Rose & Westra
A Division of GZA

GEOTECHNICAL
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MEMORANDUM

To: Abby Hendershott, EGLE

From: Lori Powers, Rose & Westra, a Division of GZA GeoEnvironmental, Inc.

Date: September 30, 2019

File No.: 16.0062335.52 / 16.0062335.53

Re: Wolverine World Wide, Inc. (Wolverine) – House Street Disposal Area Monthly Progress Report

This EGLE Monthly Progress Report (MPR) is being submitted on behalf of Wolverine. This EGLE MPR is completed as agreed upon in Mr. John Byl's July 9, 2018 letter entitled *Response to May 29 Correspondence regarding Tannery Meeting Summary and Action Items.*

This progress report also includes information to supplement the September 11, 2019 U.S. EPA MPR (attached).

SITE INVESTIGATION ACTIONS

Continued effort for access to off-site drilling locations. Conducted drilling at location PMW-12 for installation of a total of three wells. Additional wells may be installed, pending the vertical aquifer profiling data.

Began drilling location PMW-24.

Clearing for fence installation continued, a permit was issued through Kent County Road Commission regarding fence installation in the House Street right-of-way, and fence installation began.

At the request of EGLE, five boring logs from drilled locations MW-27, MW-28, MW-30, MW-31, and MW-32 are included with this update.

R&W/GZA completed Quarter 3 sampling of the permanent groundwater monitoring wells both on and off-Site.

Three staff gauges were installed and surveyed along the Rogue River.

SITE ANALYTICAL DATA RECIEVED

PFAS soil data received since the last update from the on-Site investigation and westerly possible wetlands investigation is summarized in the attached table. The figures showing the boring and sample locations were submitted in the last monthly update.

SITE MAPPING

A revised map of the off-Site well locations will be provided once the evaluation and verification of the survey information is available.

SITE ANTICIPATED ACTIONS AND SCHEDULE FOR NEXT REPORTING PERIOD

Drilling will continue at PMW-24. R&W/GZA will continue to make efforts to gain access to drilling locations PMW-22, PMW-13, and PMW-16. Additional wells may be installed at the PMW-12 location.

Continue to respond to the EPA's April 29, 2019 correspondence regarding CERCLA actions at the Wolverine Tannery and House Street sites.

OFF-SITE SUMMARY

Draft scopes of work for parcels on the south side of House Street are being prepared for submittal to EGLE, EPA, MDOT, and the property owners and their counsel for review and approval prior to implementing any removal actions.

R&W/GZA is also working on approval for waste disposal. An additional composite sample was requested from the disposal facility, collected, and has been submitted for analysis. Revised waste profiles and approval are underway.

R&W/GZA and Wolverine are evaluating possible actions for additional investigation/remediation at the Imperial Pine Parcel (7900 Imperial Pine Drive NE).

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - PFAS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	U.S. EPA Residential Soil Regional Removal Management Levels[3]	HS-SB-4800	HS-SB-4800	HS-SB-4802	HS-SB-4802	HS-SB-4803	HS-SB-4803	HS-SB-4804	HS-SB-4804	HS-SB-4806
Sample Name				HS-SB-4800 (0-2)	HS-SB-4800 (15-17)	HS-SB-4802 (0-2)	HS-SB-4802 (15-17)	HS-SB-4803 (0-2)	HS-SB-4803 (6-8)	HS-SB-4804 (0-2)	HS-SB-4804 (10-12)	HS-SB-4806 (0-2)
Depth Interval (Feet below ground surface)				0 - 2	15 - 17	0 - 2	15 - 17	0 - 2	6 - 8	0 - 2	10 - 12	0 - 2
Boring Location				Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site
Laboratory Sample ID(s)				UH23024-002	UH23024-003	UH17001-020	UH17001-021	UH23024-010	UH23024-011	UH23024-012	UH23024-013	UH17001-026
Sample Date				8/19/2019	8/19/2019	8/16/2019	8/16/2019	8/20/2019	8/20/2019	8/20/2019	8/20/2019	8/16/2019
Parameter (µg/kg)												
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	NCL	NCL	NCL	<12	<11	<9.6	<11	<9.4	<12	<10	<11	<11
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	NCL	NCL	NCL	<12	<11	<9.6	<11	<9.4	<12	<10	<11	<11
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	NCL	NCL	NCL	<2.4	<2.2	<1.9	<2.2	<1.9	<2.5	<2.1	<2.1	<2.2
N-Methyl perfluorooctane sulfonamide (MeFOSA)	NCL	NCL	NCL	<2.4	<2.2	<1.9	<2.2	<1.9	<2.5	<2.1	<2.1	<2.2
Perfluorobutane sulfonic acid (PFBS)	NCL	NCL	3,800,000	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorodecane sulfonic acid (PFDS)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluoroheptane sulfonic acid (PFHpS)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorononane sulfonic acid (PFNS)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorooctane sulfonamide (FOSA)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluoropentane sulfonic acid (PFPeS)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorohexane sulfonic acid (PFHxS)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorobutanoic acid (PFBA)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorodecanoic acid (PFDA)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorododecanoic acid (PFDoDA)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluoroheptanoic acid (PFHpA)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorohexanoic acid (PFHxA)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorononanoic acid (PFNA)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorooctanoic acid (PFOA)	NCL	10,000	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorooctane sulfonic acid (PFOS)	NCL	0.24	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
PFOA + PFOS (Calculated)	NCL	NCL	NCL	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoropentanoic acid (PFPeA)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorotetradecanoic acid (PFTeDA)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluorotridecanoic acid (PFTrDA)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Perfluoroundecanoic acid (PFUnDA)	NCL	NCL	NCL	<5.9	<5.5	<4.8	<5.4	<4.7	<6.2	<5.2	<5.3	<5.4
Total PFAS (Calculated)	NCL	NCL	NCL	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - PFAS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	U.S. EPA Residential Soil Regional Removal Management Levels[3]	HS-SB-4806	HS-SB-4807	HS-SB-4807	HS-SB-4809	HS-SB-4809	HS-SB-4810	HS-SB-4810	HS-SB-4811	HS-SB-4811
Sample Name				HS-SB-4806 (7-9)	HS-SB-4807 (0-2)	HS-SB-4807 (10-12)	HS-SB-4809 (0-2)	HS-SB-4809 (6-8)	HS-SB-4810 (0-2)	HS-SB-4810 (6-8)	HS-SB-4811 (0-2)	HS-SB-4811 (12-14)
Depth Interval (Feet below ground surface)				7 - 9	0 - 2	10 - 12	0 - 2	6 - 8	0 - 2	6 - 8	0 - 2	12 - 14
Boring Location				Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	House St Site	House St Site
Laboratory Sample ID(s)				UH17001-027	UH23024-006	UH23024-007	UH17001-022	UH17001-023	UH17001-012	UH17001-013	UH23024-016	UH23024-017
Sample Date				8/16/2019	8/19/2019	8/19/2019	8/16/2019	8/16/2019	8/15/2019	8/15/2019	8/20/2019	8/20/2019
Parameter (µg/kg)												
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	NCL	NCL	NCL	<10	<13	<11	<12	<11	<11	<11	<10	<11
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	NCL	NCL	NCL	<10	<13	<11	<12	<11	<11	<11	<10	<11
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	NCL	NCL	NCL	<2	<2.5	<2.3	<2.4	<2.3	<2.2	<2.2	<2.1	<2.3
N-Methyl perfluorooctane sulfonamide (MeFOSA)	NCL	NCL	NCL	<2	<2.5	<2.3	<2.4	<2.3	<2.2	<2.2	<2.1	<2.3
Perfluorobutane sulfonic acid (PFBS)	NCL	NCL	3,800,000	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorodecane sulfonic acid (PFDS)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluoroheptane sulfonic acid (PFHpS)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorononane sulfonic acid (PFNS)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorooctane sulfonamide (FOSA)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluoropentane sulfonic acid (PFPeS)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorohexane sulfonic acid (PFHxS)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorobutanoic acid (PFBA)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorodecanoic acid (PFDA)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorododecanoic acid (PFDoDA)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluoroheptanoic acid (PFHpA)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorohexanoic acid (PFHxA)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorononanoic acid (PFNA)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorooctanoic acid (PFOA)	NCL	10,000	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorooctane sulfonic acid (PFOS)	NCL	0.24	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
PFOA + PFOS (Calculated)	NCL	NCL	NCL	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoropentanoic acid (PFPeA)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorotetradecanoic acid (PFTeDA)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluorotridecanoic acid (PFTrDA)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Perfluoroundecanoic acid (PFUnDA)	NCL	NCL	NCL	<5.1	<6.3	<5.7	<5.9	<5.7	<5.6	<5.4	<5.2	<5.6
Total PFAS (Calculated)	NCL	NCL	NCL	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - PFAS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	U.S. EPA Residential Soil Regional Removal Management Levels[3]	HS-SB-4900	HS-SB-4900	HS-SB-4901	HS-SB-4901	HS-SB-4902	HS-SB-4902	HS-SB-4903	HS-SB-4903	HS-SB-4904
Sample Name				HS-SB-4900 (0-2)	HS-SB-4900 (17-19)	HS-SB-4901 (0-2)	HS-SB-4901 (18-20)	HS-SB-4902 (0-2)	HS-SB-4902 (6-8)	HS-SB-4903 (0-2)	HS-SB-4903 (11-13)	HS-SB-4904 (0-2)
Depth Interval (Feet below ground surface)				0 - 2	17 - 19	0 - 2	18 - 20	0 - 2	6 - 8	0 - 2	11 - 13	0 - 2
Boring Location				Off-Site	Off-Site	House St Site	House St Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site
Laboratory Sample ID(s)				UH17001-001	UH17001-002	UH17001-003	UH17001-004	UH23024-008	UH23024-009	UH23024-004	UH23024-005	UH23024-014
Sample Date				8/12/2019	8/12/2019	8/12/2019	8/12/2019	8/20/2019	8/19/2019	8/19/2019	8/19/2019	8/20/2019
Parameter (µg/kg)												
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	NCL	NCL	NCL	<9.4	<10	<11	<11	<11	<11	<12	<13	<11
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	NCL	NCL	NCL	<9.4	<10	<11	<11	<11	<11	<12	<13	<11
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	NCL	NCL	NCL	<1.9	<2.1	<2.2	<2.2	<2.3	<2.2	<2.4	<2.6	<2.3
N-Methyl perfluorooctane sulfonamide (MeFOSA)	NCL	NCL	NCL	<1.9	<2.1	<2.2	<2.2	<2.3	<2.2	<2.4	<2.6	<2.3
Perfluorobutane sulfonic acid (PFBS)	NCL	NCL	3,800,000	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorodecane sulfonic acid (PFDS)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluoroheptane sulfonic acid (PFHpS)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorononane sulfonic acid (PFNS)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorooctane sulfonamide (FOSA)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluoropentane sulfonic acid (PFPeS)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorohexane sulfonic acid (PFHxS)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorobutanoic acid (PFBA)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorodecanoic acid (PFDA)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorododecanoic acid (PFDoDA)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluoroheptanoic acid (PFHpA)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorohexanoic acid (PFHxA)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorononanoic acid (PFNA)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorooctanoic acid (PFOA)	NCL	10,000	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorooctane sulfonic acid (PFOS)	NCL	0.24	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
PFOA + PFOS (Calculated)	NCL	NCL	NCL	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoropentanoic acid (PFPeA)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorotetradecanoic acid (PFTeDA)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluorotridecanoic acid (PFTrDA)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Perfluoroundecanoic acid (PFUnDA)	NCL	NCL	NCL	<4.7	<5.2	<5.6	<5.6	<5.7	<5.5	<5.9	<6.4	<5.7
Total PFAS (Calculated)	NCL	NCL	NCL	ND	ND	ND	ND	ND	ND	ND	ND	ND

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SUMMARY OF SOIL SAMPLE ANALYSIS - PFAS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	U.S. EPA Residential Soil Regional Removal Management Levels[3]	HS-SB-4904	HS-SB-4907	HS-SB-4907	HS-SB-4908	HS-SB-4908	HS-SB-4910	HS-SB-4910	HS-SB-4910	HS-SB-4911
Sample Name				HS-SB-4904 (15-17)	HS-SB-4907 (0-2)	HS-SB-4907 (12-14)	HS-SB-4908 (0-2)	HS-SB-4908 (7-9)	HS-SB-4910 (0-2)	HS-SB-4910 (0-2) DUP	HS-SB-4910 (10-12)	HS-SB-4911 (0-2)
Depth Interval (Feet below ground surface)				15 - 17	0 - 2	12 - 14	0 - 2	7 - 9	0 - 2	0 - 2	10 - 12	0 - 2
Boring Location				Off-Site	House St Site	House St Site	Off-Site	Off-Site	House St Site	House St Site	House St Site	House St Site
Laboratory Sample ID(s)				UH23024-015	UH17001-015	UH17001-016	UH17001-024	UH17001-025	UH17001-010	UH17001-011	UH17001-014	UH17001-008
Sample Date				8/20/2019	8/15/2019	8/15/2019	8/16/2019	8/16/2019	8/15/2019	8/15/2019	8/15/2019	8/15/2019
Parameter (µg/kg)												
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	NCL	NCL	NCL	<10	<11	<10	<11	<11	<11	<12	<10	<13
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	NCL	NCL	NCL	<10	<11	<10	<11	<11	<11	<12	<10	<13
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	NCL	NCL	NCL	<2	<2.1	<2.1	<2.2	<2.2	<2.1	<2.4	<2.1	<2.6
N-Methyl perfluorooctane sulfonamide (MeFOSA)	NCL	NCL	NCL	<2	<2.1	<2.1	<2.2	<2.2	<2.1	<2.4	<2.1	<2.6
Perfluorobutane sulfonic acid (PFBS)	NCL	NCL	3,800,000	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorodecane sulfonic acid (PFDS)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluoroheptane sulfonic acid (PFHpS)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorononane sulfonic acid (PFNS)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorooctane sulfonamide (FOSA)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluoropentane sulfonic acid (PFPeS)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorohexane sulfonic acid (PFHxS)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorobutanoic acid (PFBA)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorodecanoic acid (PFDA)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorododecanoic acid (PFDoDA)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluoroheptanoic acid (PFHpA)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorohexanoic acid (PFHxA)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorononanoic acid (PFNA)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorooctanoic acid (PFOA)	NCL	10,000	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorooctane sulfonic acid (PFOS)	NCL	0.24	NCL	<5.1	***8.6***	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
PFOA + PFOS (Calculated)	NCL	NCL	NCL	ND	8.6	ND	ND	ND	ND	ND	ND	ND
Perfluoropentanoic acid (PFPeA)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorotetradecanoic acid (PFTeDA)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluorotridecanoic acid (PFTrDA)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Perfluoroundecanoic acid (PFUnDA)	NCL	NCL	NCL	<5.1	<5.4	<5.1	<5.5	<5.4	<5.4	<6	<5.2	<6.4
Total PFAS (Calculated)	NCL	NCL	NCL	ND	8.6	ND	ND	ND	ND	ND	ND	ND

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - PFAS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	U.S. EPA Residential Soil Regional Removal Management Levels[3]	HS-SB-4911	HS-SB-4912	HS-SB-4912	HS-SB-4912	HS-SB-4914	HS-SB-4914	HS-SB-4914
Sample Name				HS-SB-4911 (11-13)	HS-SB-4912 (0-2)	HS-SB-4912 (0-2) DUP	HS-SB-4912 (5-7)	HS-SB-4914 (0-2)	HS-SB-4914 (0-2) DUP	HS-SB-4914 (8-10)
Depth Interval (Feet below ground surface)				11 - 13	0 - 2	0 - 2	5 - 7	0 - 2	0 - 2	8 - 10
Boring Location				House St Site	House St Site	House St Site	House St Site	House St Site	House St Site	House St Site
Laboratory Sample ID(s)				UH17001-009	UH17001-005	UH17001-006	UH17001-007	UH17001-017	UH17001-018	UH17001-019
Sample Date				8/15/2019	8/15/2019	8/15/2019	8/15/2019	8/16/2019	8/16/2019	8/16/2019
Parameter (µg/kg)										
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	NCL	NCL	NCL	<12	<11	<11	<11	<11	<9.5	<13
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	NCL	NCL	NCL	<12	<11	<11	<11	<11	<9.5	<13
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	NCL	NCL	NCL	<2.4	<2.2	<2.3	<2.3	<2.2	<1.9	<2.7
N-Methyl perfluorooctane sulfonamide (MeFOSA)	NCL	NCL	NCL	<2.4	<2.2	<2.3	<2.3	<2.2	<1.9	<2.7
Perfluorobutane sulfonic acid (PFBS)	NCL	NCL	3,800,000	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorodecane sulfonic acid (PFDS)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluoroheptane sulfonic acid (PFHpS)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorononane sulfonic acid (PFNS)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorooctane sulfonamide (FOSA)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluoropentane sulfonic acid (PFPeS)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorohexane sulfonic acid (PFHxS)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorobutanoic acid (PFBA)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorodecanoic acid (PFDA)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorododecanoic acid (PFDoDA)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluoroheptanoic acid (PFHpA)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorohexanoic acid (PFHxA)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorononanoic acid (PFNA)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorooctanoic acid (PFOA)	NCL	10,000	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorooctane sulfonic acid (PFOS)	NCL	0.24	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
PFOA + PFOS (Calculated)	NCL	NCL	NCL	ND	ND	ND	ND	ND	ND	ND
Perfluoropentanoic acid (PFPeA)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorotetradecanoic acid (PFTeDA)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluorotridecanoic acid (PFTrDA)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Perfluoroundecanoic acid (PFUnDA)	NCL	NCL	NCL	<6.1	<5.4	<5.7	<5.7	<5.5	<4.8	<6.6
Total PFAS (Calculated)	NCL	NCL	NCL	ND	ND	ND	ND	ND	ND	ND

TABLE 1 NOTES
1855 House Street NE
Plainfield Township, Kent County, MI

NOTES:

1. Concentration and criteria units are micrograms per kilogram (µg/kg) or parts per billion (ppb). Calculated criteria and concentrations are rounded to two significant digits. "ND" indicates the parameters used in the calculation were not detected. "NC" indicates not calculated.
2. Michigan Part 201 Soil Cleanup Criteria are based on "Table 2, Soil: Residential Part 201 Generic Cleanup Criteria and Screening Levels/Part 213 Tier I Risk Based Screening Levels," Michigan Administrative Code, Cleanup Criteria Requirements for Response Activity, Rules 299.46 and 299.49, effective December 30, 2013; updated June 25, 2018.
   Abbreviations Include:
   "NCL" indicates no criterion listed in EGLE Table 2.
3. U.S. EPA Residential Soil Regional Removal Management Levels (RMLs) were based on "Generic RML Tables," updated November 2018.
4. To the extent that samples listed in these tables contain or consist of waste material, in whole or in part, the comparison to the EGLE Part 201 generic cleanup criteria does not imply applicability of the criteria because the physical and chemical properties of the waste material are expected to be different from the default values or assumptions used to derive the Generic Soil Cleanup Criteria in the Cleanup Criteria Requirements for Response Activity Rules (R299.1-299.50).
5. Bold, italic number with thick line border or italic parameter name indicates that parameter was detected above the Michigan Part 201 Soil Cleanup Criteria. Per MCL 324.20101(e)(i), if state-wide default background levels are available and greater than a risk-based generic cleanup criterion, then the state-wide default background levels are used as a substitute for that generic cleanup criterion.
6. Abbreviations include:
   "< RL" indicates the parameter was analyzed for but not detected above the method detection limit; RL = Reporting Limit.
   "DUP" indicates a duplicate sample.

