall\_121223

Collected Date/Time: 12/12/2023 14:00

Matrix: Soil

COC Reference: 169916

### Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR

### Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/13/23 08:50	JRH	

### Inorganics

Method: SM2540B, Run Date: 12/12/23 19:50, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	84	1		%	1		

### Metals

Method: SW6020A, Run Date: 12/13/23 09:57, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	22.6	0.20		mg/kg	262	7440-38-2	



# Analytical Laboratory Report

Lab Sample ID: S56731.03

Sample Tag: GS-A2-Floor1\_121223

Collected Date/Time: 12/12/2023 14:00

Matrix: Soil

COC Reference: 169916

### Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR

### Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/13/23 08:50	JRH	

### Inorganics

Method: SM2540B, Run Date: 12/12/23 19:50, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	88	1		%	1		

### Metals

Method: SW6020A, Run Date: 12/13/23 09:58, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	1.85	0.20		mg/kg	255	7440-38-2	



# Analytical Laboratory Report

Lab Sample ID: S56731.04

Sample Tag: GS-A2-Floor2\_121223

Collected Date/Time: 12/12/2023 14:00

Matrix: Soil

COC Reference: 169916

### Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR

### Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/13/23 08:50	JRH	

### Inorganics

Method: SM2540B, Run Date: 12/12/23 19:50, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	88	1		%	1		

### Metals

Method: SW6020A, Run Date: 12/13/23 09:59, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	4.77	0.20		mg/kg	244	7440-38-2	



# Analytical Laboratory Report

Lab Sample ID: S56731.05

Sample Tag: DUP-01

Collected Date/Time: 12/12/2023 00:01

Matrix: Soil

COC Reference: 169916

### Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR

### Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/13/23 08:50	JRH	

### Inorganics

Method: SM2540B, Run Date: 12/12/23 19:50, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

### Metals

Method: SW6020A, Run Date: 12/13/23 10:00, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	4.73	0.20		mg/kg	242	7440-38-2	



# Quality Control Report

Report ID: S56731.01(01)+QC01

Generated on 12/13/2023

Report to

Attention: Kaitlyn Hunt

Arcadis

28550 Cabot Drive

Suite 500

Novi, MI 48377

Phone: O:248-809-4013 C:947-777-5215 FAX:

Report Produced by

Merit Laboratories

2680 East Lansing Drive

East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S56731.01-S56731.05

Project: RACER Lansing 30171056

Submitted Date/Time: 12/12/2023 14:40

Sampled by: Jonathan Lust

P.O. #: 30171056

QC Report Sections

Cover Page (Page 11)

Analysis Summary (Pages 12-16)

Prep Batch Summary (Page 17)

Batch QC Results (Pages 18-19)

Report Flag Descriptions

\*: QC result is outside of indicated control limits

W: Surrogate result not applicable due to sample dilution

I certify that this data package is in compliance with the terms and conditions of the program, and project, and contractual requirements both technically and for completeness. Release of the data contained in this hardcopy data package and its computer-readable data submitted has been authorized by the Quality Assurance Manager and his/her designee, as verified by the following signature.

Barbara Ball

Quality Assurance Manager

# QC Report - Analysis Summary

Lab Sample ID: S56731.01

Sample Tag: GS-A2-NSidewall\_121223

Collected Date/Time: 12/12/2023 14:00

Matrix: Soil

COC Reference: 169916

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<b>Inorganics</b>						
Total Solids	SM2540B	12/12/23 19:50	TS231212D	TS231212D	No	BLK/LCS/DUP
<b>Metals</b>						
Arsenic	SW6020A	12/13/23 09:56	MT5-23-1213A	MTD-121323-1	No	BLK/LCS/MS/MSD

# QC Report - Analysis Summary

Lab Sample ID: S56731.02

Sample Tag: GS-A2-SSidewall\_121223

Collected Date/Time: 12/12/2023 14:00

Matrix: Soil

COC Reference: 169916

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<b>Inorganics</b>						
Total Solids	SM2540B	12/12/23 19:50	TS231212D	TS231212D	No	BLK/LCS/DUP
<b>Metals</b>						
Arsenic	SW6020A	12/13/23 09:57	MT5-23-1213A	MTD-121323-1	No	BLK/LCS/MS/MSD

