



Rose & Westra
A Division of GZA

GEOTECHNICAL

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WATER

CONSTRUCTION
MANAGEMENT

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WORK PLAN ADDENDUM

House Street Disposal Area

Plainfield Township, Kent County, Michigan

November 15, 2019
File No. 16.0062335.52



PREPARED FOR:
Wolverine World Wide, Inc.
Rockford, Michigan

Rose & Westra, a Division of GZA GeoEnvironmental, Inc.
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Submitted Via Email Only

November 15, 2019
File No. 16.0062335.52

Mr. Jeffrey Kimble, On-Scene Coordinator (OSC)
United States Environmental Protection Agency - Region 5
2565 Plymouth Road
Ann Arbor, MI 48105

Re: Work Plan Addendum
House Street Disposal Site, Plainfield Township, Kent County, Michigan

Dear Mr. Kimble:

On behalf of Wolverine World Wide, Inc. (Wolverine), Rose & Westra, a Division of GZA GeoEnvironmental, Inc. (R&W/GZA), has prepared this Work Plan Addendum for the former Wolverine House Street Disposal Site in Plainfield Township, Kent County, Michigan. This Work Plan Addendum is being completed pursuant to the October 28, 2019 U.S. EPA Region 5 Administrative Settlement Agreement and Order on Consent for Removal Actions (AOC)¹.

Very truly yours,

Rose & Westra, A Division of GZA GeoEnvironmental, Inc.


Loretta J. Powers
Senior Project Manager


Jiangeng (Jim) Cai, P.E.
Senior Consultant


Mark A. Westra
Principal

Attachment

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¹ Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Docket No. V-W-20-C-002



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Acronym	Definition
AOC	Agreement and Order on Consent for Removal Actions
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	United States Environmental Protection Agency
GRGCC	MDEQ Part 201 Generic Residential Groundwater Cleanup Criteria
GCL	Geosynthetic Clay Liner
HDPE	High Density Polyethylene
LLDPE	Linear Low-Density Polyethylene
PFAS	Perfluoroalkyl and Polyfluoroalkyl Substances
R&W/GZA	Rose & Westra, a Division of GZA GeoEnvironmental, Inc.
Site	House Street Site, 1855 House Street NE, Plainfield Township, Michigan
TCLP	Toxicity Characteristic Leaching Procedure
VOCs	Volatile Organic Compounds
TCRA	Time Critical Response Action (as defined by EPA)
Wolverine	Wolverine World Wide, Inc.
WP	Work Plan



1.0 INTRODUCTION

On behalf of Wolverine, R&W/GZA prepared this WP Addendum as a follow up to the July 12, 2019 WP. This WP Addendum incorporates the additional delineation sampling data collected in June - August 2019 and serves as the amendment referenced in **Section 6.0** of the WP. This Work Plan Addendum is being completed in response to the AOC entered into by Wolverine and EPA on October 28, 2019.

2.0 SITE BACKGROUND

Site background is provided in **Section 2.0** of the WP.

3.0 CERCLA ACTION ITEMS

This section of the WP Addendum updates the planned responses to the action item identified in **Section 3.6.2** of the WP (TCLP Soil Excavation). The AOC entered into by Wolverine and EPA on October 28, 2019 provides for capping soil in lieu of excavation.

WP 3.6 TCLP SOIL

During the 2018 investigation, chromium concentrations exceeded the TCLP screening value in six waste material samples (two of which were in one boring at different depths). This results in five areas with chromium TCLP exceedances. The AOC entered into by Wolverine and EPA on October 28, 2019 provides for these materials to be capped in place. Accordingly, the following section discusses the capping of these areas based on the investigation and delineation activities conducted in 2018 and 2019.

WP 3.6.1 TCLP Soil Delineation

Task 3.6.1 was completed during June, July, and August 2019. The results from the delineation have been incorporated into the capping plans proposed in the following sections.