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Boring No.: HS-MW27A
Page: 1 **of** 1
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-20-19 / 6-20-19
Boring Location: 6390 Belmont Ave. NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–29						See HS-MW27E boring log for sample description and classification.				PROTECTIVE CASING
26						Bottom of Borehole at 26.0 Feet		1		

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 21.1 to 25.7 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW27B
Page: 1 **of** 1
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-20-19 / 6-20-19
Boring Location: 6390 Belmont Ave. NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–37						See HS-MW27E boring log for sample description and classification.				PROTECTIVE CASING
38						Bottom of Borehole at 37.5 Feet		1		

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 34.8 to 37.4 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW27C
Page: 1 **of** 1
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-20-19 / 6-20-19
Boring Location: 6390 Belmont Ave. NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–45						See HS-MW27E boring log for sample description and classification.				PROTECTIVE CASING
46						Bottom of Borehole at 45.5 Feet		1		
47										

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 40.8 to 45.4 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW27D
Page: 1 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-19-19 / 6-19-19
Boring Location: 6390 Belmont Ave. NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–29						See HS-MW27E boring log for sample description and classification.				PROTECTIVE CASING

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW27D
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Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
31–64										
63						Bottom of Borehole at 63 Feet		1		

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 59.0 to 63.0 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW27E
Page: 1 of 4
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-17-19 / 6-19-19
Boring Location: 6390 Belmont Ave. NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Info: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks
1–29		1	120/89			Very dark, grayish-brown, poorly sorted, SILT, some fine Sand, trace Gravel, moist. Changing at 1.0 feet to: Dark yellowish-brown, poorly sorted, SILT, some fine Sand, trace Clay, slightly plastic, slightly coheisve, moist. Changing at 1.5 feet to: Dark brown to dark yellowish-brown, moderately sorted, fine to medium SAND, little Silt, trace Gravel, moist. Changing at 6.0 feet to: Dark yellowish-brown, moderately sorted, fine to medium SAND, trace Silt, trace Gravel, moist. Changing at 7.0 feet to: Yellowish-brown, well sorted, fine to medium SAND, trace Silt, moist. Changing at 7.4 feet to: NO RECOVERY.	SILT 1.5' SAND 7.4' NO RECOVERY	
10		2	120/70			Dark yellowish-brown, poorly sorted, fine to coarse SAND, some Gravel, trace Silt, moist. Changing at 15.0 feet to: Yellowish-brown, moderately well sorted, fine to medium SAND, trace Silt, trace Gravel (silty clay on large gravel), moist. Changing at 15.8 feet to: NO RECOVERY.	10' SAND 15.8' NO RECOVERY	
20		3	120/115			Yellowish-brown, moderately well sorted, fine to medium SAND, trace Silt, trace Gravel (silty clay on large gravel), moist. Changing at 25.4 feet to: Yellowish-brown, poorly sorted, fine to coarse SAND, some Gravel, trace Silt, wet. Changing at 27.1 feet to: Hard, dark yellowish-brown, poorly sorted, Silty CLAY, trace Gravel, plastic, cohesive, moist. Changing at 28.6 feet to: Hard, dark grayish-brown, poorly sorted, Silty CLAY, trace Gravel, plastic, cohesive, moist. Changing at 29.6 feet to: NO RECOVERY.	20' SAND 27.1' Silty CLAY 29.6' 30'	1

Gamma (API-GR) — 0 20 40 60 80

Well Diagram
PROTECTIVE CASING

REMARKS

1. Groundwater sample was collected from approximately 21.0 to 25.0 feet below ground surface and submitted for analytical laboratory testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
31–64		4	120/120			Hard, dark grayish-brown, poorly sorted, Silty CLAY, trace Gravel, plastic, cohesive, moist. Changing at 33.7 feet to: Grayish-brown to brown, poorly sorted, fine to coarse SAND, little Silt, trace Gravel, moist to wet. Changing at 36.4 feet to: Hard, dark grayish-brown, poorly sorted, Silty CLAY, trace Gravel, plastic, cohesive, moist. Changing at 36.9 feet to: Grayish-brown to brown, poorly sorted, fine to medium SAND, little Silt, trace Gravel, moist to wet. Changing at 37.0 feet to: Dark grayish-brown, poorly sorted, Silty CLAY, trace Gravel, plastic, cohesive, moist. Changing at 39.8 feet to: NO RECOVERY.	NO RECOVERY / Silty CLAY; 33.7' SAND; 36.4'; 36.9' Silty CLAY; 37' SAND; Silty CLAY; 39.8'	2		
40–64		5	120/120			Brown, well sorted, fine to medium SAND, little Silt, lightly cohesive, wet. Changing at 45.6 feet to: Hard, dark grayish-brown, poorly sorted, Silty CLAY, trace Gravel, plastic, coheisve, moist. Changing at 48.8 feet to: Dark grayish-brown, well sorted, Silty CLAY, plastic, cohesive, moist, occasional very thin fine Sand, moist.	40' NO RECOVERY / SAND; 45.6' Silty CLAY; 50' SAND	3		
50–64		6	120/120			Brown, well sorted, fine to medium SAND, little Silt, lightly cohesive, wet. Changing at 51.1 feet to: Dark grayish-brown, well sorted, Silty CLAY, plastic, cohesive, moist. Changing at 51.5 feet to: Brown, well sorted, fine to medium SAND, little Silt, lightly cohesive, wet. Changing at 52.9 feet to: Dark grayish-brown, well sorted, Silty CLAY, plastic, cohesive, moist. Changing at 53.5 feet to: Brown, well sorted, fine to medium SAND, little Silt, lightly cohesive, wet. Changing at 54.8 feet to: Dark grayish-brown, well sorted, Silty CLAY, plastic, cohesive, moist.	51.1'; 51.5' Silty CLAY / SAND; 52.9'; 53.5' Silty CLAY / SAND; 54.8' Silty CLAY	4		
60–64		7	120/112			Dark grayish-brown, well sorted, Silty CLAY, plastic, cohesive, moist. Changing at 60.6 feet to: Brown, well sorted, fine to medium SAND, little Silt, lightly cohesive, wet. Changing at 63.8 feet to: Dark grayish-brown, well sorted, Silty CLAY, plastic, cohesive, moist. Changing at 67.8 feet to: Alternating layers of dark	60.6' SAND; 63.8' Silty CLAY	5		

REMARKS

2. Groundwater sample was collected from approximately 34.0 to 38.0 feet below ground surface and submitted for analytical laboratory testing.
3. Groundwater sample was collected from approximately 41.0 to 45.0 feet below ground surface and submitted for analytical laboratory testing.
4. Groundwater sample was collected from approximately 52.0 to 56.0 feet below ground surface and submitted for analytical laboratory testing.
5. Groundwater sample was collected from approximately 60.0 to 64.0 feet below ground surface and submitted for analytical laboratory testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW27E
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Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
66–99						grayish-brown, well sorted, Silty CLAY, plastic, cohesive, and brown moderate sorted fine to medium SAND, little Silt, moist. Changing at 68.1 feet to: Dark grayish-brown, well sorted, Silty CLAY, well sorted, Silty CLAY, plastic, cohesive moist. Changing at 69.3 feet to: NO RECOVERY.	Silty CLAY		0 20 40 60 80 100	
							69.3'			
70		8	120/112			Dark grayish-brown, well sorted, Silty CLAY, plastic, cohesive, moist. Changing at 79.3 feet to: NO RECOVERY.	70' NO RECOVERY Silty CLAY			
							79.3'			
80		9	120/120			Brown, well sorted, fine to medium SAND, little Silt, lightly cohesive, moist. Changing at 80.3 feet to: Dark brown to dark yellowish-brown, poorly sorted, Silty CLAY, plastic, cohesive, moist.	80' NO RECOVERY 80.3' SAND Silty CLAY			
90		10	120/120			Reddish-brown, moderately sorted, Silty CLAY (possible Red Beds), plastic, cohesive, moist.				

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW27E

GAMMA_LOG 62335.52 MDEQ WWW.GPJ GZA_CORP.GDT 9/27/19

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Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
101–104		11	60/60			Reddish-brown, moderately sorted, Silty CLAY (possible Red Beds), plastic, cohesive, moist. Changing at 103.8 feet to: White GYPSUM, fractured.	Silty CLAY 103.8' GYPSUM			
105						Bottom of Borehole at 105.0 Feet	105'	6	-999.25	

REMARKS

6. Monitoring well was installed in borehole upon completion. Well screen set from 59.0 to 63.0 feet below surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Rockford, Michigan

Boring No.: HS-MW28A
Page: 1 **of** 1
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-11-19 / 6-12-19
Boring Location: 6272 Belshire Ave. NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks
1–42						See HS-MW28E boring log for sample description and classification.		
43						Bottom of Borehole at 42.5 Feet		1

Gamma (API-GR) 0 20 40 60 80

Well Diagram: PROTECTIVE CASING

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 37.5 to 42.1 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

GAMMA_LOG 62335.52 MDEQ WWW.GPJ GZA_CORP.GDT 9/27/19

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Boring No.: HS-MW28B
Page: 1 **of** 1
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-25-19 / 6-25-19
Boring Location: 6272 Belshire Ave. NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–47						See HS-MW28E boring log for sample description and classification.				PROTECTIVE CASING
47						Bottom of Borehole at 47.0 Feet		1		
48										

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 41.9 to 46.5 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW28C
Page: 1 **of** 1
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-25-19 / 6-25-19
Boring Location: 6272 Belshire Ave. NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–54						See HS-MW28E boring log for sample description and classification.				PROTECTIVE CASING
53						Bottom of Borehole at 52.5 Feet		1		

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 47.5 to 52.1 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW28D
Page: 1 **of** 3
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-11-19 / 6-11-19
Boring Location: 6272 Belshire Ave. NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1						See HS-MW-28E boring log for sample description and classification.				PROTECTIVE CASING
2–44										

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW28D

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Boring No.: HS-MW28D
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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
46–97										

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW28D

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Boring No.: HS-MW28D
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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
98–109										
110						Bottom of Borehole at 110.0 Feet		1		
111–149										

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 80.6 to 85.2 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW28E
Page: 1 **of** 6
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-5-19 / 6-11-19
Boring Location: 6272 Belshire Ave. NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks
0		1	120/30			Dark yellowish-brown, poorly sorted, fine to coarse SAND, some Gravel, trace Silt, moist. Changing at 1.2 feet to: Dark yellowish-brown, well sorted, fine to medium SAND, trace Silt, moist. Changing at 1.4 feet to: Yellowish-brown, poorly sorted, fine to coarse SAND, some Gravel, trace Silt, moist. Changing at 2.5 feet to: NO RECOVERY.	SAND	
2.5							NO RECOVERY	
10		2	120/118			Yellowish-brown grading to dark yellowish-brown, moderately sorted, fine to medium SAND, trace Gravel, trace Silt, grading coarser, moist. Changing at 12.6 feet to: Dark yellowish-brown, poorly sorted, fine to coarse SAND, little Gravel, trace Silt, moist. Changing at 14.6 feet to: Dark grayish-brown, poorly sorted, SILT, little Sand, trace Clay, trace Gravel, non-plastic, slightly cohesive, moist around cobble. Changing at 15.0 feet to: Yellowish-brown, well sorted, brown, well sorted, fine to medium SAND, trace Silt, moist. Changing at 19.8 feet to: NO RECOVERY.	10' SAND	
14.6							SILT	
15							SAND	

Gamma (API-GR) 0 20 40 60 80

Well Diagram
PROTECTIVE CASING

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW28E
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Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
18							SAND			
19										
20		3	120/101			Yellowish-brown, well sorted, fine to medium SAND, trace Silt, trace Gravel, moist. Changing at 28.4 feet to: NO RECOVERY.	19.8' 20' NO RECOVERY SAND			
21										
22										
23										
24										
25										
26										
27										
28							28.4' NO RECOVERY			
29										
30		4	120/118			Pale brown to light yellowish-brown, well sorted, fine to medium SAND, trace Silt, moist. Changing at 39.8 feet to: NO RECOVERY.	30' SAND			
31										
32										
33										
34										
35										
36										

Gamma (API-GR) scale: 0, 20, 40, 60, 80, 100

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW28E

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Boring No.: HS-MW28E
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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
37–56		5	120/41			Pale brown to light yellowish-brown, well sorted, fine to medium SAND, trace Silt, trace Gravel, moist. Changing at 40.5 feet to: Yellowish-brown, poorly sorted, fine to coarse SAND, some Gravel, trace Silt, moist to wet. Changing at 41.5 feet to: Yellowish-brown, well sorted, fine to medium SAND, trace Silt, wet. Changing at 42.0 feet to: Dark yellowish-brown, poorly sorted, GRAVEL, little coarse Sand, trace Silt, wet. Changing at 43.4 feet to: NO RECOVERY.	SAND; 39.8' 40' NO RECOVERY; SAND; 42' GRAVEL; 42.9' SAND; 43.4' NO RECOVERY	1		
		6	120/115			Yellowish-brown, well sorted, fine to medium SAND, trace Silt, wet. Changing at 52.5 feet to: Grayish-brown, poorly sorted, Sandy CLAY, little Silt, moderately plastic, cohesive, moist to wet. Changing at 59.6 feet to: NO RECOVERY.	50' SAND; 52.5' CLAY & SILT; 56.4'	2		

Gamma (API-GR) scale: 0, 20, 40, 60, 80, 100

REMARKS

1. Groundwater sample was collected from approximately 42.0 to 44.0 feet below ground surface and submitted for analytical laboratory testing.
2. Groundwater sample was collected from approximately 51.0 to 53.0 feet below ground surface and submitted for analytical laboratory testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
57–76		7	120/74			Brown, well sorted, fine to medium SAND, trace Silt, wet. Changing at 60.7 feet to: Brown, moderately well sorted, SILT, some fine Sand, non-plastic, moderately cohesive, wet. Changing at 60.9 feet to: Brown, well sorted, fine to medium SAND, trace Silt, wet. Changing at 61.7 feet to: Brown, moderately well sorted, SILT, some fine Sand, non-plastic, moderately cohesive, wet. Changing at 62.0 feet to: Brown, well sorted, fine to medium SAND, trace Silt, wet. Changing at 62.5 feet to: Dark yellowish-brown, poorly sorted, fine to coarse SAND, little Gravel, trace Silt, wet. Changing at 63.3 feet to: Brown, well sorted, fine to medium SAND, trace Silt, wet. Changing at 63.8 feet to: Dark yellowish-brown, poorly sorted, GRAVEL, little fine to coarse Sand, trace Silt, wet. Changing at 63.9 feet to: Brown, well sorted, fine to medium SAND, trace Silt, wet. Changing at 64.6 feet to: Dark yellowish-brown, poorly sorted, GRAVEL, little fine to coarse Sand, trace Silt, wet. Changing at 65.1 feet to: Brown, well sorted, fine to medium SAND, trace Gravel, trace Silt, wet. Changing at 66.2 feet to: NO RECOVERY.	Sandy CLAY 59.6' 60' NO RECOVERY SAND 60.7' 60.9' SILT SAND 61.7' 62' SILT SAND 63.8' 63.9' GRAVEL SAND 64.6' GRAVEL 65.1' SAND 66.2' NO RECOVERY			
70–71		8	120/83			Brown, well sorted, fine to medium SAND, trace Gravel, trace Silt, wet. Changing at 76.9 feet to: NO RECOVERY.	70' SAND	3		

REMARKS

3. Groundwater sample was collected from approximately 70.5 to 72.5 feet below ground surface and submitted for analytical laboratory testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW28E
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Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
77							76.9' SAND			
78							NO RECOVERY			
79										
80		9	120/120			Brown, well sorted, fine to medium SAND, trace Gravel, trace Silt, wet. Changing at 85.0 feet to: Dark grayish-brown, poorly sorted, Silty CLAY, trace Sand, trace Gravel, plastic, cohesive, moist.	80' SAND			
81								4		
82										
83										
84										
85							85' Silty CLAY			
86										
87										
88										
89										
90		10	120/120			Dark grayish-brown, poorly sorted, Silty CLAY, trace Sand, trace Gravel, plastic, cohesive, moist.				
91										
92										
93										
94										
95										
96										

Gamma (API-GR) scale: 0, 20, 40, 60, 80, 100

REMARKS

4. Groundwater sample was collected from approximately 81.0 to 85.0 feet below ground surface and submitted for analytical laboratory testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW28E
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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
97							Silty CLAY			
98										
99										
100		11	120/120			Dark grayish-brown, poorly sorted, Silty CLAY, trace Sand, trace Gravel, plastic, cohesive, moist. Changing at 102.7 feet to: Brownish-red, poorly consolidated, weathered SHALE, some gypsum, trace Gravel, moist.				
101										
102										
103							102.7' SHALE			
104										
105										
106										
107										
108										
109										
110						Bottom of Borehole at 110.0 Feet	110'	5		
111										
112										
113										
114										
115										
116										

Gamma (API-GR) scale: 0, 20, 40, 60, 80, 100
-1
-999.25

REMARKS

5. Monitoring well was installed in borehole upon completion. Well screen set from 80.6 to 85.2 feet below surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW30A
Page: 1 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 5-22-19 / 5-22-19
Boring Location: 6205 Packer Drive, NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–27						See HS-MW-30E boring log for sample description and classification.				PROTECTIVE CASING

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW30A

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Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
29–60										
50						Bottom of Borehole at 50.0 Feet		1		

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 45.1 to 49.7 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW30A

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Boring No.: HS-MW30B
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File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 5-30-19 / 5-30-19
Boring Location: 6205 Packer Drive, NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1						See HS-MW-30E boring log for sample description and classification.				PROTECTIVE CASING
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
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18										
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21										
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24										
25										
26										
27										
28										
29										