# QC Report - Analysis Summary

**Lab Sample ID: S56731.03**

Sample Tag: GS-A2-Floor1\_121223

Collected Date/Time: 12/12/2023 14:00

Matrix: Soil

COC Reference: 169916

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<b><i>Inorganics</i></b>						
Total Solids	SM2540B	12/12/23 19:50	TS231212D	TS231212D	No	BLK/LCS/DUP
<b><i>Metals</i></b>						
Arsenic	SW6020A	12/13/23 09:58	MT5-23-1213A	MTD-121323-1	No	BLK/LCS/MS/MSD

# QC Report - Analysis Summary

**Lab Sample ID: S56731.04**

Sample Tag: GS-A2-Floor2\_121223

Collected Date/Time: 12/12/2023 14:00

Matrix: Soil

COC Reference: 169916

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<b><i>Inorganics</i></b>						
Total Solids	SM2540B	12/12/23 19:50	TS231212D	TS231212D	No	BLK/LCS/DUP
<b><i>Metals</i></b>						
Arsenic	SW6020A	12/13/23 09:59	MT5-23-1213A	MTD-121323-1	No	BLK/LCS/MS/MSD

# QC Report - Analysis Summary

Lab Sample ID: S56731.05

Sample Tag: DUP-01

Collected Date/Time: 12/12/2023 00:01

Matrix: Soil

COC Reference: 169916

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<b>Inorganics</b>						
Total Solids	SM2540B	12/12/23 19:50	TS231212D	TS231212D	No	BLK/LCS/DUP
<b>Metals</b>						
Arsenic	SW6020A	12/13/23 10:00	MT5-23-1213A	MTD-121323-1	No	BLK/LCS/MS/MSD

# QC Report - Prep Batch Summary

## Inorganics, Prep Batch ID: TS231212D

Surrogates: No, QC Types: BLK/LCS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S56731.01	Total Solids	SM2540B	12/12/23 19:50	TS231212D
S56731.02	Total Solids	SM2540B	12/12/23 19:50	TS231212D
S56731.03	Total Solids	SM2540B	12/12/23 19:50	TS231212D
S56731.04	Total Solids	SM2540B	12/12/23 19:50	TS231212D
S56731.05	Total Solids	SM2540B	12/12/23 19:50	TS231212D

## Metals, Prep Batch ID: MTD-121323-1

Surrogates: No, QC Types: BLK/LCS/MS/MSD

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S56731.01	Arsenic	SW6020A	12/13/23 09:56	MT5-23-1213A
S56731.02	Arsenic	SW6020A	12/13/23 09:57	MT5-23-1213A
S56731.03	Arsenic	SW6020A	12/13/23 09:58	MT5-23-1213A
S56731.04	Arsenic	SW6020A	12/13/23 09:59	MT5-23-1213A
S56731.05	Arsenic	SW6020A	12/13/23 10:00	MT5-23-1213A

# QC Report - Batch QC Results

## Inorganics, Prep Batch ID: TS231212D

Surrogates: No, QC Types: BLK/LCS/DUP

### Blank (BLK)

Lab Sample ID: TS231212D.LRB1

Run in Batch: TS231212D, Run Date: 12/12/2023 19:50, Prep Date: 12/12/2023, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Total Solids		ND	1	%

### Laboratory Control Sample (LCS)

Lab Sample ID: TS231212D.LCS1

Run in Batch: TS231212D, Run Date: 12/12/2023 19:50, Prep Date: 12/12/2023, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Total Solids		100	90	110

### Duplicate (DUP)

Lab Sample ID: TS231212D.DP1, Parent Sample ID: S56710.05

Run in Batch: TS231212D, Run Date: 12/12/2023 19:50, Prep Date: 12/12/2023, Matrix: Soil, Dilution: 1

Analyte	Flags	RPD	RPD CL
Total Solids		0	5

### Duplicate (DUP)

Lab Sample ID: TS231212D.DP2, Parent Sample ID: S56710.15

Run in Batch: TS231212D, Run Date: 12/12/2023 19:50, Prep Date: 12/12/2023, Matrix: Soil, Dilution: 1