WP Task 3.6.2 TCLP Soil Capping

Soil and/or waste material above the chromium TCLP threshold (TCLP Chromium Areas) have been delineated and will be capped in place. **Figure 1** shows the approximate locations of capping Areas 1 through 5 as well as the typical details and section for the caps. **Figure 2** through **Figure 5** show the delineation borings and area details for TCLP Chromium Areas 1 through 5.

Site Preparation Activities

The Site preparation tasks are described in **Section 3.6.2** of the WP.

Capping of Chromium TCLP Soil/Waste Material

The five TCLP Chromium Areas will be capped using geomembrane in accordance with the details provided on **Figure 1**. Generally, each TCLP Chromium Area, plus approximately 10 feet on each side, will be cleared and grubbed, and the area will be graded so that the cap will shed water, with a slope of approximately 1.6:1, as depicted on **Figure 1**. If needed, subgrade material (sand or gravel, as determined by the Engineer), will be placed over the graded area prior to cap placement.



The cap will consist of a liner, followed by 12-inch clean cover soil, and approximately 6 inch top soil with seeding. The liner, either HDPE geomembrane, LLDPE geomembrane, or GCL, will be placed over each of the graded TCLP Chromium Areas and will extend 10 feet past the limit of the Areas. The liner will be anchored using an anchor trench as specified in **Figure 1**. The liner will then be covered with 12 inches of “clean” fill soil, topsoil, and seeded. Fill material will be analyzed for metals, VOCs, SVOCs, and PFAS to confirm that the material is “clean” prior to being accepted for placement on-Site.

Site Restoration

Section 3.6.2 describes the applicable site restoration.

4.0 OFF-SITE MIGRATION CONTROL

Off-Site Migration Control is described in **Section 4.0** of the WP.

5.0 INVESTIGATION-DERIVED WASTE DISPOSAL

While expected to be minimal, investigation-derived waste disposal is described in **Section 5.0** of the WP.

6.0 ANTICIPATED SCHEDULE

R&W/GZA has completed the following tasks from the WP:

- The delineation of the TCLP Chromium Soil Areas and off-site investigations have been completed.
- The fencing installation has been completed.

The schedule for the capping will be established once the proposed specifications are approved. The schedule will be provided as a separate submittal. Upon completion of the capping, a summary of the 2019 TCRA tasks and capping will be provided to EPA within 90 days.

7.0 REFERENCES

R&W/GZA. 2018. *Extent of Contamination Study Removal Work Plan, House Street Disposal Area, Plainfield Township, Kent County, Michigan*. Submitted to EPA May 29, 2018.

R&W/GZA. 2018. *Field Sampling Plan, House Street Disposal Area*. Submitted to USEPA May 30, 2018.

R&W/GZA. 2018. *Health and Safety Plan, Former Wolverine Tannery and House Street Disposal Area*. Submitted to EPA May 29, 2018.

R&W/GZA. 2018. *Quality Assurance Project Plan, Former Wolverine Tannery and House Street Disposal Area, Revision 2*. Submitted to EPA August 29, 2018 with errata pages submitted October 31, 2018 and April 15, 2019.

R&W/GZA. 2019. *HSDS Implementation of the 2018 Work Plan Summary Report*. Submitted to EPA May 21, 2019.

USEPA. 2019. *RE: Wolverine Tannery and House Street Disposal State: Required CERCLA Actions*. Letter dated April 29, 2019.



November 15, 2019

WP Addendum

House Street Disposal Site, Plainfield Township, Kent County, Michigan

File No. 16.0062335.52

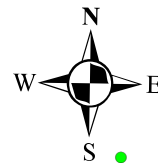
Page 3 of 16

USEPA. 2019. *RE: Work Plan, House Street Disposal Area, Plainfield Township, Kent County, Michigan: Approval with Significant Modifications*. Letter dated June 27, 2019.