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
31–64										
55						Bottom of Borehole at 55.0 Feet		1		

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 49.3 to 53.9 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW30B

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Boring No.: HS-MW30C
Page: 1 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 5-29-19 / 5-29-19
Boring Location: 6205 Packer Drive, NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1						See HS-MW-30E boring log for sample description and classification.				PROTECTIVE CASING
2–40										

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW30C

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Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
42–88										
80						Bottom of Borehole at 80.0 Feet		1		

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 74.3 to 78.9 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW30C

GAMMA_LOG 62335.52 MDEQ WWW.GPJ GZA_CORP.GDT 9/27/19

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Rockford, Michigan

Boring No.: HS-MW30D
Page: 1 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 5-31-19 / 6-3-19
Boring Location: 6205 Packer Drive, NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1						See HS-MW-30E boring log for sample description and classification.				PROTECTIVE CASING

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW30D

GAMMA_LOG 62335.52 MDEQ WWW.GPJ GZA_CORP.GDT 9/27/19

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Boring No.: HS-MW30D
Page: 2 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
58–123										
115						Bottom of Borehole at 115.0 Feet		1		

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 109.5 to 114.1 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW30D

GAMMA_LOG 62335.52 MDEQ WWW.GPJ GZA_CORP.GDT 9/27/19

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Boring No.: HS-MW30E
Page: 1 **of** 6
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 5-13-19 / 5-28-19
Boring Location: 6205 Packer Drive, NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks
0		1	120/56		0.0 ppm	Very dark brown to dark brown, moderately well sorted, fine to medium SAND, some Silt, moist. Changing at 1.0 feet to: Dark yellowish-brown, moderately sorted, fine to medium SAND, little Silt, moist. Changing at 3.0 feet to: Yellowish-brown, poorly sorted, fine to coarse SAND, trace Gravel, trace Silt, moist. Changing at 4.7 feet to: NO RECOVERY.	SAND	1
4.7							4.7' NO RECOVERY	
10		2	120/48		0.0 ppm	Brown to yellowish-brown, poorly sorted, coarse to medium SAND, some Gravel, trace Silt, moist. Changing at 10.8 feet to: Brown to yellowish-brown, poorly sorted, coarse to medium SAND, some Gravel, some Silt, non-plastic, cohesive, moist. Changing at 11.0 feet to: Brown to yellowish-brown, poorly sorted, coarse to medium SAND, some Gravel, trace Silt, moist. Changing at 11.4 feet to: Light yellowish-brown, moderately well sorted, fine to medium SAND, trace Silt, moist. Changing at 12.4 feet to: Yellowish-brown, poorly sorted, fine to coarse SAND, little Gravel, trace Silt, moist. Changing at 14.0 feet to: NO RECOVERY.	10' SAND	
14							14' NO RECOVERY	
20		3	120/65		0.0 ppm	Yellowish-brown to dark yellowish-brown, poorly sorted, fine to coarse SAND, little Gravel, moist. Changing at 21.7 feet to: Yellowish-brown to brown, poorly sorted, fine to medium SAND, trace Gravel, trace Silt, moist. Changing at 22.8 feet to: Dark yellowish-brown to dark brown, poorly sorted, fine to coarse SAND, some gravel,	20' SAND	

Gamma (API-GR) 0 20 40 60 80

Well Diagram
PROTECTIVE CASING

REMARKS

1. Field screening of samples for organic vapors was peformed with a MiniRae 3000 photoionization dector equipped with a 10.6 eV lamp. Readings above levels are shown in parts per million (ppm) isobutylene. Background was measured at 0.0 ppm.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW30E
Page: 2 **of** 6
File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
25						trace Silt, moist. Changing at 25.4 feet to: NO RECOVERY.	SAND			
25.4'							NO RECOVERY			
30		4	120/58		0.0 ppm	Yellowish-brown to dark yellowish-brown, poorly sorted, fine to coarse SAND, little Gravel, trace Silt, moist. Changing at 31.3 feet to: Light yellowish-brown, moderately well sorted, fine to medium SAND, trace Silt, moist. Changing at 34.8 feet to: NO RECOVERY.	30' SAND			
34.8'							NO RECOVERY			
40		5	120/0			NO RECOVERY.				
50		6	120/19		0.0 ppm	Yellowish-brown, poorly sorted, medium to coarse SAND, some Gravel, trace Silt, wet. Changing at 50.9 feet to: Dark yellowish-brown, poorly sorted, medium to	50' SAND			
51.6'										

REMARKS

2. Groundwater sample collected from 52.0 to 54.0 feet and submitted for analytical laboratory testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW30E

GAMMA_LOG 62335.52 MDEQ WWW.GPJ GZA_CORP.GDT 9/27/19

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Rockford, Michigan

Boring No.: HS-MW30E
Page: 3 **of** 6
File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
53						coarse SAND, some Gravel, trace Silt, wet. Changing at 51.6 feet to: NO RECOVERY.	NO RECOVERY	2		
54										
55										
56										
57										
58										
59										
60		7	120/97		0.0 ppm	Yellowish-brown, poorly sorted, GRAVEL, some fine to coarse grained Sand, trace Silt, wet. Changing at 60.5 feet to: Yellowish-brown, moderately well sorted, fine to medium SAND, trace Silt, wet. Changing at 62.5 feet to: Grayish-brown to dark brown, poorly sorted, Silty CLAY, little Sand, plastic, cohesive, moist. Changing at 63.5 feet to: Grayish-brown to dark grayish-brown, poorly sorted, Silty CLAY, trace Gravel, trace Sand, plastic, cohesive, moist. Changing at 68.1 feet to: NO RECOVERY.	60' GRAVEL 60.5' SAND 62.5' CLAY 68.1' NO RECOVERY	3		
61										
62										
63										
64										
65										
66										
67										
68										
69										
70		8	120/119		0.0 ppm	Grayish-brown to dark grayish-brown, poorly sorted, Silty CLAY, trace Gravel, trace Sand, plastic, cohesive, moist. Changing at 72.6 feet to: Dark yellowish-brown to dark red, poorly sorted, coarse SAND, little Gravel, trace Silt, wet. Changing at 77.9 feet to: Brown to yellowish-brown, well sorted, fine SAND, little Silt, wet. Changing at 79.9 feet to: NO RECOVERY.	70' Silty CLAY 72.6' SAND	4		
71										
72										
73										
74										
75										
76										
77										
78										
79							79.9'			

REMARKS

3. Groundwater sample collected from 61.0 to 63.0 feet and submitted for analytical laboratory testing.
4. Groundwater sample collected from 75.0 to 77.0 feet and submitted for analytical laboratory testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
81		9	120/114		0.0 ppm	Brown to yellowish-brown, well sorted, fine SAND, little Silt, wet. Changing at 83.7 feet to: Dark red, very well sorted, fine SAND, trace Silt, wet. Changing at 83.8 feet to: Dark grayish-brown to dark brown, poorly sorted, Silty CLAY, trace Gravel, trace Sand, plastic, cohesive, moist. Changing at 84.2 feet to: Dark grayish-brown to dark brown, very well sorted, SILT, wet. Changing at 85.2 feet to: Dark grayish-brown to dark brown, poorly sorted, Silty CLAY, trace Gravel, trace Sand, plastic, cohesive, moist. Changing at 86.9 feet to: Yellowish-brown, moderately sorted, SILT, wet, with thin dark brown, Silty Clay stringers, moist. Changing at 87.2 feet to: Brown, very well sorted, SILT, some fine grained Sand, wet. Changing at 89.5 feet to: NO RECOVERY.	80' NO RECOVERY SAND 83.8' 84.2 Silty CLAY SILT 85.2 Silty CLAY 86.9' SILT 89.5'			
90		10	120/108		0.0 ppm	Yellowish-brown, very well sorted, fine SAND, little Silt, wet. Changing at 99.0 feet to: NO RECOVERY.	90' NO RECOVERY SAND 99' NO RECOVERY			
100		11	120/96		0.0 ppm	Yellowish-brown, very well sorted, fine SAND, little Silt, wet. Changing at 108.0 feet to: NO RECOVERY.	100' SAND 108'	5		

REMARKS

5. Groundwater sample collected from 100.0 to 102.0 feet and submitted for analytical laboratory testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW30E
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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
109							NO RECOVERY			
110		12	120/95		0.0 ppm	Yellowish-brown, very well sorted, fine SAND, little Silt, wet. Changing at 111.3 feet to: Yellowish-brown, very well sorted SILT, little fine grained Sand, slightly cohesive, wet. Changing at 111.8 feet to: Yellowish-brown, very well sorted, fine SAND, little Silt, wet. Changing at 117.9 feet to: NO RECOVERY.	110' SAND			
111							111.3' SILT	6		
112							111.8' SAND			
113										
114										
115										
116										
117										
118										
119										
120		13	120/76		0.0 ppm	Yellowish-brown, very well sorted, fine SAND, little Silt, grading slightly coarser (fine to medium grained SAND, trace Gravel, little Silt), wet. Changing at 126.3 feet to: NO RECOVERY.				
121								7		
122										
123										
124										
125										
126							126.3' NO RECOVERY			
127										
128								8		
129										
130		14	120/77		0.0 ppm	Yellowish-brown, moderately sorted, fine to medium SAND, little Silt, trace Gravel, wet. Changing at 131.0 feet to: Dark yellowish-brown, moderately sorted, fine to medium SAND, little Silt, trace Gravel, wet. Changing at 131.6 feet to: Yellowish-brown, moderately sorted, fine to medium SAND, little Silt, wet. Changing at 136.4 feet to: NO RECOVERY.	130' SAND			
131										
132										
133										
134										
135										

REMARKS

6. Groundwater sample collected from 111.0 to 113.0 feet and submitted for analytical laboratory testing.
7. Groundwater sample collected from 121.0 to 123.0 feet and submitted for analytical laboratory testing.
8. Groundwater sample collected from 128.0 to 130.0 feet and submitted for analytical laboratory testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
137–145		15	60/34		0.0 ppm	Dark gray, with some dark red iron staining, SHALE. Changing at 142.8 feet to: NO RECOVERY	136.4' NO RECOVERY; 140' SHALE; 142.8' NO RECOVERY.; 145'	9		
145						Bottom of Borehole at 145.0 Feet		10	-999.25	

REMARKS

9. Groundwater sample collected from 138.0 to 140.0 feet and submitted for analytical laboratory testing.
10. Monitoring well HS-MW30E was installed in borehole upon completion. Well screen set from 120.7 to 125.2 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW30E

GAMMA_LOG 62335.52 MDEQ WWW.GPJ GZA_CORP.GDT 9/27/19

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Rockford, Michigan

Boring No.: HS-MW31A
Page: 1 **of** 1
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-4-19 / 6-4-19
Boring Location: 6205 Packer Drive, NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–20						See HS-MW-31E boring log for sample description and classification.				PROTECTIVE CASING
21						Bottom of Borehole at 21.0 Feet		1		
22–23										

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 16.1 to 20.6 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-31B
Page: 1 **of** 1
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 5-20-19 / 5-20-19
Boring Location: 6205 Packer Drive, NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–30						See HS-MW31E boring log for sample description and classification.				PROTECTIVE CASING
30						Bottom of Borehole at 30.0 Feet		1		
31–32										

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 24.2 to 28.7 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Rockford, Michigan

Boring No.: HS-MW-31C
Page: 1 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-4-19 / 6-4-19
Boring Location: 6205 Packer Drive, NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–29						See HS-MW31E boring log for sample description and classification.				PROTECTIVE CASING

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Rockford, Michigan

Boring No.: HS-MW-31C
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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
45						Bottom of Borehole at 45.0 Feet		1		

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 39.4 to 43.9 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-31D
Page: 1 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 6-3-19 / 6-4-19
Boring Location: 6205 Packer Drive, NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–39						See HS-MW31E boring log for sample description and classification.				PROTECTIVE CASING

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-31D
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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
41–67										
68						Bottom of Borehole at 68.0 Feet		1		
69–86										

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 61.8 to 66.4 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-31E
Page: 1 **of** 3
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 5-16-19 / 5-21-19
Boring Location: 6205 Packer Drive, NE, Belmont, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–10		1	120/71		0.0 ppm	Very dark brown, moderately well sorted, SILT, some fine grained Sand, moist. Changing at 2.5 feet to: Dark reddish-brown, poorly sorted, fine to medium SAND, little Silt, moist. Changing at 3.2 feet to: Dark yellowish-brown, poorly sorted, fine to coarse SAND, little Gravel, trace Silt, moist. Changing at 5.3 feet to: Yellowish-brown, poorly sorted, fine to coarse SAND, trace Silt, moist. Changing at 5.9 feet to: NO RECOVERY.	SILT 2.5' SAND 5.9' NO RECOVERY			PROTECTIVE CASING
10–20		2	120/78		0.0 pm	Yellowish-brown, poorly sorted, fine to coarse SAND, trace Silt, moist. Changing at 13.2 feet to: Dark yellowish-brown, well sorted, fine to medium SAND, trace Silt, moist to wet. Changing at 16.5 feet to: NO RECOVERY.	10' SAND 16.5' NO RECOVERY			
20–30		3	120/67		0.0 ppm	Yellowish-brown, well sorted, well sorted, fine to medium SAND, trace Silt, moist to wet. Changing at 25.6 feet to: NO RECOVERY.	20' SAND 25.6' NO RECOVERY 30'	1		

REMARKS

1. Groundwater sample collected from 21.0 to 22.5 feet and submitted for analytical laboratory testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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MDEQ Drilling
Rockford, Michigan

Boring No.: HS-MW-31E
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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
31–36		4	120/76		0.0 ppm	Dark yellowish-brown, well sorted, fine to medium SAND, trace Silt, moist to wet. Changing at 36.3 feet to: NO RECOVERY.	SAND	2		
36–40							36.3' NO RECOVERY			
40–47		5	120/85		0.0 ppm	Dark yellowish-brown, well sorted, fine to medium SAND, trace Silt, moist to wet. Changing at 47.1 feet to: NO RECOVERY.	40' SAND	3		
47–50							47.1' NO RECOVERY			
50–57		6	120/108		0.0 ppm	Dark yellowish-brown, well sorted, fine to medium SAND, trace Silt, moist to wet. Changing at 53.3 feet to: Very dark grayish-brown, poorly sorted, Silty CLAY, trace Gravel, trace Sand, plastic, cohesive, moist. Changing at 57.4 feet to: Dark grayish-brown to dark brown, well sorted, fine to medium SAND, trace Silt, wet. Changing at 57.9 feet to: Very dark grayish-brown, poorly sorted, Silty CLAY, trace Gravel, trace Sand, plastic, cohesive, moist. Changing at 59.0 feet to: NO RECOVERY.	50' SAND	4		
							53' Silty CLAY			
							57.4' SAND			
							57.9' Silty CLAY			
							59' NO RECOVERY			
60–64		7	120/120		0.0 ppm	Very dark, grayish brown to dark grayish-brown, poorly sorted, Silty CLAY, trace Gravel, trace Sand, plastic, cohesive, moist. Changing at 62.7 feet to: Grayish-brown to brown, moderately well sorted, fine to medium SAND, trace Silt, moist to wet. Changing at 63.4 feet to: Dark brown, poorly sorted, fine to coarse SAND,	60' Silty CLAY			
							62.7' SAND			

REMARKS

2. Groundwater sample collected from 31.0 to 32.5 feet and submitted for analytical laboratory testing.
3. Groundwater sample collected from 41.0 to 42.5 feet and submitted for analytical laboratory testing.
4. Groundwater sample collected from 51.0 to 52.5 feet and submitted for analytical laboratory testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-31E
Page: 3 **of** 3
File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
66–69						some Gravel, little Silt, trace Clay, non-plastic, moderately cohesive, moist to wet. Changing at 66.5 feet to: Hard, dark brown, poorly sorted, Silty CLAY, trace Gravel, plastic, cohesive, moist. Changing at 68.3 feet to: Very hard, brown, poorly sorted, Silty CLAY, trace Gravel, possible red Bedrock, dry to moist.	SAND 66.5' Silty CLAY 68.3'			
70						Bottom of Borehole at 70.0 Feet		5	-999.25	

REMARKS

5. Monitoring well HS-MW31B was installed in borehole upon completion. Well screen set from 24.2 to 28.8 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-32A
Page: 1 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 5-9-19 / 5-9-19
Boring Location: 1332 10 Mile Road NE, Comstock Park, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–44						See HS-MW-32D boring log for sample description and classification.				PROTECTIVE CASING

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-32A
Page: 2 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
65						Bottom of Borehole at 65.0 Feet		1		

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 57.8 to 62.4 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-32B
Page: 1 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 5-8-19 / 5-8-19
Boring Location: 1332 10 Mile Road NE, Comstock Park, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–49						See HS-MW-32D boring log for sample description and classification.				PROTECTIVE CASING

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-32B
Page: 2 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
51–82										
83						Bottom of Borehole at 83.0 Feet		1		
84–108										

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 78.2 to 82.8 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-32C
Page: 1 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: JTM
Date Start/Finish: 5-8-19 / 5-8-19
Boring Location: 1332 10 Mile Road NE, Comstock Park, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1–54						See HS-MW-32D boring log for sample description and classification.				PROTECTIVE CASING

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-32C
Page: 2 **of** 2
File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80 100	Well Diagram
56–118										
112						Bottom of Borehole at 112.0 Feet		1		

REMARKS

1. Monitoring well was installed in borehole upon completion. Well screen set from 107.2 to 111.8 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: HS-MW-32C

GAMMA_LOG 62335.52 MDEQ WWW.GPJ GZA_CORP.GDT 9/27/19

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Boring No.: HS-MW-32D
Page: 1 of 6
File No.: 16.0062335.52
Check: Lori Powers

Contractor: Stock
Foreman: Ryan
Logged by: MJS/KWO
Date Start/Finish: 5-6-19 / 5-6-19
Boring Location: 1332 10 Mile Road NE, Comstock Park, MI
GS Elev.: _____ **Datum:** _____

	Auger/ Casing	Sampler
Type:	Sonic	NA
O.D. / I.D.:	NA	NA
Hammer Wt.:	NA	NA
Hammer Fall:	NA	NA
TOC Elev.:		

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
3-2-99	17:00	7.2	5	5 min.
3-3-99	08:00	6.5	5	15 hours
3-3-99	12:00	6.8	---	20 min.