Analyte	Flags	RPD	RPD CL
Total Solids		2	5

# QC Report - Batch QC Results

## Metals, Prep Batch ID: MTD-121323-1

Surrogates: No, QC Types: BLK/LCS/MS/MSD

### Blank (BLK)

Lab Sample ID: MT5-23-1213A.016.LRB

Run in Batch: MT5-23-1213A, Run Date: 12/13/2023 09:52, Prep Date: 12/13/2023, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Arsenic		ND	0.0004	mg/L

### Laboratory Control Sample (LCS)

Lab Sample ID: MT5-23-1213A.015.LCS

Run in Batch: MT5-23-1213A, Run Date: 12/13/2023 09:51, Prep Date: 12/13/2023, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Arsenic		98	85	115

### Matrix Spike (MS)

Lab Sample ID: MT5-23-1213A.023.MS, Parent Sample ID: S56731.05

Run in Batch: MT5-23-1213A, Run Date: 12/13/2023 10:02, Prep Date: 12/13/2023, Matrix: Soil, Dilution: 240

Analyte	Flags	% Rec	LCL	UCL
Arsenic	*	74	75	125

### Matrix Spike (MS)

Lab Sample ID: MT5-23-1213A.025.MS, Parent Sample ID: S56731.05

Run in Batch: MT5-23-1213A, Run Date: 12/13/2023 10:08, Prep Date: 12/13/2023, Matrix: Soil, Dilution: 242

Analyte	Flags	% Rec	LCL	UCL
Arsenic		107	75	125

### Matrix Spike Duplicate (MSD)

Lab Sample ID: MT5-23-1213A.024.MSD, Parent Sample ID: MT5-23-1213A.023.MS

Run in Batch: MT5-23-1213A, Run Date: 12/13/2023 10:03, Prep Date: 12/13/2023, Matrix: Soil, Dilution: 237

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Arsenic	*	62	75	125	14	20

# Merit Laboratories Login Checklist

Lab Set ID:S56731

Client:ARCADIS\_NOVI (ARCADIS U.S., Inc.)

Project: RACER Lansing 30171056

Submitted: 12/12/2023 14:40 Login User: MMC

Attention: Kaitlyn Hunt

Address: Arcadis  
28550 Cabot Drive  
Suite 500  
Novi, MI 48377

Phone: O:248-809-4013 FAX:

Email: Kaitlyn.Hunt@arcadis.com

Selection	Description	Note
<b>Sample Receiving</b>		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 6.0
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
<b>Chain of Custody</b>		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
<b>Preservation</b>		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
<b>Bottle Conditions</b>		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: \_\_\_\_\_ Date: \_\_\_\_\_



2680 East Lansing Dr., East Lansing, MI 48823  
 Phone (517) 332-0167 Fax (517) 332-4034  
 www.meritlabs.com

C.O.C. PAGE # \_\_\_\_\_ OF \_\_\_\_\_

169916

**REPORT TO**

**CHAIN OF CUSTODY RECORD**

**INVOICE TO**

CONTACT NAME *Tiffany Linder*  
 COMPANY *Arcadis*  
 ADDRESS *28550 Cabot Dr Ste 500*  
 CITY *Novi* STATE *MI* ZIP CODE *48377*  
 PHONE NO. *810-225-1928* CELL NO. \_\_\_\_\_ P.O. NO. *30171056*  
 E-MAIL ADDRESS *Tiffany.Linder@arcadis.com* QUOTE NO. \_\_\_\_\_

CONTACT NAME *SAME*  
 COMPANY \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_  
 PHONE NO. \_\_\_\_\_ E-MAIL ADDRESS \_\_\_\_\_

**ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)**

PROJECT NO./NAME *RACER Lansing 30171056* SAMPLER(S) - PLEASE PRINT/SIGN NAME *Johanna Murray*  
 TURNAROUND TIME REQUIRED  1 DAY  2 DAYS  3 DAYS  STANDARD  OTHER \_\_\_\_\_  
 DELIVERABLES REQUIRED  STD  LEVEL II  LEVEL III  LEVEL IV  EDD  OTHER \_\_\_\_\_

USEPA CAS 1313 SW 6020  
 1313 SW 6020

Certifications  
 OHIO VAP  Drinking Water  
 DoD  NPDES  
 Project Locations  
 Detroit  New York  
 Other *Lansing*  
 Special Instructions

MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID  
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

# Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	MeOH	OTHER								
	DATE	TIME																		
56731.01	12-12-23	1400	G5-A2-NSidewall-121223	S	1	X							1							
.02	12-12-23	1400	G5-A2-SSidewall-121223	S	1	X							1							
.03	12-12-23	1400	G5-A2-Floor 1-121223	S	1	X							1							
.04	12-12-23	1400	G5-A2-Floor 2-121223	S	1	X							1							
.05	12-12-23	—	DUP-01	S	1	X							1							

RELINQUISHED BY: *Johanna Murray*  Sampler DATE *12-12-23* TIME *1447*  
 RECEIVED BY: *Johanna Murray* DATE *12/12/23* TIME *1440*

RELINQUISHED BY: \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_  
 RECEIVED BY: \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_  
 SEAL NO. SEAL INTACT YES  NO  INITIALS \_\_\_\_\_  
 SEAL NO. SEAL INTACT YES  NO  INITIALS \_\_\_\_\_  
 NOTES: TEMP. ON ARRIVAL *6.0*

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

# **Attachment 3**

**Clean Fill Certification Letter**

# *Crandell* *Bros.* **TRUCKING**

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December 8, 2023

Job Site Services, Inc.  
Attn: Tom Holdeman  
4395 Wilder Road  
Bay City, MI 48706

Dear Tom;

The 22A Road Gravel from the CP1 gravel pit (Pit #23-110) and the Class II Sand from the Nixon Road gravel pit (Pit #23-114) supplied by Crandell Brothers Trucking, are hereby certified as clean virgin materials that are freshly quarried and to the best of our knowledge are free of contaminants.

CP1 Gravel Pit is Located At:  
3659 E. Clinton Trail Charlotte, MI 48813

Nixon Road Gravel Pit is Located At:  
7399 Nixon Rd. Charlotte, MI 48813

Sincerely,



Chad Crandell  
Crandell Brothers Trucking  
800 Island Highway  
Charlotte, MI 48813



# Material Test Report

**Project No.:** 088580.00  
**Report No.:** MAT:23-27523-S2-1

**Client:** Crandell Bros Trucking Co  
**Project:** Crandell Brothers Misc Testing 2022  
  
various  
Lansing MI 48911  
**Contractor:** Crandell Brothers

**CC:**  
Chad Crandell, Karla Lilly

This report represents conditions at specific locations, therefore, conditions might vary away from those locations. No one except our client may rely on our findings/opinions, or reproduce this report. SME is not responsible for site safety on this project.

**Reviewed By:** Todd S. Neumann

Sample Details		Other Test Results			
<b>Specification</b>	22 A	<b>Description</b>	<b>Method</b>	<b>Result</b>	<b>Limits</b>
<b>Sample ID</b>	23-27523-S2	Retaining Sieve	ASTM D 5821	4.75mm	
<b>Supplier</b>	Crandell Brothers	Total Mass of Sample (g)		847.0	
<b>Sampled By</b>	CONTRACTOR	Fractured Particles (%)		83.5	≥25
<b>Source</b>	CP1 (MDOT Pit# 23-110)	<b>Method</b>		Mass	
<b>Date Sampled</b>	Sep 22, 2023				

Particle Size Distribution		<b>Method:</b>	ASTM C 136, ASTM C 117
		<b>Tested By:</b>	Charles A. Pakkala
<b>Sieve Size</b>	<b>% Passing</b>	<b>Limits</b>	
1in	100	100	
¾in	91	90 – 100	
½in	76		
3/8in	69	65 – 85	
No.4	54		
No.8	44	30 – 50	
No.16	37		
No.30	29		
No.50	21		
No.100	13		
No.200	9.0		
Finer No.200 (75µm)	7	4 – 8	

**Comments**  
The tested sample meets the MDOT grading requirements for 22A dense graded aggregates.



# Material Test Report

Project No.: 088580.00  
Report No.: MAT:23-26826-S1-1

Client: Crandell Bros Trucking Co  
Project: Crandell Brothers Misc Testing 2022  
  
various  
Lansing MI 48911  
Contractor: Crandell Brothers

CC:  
Chad Crandell, Karla Lilly

This report represents conditions at specific locations, therefore, conditions might vary away from those locations. No one except our client may rely on our findings/opinions, or reproduce this report. SME is not responsible for site safety on this project.