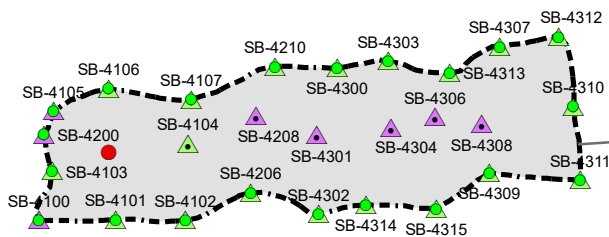
USEPA. 2019. Administrative Settlement Agreement and Order on Consent for Removal Actions. CERCLA Docket No. V-W-20-C-002. Dated October 28, 2019.



FIGURES

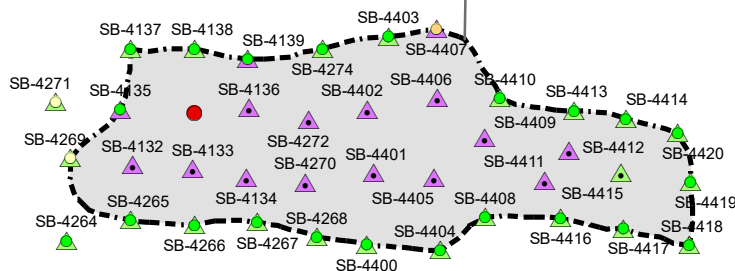


AREA 1



Area= 1679 Square Ft
 Max Length= 85 Ft
 Max Width= 23 Ft

Area= 2293 Square Ft
 Max Length= 97 Ft
 Max Width= 35 Ft



AREA 5

LEGEND

2019 TCLP INVESTIGATION

- NO WASTE MATERIAL OBSERVED
- WASTE MATERIAL OBSERVED

- 1966 PROPOSED SITE PLAN
- APPROXIMATE HOUSE ST SITE BOUNDARY

TCLP Chromium Concentration (ug/L)

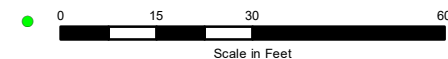
- 0 - 310
- 310.00001 - 950
- 950.00001 - 1,600
- 1,600.00001 - 5,000
- 5,000.00001 - 18,000

Extent of Cr TCLP Exceeding RCRA Max Concentration

- Extent of Cr TCLP Exceeding RCRA Max Concentration

NOTE:

1. BORING LOCATIONS ARE PRECEDED BY THE SITE CODE "HS-" ON BORING LOGS AND SAMPLE NAMES.



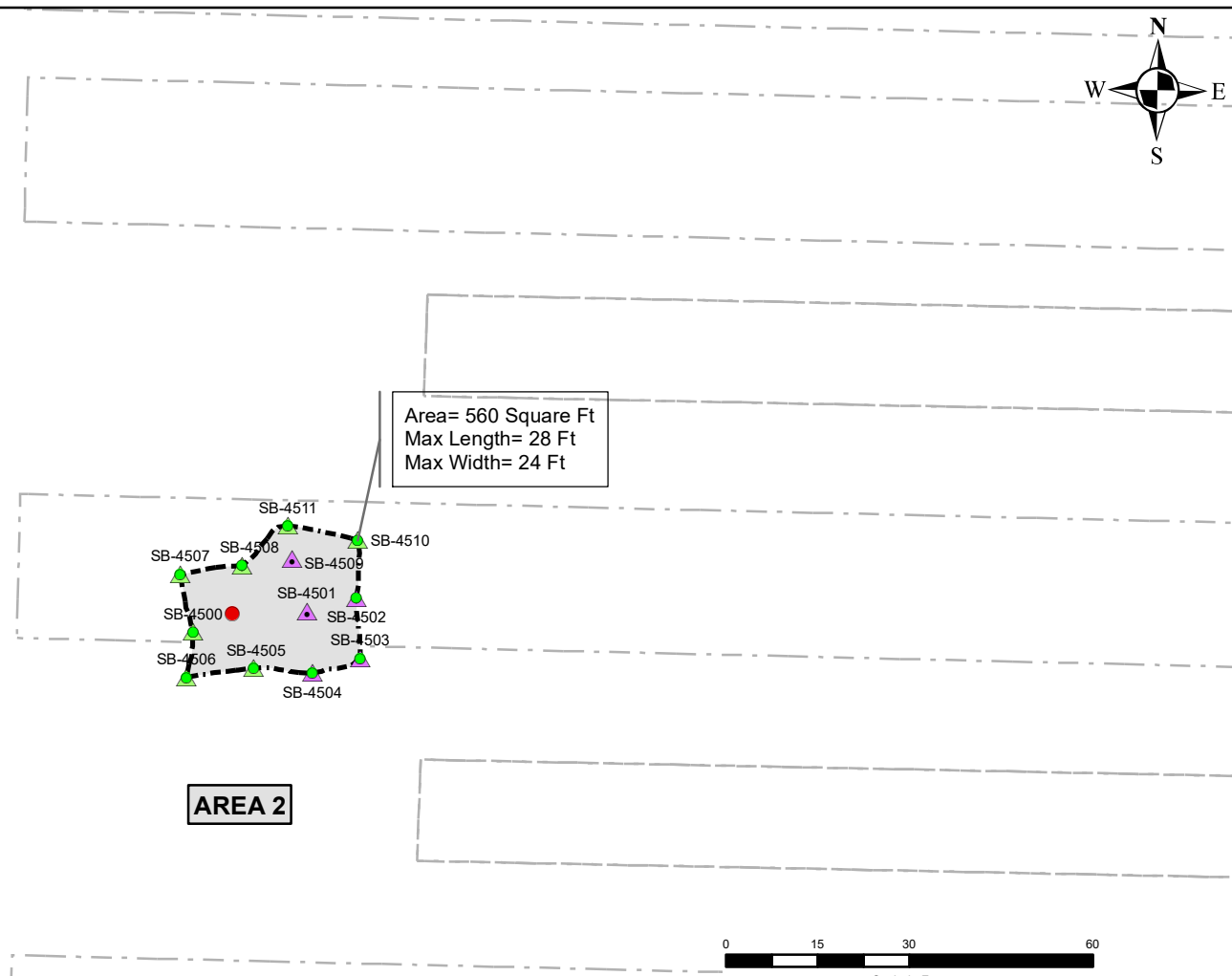
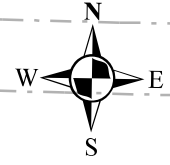
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 601 Fifth Street NW, Suite 102
 Grand Rapids, Michigan 49504

EXTENT OF TCLP CHROMIUM EXCEEDING RCRA MAX CONCENTRATION HOUSE STREET 2019 TCLP INVESTIGATION - AREA 1 AND AREA 5

GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: WN&J/WWW	
PROJ MGR: LJP DESIGNED BY: JC DATE: 11/15/2019	REVIEWED BY: LJP DRAWN BY: JC/JMG PROJECT NO. 16.0062335.52	CHECKED BY: LJP SCALE: 1" = 30' REVISION NO.	FIGURE 2

© 2019 - GZA GeoEnvironmental, Inc. J:\16.xx Grand Rapids\16.0062335.52\16.0062335.52\Data_GIS\GIS_CAD\HS_TCLP_Investigation_LetterSize.mxd, 11/15/2019, 12:02:44 PM, julie.groenleer



LEGEND

2019 TCLP INVESTIGATION

- NO WASTE MATERIAL OBSERVED
- WASTE MATERIAL OBSERVED
- 1966 PROPOSED SITE PLAN
- APPROXIMATE HOUSE ST SITE BOUNDARY

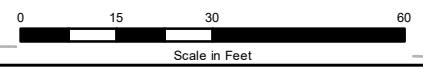
TCLP Chromium Concentration (ug/L)

- 0 - 310
- 310.00001 - 950
- 950.00001 - 1,600
- 1,600.00001 - 5,000
- 5,000.00001 - 18,000

Extent of Cr TCLP Exceeding RCRA Max Concentration

- Extent of Cr TCLP Exceeding RCRA Max Concentration

AREA 2



NOTE:
1. BORING LOCATIONS ARE PRECEDED BY THE SITE CODE "HS-" ON BORING LOGS AND SAMPLE NAMES.