Surveyed By: _____ **Survey Date:** _____

Depth	Elevation (ft.)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR) 0 20 40 60 80	Well Diagram
1		1	24/24			Black, TOPSOIL with Roots and Grass. Changing at 0.5 feet to: Loose, brown, fine to medium SAND, trace fine Gravel, moist.	0.5' TOPSOIL / SAND			PROTECTIVE CASING
2		2	96/48		0.0 ppm	Loose, brown, fine to medium SAND, trace Silt, moist. Changing at 3.5 feet to: Loose, brown, fine to medium SAND and GRAVEL, moist.		1		
3										
4					0.0 ppm		3.5' SAND and GRAVEL			
5										
6										
7										
8										
9										
10		3	120/72		1.0 ppm	Loose, brown, fine to coarse SAND, trace Gravel, trace Silt, moist.	10' SAND			
11										
12					1.3 ppm					
13										
14										
15										
16										
17										
18										
19										
20		4	120/90		1.7 ppm	Loose, brown, fine to coarse SAND and GRAVEL, trace Clay & Silt, moist.	20' SAND and GRAVEL			
21										
22										
23										
24					1.6 ppm					
25										
26										
27										
28										
29										

REMARKS

1. Field screening of samples for organic vapors was peformed with a MiniRae 3000 photoionization dector equipped with a 10.6 eV lamp. Readings above levels are shown in parts per million (ppm) isobutylene. Background was measured at 0.0 ppm.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Rockford, Michigan

Boring No.: HS-MW-32D
Page: 2 **of** 6
File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
31		5	120/120		0.4 ppm	Loose, gray, fine to coarse SAND and GRAVEL, moist. Changing at 38.0 feet to: Soft, gray, Silty SAND, moist. Changing at 35.0 feet to: Loose, gray, fine to medium SAND, moist to wet.	SAND and GRAVEL			
35					0.5 ppm					
38							38' SAND			
40		6	120/120		1.5 ppm 1.8 ppm	Loose, gray, Silty SAND, moist.				
50		7	120/120		0.4 ppm	Loose, gray, Silty SAND, moist.		2		
55					0.3 ppm					
60		8	120/120		1.4 ppm	Loose, brown, fine to coarse SAND and Gravel, wet. Changing at 65.0 feet to: Loose, gray, fine to medium SAND, wet.				

Gamma (API-GR) scale: 0, 20, 40, 60, 80, 100

REMARKS

2. Temporary well pushed to 64.0 feet below ground surface. Groundwater collected for laboratory analytical testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

GAMMA_LOG 62335.52 MDEQ WWW.GPJ GZA_CORP.GDT 9/27/19

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Boring No.: HS-MW-32D
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File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
66					2.2 ppm		SAND			
67										
68										
69										
70		9	120/120		1.5 ppm	Gray, medium stiff, SILT, trace Gravel, trace Sand, wet. Changing at 72.5 feet to: Stiff, gray, Silty SAND, moist.	70' SILT			
71										
72							72.5' SAND			
73										
74								3		
75					2.0 ppm					
76										
77										
78										
79										
80		10	120/120		1.0 ppm	Loose, gray, fine to medium SAND, wet. Changing at 83.3 feet to: Stiff, gray, SILT, trace fine Sand, moist.				
81										
82										
83							83.3' SILT			
84										
85					4.5 ppm					
86										
87										
88										
89										
90		11	120/120		2.5 ppm	Stiff, gray, SILT, trace fine to coarse Sand, moist.				
91										
92										
93										
94										
95					3.0 ppm					
96										
97										
98										
99										

Gamma (API-GR) scale: 0, 20, 40, 60, 80, 100

REMARKS

3. Temporary well pushed to 74.0 feet below ground surface. Groundwater collected for laboratory analytical testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-32D
Page: 4 **of** 6
File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
101		12	120/120		0.6 ppm	Stiff, gray, SILT, trace fine Sand, moist. Changing at 107.0 feet to: Loose, fine to coarse SAND, trace Silt, moist.	SILT			
105					1.2 ppm					
107							107' SAND			
110		13	60/60		5.1 ppm	Loose, gray, fine to coarse SAND, wet.		4		
115		14	60/60		7.1 ppm	Loose, gray, fine to coarse SAND, trace Silt, moist.				
120		15	120/120		0.5 ppm	Loose, gray, fine to coarse SAND, moist.		5		
125					0.4 ppm					
130		16	120/120		1.0 ppm	Loose, gray, Silty SAND, some fine Gravel, moist.				
134										

Gamma (API-GR) scale: 0, 20, 40, 60, 80, 100

REMARKS

4. Temporary well pushed to 112.0 feet below ground surface. Groundwater collected for laboratory analytical testing.
5. Temporary well pushed to 122.0 feet below ground surface. Groundwater collected for laboratory analytical testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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Boring No.: HS-MW-32D
Page: 5 **of** 6
File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks
136					0. ppm		SAND	
137								
138								
139								
140		17	120/120		0.9 ppm	Loose, gray, fine to coarse SAND, black and gray, some Silt, moist. Changing at 145.0 feet to: Dense, gray and black, SAND and SILT, trace coarse Gravel, , moist.		6
141								
142								
143								
144								
145					0.5 ppm			
146								
147								
148								
149								
150		18	120/120		1.7 ppm	Dense, gray, CLAY, some fine to coarse SAND, moist. Changing at 151.7 feet to: Loose, gray, fine to coarse SAND, some Silt, wet.	150' CLAY	
151							151.7' SAND	
152								
153								
154								
155					1.5 ppm			
156								
157								
158								
159								
160		19	120/120		1.4 ppm	Loose, gray, Silty SAND, moist. Changing at 165.0 feet to: Dense, gray, CLAY, some fine Sand, moist.		
161								
162								
163								
164								
165					3.9 ppm		165' CLAY	
166								
167								
168								
169								

Gamma (API-GR): 0 20 40 60 80 100

Well Diagram

REMARKS

6. Temporary well pushed to 140.0 feet below ground surface. Groundwater collected for laboratory analytical testing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

GAMMA_LOG 62335.52 MDEQ WWW.GPJ GZA_CORP.GDT 9/27/19

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Rockford, Michigan

Boring No.: HS-MW-32D
Page: 6 **of** 6
File No.: 16.0062335.52
Check: Lori Powers

Depth	Elevation (ft,)	Sample Information: No.	Pen./ Rec. (in.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Gamma (API-GR)	Well Diagram
171		20	120/120		2.9 ppm	Dense, gray, CLAY, trace fine Sand, moist.	CLAY			
172										
173										
174										
175					1.7 ppm					
176										
177										
178										
179										
180		21	120/120		1.9 ppm	Dense, gray CLAY, moist.				
181										
182										
183										
184										
185					2.3 ppm					
186										
187										
188										
189										
190		22	60/60		2.1 ppm	Dense, gray, CLAY, moist.		7		
191										
192										
193					2.8 ppm					
194										
195							195'			
						Bottom of Borehole at 195.0 Feet				
196										
197										
198										
199										
200										
201										
202										
203										
204										

Gamma (API-GR) scale: 0, 20, 40, 60, 80, 100

REMARKS

7. Driller mentioned possible bedrock at 195.0 feet.
Monitoring well was installed in borehole upon completion. Well screen set from 137.6 to 142.2 feet below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Rose & Westra
A Division of GZA

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www.gza.com

MEMORANDUM

To: Jeffrey Kimble, U.S. EPA, Region 5

From: Loretta Powers, Rose & Westra, a Division of GZA GeoEnvironmental, Inc.

Date: September 11, 2019

File No.: 16.0062335.52 Task 006

Re: Wolverine World Wide, Inc. (Wolverine) – House Street – Monthly Progress Report

This Monthly Progress Report (MPR) is being provided at the request of the U.S. EPA to support the July 12, 2019 *Work Plan, House Street Disposal Area, Plainfield Township, Kent County, Michigan* (2019 WP). The 2019 WP was prepared in response to the U.S. EPA Region 5 Unilateral Administrative Order for Removal Actions[1] (UAO) effective February 1, 2018, associated with the Former Wolverine Tannery and House Street Disposal Area. This MPR is submitted pursuant to Paragraph 25 of the UAO.

Per Paragraph 25 of the UAO, this MPR summarizes the following items for the period of August 3 to September 6, 2019: "*. . . significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.*" Subsequent to issuance of the UAO and completion of the 2019 WP, R&W/GZA and U.S. EPA agreed that approved modifications to the 2019 WP will also be summarized in the MPRs.

ACTIONS PERFORMED

1) Continued drilling efforts for delineation task around the five TCLP chromium exceedances at the Site (2019 WP, Section 3.6.1). This work was completed August 6, 2019.

2) August 7, 2019: Began drilling efforts in west-central and northwest off-site potential wetland areas. This work was completed August 19, 2019.

3) Temporary monitoring well points were sampled upon completion of the borings.

4) On-Site investigation activities were completed the week of August 19, 2019.

5) Clearing, permitting, and logistics associated with the fence installation are on-going.

Tables A and B summarize the borings completed and associated samples collected during this reporting period. The boring locations in the southwestern investigation area (completed previously) are shown on attached Figure 1. Borings completed in the five

[1]. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Docket No. V-W-18-C-004.

TCLP delineation areas are shown on working drafts included as Figures 2A-2E. Lastly, the borings in the west-central and northwest low, possible wetland areas are shown on Figures 3A and 3B.

Boring logs for soil borings identified as HS-SB-4100 to HS-SB-4402 are attached.

ANALYTICAL DATA RECIEVED

Soil analytical data received during this reporting period is summarized in Tables 1 and 2A through 2E (note this includes the data from the composite sample collected on the west adjoining property). No groundwater data was received during this period.

ANTICIPATED ACTIONS AND SCHEDULE FOR NEXT REPORTING PERIOD

During the next reporting period, September 7 to October 7, 2019, the following tasks are anticipated to begin or be completed:

1) Receive the remainder of the analytical data from the laboratory
2) Finish clearing and begin installation of fencing
3) Finish boring logs from the on-Site investigation

IDENTIFIED PROBLEMS AND RESOLUTIONS

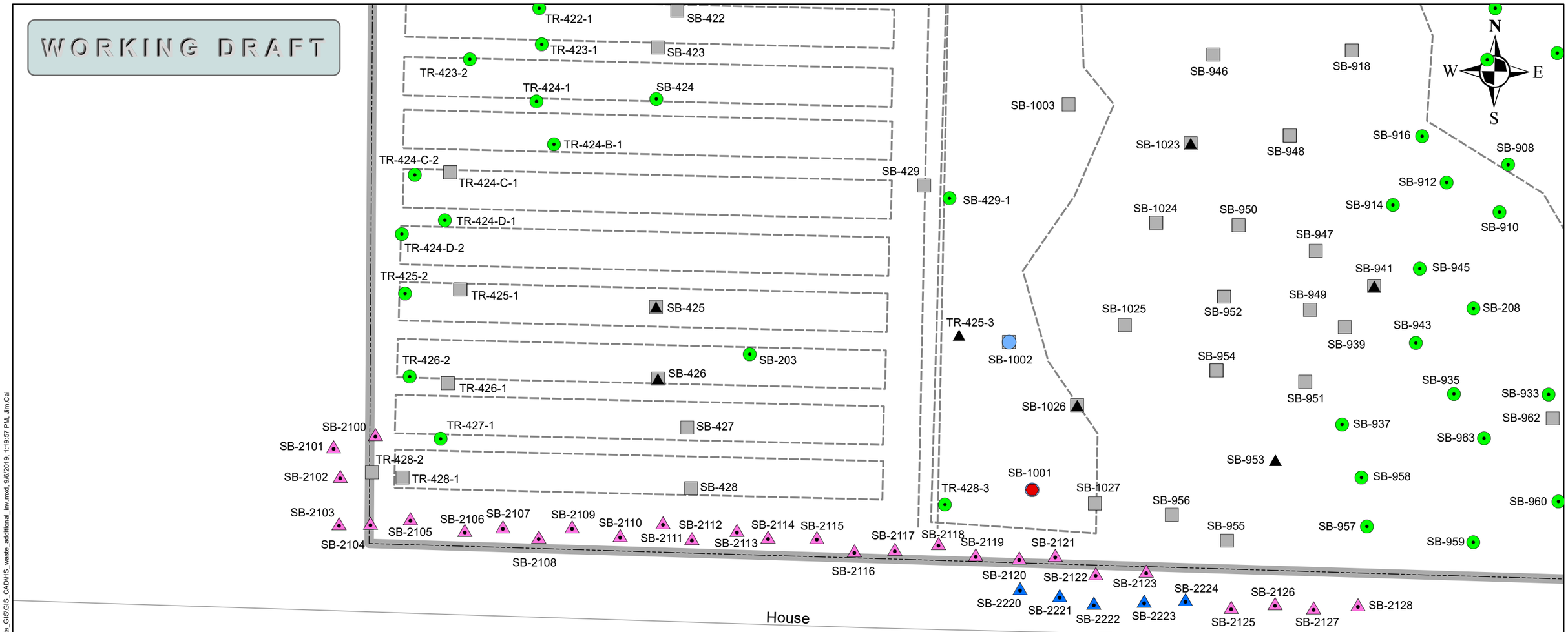
No significant problems were identified during this reporting period. As the GPS accuracy can waiver significantly at the Site, R&W/GZA worked closely with START to locate the delineation borings around the five chromium TCLP exceedances. Similarly, the borings on the west-central and northwest areas were discussed and adjusted with agreement of START.

The original fencing plan may require some modifications to the placement. R&W/GZA is discussing this with both Kent County Road Commission and EPA.

APPROVED 2019 WP MODIFICATIONS

No modifications were approved during this reporting period.

WORKING DRAFT



LEGEND

- RED WASTE MATERIAL
- BROWN WASTE MATERIAL
- BLACK WASTE MATERIAL
- WHITE WASTE MATERIAL
- GRAY WASTE MATERIAL
- NO WASTE MATERIAL OBSERVED

2019 SOUTHWEST AREA TIERED BORING LOCATION

- TIER 1
- TIER 2
- 1966 PROPOSED SITE PLAN
- APPROXIMATE HOUSE ST SITE BOUNDARY

NOTES
1. SOIL BORING STATUS UDATED THROUGH 9/5/2019.

2. LOCATIONS OF BORINGS NOT COMPLETED ARE SUBJECT TO CHANGE.

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

4. 2018 BORING LOCATIONS FOR TR-428-1 AND TR-428-2 WERE UPDATED BASED ON FIELD GPS MEASUREMENTS.

0 30 60 120
Scale in Feet

NO.	ISSUE/DESCRIPTION	BY	DATE

Rose & Westra, a Division of GZA
601 Fifth Street NW, Suite 102
Grand Rapids, Michigan 49504

ADDITIONAL SOIL BORINGS
SOUTHWEST AREA

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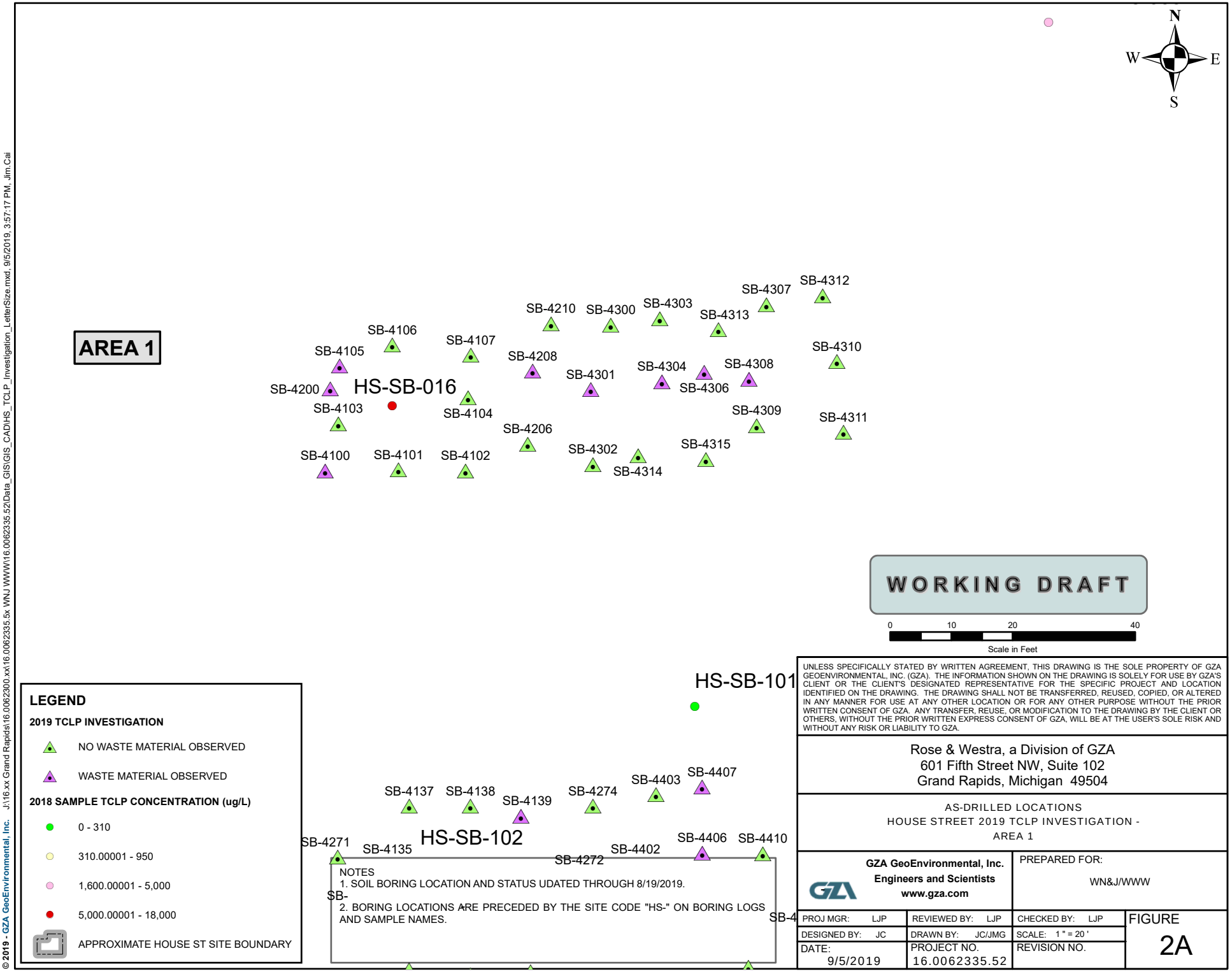
www.gza.com

PREPARED FOR:
WN&J/WWW

PROJ MGR: LIP	REVIEWED BY: LIP	CHECKED BY: LIP	FIGURE 1
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1"=60'	
DATE: 08-08-2019	PROJECT NO. 16.0062355.52	REVISION NO.	