Reviewed By: Todd S. Neumann

## Sample Details

Specification: Class II  
Sample ID: 23-26826-S1  
Supplier: Crandell Brothers  
Sampled By: CONTRACTOR  
Source: Nixon Road (MDOT Pit #23-114)  
Date Sampled: Sep 18, 2023  
Date Tested: Sep 18, 2023

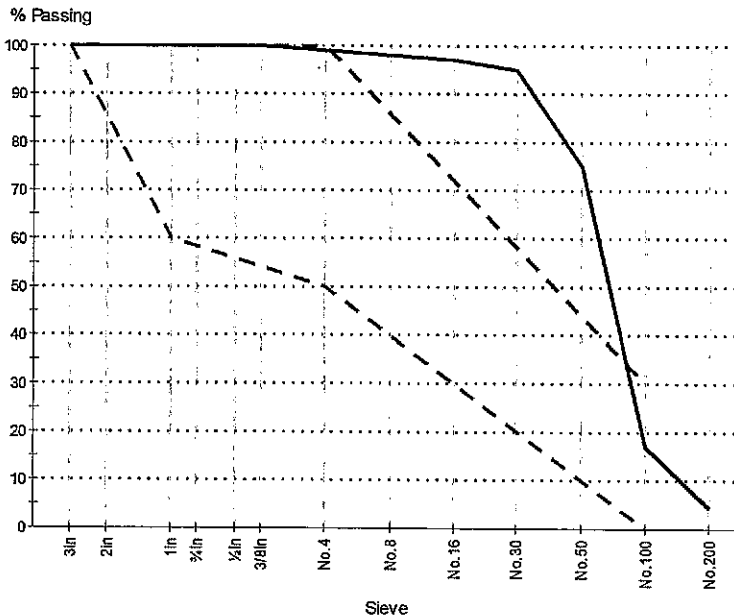
## Other Test Results

Description	Method	Result	Limits
-------------	--------	--------	--------

## Particle Size Distribution

Method: ASTM C 136, ASTM C 117

Tested By: Charles A. Pakkala



Sieve Size	% Passing	Limits
3in	100	100
2in	100	100
1in	100	60 - 100
3/4in	100	60 - 100
1/2in	100	60 - 100
3/8in	100	60 - 100
No. 4	99	50 - 100
No. 8	98	50 - 100
No. 16	97	50 - 100
No. 30	95	50 - 100
No. 50	75	50 - 100
No. 100	17	0 - 30
No. 200	4.5	0 - 30
Finer No. 200 (75µm)	4	0 - 7

## Comments

The tested sample meets the MDOT grading requirements for Class II granular materials.