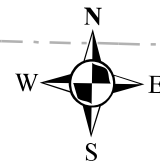
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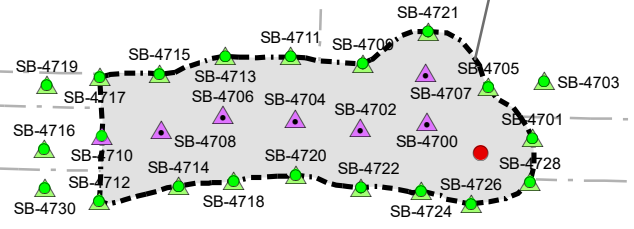
EXTENT OF TCLP CHROMIUM EXCEEDING RCRA MAX CONCENTRATION HOUSE STREET 2019 TCLP INVESTIGATION - AREA 2

GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: WN&J/WWW	
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PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE 3
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1" = 30'	
DATE: 11/15/2019	PROJECT NO. 16.0062335.52	REVISION NO.	



Area= 1324 Square Ft
 Max Length= 68 Ft
 Max Width= 26 Ft



AREA 3

LEGEND

2019 TCLP INVESTIGATION

- NO WASTE MATERIAL OBSERVED
- WASTE MATERIAL OBSERVED
- 1966 PROPOSED SITE PLAN
- APPROXIMATE HOUSE ST SITE BOUNDARY

TCLP Chromium Concentration (ug/L)

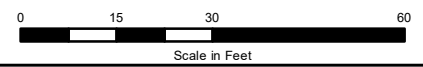
- 0 - 310
- 310.00001 - 950
- 950.00001 - 1,600
- 1,600.00001 - 5,000
- 5,000.00001 - 18,000

Extent of Cr TCLP Exceeding RCRA Max Concentration

Extent of Cr TCLP Exceeding RCRA Max Concentration

NOTE:

1. BORING LOCATIONS ARE PRECEDED BY THE SITE CODE "HS-" ON BORING LOGS AND SAMPLE NAMES.



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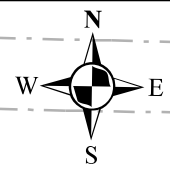
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EXTENT OF TCLP CHROMIUM EXCEEDING RCRA MAX CONCENTRATION HOUSE STREET 2019 TCLP INVESTIGATION - AREA 3

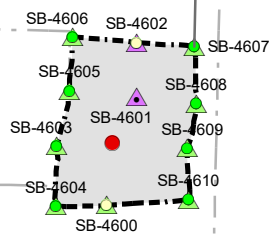
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PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE 4
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1" = 30'	
DATE: 11/15/2019	PROJECT NO. 16.0062335.52	REVISION NO.	

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Area= 506 Square Ft
 Max Length= 26 Ft
 Max Width= 21 Ft



AREA 4

LEGEND

2019 TCLP INVESTIGATION

- NO WASTE MATERIAL OBSERVED
- WASTE MATERIAL OBSERVED
- 1966 PROPOSED SITE PLAN
- APPROXIMATE HOUSE ST SITE BOUNDARY

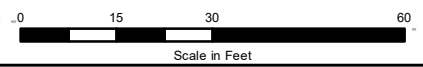
TCLP Chromium Concentration (ug/L)

- 0 - 310
- 310.00001 - 950
- 950.00001 - 1,600
- 1,600.00001 - 5,000
- 5,000.00001 - 18,000

Extent of Cr TCLP Exceeding RCRA Max Concentration

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EXTENT OF TCLP CHROMIUM EXCEEDING RCRA MAX CONCENTRATION HOUSE STREET 2019 TCLP INVESTIGATION - AREA 4

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PROJ MGR: LJP DESIGNED BY: JC DATE: 11/15/2019	REVIEWED BY: LJP DRAWN BY: JC/JMG PROJECT NO. 16.0062335.52	CHECKED BY: LJP SCALE: 1" = 30' REVISION NO.	FIGURE 5



GZA GeoEnvironmental, Inc.