 J:\16.xx Grand Rapids\16.0062300.xx\16.0062335.5x WNJ WWW\16.0062335.52\Data_GIS\GIS_CAD\HS_waste_additional_inv.mxd, 9/6/2019, 1:19:57 PM, Jim Cal



Rose & Westra, a Division of GZA
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AS-DRILLED LOCATIONS
HOUSE STREET 2019 TCLP INVESTIGATION -
AREA 1

GZA GeoEnvironmental, Inc.
Engineers and Scientists
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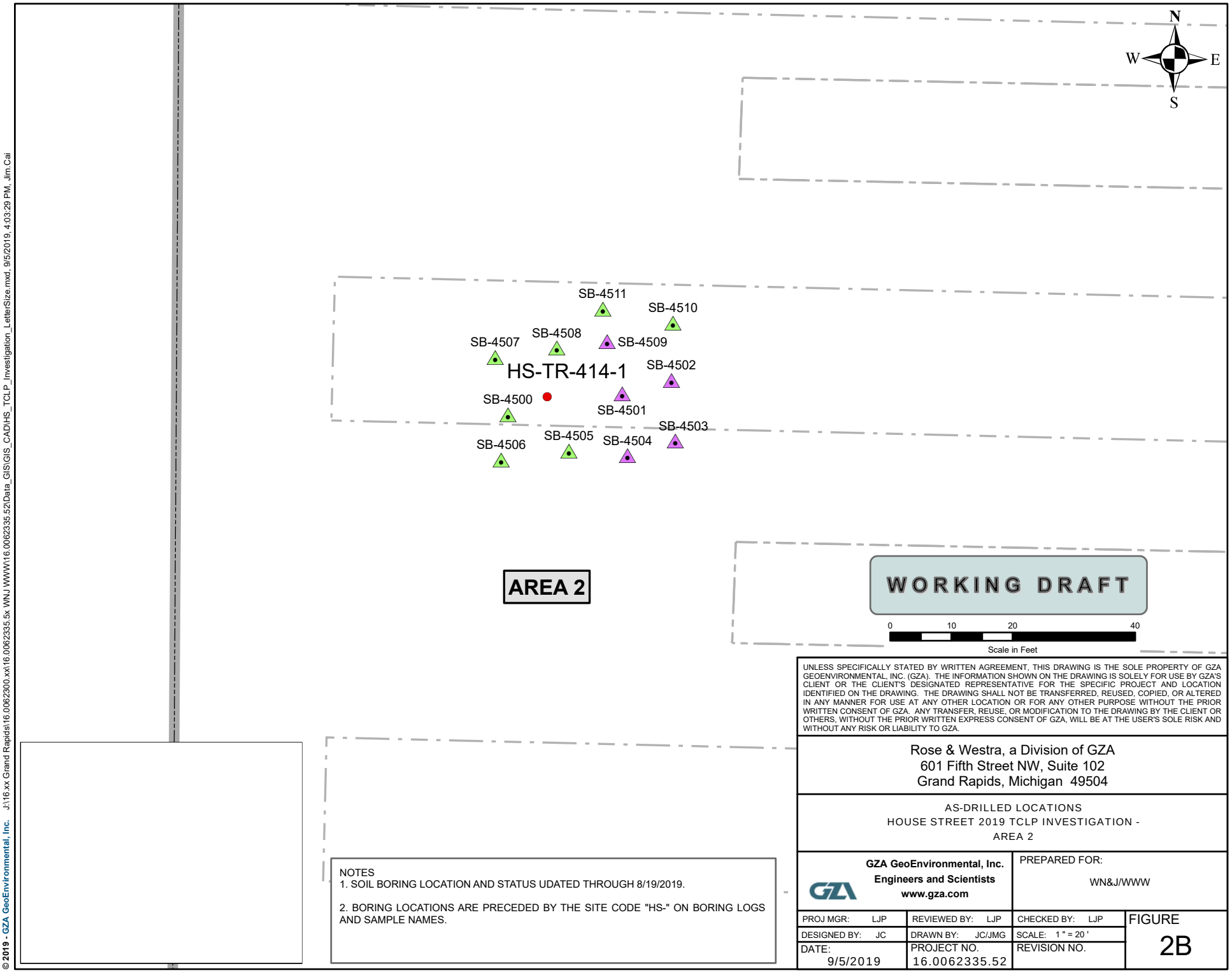
PREPARED FOR:
WN&J/WWW

PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE 2A
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1 " = 20 '	
DATE: 9/5/2019	PROJECT NO. 16.0062335.52	REVISION NO.	



NOTES
1. SOIL BORING LOCATION AND STATUS UDATED THROUGH 8/19/2019.

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

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AS-DRILLED LOCATIONS
HOUSE STREET 2019 TCLP INVESTIGATION -
AREA 2

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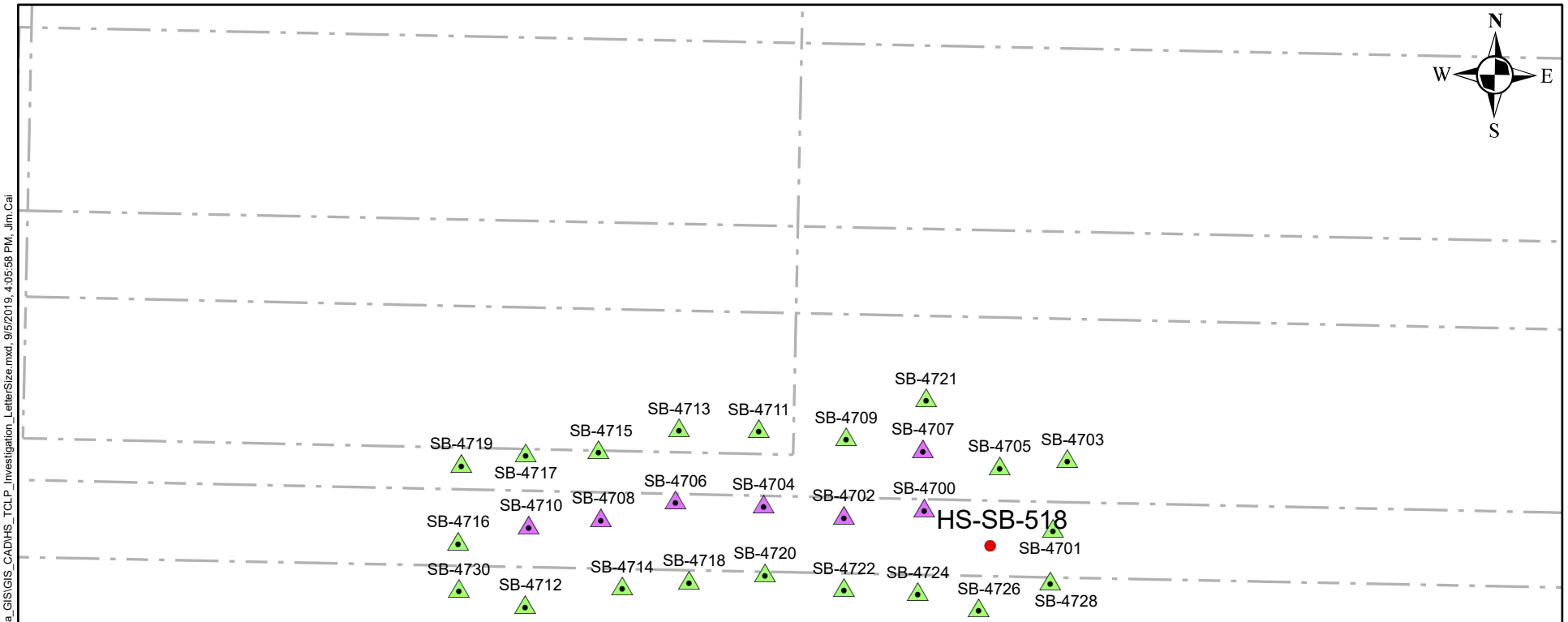
PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1 " = 20 '	2B
DATE: 9/5/2019	PROJECT NO. 16.0062335.52	REVISION NO.	



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AS-DRILLED LOCATIONS
HOUSE STREET 2019 TCLP INVESTIGATION -
AREA 3

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PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1 " = 20 '	2C
DATE: 9/5/2019	PROJECT NO. 16.0062335.52	REVISION NO.	

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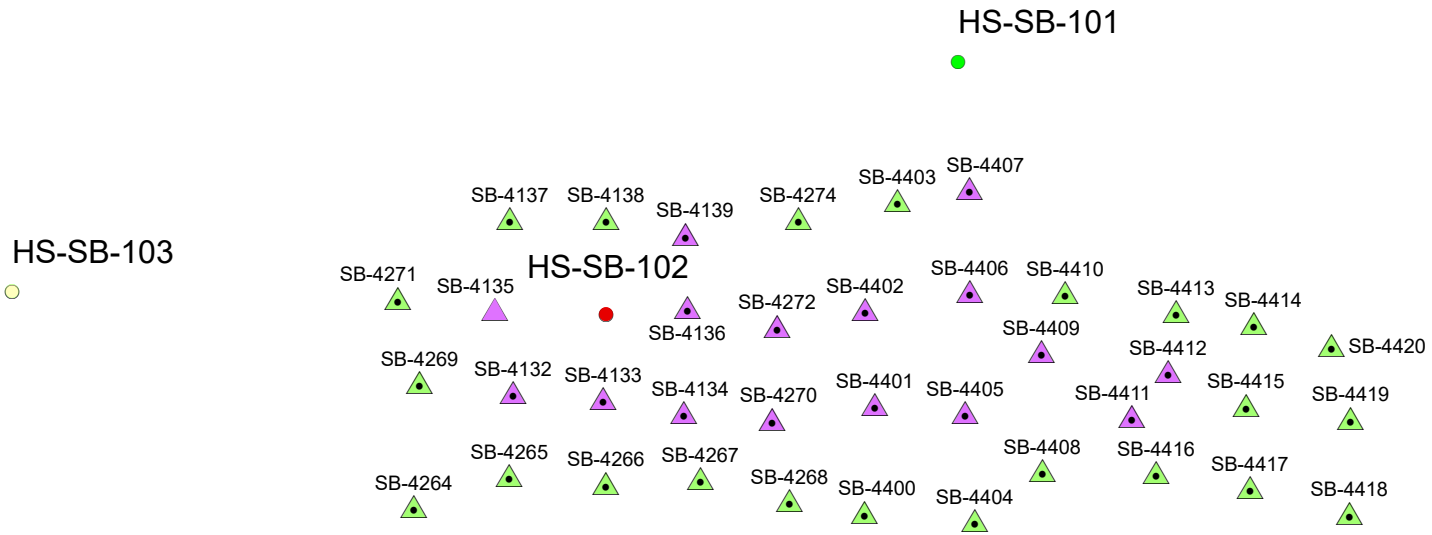

N
W E
S

WORKING DRAFT

0 10 20 40
Scale in Feet

LEGEND

2019 TCLP INVESTIGATION

- NO WASTE MATERIAL OBSERVED
- WASTE MATERIAL OBSERVED

2018 SAMPLE TCLP CONCENTRATION (ug/L)

- 0 - 310
- 310.00001 - 950
- 5,000.00001 - 18,000
- APPROXIMATE HOUSE ST SITE BOUNDARY

NOTES
1. SOIL BORING LOCATION AND STATUS UDATED THROUGH 8/19/2019.

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

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AS-DRILLED LOCATIONS
HOUSE STREET 2019 TCLP INVESTIGATION -
AREA 5

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PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1 " = 20 '	2E
DATE: 9/5/2019	PROJECT NO. 16.0062335.52	REVISION NO.	

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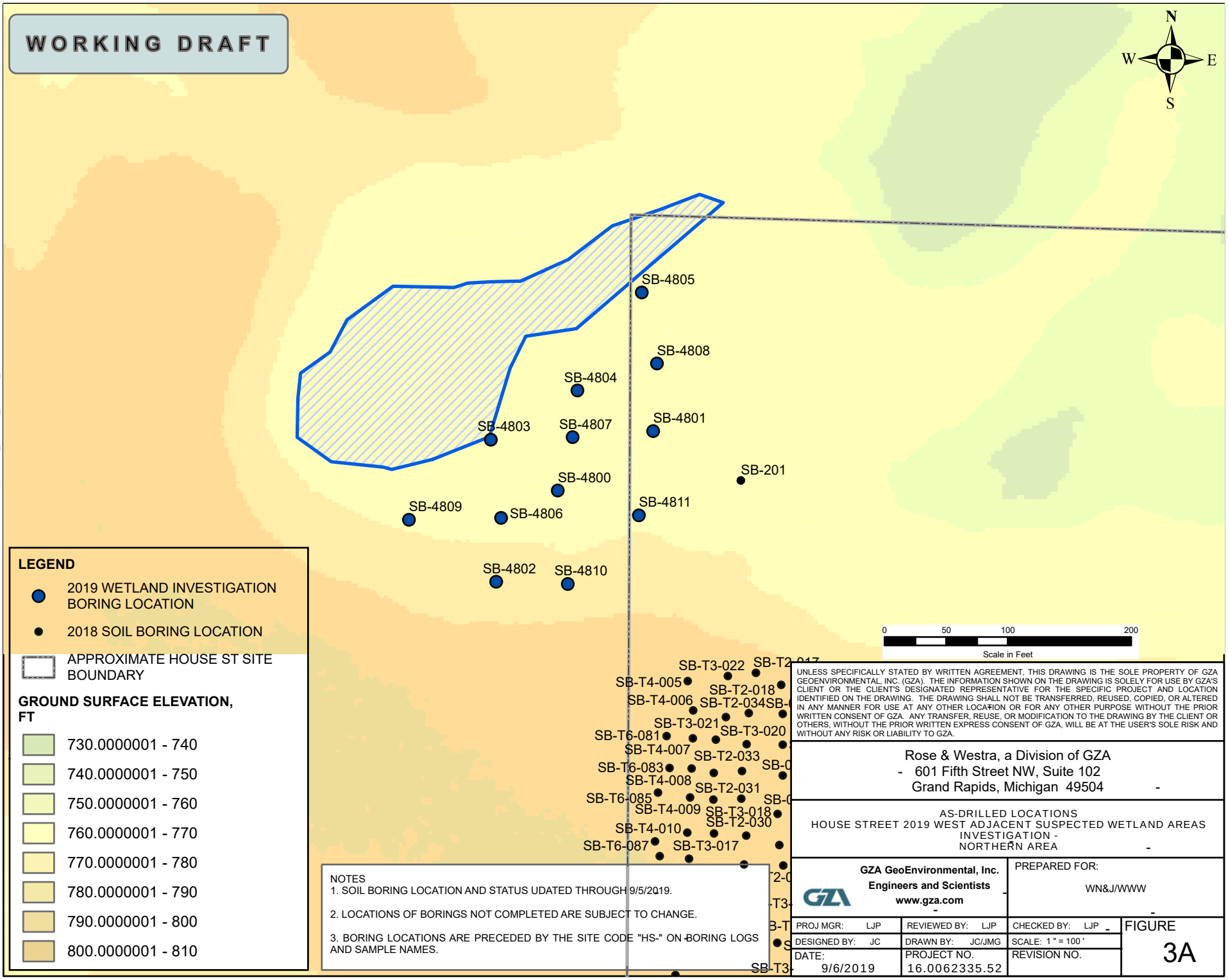
WORKING DRAFT



LEGEND

- 2019 WETLAND INVESTIGATION BORING LOCATION
- 2018 SOIL BORING LOCATION
- APPROXIMATE HOUSE ST SITE BOUNDARY

GROUND SURFACE ELEVATION, FT

- 730.0000001 - 740
- 740.0000001 - 750
- 750.0000001 - 760
- 760.0000001 - 770
- 770.0000001 - 780
- 780.0000001 - 790
- 790.0000001 - 800
- 800.0000001 - 810

NOTES
1. SOIL BORING LOCATION AND STATUS UDATED THROUGH 9/5/2019.

2. LOCATIONS OF BORINGS NOT COMPLETED ARE SUBJECT TO CHANGE.

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

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AS-DRILLED LOCATIONS
HOUSE STREET 2019 WEST ADJACENT SUSPECTED WETLAND AREAS INVESTIGATION -
NORTHERN AREA -

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PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1 " = 100 '	3A
DATE: 9/6/2019	PROJECT NO. 16.0062335.52	REVISION NO.	

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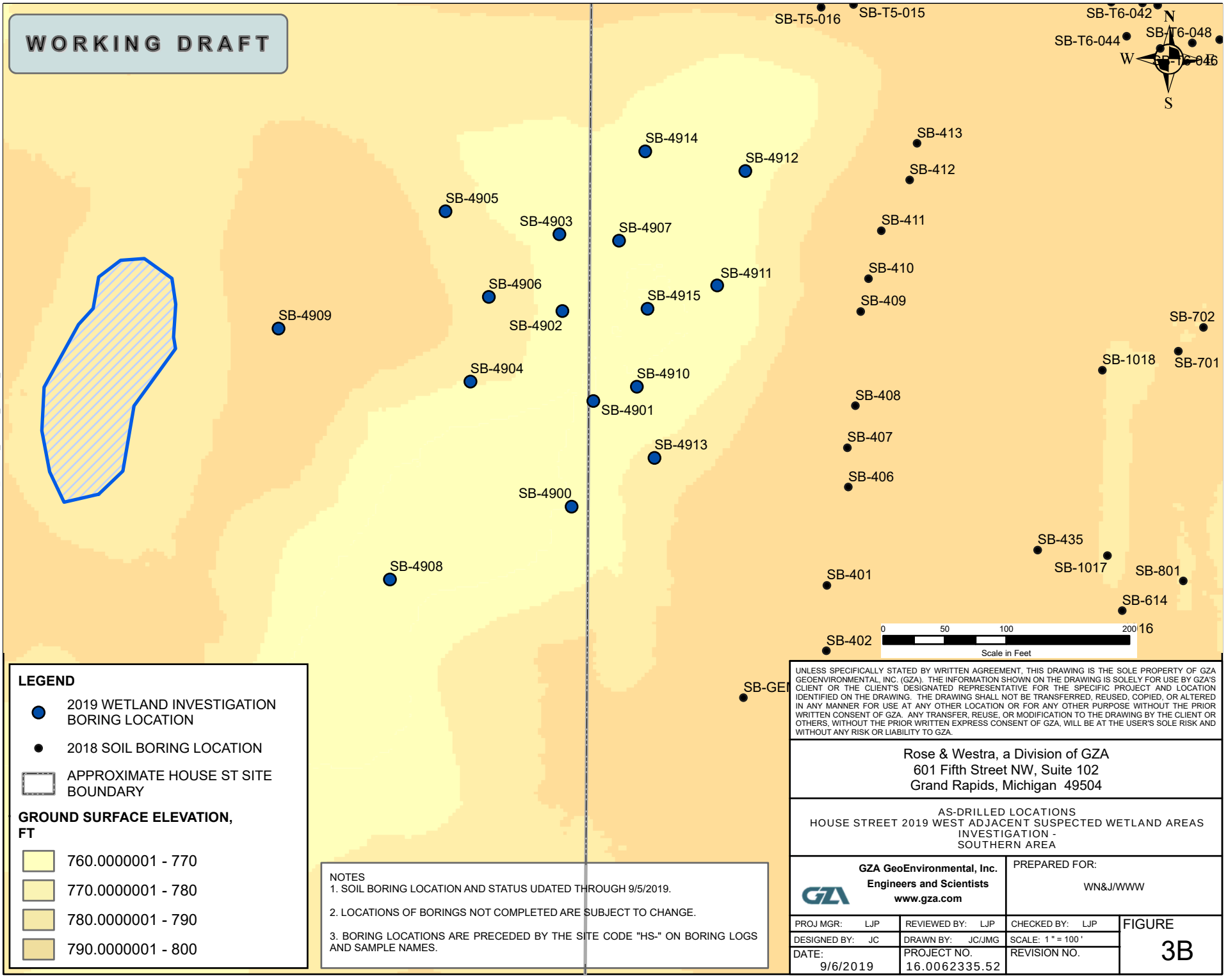

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AS-DRILLED LOCATIONS
HOUSE STREET 2019 WEST ADJACENT SUSPECTED WETLAND AREAS INVESTIGATION -
SOUTHERN AREA

GZA GeoEnvironmental, Inc.
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PREPARED FOR: WN&J/WWW

PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE 3B
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1 " = 100 '	
DATE: 9/6/2019	PROJECT NO. 16.0062335.52	REVISION NO.	