# **Attachment 4**

## **Photograph Log**

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #1**

**Date: 12-12-2023**

**Description:**  
**Area 2 excavation in progress**

**Location:**  
**Area 2**

**Photograph Taken By:**  
**Jonathon Lust**



**Photo #2**

**Date: 12-12-2023**

**Description:**  
**Area 2 excavation in progress**

**Location:**  
**Area 2**

**Photograph Taken By:**  
**Jonathon Lust**

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #3**

**Date: 12-12-2023**

**Description:**  
**Area 2 excavation in progress**

**Location:**  
**Area 2**

**Photograph Taken By:**  
**Robert Prigge**



**Photo #4**

**Date: 12-12-2023**

**Description:**  
**Area 2 excavation in progress**

**Location:**  
**Area 2**

**Photograph Taken By:**  
**Jonathon Lust**

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #5**

**Date: 12-14-2023**

**Description:  
Area 2 excavation  
backfilling activities**

**Location:  
Area 2**

**Photograph Taken By:  
Robert Prigge**



**Photo #6**

**Date: 12-14-2023**

**Description:  
Area 2 excavation  
compaction with  
equipment after  
backfilling**

**Location:  
Area 2**

**Photograph Taken By:  
Robert Prigge**

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #7**

**Date: 12-14-2023**

**Description:  
Area 2 excavation and  
backfilling complete**

**Location:  
Area 2**

**Photograph Taken By:  
Robert Prigge**



**Photo #8**

**Date: 12-14-2023**

**Description:  
Area 2 excavation and  
backfilling complete**

**Location:  
Area 2**

**Photograph Taken By:  
Robert Prigge**

## PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #9**

**Date: 12-11-2023**

**Description:**  
Area 5-2 exposure  
barrier in progress

**Location:**  
Area 5-2

**Photograph Taken By:**  
Jonathon Lust



**Photo #10**

**Date: 12-11-2023**

**Description:**  
Area 5-2 exposure  
barrier in progress

**Location:**  
Area 5-2

**Photograph Taken By:**  
Jonathon Lust

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #11**

**Date: 12-11-2023**

**Description:  
Completed area 5-2  
exposure barrier**

**Location:  
5-2**

**Photograph Taken By:  
Jonathon Lust**



**Photo #12**

**Date: 12-11-2023**

**Description:  
Completed area 5-2  
exposure barrier**

**Location:  
5-2**

**Photograph Taken By:  
Jonathon Lust**

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #13**

**Date: 12-11-2023**

**Description:  
Completed area 5-2  
exposure barrier**

**Location:  
5-2**

**Photograph Taken By:  
Jonathon Lust**



**Photo #14**

**Date: 12-11-2023**

**Description:  
Completed area 5-2  
exposure barrier**

**Location:  
5-2**

**Photograph Taken By:  
Jonathon Lust**

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #15**

**Date: 12-11-2023**

**Description:  
Area 5-3 exposure  
barrier in progress**

**Location:  
5-3**

**Photograph Taken By:  
Jonathon Lust**



**Photo #16**

**Date: 12-11-2023**

**Description:  
Area 5-3 exposure  
barrier in progress**

**Location:  
5-3**

**Photograph Taken By:  
Jonathon Lust**

## PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #17**

**Date: 12-12-2023**

**Description:**  
Area 5-3 exposure  
barrier in progress

**Location:**  
5-3

**Photograph Taken By:**  
Jonathon Lust



**Photo #18**

**Date: 12-12-2023**

**Description:**  
Area 5-3 exposure  
barrier in progress

**Location:**  
5-3

**Photograph Taken By:**  
Jonathon Lust

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #19**

**Date: 12-12-2023**

**Description:**  
**Area 5-3 exposure barrier in progress**

**Location:**  
**5-3**

**Photograph Taken By:**  
**Jonathon Lust**



**Photo #20**

**Date: 12-12-2023**

**Description:**  
**Area 5-3 exposure barrier in progress**

**Location:**  
**5-3**

**Photograph Taken By:**  
**Jonathon Lust**

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #21**

**Date: 12-13-2023**

**Description:**  
Area 5-3 completed  
exposure barrier

**Location:**  
5-3

**Photograph Taken By:**  
Jonathon Lust



**Photo #22**

**Date: 12-13-2023**

**Description:**  
Area 5-3 completed  
exposure barrier

**Location:**  
5-3

**Photograph Taken By:**  
Jonathon Lust

## PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #23**

**Date: 12-13-2023**

**Description:**  
Area 5-3 completed  
exposure barrier

**Location:**  
5-3

**Photograph Taken By:**  
Jonathon Lust



**Photo #24**

**Date: 12-13-2023**

**Description:**  
Area 5-3 completed  
exposure barrier

**Location:**  
5-3

**Photograph Taken By:**  
Jonathon Lust

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #25**

**Date: 12-13-2023**

**Description:**  
Area 18 marked  
exposure barrier area

**Location:**  
Area 18

**Photograph Taken By:**  
Jonathon Lust



**Photo #26**

**Date: 12-13-2023**

**Description:**  
Area 18 marked  
exposure barrier area

**Location:**  
Area 18

**Photograph Taken By:**  
Jonathon Lust

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #27**

**Date: 12-13-2023**

**Description:  
Area 18 exposure  
barrier in progress**

**Location:  
Area 18**

**Photograph Taken By:  
Jonathon Lust**



**Photo #28**

**Date: 12-13-2023**

**Description:  
Area 18 exposure  
barrier in progress**

**Location:  
Area 18**

**Photograph Taken By:  
Jonathon Lust**

# PROJECT PHOTOGRAPHS

RACER Trust  
RACER Lansing 2023



**Photo #29**

**Date: 12-13-2023**

**Description:**  
**Area 18 completed exposure barrier**

**Location:**  
**Area 18**

**Photograph Taken By:**  
**Jonathon Lust**



**Photo #30**

**Date: 12-13-2023**

**Description:**  
**Area 18 completed exposure barrier**

**Location:**  
**Area 18**

**Photograph Taken By:**  
**Jonathon Lust**