House Street Soil Boring Locations
2019 Delineation

Sampling Program	Sample Location	Start Date	End Date	Start Depth (ft)	End Depth (ft)	Samples Analyzed			PID Readings for Samples Analyzed			XRF Results for Samples Analyzed											
												As			Cr			Hg			Pb		
						S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3
Southwest Investigatio	HS-SB-2100	17-Jun-19	18-Jun-19	0	20	1-2	3-4	NA	0.2	0.1	NA	7.4	<LOD	NA	31	28	NA	<LOD	<LOD	NA	11.9	5.5	NA
Southwest Investigatio	HS-SB-2101	18-Jun-19	18-Jun-19	0	20	1-2	3-4	NA	0.9	2.0	NA	<LOD	<LOD	NA	44	32	NA	<LOD	<LOD	NA	5.6	8	NA
Southwest Investigatio	HS-SB-2102	18-Jun-19	20-Jun-19	0	20	1-2	3-4	NA	0.9	0.8	NA	<LOD	<LOD	NA	53	24	NA	<LOD	<LOD	NA	11.4	5.3	NA
Southwest Investigatio	HS-SB-2103	19-Jun-19	20-Jun-19	0	20	1-2	3-4	NA	3.8	11.6	NA	<LOD	<LOD	NA	19	23	NA	<LOD	<LOD	NA	6.7	5.3	NA
Southwest Investigatio	HS-SB-2104	19-Jun-19	28-Jun-19	0	20	1-2	3-4	NA	1.3	7.8	NA	<LOD	3.1	NA	29	48	NA	<LOD	<LOD	NA	5.7	10.6	NA
Southwest Investigatio	HS-SB-2105	19-Jun-19	28-Jun-19	0	20	2-3	3-4	NA	0.9	0.9	NA	3.2	<LOD	NA	53	23	NA	<LOD	<LOD	NA	12.8	5.2	NA
Southwest Investigatio	HS-SB-2106	19-Jun-19	1-Jul-19	0	20	2-3	5-6	NA	0.1	1.0	NA	3.4	<LOD	NA	56	27	NA	<LOD	<LOD	NA	15.1	6.2	NA
Southwest Investigatio	HS-SB-2107	20-Jun-19	1-Jul-19	0	20	2-3	6-7	NA	1.1	0.8	NA	2.5	<LOD	NA	46	28	NA	<LOD	<LOD	NA	8.4	6.1	NA
Southwest Investigatio	HS-SB-2108	20-Jun-19	1-Jul-19	0	20	1-2	3-4	NA	0.3	0.6	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	8	8	NA
Southwest Investigatio	HS-SB-2109	20-Jun-19	1-Jul-19	0	20	0-1	2-3	NA	0.8	0.6	NA	3	<LOD	NA	35	<LOD	NA	<LOD	<LOD	NA	16	8	NA
Southwest Investigatio	HS-SB-2110	20-Jun-19	1-Jul-19	0	20	1-2	3-4	NA	0.4	0.9	NA	<LOD	<LOD	NA	142	<LOD	NA	<LOD	<LOD	NA	8	7	NA
Southwest Investigatio	HS-SB-2111	21-Jun-19	1-Jul-19	0	20	0-1	2-3	NA	0.3	0.2	NA	<LOD	2.0	NA	76	37	NA	<LOD	<LOD	NA	11	11	NA
Southwest Investigatio	HS-SB-2112	21-Jun-19	2-Jul-19	0	20	2-3	4-5	NA	0.3	0.4	NA	6	4.0	NA	42	27	NA	<LOD	<LOD	NA	9	7	NA
Southwest Investigatio	HS-SB-2113	21-Jun-19	2-Jul-19	0	20	1-2	3-4	NA	0.1	0.4	NA	<LOD	4.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	4	11	NA
Southwest Investigatio	HS-SB-2114	21-Jun-19	2-Jul-19	0	20	0-1	3-4	NA	0.8	0.0	NA	<LOD	4.0	NA	439	<LOD	NA	<LOD	<LOD	NA	7	9	NA
Southwest Investigatio	HS-SB-2115	21-Jun-19	2-Jul-19	0	20	0-1	3-4	NA	0.7	1.0	NA	2	5.0	NA	419	<LOD	NA	<LOD	<LOD	NA	8	8	NA
Southwest Investigatio	HS-SB-2116	24-Jun-19	2-Jul-19	0	20	0-1	3-4	NA	0.8	0.6	NA	<LOD	4.0	NA	25	<LOD	NA	<LOD	<LOD	NA	5	8	NA
Southwest Investigatio	HS-SB-2117	24-Jun-19	2-Jul-19	0	20	0-1	2-3	NA	0.5	0.0	NA	2	3.0	NA	196	<LOD	NA	<LOD	<LOD	NA	10	11	NA
Southwest Investigatio	HS-SB-2118	24-Jun-19	2-Jul-19	0	20	0-1	3-4	NA	0.0	0.1	NA	<LOD	<LOD	NA	285	<LOD	NA	<LOD	<LOD	NA	11	8	NA
Southwest Investigatio	HS-SB-2119	24-Jun-19	2-Jul-19	0	20	0-1	3-4	NA	0.1	0.0	NA	<LOD	6.0	NA	957	34	NA	<LOD	<LOD	NA	11	13	NA
Southwest Investigatio	HS-SB-2120	25-Jun-19	2-Jul-19	0	20	1-2	4-5	NA	1.8	0.4	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	10	7	NA
Southwest Investigatio	HS-SB-2121	25-Jun-19	25-Jun-19	0	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Southwest Investigatio	HS-SB-2122	25-Jun-19	25-Jun-19	0	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Southwest Investigatio	HS-SB-2123	25-Jun-19	25-Jun-19	0	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Southwest Investigatio	HS-SB-2125	25-Jun-19	28-Jun-19	0	20	1-2	7-8	NA	0.6	0.7	NA	4	2.0	NA	24	<LOD	NA	<LOD	<LOD	NA	8	4	NA
Southwest Investigatio	HS-SB-2125	25-Jun-19	28-Jun-19	20	40	25-27	30-32	35-37	1.8/1.5	2.7/1.6	2.0/1.2	<LOD | <LOD	<LOD | <LOD	<LOD | <LOD	<LOD | <LOD	<LOD | <LOD	58 | <LOD	<LOD | <LOD	<LOD | <LOD	<LOD | <LOD	5 / 6	4 / 6	6 / 6
Southwest Investigatio	HS-SB-2126	24-Jun-19	26-Jun-19	0	20	2-3	8-9	NA	0.7	0.6	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	6	5	NA
Southwest Investigatio	HS-SB-2126	24-Jun-19	26-Jun-19	20	40	25-27	31-33	37-39	0.8	0.5	0.2	NR	<LOD | <LOD	<LOD | <LOD	NR	<LOD | <LOD	<LOD | 66	NR	<LOD | <LOD	<LOD | <LOD	NR	5 / 4	9 / 8
Southwest Investigatio	HS-SB-2127	24-Jun-19	25-Jun-19	0	20	3-4	8-9	NA	0.1	0.6	NA	5	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	5	4	NA
Southwest Investigatio	HS-SB-2128	24-Jun-19	26-Jun-19	0	20	2-3	8-9	NA	0.3	0.8	NA	7	<LOD	NA	39	<LOD	NA	<LOD	<LOD	NA	13	5	NA
Southwest Investigatio	HS-SB-2220	27-Jun-19	27-Jun-19	0	20	3-4	8-9	NA	4.4	1.4	NA	4	<LOD	NA	43	<LOD	NA	<LOD	<LOD	NA	9	4	NA
Southwest Investigatio	HS-SB-2221	26-Jun-19	27-Jun-19	0	20	0-1	8-9	NA	0.2	0.1	NA	<LOD	<LOD	NA	236	24	NA	<LOD	<LOD	NA	17	5	NA
Southwest Investigatio	HS-SB-2222	26-Jun-19	26-Jun-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Southwest Investigatio	HS-SB-2223	26-Jun-19	26-Jun-19	0	20	1-2	8-9	NA	0.5	0.9	NA	2	4.0	NA	30	36	NA	<LOD	<LOD	NA	4	8	NA
Southwest Investigatio	HS-SB-2224	27-Jun-19	28-Jun-19	0	20	1-2	6-7	NA	0.8	0.9	NA	2	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	6	10	NA
Southwest Investigatio	HS-SB-2224	27-Jun-19	28-Jun-19	20	40	20-22	31-33	37-39	1.1/0.6	1.8/1.8	0.5/0.4	<LOD | <LOD	<LOD | <LOD	<LOD | <LOD	<LOD | <LOD	<LOD | <LOD	<LOD | <LOD	<LOD | <LOD	<LOD | <LOD	<LOD | <LOD	7 | 5	4 | 3	4 | 2
TCLP Investigation	HS-SB-4100	8-Jul-19	8-Jul-19	0	20	12-13	15-16	NA	0.6	1.8	NA	4	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	8	5	NA
TCLP Investigation	HS-SB-4101	8-Jul-19	8-Jul-19	0	20	12-13	15-16	NA	1.4	1.7	NA	<LOD	<LOD	NA	23	<LOD	NA	<LOD	<LOD	NA	3	4	NA
TCLP Investigation	HS-SB-4102	8-Jul-19	8-Jul-19	0	20	3-4	4-5	NA	0.0	0.0	NA	3	5.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	9	9	NA
TCLP Investigation	HS-SB-4103	9-Jul-19	9-Jul-19	0	20	12-13	15-16	NA	1.0	0.8	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	4	5	NA
TCLP Investigation	HS-SB-4104	9-Jul-19	9-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4105	8-Jul-19	8-Jul-19	0	20	12-13	15-16	NA	6.5	6.1	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	4	4	NA
TCLP Investigation	HS-SB-4106	9-Jul-19	9-Jul-19	0	20	12-13	15-16	NA	3.4	7.6	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	4	4	NA
TCLP Investigation	HS-SB-4107	9-Jul-19	9-Jul-19	0	20	3-4	5-6	NA	0.8	1.3	NA	8	5.0	NA	43	40	NA	<LOD	<LOD	NA	11	9	NA
TCLP Investigation	HS-SB-4132	9-Jul-19	9-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4133	8-Jul-19	8-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4134	8-Jul-19	8-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4135	8-Jul-19	25-Jul-19	0	20	12-13	15-16	NA	0.3	0.0	NA	2	6.0	NA	<LOD	61	NA	<LOD	<LOD	NA	8	12	NA
TCLP Investigation	HS-SB-4136	8-Jul-19	8-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4137	9-Jul-19	25-Jul-19	0	20	12-13	15-16	NA	1.4	1.0	NA	6	4.0	NA	47	38	NA	<LOD	<LOD	NA	10	11	NA
TCLP Investigation	HS-SB-4138	9-Jul-19	25-Jul-19	0	20	11-12	13-14	NA	1.4	NA	NA	<LOD	NA	NA	<LOD	NA	NA	<LOD	NA	NA	10	NA	NA
TCLP Investigation	HS-SB-4139	9-Jul-19	25-Jul-19	0	20	7-8	10-11	NA	1.1	1.3	NA	7	5.0	NA	42	33	NA	<LOD	<LOD	NA	11	12	NA
TCLP Investigation	HS-SB-4200	11-Jul-19	11-Jul-19	0	20	12-13	15-16	NA	0.3	0.4	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	4	3	NA
TCLP Investigation	HS-SB-4206	10-Jul-19	10-Jul-19	0	20	7-8	10-11	NA	1.1	1.1	NA	13	<LOD	NA	28	<LOD	NA	<LOD	<LOD	NA	14	4	NA
TCLP Investigation	HS-SB-4208	10-Jul-19	10-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4210	10-Jul-19	10-Jul-19	0	20	7-8	10-11	NA	1.9	3.1	NA	6	<LOD	NA	38	<LOD	NA	<LOD	<LOD	NA	9	4	NA
TCLP Investigation	HS-SB-4264	11-Jul-19	11-Jul-19	0	20	12-13	15-16	NA	0.4	0.4	NA	6	6.0	NA	41	39	NA	<LOD	<LOD	NA	10	10	NA
TCLP Investigation	HS-SB-4265	11-Jul-19	11-Jul-19	0	20	12-13	15-16	NA	0.9	0.7	NA	3	5.0	NA	46	<LOD	NA	<LOD	<LOD	NA	10	8	NA
TCLP Investigation	HS-SB-4266	10-Jul-19	10-Jul-19	0	20	11-12	14-15	NA	3.0	2.3	NA	3	3.0	NA	32	43	NA	<LOD	<LOD	NA	15	11	NA
TCLP Investigation	HS-SB-4267	10-Jul-19	10-Jul-19	0	20	12-13	15-16	NA	3.3	3.6	NA	5	2.0	NA	63	25	NA	<LOD	<LOD	NA	10	6	NA
TCLP Investigation	HS-SB-4268	10-Jul-19	10-Jul-19	0	20	12-13	15-16	NA	1.2	1.1	NA	3	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	11	4	NA
TCLP Investigation	HS-SB-4269	11-Jul-19	11-Jul-19	0	20	8-9	11-12	NA	4.8	0.4	NA	4	6.0	NA	1638	56	NA	<LOD	<LOD	NA	13	12	NA
TCLP Investigation	HS-SB-4270	10-Jul-19	10-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4271	11-Jul-19	22-Jul-19	0	20	5-6	8-9	NA	0.6	0.8	NA	3	3.0	NA	2434	40	NA	<LOD	<LOD	NA	12	8	NA
TCLP Investigation	HS-SB-4272	10-Jul-19	10-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4274	16-Jul-19	25-Jul-19	0	20	6-7	8-9	NA	0.2	0.7	NA	5	2	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	11	3	NA
TCLP Investigation	HS-SB-4300	11-Jul-19	11-Jul-19	0	20	6-7	8-9	NA	0.1	0.2	NA	4	5	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	8	7	NA
TCLP Investigation	HS-SB-4301	11-Jul-19	11-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

									PID Readings for Samples			XRF Results for Samples Analyzed											
				Start Depth	End Depth																		
TCLP Investigation	HS-SB-4302	10-Jul-19	10-Jul-19	0	20	6-7	8-9	NA	1.5	1.1	NA	4	7	NA	36	32	NA	<LOD	<LOD	NA	7	10	NA
TCLP Investigation	HS-SB-4303	12-Jul-19	12-Jul-19	0	20	5-6	7-8	NA	0.7	0.8	NA	2	4	NA	34	<LOD	NA	<LOD	<LOD	NA	10	8	NA
TCLP Investigation	HS-SB-4304	11-Jul-19	11-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4306	12-Jul-19	12-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4307	15-Jul-19	15-Jul-19	0	20	5-6	8-9	NA	3.5	2.5	NA	3	4	NA	40	59	NA	3	<LOD	NA	10	12	NA
TCLP Investigation	HS-SB-4308	15-Jul-19	15-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4309	15-Jul-19	15-Jul-19	0	20	5-6	8-9	NA	3.8	3.3	NA	7	4	NA	40	22	NA	<LOD	<LOD	NA	16	8	NA
TCLP Investigation	HS-SB-4310	16-Jul-19	19-Jul-19	0	20	5-6	8-9	NA	0.5	0.1	NA	5	12	NA	39	37	NA	<LOD	<LOD	NA	13	14	NA
TCLP Investigation	HS-SB-4311	16-Jul-19	19-Jul-19	0	20	5-6	8-9	NA	0.0	0.3	NA	5	5	NA	53	46	NA	<LOD	<LOD	NA	13	10	NA
TCLP Investigation	HS-SB-4312	16-Jul-19	19-Jul-19	0	20	2-3	5-6	NA	0.0	0.0	NA	7	5	NA	3154	226	NA	<LOD	<LOD	NA	15	13	NA
TCLP Investigation	HS-SB-4313	16-Jul-19	19-Jul-19	0	20	7-8	10-11	NA	0.0	0.3	NA	6	<LOD	NA	29	<LOD	NA	<LOD	<LOD	NA	10	3	NA
TCLP Investigation	HS-SB-4314	17-Jul-19	22-Jul-19	0	20	5-6	8-9	NA	0.6	0.6	NA	<LOD	8	NA	<LOD	54	NA	<LOD	<LOD	NA	4	10	NA
TCLP Investigation	HS-SB-4315	18-Jul-19	22-Jul-19	0	20	7-8	10-11	NA	0.0	0.0	NA	5	4	NA	29	27	NA	<LOD	<LOD	NA	10	10	NA
TCLP Investigation	HS-SB-4400	12-Jul-19	12-Jul-19	0	20	11-12	13-14	NA	1.4	2.2	NA	5	2	NA	49	53	NA	<LOD	<LOD	NA	15	7	NA
TCLP Investigation	HS-SB-4401	12-Jul-19	12-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4402	12-Jul-19	12-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4403	15-Jul-19	15-Jul-19	0	20	5-6	7-8	NA	2.5	2.7	NA	5	7	NA	33	<LOD	NA	<LOD	<LOD	NA	10	9	NA
TCLP Investigation	HS-SB-4404	16-Jul-19	24-Jul-19	0	20	11-12	13-14	NA	0.0	0.0	NA	8	2	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	11	3	NA
TCLP Investigation	HS-SB-4405	15-Jul-19	15-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4406	15-Jul-19	15-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4407	15-Jul-19	23-Jul-19	0	20	6-7	9-10	NA	86.3	9.9	NA	5	3	NA	9256	<LOD	NA	<LOD	<LOD	NA	13	8	NA
TCLP Investigation	HS-SB-4408	16-Jul-19	14-Jul-19	0	20	8-9	11-12	NA	2.3	0.0	NA	6	<LOD	NA	914	<LOD	NA	<LOD	<LOD	NA	10	4	NA
TCLP Investigation	HS-SB-4409	16-Jul-19	--	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4410	16-Jul-19	24-Jul-19	0	20	10-11	13-14	NA	0.0	0.0	NA	6	<LOD	NA	35	<LOD	NA	<LOD	<LOD	NA	12	4	NA
TCLP Investigation	HS-SB-4411	17-Jul-19	--	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4412	17-Jul-19	--	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4413	17-Jul-19	24-Jul-19	0	20	6-7	8-9	NA	0.4	1.2	NA	5	6	NA	40	<LOD	NA	<LOD	<LOD	NA	10	11	NA
TCLP Investigation	HS-SB-4414	17-Jul-19	24-Jul-19	0	20	3-4	5-6	NA	0.0	0.3	NA	<LOD	9	NA	3447	54	NA	<LOD	<LOD	NA	14	12	NA
TCLP Investigation	HS-SB-4415	18-Jul-19	--	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4416	18-Jul-19	24-Jul-19	0	20	6-7	9-10	NA	NR	NA	NA	8	NA	NA	5184	NA	NA	<LOD	NA	NA	14	NA	NA
TCLP Investigation	HS-SB-4417	18-Jul-19	24-Jul-19	0	20	4-5	6-7	NA	0.0	0.2	NA	5	5	NA	79	33	NA	<LOD	<LOD	NA	22	10	NA
TCLP Investigation	HS-SB-4418	18-Jul-19	24-Jul-19	0	20	4-5	6-7	NA	0.1	0.0	NA	13	3	NA	39	<LOD	NA	<LOD	<LOD	NA	13	9	NA
TCLP Investigation	HS-SB-4419	18-Jul-19	24-Jul-19	0	20	4-5	6-7	NA	0.0	0.0	NA	7	7	NA	39	44	NA	<LOD	<LOD	NA	14	12	NA
TCLP Investigation	HS-SB-4420	18-Jul-19	24-Jul-19	0	20	4-5	6-7	NA	0.5	1.2	NA	7	6	NA	54	37	NA	<LOD	<LOD	NA	12	11	NA
TCLP Investigation	HS-SB-4500	25-Jul-19	25-Jul-19	0	20	6-7	16-17	NA	1.9	1.4	NA	3	<LOD	NA	27	<LOD	NA	<LOD	<LOD	NA	7	5	NA
TCLP Investigation	HS-SB-4501	26-Jul-19	26-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4502	26-Jul-19	26-Jul-19	0	20	5-6	7-8	NA	0.7	0.8	NA	6	4	NA	23	<LOD	NA	<LOD	<LOD	NA	14	11	NA
TCLP Investigation	HS-SB-4503	26-Jul-19	26-Jul-19	0	20	5-6	7-8	NA	0.7	0.7	NA	<LOD	2	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	6	5	NA
TCLP Investigation	HS-SB-4504	26-Jul-19	26-Jul-19	0	20	5-6	7-8	NA	0.8	0.6	NA	4	2	NA	36	<LOD	NA	<LOD	<LOD	NA	14	<LOD	NA
TCLP Investigation	HS-SB-4505	29-Jul-19	29-Jul-19	0	20	6-7	8-9	NA	0.0	0.0	NA	3	5	NA	<LOD	25	NA	<LOD	<LOD	NA	7	11	NA
TCLP Investigation	HS-SB-4506	29-Jul-19	29-Jul-19	0	20	4-5	6-7	NA	0.0	0.0	NA	6	3	NA	4208	28	NA	<LOD	<LOD	NA	12	8	NA
TCLP Investigation	HS-SB-4507	29-Jul-19	29-Jul-19	0	20	6-7	8-9	NA	0.0	0.0	NA	5	5	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	10	10	NA
TCLP Investigation	HS-SB-4508	29-Jul-19	29-Jul-19	0	20	6-7	8-9	NA	0.0	0.0	NA	7	3	NA	<LOD	24	NA	<LOD	<LOD	NA	7	11	NA
TCLP Investigation	HS-SB-4509	30-Jul-19	--	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4510	30-Jul-19	31-Jul-19	0	20	5-6	7-8	NA	0.1	0.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	6	7	NA
TCLP Investigation	HS-SB-4511	30-Jul-19	31-Jul-19	0	20	5-6	7-8	NA	0.0	0.3	NA	7	6	NA	<LOD	26	NA	<LOD	<LOD	NA	11	9	NA
TCLP Investigation	HS-SB-4600	29-Jul-19	31-Jul-19	0	20	5-6	10-11	NA	0.0	0.0	NA	<LOD	<LOD	NA	3350	1004	NA	<LOD	<LOD	NA	8	10	NA
TCLP Investigation	HS-SB-4601	29-Jul-19	29-Jul-19	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4602	29-Jul-19	31-Jul-19	0	20	4-5	6-7	NA	0.0	0.0	NA	25	3	NA	2021	5118	NA	<LOD	<LOD	NA	53	13	NA
TCLP Investigation	HS-SB-4603	29-Jul-19	31-Jul-19	0	20	2-3	12-13	NA	0.0	0.0	NA	<LOD	<LOD	NA	3056	<LOD	NA	<LOD	<LOD	NA	105	5	NA
TCLP Investigation	HS-SB-4604	30-Jul-19	31-Jul-19	0	20	12-13	14-15	NA	1.0	1.9	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	7	5	NA
TCLP Investigation	HS-SB-4605	30-Jul-19	31-Jul-19	0	20	5-6	7-8	NA	0.8	0.7	NA	3	<LOD	NA	<LOD	40	NA	<LOD	<LOD	NA	11	5	NA
TCLP Investigation	HS-SB-4606	30-Jul-19	31-Jul-19	0	20	5-6	7-8	NA	0.0	0.0	NA	5	<LOD	NA	869	<LOD	NA	<LOD	<LOD	NA	20	6	NA
TCLP Investigation	HS-SB-4607	30-Jul-19	31-Jul-19	0	20	4-5	6-7	NA	0.0	0.0	NA	2	4	NA	62	<LOD	NA	<LOD	<LOD	NA	10	8	NA
TCLP Investigation	HS-SB-4608	31-Jul-18	31-Jul-19	0	20	7-8	10-11	NA	0.0	0.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	9	6	NA
TCLP Investigation	HS-SB-4609	31-Jul-18	1-Aug-19	0	20	13-14	16-17	NA	0.6	0.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	6	7	NA
TCLP Investigation	HS-SB-4610	31-Jul-18	1-Aug-19	0	20	13-14	16-17	NA	1.1	1.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	6	6	NA
TCLP Investigation	HS-SB-4700	31-Jul-18	--	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4701	31-Jul-18	6-Aug-19	0	20	7-8	11-12	NA	4.2	0.9	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	3	5	NA
TCLP Investigation	HS-SB-4702	1-Aug-19	--	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4703	1-Aug-19	7-Aug-19	0	20	7-8	11-12	NA	0.4	0.2	NA	2	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	3	<LOD	NA
TCLP Investigation	HS-SB-4704	1-Aug-19	--	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4705	1-Aug-19	7-Aug-19	0	20	7-8	13-14	NA	0.2	1.2	NA	2	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	4	4	NA
TCLP Investigation	HS-SB-4706	1-Aug-19	--	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4707	1-Aug-19	--	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4708	1-Aug-19	--	0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP Investigation	HS-SB-4709	1-Aug-19	7-Aug-19	0	20	7-8	13-14	NA	2.3	1.3	NA	5	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	11	4	NA
TCLP Investigation	HS-SB-4710	2-Aug-19	6-Aug-19	0	20	9-10	NA	NA	1.8	NA	NA	7	NA	NA	<LOD	NA	NA	<LOD	NA	NA	7	NA	NA
TCLP Investigation	HS-SB-4711	5-Aug-19	7-Aug-19	0	20	7-8	13-14	NA	4.3	15.1	NA	4	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	9	5	NA
TCLP Investigation	HS-SB-4712	5-Aug-19	6-Aug-19	0	20	6-7	9-10	NA	0.5	1.2	NA	4	5.0	NA	25	<LOD	NA	<LOD	<LOD	NA	8	9	NA

House Street Soil Boring Locations
2019 Delineation

									PID Readings for Samples			XRF Results for Samples Analyzed											
				Start Depth	End Depth																		
TCLP Investigation	HS-SB-4713	5-Aug-19	7-Aug-19	0	20	7-8	10-11	NA	1.3	1.0	NA	9	<LOD	NA	24	<LOD	NA	<LOD	<LOD	NA	13	8	NA
TCLP Investigation	HS-SB-4714	5-Aug-19	7-Aug-19	0	20	6-7	9-10	NA	2.8	2.3	NA	5	5.0	NA	26	39	NA	<LOD	<LOD	NA	9	10	NA
TCLP Investigation	HS-SB-4715	5-Aug-19	7-Aug-19	0	20	6-7	9-10	NA	0.7	0.5	NA	5	8.0	NA	68	28	NA	<LOD	<LOD	NA	9	10	NA
TCLP Investigation	HS-SB-4716	5-Aug-19	6-Aug-19	0	20	6-7	9-10	NA	1.7	1.5	NA	4	4.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	8	5	NA
TCLP Investigation	HS-SB-4717	5-Aug-19	7-Aug-19	0	20	6-7	9-10	NA	1.9	0.7	NA	5	3.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	6	5	NA
TCLP Investigation	HS-SB-4718	5-Aug-19	7-Aug-19	0	20	7-8	10-11	NA	1.7	1.2	NA	7	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	11	6	NA
TCLP Investigation	HS-SB-4719	5-Aug-19	9-Aug-19	0	20	6-7	9-10	NA	6.1	6.4	NA	5	4.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	9	8	NA
TCLP Investigation	HS-SB-4720	5-Aug-19	7-Aug-19	0	20	7-8	13-14	NA	1.0	NA	NA	4	NA	NA	1626	NA	NA	<LOD	NA	NA	12	NA	NA
TCLP Investigation	HS-SB-4721	5-Aug-19	7-Aug-19	0	20	7-8	13-14	NA	6.0	4.2	NA	6	4.0	NA	<LOD	23	NA	<LOD	<LOD	NA	9	7	NA
TCLP Investigation	HS-SB-4722	5-Aug-19	7-Aug-19	0	20	6-7	10-11	NA	0.7	0.6	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	5	5	NA
TCLP Investigation	HS-SB-4724	5-Aug-19	5-Aug-19	0	20	7-8	10-11	NA	3.1	2.7	NA	5	2.0	NA	26	<LOD	NA	<LOD	<LOD	NA	11	3	NA
TCLP Investigation	HS-SB-4726	6-Aug-19	6-Aug-19	0	20	7-8	11-12	NA	8.9	12.9	NA	4	3.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	4	6	NA
TCLP Investigation	HS-SB-4728	6-Aug-19	6-Aug-19	0	20	7-8	11-12	NA	1.7	1.4	NA	<LOD	2.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	2	2	NA
TCLP Investigation	HS-SB-4730	6-Aug-19	6-Aug-19	0	20	6-7	9-10	NA	1.4	1.6	NA	6	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	10	8	NA
TCLP Investigation	1781 House St Composite	2-Aug-19	2-Aug-19	0	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2018 Investigation	HS-SB-518	6-Aug-19	6-Aug-19	0	15	11-12	NA	NA	NA	NA	NA	4	NA	NA	75	NA	NA	<LOD	NA	NA	6	NA	NA
NW Wetland	HS-SB-4800	8-Aug-19	8-Aug-19	0	20	0-2	15-17	NA	1.9	3.3	NA	6	2.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	10	3	NA
NW Wetland	HS-SB-4801	9-Aug-19	9-Aug-19	0	20	0-2	15-17	NA	1.8	3.7	NA	4	<LOD	NA	28	<LOD	NA	<LOD	<LOD	NA	12	7	NA
NW Wetland	HS-SB-4802	9-Aug-19	9-Aug-19	0	20	0-2	15-17	NA	12.9	5.2	NA	2	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	11	5	NA
NW Wetland	HS-SB-4803	8-Aug-19	8-Aug-19	0	20	0-2	6-8	NA	1.0	0.9	NA	7	6.0	NA	24	27	NA	<LOD	<LOD	NA	15	9	NA
NW Wetland	HS-SB-4804	8-Aug-19	8-Aug-19	0	20	0-2	10-12	NA	1.6	1.5	NA	5	3.0	NA	25	<LOD	NA	<LOD	<LOD	NA	12	6	NA
NW Wetland	HS-SB-4805	8-Aug-19	8-Aug-19	0	20	0-2	7-9	NA	2.4	8.1	NA	<LOD	5.0	NA	38	<LOD	NA	<LOD	<LOD	NA	10	10	NA
NW Wetland	HS-SB-4806	13-Aug-19	13-Aug-19	0	20	0-2	7-9	NA	0.0	0.0	NA	4	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	14	6	NA
NW Wetland	HS-SB-4807	14-Aug-19	14-Aug-19	0	20	0-2	10-12	NA	0.0	0.2	NA	5	5.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	10	16	NA
NW Wetland	HS-SB-4808	14-Aug-19	14-Aug-19	0	20	0-2	6-8	NA	6.5	5.7	NA	3	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	14	6	NA
NW Wetland	HS-SB-4809	14-Aug-19	14-Aug-19	0	20	0-2	6-8	NA	9.2	8.4	NA	6	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	12	4	NA
NW Wetland	HS-SB-4810	15-Aug-19	15-Aug-19	0	20	0-2	6-8	NA	4.4	3.3	NA	3	<LOD	NA	28	<LOD	NA	<LOD	<LOD	NA	8	4	NA
NW Wetland	HS-SB-4811	15-Aug-19	15-Aug-19	0	20	0-2	12-14	NA	3.9	2.4	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	8	7	NA
Western Wetland	HS-SB-4900	9-Aug-19	9-Aug-19	0	20	0-2	17-19	NA	0.9	1.3	NA	5	<LOD	NA	27	<LOD	NA	<LOD	<LOD	NA	10	2	NA
Western Wetland	HS-SB-4901	9-Aug-19	9-Aug-19	0	20	0-2	18-20	NA	0.7	NA	NA	5	NA	NA	<LOD	NA	NA	<LOD	NA	NA	13	NA	NA
Western Wetland	HS-SB-4902	9-Aug-19	9-Aug-19	0	20	0-2	6-8	NA	3.9	8.4	NA	5	2.0	NA	36	<LOD	NA	<LOD	<LOD	NA	11	4	NA
Western Wetland	HS-SB-4903	9-Aug-19	9-Aug-19	0	20	0-2	11-13	NA	4.3	5.5	NA	4	3.0	NA	25	27	NA	<LOD	<LOD	NA	10	9	NA
Western Wetland	HS-SB-4904	9-Aug-19	9-Aug-19	0	20	0-2	15-17	NA	6.5	5.2	NA	3	7.0	NA	49	38	NA	<LOD	<LOD	NA	10	8	NA
Western Wetland	HS-SB-4905	12-Aug-19	12-Aug-19	0	20	0-2	15-17	NA	0.0	3.6	NA	6	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	13	4	NA
Western Wetland	HS-SB-4906	12-Aug-19	12-Aug-19	0	20	0-2	16-18	NA	0.0	1.6	NA	3	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	12	5	NA
Western Wetland	HS-SB-4907	12-Aug-19	12-Aug-19	0	20	0-2	12-14	NA	0.2	0.0	NA	3	2.0	NA	24	<LOD	NA	<LOD	<LOD	NA	12	7	NA
Western Wetland	HS-SB-4908	13-Aug-19	13-Aug-19	0	20	0-2	7-9	NA	0.4	0.7	NA	3	15.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	10	10	NA
Western Wetland	HS-SB-4909	13-Aug-19	13-Aug-19	0	20	0-2	11-13	NA	0.1	0.3	NA	6	4.0	NA	27	<LOD	NA	<LOD	<LOD	NA	10	5	NA
Western Wetland	HS-SB-4910	13-Aug-19	13-Aug-19	0	20	0-2	10-12	NA	0.0	0.0	NA	4	2.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	13	7	NA
Western Wetland	HS-SB-4911	13-Aug-19	13-Aug-19	0	20	0-2	11-13	NA	0.0	0.1	NA	5	9.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	13	7	NA
Western Wetland	HS-SB-4912	14-Aug-19	14-Aug-19	0	20	0-2	5-7	NA	0.0	0.0	NA	6	5.0	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	13	8	NA
Western Wetland	HS-SB-4913	14-Aug-19	14-Aug-19	0	20	0-2	6-8	NA	5.6	11.0	NA	6	<LOD	NA	<LOD	<LOD	NA	<LOD	<LOD	NA	12	4	NA
Western Wetland	HS-SB-4914	14-Aug-19	14-Aug-19	0	20	0-2	8-10	NA	7.2	1.8	NA	3	5.0	NA	42	<LOD	NA	<LOD	<LOD	NA	16	9	NA
Western Wetland	HS-SB-4915	19-Aug-19	19-Aug-19	0	20	0-2	2-4	NA	0.3	1.1	NA	4	<LOD	NA	23	42	NA	<LOD	<LOD	NA	13	10	NA

XRF Results for Drilled-Only Borings
2019 Delineation

Sampling Program	Sample Location	Start Date	End Date	Start Depth (ft)	End Depth (ft)	Sample Intervals Analyzed with XRF			PID Readings for Samples Analyzed			XRF Results for Samples Analyzed											
												As			Cr			Hg			Pb		
						S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3
TCLP Investigation	HS-SB-4104	9-Jul-19	9-Jul-19	0	20	3-4	5-6	7-8	1.8	3.1	3.0	<LOD	<LOD	2.0	25576	209	80.0	<LOD	<LOD	<LOD	39	6	7.0
TCLP Investigation	HS-SB-4132	9-Jul-19	9-Jul-19	0	20	10-11	11-12	12-13	4.4	17.2	94.3	4	5.0	<LOD	2116	2397	15403.0	<LOD	<LOD	<LOD	12	11	22.0
TCLP Investigation	HS-SB-4133	8-Jul-19	8-Jul-19	0	20	5-6	8-9	11-12	0.9	17.9	24.3	2	<LOD	<LOD	120	1548	26132.0	<LOD	<LOD	<LOD	6	13	46.0
TCLP Investigation	HS-SB-4134	8-Jul-19	8-Jul-19	0	20	8-9	12-13	15-16	122.0	270.0	19.2	2	<LOD	2.0	13800	19397	8894.0	<LOD	<LOD	<LOD	37	36	16.0
TCLP Investigation	HS-SB-4136	8-Jul-19	8-Jul-19	0	20	5-6	6-7	7-8	85.5	27.0	26.5	<LOD	4.0	<LOD	24403	2968	16543.0	<LOD	<LOD	<LOD	24	12	86.0
TCLP Investigation	HS-SB-4208	10-Jul-19	10-Jul-19	0	20	4-5	6-7	7-8	2.9	13.2	81.7	4	<LOD	<LOD	26228	21792	21224.0	<LOD	<LOD	<LOD	36	28	23.0
TCLP Investigation	HS-SB-4270	10-Jul-19	10-Jul-19	0	20	9-10	10-11	12-13	11.7	65.3	157.0	11	<LOD	<LOD	10946	25723	10539.0	<LOD	<LOD	<LOD	17	26	23.0
TCLP Investigation	HS-SB-4272	10-Jul-19	10-Jul-19	0	20	4-5	5-6	6-7	8.0	44.0	66.7	<LOD	2.0	6.0	1551	308	18947.0	<LOD	<LOD	<LOD	10	8	20.0
TCLP Investigation	HS-SB-4301	11-Jul-19	11-Jul-19	0	20	3-4	5-6	6-7	1.3	1.3	6.2	3.0	4.0	<LOD	32	80	12244.0	<LOD	<LOD	<LOD	8	7	20.0
TCLP Investigation	HS-SB-4304	11-Jul-19	11-Jul-19	0	20	3-4	4-5	5-6	0.5	0.4	0.6	7	5	<LOD	19542	914	22348.0	<LOD	<LOD	<LOD	33	10	29.0
TCLP Investigation	HS-SB-4306	12-Jul-19	12-Jul-19	0	20	5-6	6-7	7-8	2.7	20.2	6.2	3	<LOD	2.0	20198	18280	11764.0	<LOD	<LOD	<LOD	33	23	15.0
TCLP Investigation	HS-SB-4308	15-Jul-19	15-Jul-19	0	20	3-4	4-5	5-6	1.9	76.1	20.5	3	<LOD	<LOD	1660	8727	16439.0	<LOD	<LOD	<LOD	10	21	21.0
TCLP Investigation	HS-SB-4401	12-Jul-19	12-Jul-19	0	20	8-9	10-11	11-12	45.5	48.6	94.7	8	4	8.0	7711	7025	6868.0	<LOD	<LOD	<LOD	12	14	16.0
TCLP Investigation	HS-SB-4402	12-Jul-19	12-Jul-19	0	20	5-6	6-7	8-9	12.6	21.6	2.5	4.0	11.0	6.0	30707	3955	190.0	<LOD	<LOD	<LOD	42	13	11.0
TCLP Investigation	HS-SB-4405	15-Jul-19	15-Jul-19	0	20	8-9	11-12	12-13	15.7	157.2	73.9	5	<LOD	8.0	1904	21519	121.0	<LOD	<LOD	<LOD	11	37	17.0
TCLP Investigation	HS-SB-4406	15-Jul-19	15-Jul-19	0	20	2-3	3-4	5-6	1.7	1.7	22.0	4	8	6.0	28086	915	1261.0	<LOD	<LOD	<LOD	34	11	NA
TCLP Investigation	HS-SB-4409	16-Jul-19	16-Jul-19	0	20	5-6	6-7	7-8	13.9	50.0	32.5	2	<LOD	<LOD	27389	23513	22273	<LOD	<LOD	<LOD	24	30	31
TCLP Investigation	HS-SB-4411	17-Jul-19	17-Jul-19	0	20	1-2	7-8	8-9	1.3	28.4	2.6	10	<LOD	4	77	16521	61	<LOD	<LOD	<LOD	12	21	11
TCLP Investigation	HS-SB-4412	17-Jul-19	17-Jul-19	0	20	6-7	7-8	17-18	78.2	3.2	0.0	3	12	3	12043	855	83	<LOD	<LOD	<LOD	20	14	7
TCLP Investigation	HS-SB-4415	18-Jul-19	18-Jul-19	0	20	4-5	5-6	6-7	3.3	2.8	2.4	<LOD	8	4	37811	79	388	<LOD	<LOD	<LOD	38	11	8
TCLP Investigation	HS-SB-4501	26-Jul-19	26-Jul-19	0	20	3-4	5-6	6-7	3.7	19.5	5.5	7	<LOD	6	2025	16667	235	<LOD	<LOD	<LOD	11	16	9
TCLP Investigation	HS-SB-4509	30-Jul-19	30-Jul-19	0	20	2-3	3-3.95	3.95-4	0.0	3.6	3.6	<LOD	5	<LOD	46	42	22193	<LOD	<LOD	<LOD	11	9	22
TCLP Investigation	HS-SB-4601	29-Jul-19	29-Jul-19	0	20	0-1	7-8	8-9	0.0	8.5	0.0	5	<LOD	<LOD	386	19248	1128	<LOD	<LOD	<LOD	22	18	9
TCLP Investigation	HS-SB-4700	31-Jul-18	31-Jul-18	0	20	5-6	6-7	7-8	114.7	169.7	322.1	<LOD	<LOD	<LOD	16009	17882	20506	<LOD	<LOD	<LOD	22	29	28
TCLP Investigation	HS-SB-4702	1-Aug-19	1-Aug-19	0	20	5-6	6-7	15-16	2.0	2.3	1.8	<LOD	<LOD	<LOD	248	4669	39	<LOD	<LOD	<LOD	6	10	3
TCLP Investigation	HS-SB-4704	1-Aug-19	1-Aug-19	0	20	7-8	10-11	11-12	42.9	31.7	16.6	<LOD	<LOD	7	20162	9606	6351	<LOD	<LOD	<LOD	20	11	9
TCLP Investigation	HS-SB-4706	1-Aug-19	1-Aug-19	0	20	6-7	7-8	8-9	33.8	40.9	6.5	<LOD	3	3	14017	14212	575	<LOD	<LOD	<LOD	20	14	8
TCLP Investigation	HS-SB-4707	1-Aug-19	1-Aug-19	0	20	2-2.5	3-4	10-11	1.6	1.4	1.4	<LOD	4.0	4.0	23762	855	21061	<LOD	<LOD	<LOD	39	10	20
TCLP Investigation	HS-SB-4708	1-Aug-19	1-Aug-19	0	20	6-7	7-8	8-9	52.6	16.7	2.6	4	2.0	4.0	9895	118	180	<LOD	<LOD	<LOD	11	9	9
TCLP Investigation	1781 House St Composite	2-Aug-19	2-Aug-19	0	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - TCLP METALS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	RCRA Maximum Concentration	HS-SB-4135	HS-SB-4135	HS-SB-4137	HS-SB-4137	HS-SB-4138	HS-SB-4138	HS-SB-4139	HS-SB-4139	HS-SB-4264	HS-SB-4264	HS-SB-4264	HS-SB-4265	HS-SB-4265	HS-SB-4266	HS-SB-4266	HS-SB-4267	HS-SB-4267
Sample Name		HS-SB-4135 (12-13)	HS-SB-4135 (15-16)	HS-SB-4137 (12-13)	HS-SB-4137 (15-16)	HS-SB-4138 (11-12)	HS-SB-4138 (13-14)	HS-SB-4139 (10-11)	HS-SB-4139 (7-8)	HS-SB-4264 (12-13)	HS-SB-4264 (12-13) DUP	HS-SB-4264 (15-16)	HS-SB-4265 (12-13)	HS-SB-4265 (15-16)	HS-SB-4266 (11-12)	HS-SB-4266 (14-15)	HS-SB-4267 (12-13)	HS-SB-4267 (15-16)
Depth Interval (Feet below ground surface)		12 - 13	15 - 16	12 - 13	15 - 16	11 - 12	13 - 14	10 - 11	7 - 8	12 - 13	12 - 13	15 - 16	12 - 13	15 - 16	11 - 12	14 - 15	12 - 13	15 - 16
Laboratory Sample ID		UG27004-032	UG27004-033	UG27004-030	UG27004-031	UG27004-028	UG27004-029	UG27004-027	UG27004-026	UG24012-014	UG24012-015	UG24012-016	UG24012-017	UG24012-018	UG24012-019	UG24012-020	UG24012-021	UG24012-022
Sample Date		07/25/2019	07/25/2019	07/25/2019	07/25/2019	07/25/2019	07/25/2019	07/25/2019	07/25/2019	07/23/2019	07/23/2019	07/23/2019	07/23/2019	07/23/2019	07/23/2019	07/23/2019	07/23/2019	07/23/2019
Parameter (µg/L)																		
Chromium	5,000.00	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - TCLP METALS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	RCRA Maximum Concentration	HS-SB-4268	HS-SB-4268	HS-SB-4269	HS-SB-4269	HS-SB-4271	HS-SB-4271	HS-SB-4274	HS-SB-4274	HS-SB-4302	HS-SB-4302	HS-SB-4309	HS-SB-4309	HS-SB-4314	HS-SB-4314	HS-SB-4315	HS-SB-4315	HS-SB-4400
Sample Name		HS-SB-4268 (12-13)	HS-SB-4268 (15-16)	HS-SB-4269 (11-12)	HS-SB-4269 (8-9)	HS-SB-4271 (5-6)	HS-SB-4271 (8-9)	HS-SB-4274 (6-7)	HS-SB-4274 (8-9)	HS-SB-4302 (6-7)	HS-SB-4302 (8-9)	HS-SB-4309 (5-6)	HS-SB-4309 (8-9)	HS-SB-4314 (5-6)	HS-SB-4314 (8-9)	HS-SB-4315 (10-11)	HS-SB-4315 (7-8)	HS-SB-4400 (11-12)
Depth Interval (Feet below ground surface)		12 - 13	15 - 16	11 - 12	8 - 9	5 - 6	8 - 9	6 - 7	8 - 9	6 - 7	8 - 9	5 - 6	8 - 9	5 - 6	8 - 9	10 - 11	7 - 8	11 - 12
Laboratory Sample ID		UG24012-023	UG24012-024	UG24012-012	UG24012-011	UG24012-009	UG24012-010	UG27004-024	UG27004-025	UG24012-005	UG24012-006	UG24012-007	UG24012-008	UG24012-003	UG24012-004	UG24012-002	UG24012-001	UG24012-025
Sample Date		07/23/2019	07/23/2019	07/22/2019	07/22/2019	07/22/2019	07/22/2019	07/25/2019	07/25/2019	07/22/2019	07/22/2019	07/22/2019	07/22/2019	07/22/2019	07/22/2019	07/22/2019	07/22/2019	07/23/2019
Parameter (µg/L)																		
Chromium	5,000.00	<100	<100	<100	890	390	<100	<100	<100	<100	<100	<100	49 [J]	<100	<100	<100	<100	<100

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - TCLP METALS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	RCRA Maximum Concentration	HS-SB-4400	HS-SB-4403	HS-SB-4403	HS-SB-4404	HS-SB-4404	HS-SB-4407	HS-SB-4407	HS-SB-4408	HS-SB-4408	HS-SB-4410	HS-SB-4410	HS-SB-4413	HS-SB-4413	HS-SB-4414	HS-SB-4414	HS-SB-4416	HS-SB-4416
Sample Name		HS-SB-4400 (13-14)	HS-SB-4403 (5-6)	HS-SB-4403 (7-8)	HS-SB-4404 (11-12)	HS-SB-4404 (13-14)	HS-SB-4407 (6-7)	HS-SB-4407 (9-10)	HS-SB-4408 (11-12)	HS-SB-4408 (8-9)	HS-SB-4410 (10-11)	HS-SB-4410 (13-14)	HS-SB-4413 (6-7)	HS-SB-4413 (8-9)	HS-SB-4414 (3-4)	HS-SB-4414 (5-6)	HS-SB-4416 (6-7)	HS-SB-4416 (9-10)
Depth Interval (Feet below ground surface)		13 - 14	5 - 6	7 - 8	11 - 12	13 - 14	6 - 7	9 - 10	11 - 12	8 - 9	10 - 11	13 - 14	6 - 7	8 - 9	3 - 4	5 - 6	6 - 7	9 - 10
Laboratory Sample ID		UG24012-026	UG27004-022	UG27004-023	UG27004-001	UG27004-002	UG24104-001	UG24012-013	UH01064-001	UG27004-003	UG27004-020	UG27004-021	UG27004-018	UG27004-019	UG27004-016	UG27004-017	UG27004-005	UG27004-006
Sample Date		07/23/2019	07/24/2019	07/24/2019	07/24/2019	07/24/2019	07/23/2019	07/23/2019	07/29/2019	07/24/2019	07/24/2019	07/24/2019	07/24/2019	07/24/2019	07/24/2019	07/24/2019	07/24/2019	07/24/2019
Parameter (µg/L)																		
Chromium	5,000.00	<100	36 [J]	<100	<100	<100	1,600	<100	<100	<100	<100	<100	<100	<100	110	<100	84 [J]	<100

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - TCLP METALS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	RCRA Maximum Concentration	HS-SB-4417	HS-SB-4417	HS-SB-4418	HS-SB-4418	HS-SB-4419	HS-SB-4419	HS-SB-4420	HS-SB-4420	HS-SB-4420	HS-SB-4500	HS-SB-4500	HS-SB-4502	HS-SB-4502	HS-SB-4503	HS-SB-4503	HS-SB-4504	HS-SB-4504
Sample Name		HS-SB-4417 (4-5)	HS-SB-4417 (6-7)	HS-SB-4418 (4-5)	HS-SB-4418 (6-7)	HS-SB-4419 (4-5)	HS-SB-4419 (6-7)	HS-SB-4420 (4-5)	HS-SB-4420 (4-5) DUP	HS-SB-4420 (6-7)	HS-SB-4500 (16-17)	HS-SB-4500 (6-7)	HS-SB-4502 (5-6)	HS-SB-4502 (7-8)	HS-SB-4503 (5-6)	HS-SB-4503 (7-8)	HS-SB-4504 (5-6)	HS-SB-4504 (7-8)
Depth Interval (Feet below ground surface)		4 - 5	6 - 7	4 - 5	6 - 7	4 - 5	6 - 7	4 - 5	4 - 5	6 - 7	16 - 17	6 - 7	5 - 6	7 - 8	5 - 6	7 - 8	5 - 6	7 - 8
Laboratory Sample ID		UG27004-007	UG27004-008	UG27004-009	UH01064-002	UG27004-011	UG27004-012	UG27004-013	UG27004-014	UG27004-015	UH01064-004	UH01064-003	UH01064-012	UH01064-013	UH01064-014	UH01064-015	UH01064-008	UH01064-009
Sample Date		07/24/2019	07/24/2019	07/24/2019	07/29/2019	07/24/2019	07/24/2019	07/24/2019	07/24/2019	07/24/2019	07/30/2019	07/30/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/30/2019	07/30/2019
Parameter (µg/L)																		
Chromium	5,000.00	20 [J]	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - TCLP METALS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	RCRA Maximum Concentration	HS-SB-4505	HS-SB-4505	HS-SB-4506	HS-SB-4506	HS-SB-4506	HS-SB-4507	HS-SB-4507	HS-SB-4508	HS-SB-4508	HS-SB-4510	HS-SB-4510	HS-SB-4511	HS-SB-4511	HS-SB-4600	HS-SB-4600	HS-SB-4602	HS-SB-4602
Sample Name		HS-SB-4505 (6-7)	HS-SB-4505 (8-9)	HS-SB-4506 (4-5)	HS-SB-4506 (4-5) DUP	HS-SB-4506 (6-7)	HS-SB-4507 (6-7)	HS-SB-4507 (8-9)	HS-SB-4508 (6-7)	HS-SB-4508 (8-9)	HS-SB-4510 (5-6)	HS-SB-4510 (7-8)	HS-SB-4511 (5-6)	HS-SB-4511 (7-8)	HS-SB-4600 (10-11)	HS-SB-4600 (5-6)	HS-SB-4602 (4-5)	HS-SB-4602 (6-7)
Depth Interval (Feet below ground surface)		6 - 7	8 - 9	4 - 5	4 - 5	6 - 7	6 - 7	8 - 9	6 - 7	8 - 9	5 - 6	7 - 8	5 - 6	7 - 8	10 - 11	5 - 6	4 - 5	6 - 7
Laboratory Sample ID		UH01064-010	UH01064-011	UH01064-005	UH01064-006	UH01064-007	UH01064-020	UH01064-021	UH01064-022	UH01064-023	UH01064-016	UH01064-017	UH01064-018	UH01064-019	UH01064-036	UH01064-035	UH01064-024	UH01064-025
Sample Date		07/30/2019	07/30/2019	07/30/2019	07/30/2019	07/30/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019
Parameter (µg/L)																		
Chromium	5,000.00	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	30 [J]	490	13 [J]	390

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - TCLP METALS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	RCRA Maximum Concentration	HS-SB-4603	HS-SB-4603	HS-SB-4604	HS-SB-4604	HS-SB-4605	HS-SB-4605	HS-SB-4606	HS-SB-4606	HS-SB-4606	HS-SB-4607	HS-SB-4607	HS-SB-4608	HS-SB-4608	HS-SB-4609	HS-SB-4609	HS-SB-4610	HS-SB-4610
Sample Name		HS-SB-4603 (12-13)	HS-SB-4603 (2-3)	HS-SB-4604 (12-13)	HS-SB-4604 (14-15)	HS-SB-4605 (5-6)	HS-SB-4605 (7-8)	HS-SB-4606 (5-6)	HS-SB-4606 (5-6) DUP	HS-SB-4606 (7-8)	HS-SB-4607 (4-5)	HS-SB-4607 (6-7)	HS-SB-4608 (10-11)	HS-SB-4608 (7-8)	HS-SB-4609 (13-14)	HS-SB-4609 (16-17)	HS-SB-46010 (13-14)	HS-SB-46010 (16-17)
Depth Interval (Feet below ground surface)		12 - 13	2 - 3	12 - 13	14 - 15	5 - 6	7 - 8	5 - 6	5 - 6	7 - 8	4 - 5	6 - 7	10 - 11	7 - 8	13 - 14	16 - 17	13 - 14	16 - 17
Laboratory Sample ID		UH01064-034	UH01064-033	UH01064-031	UH01064-032	UH01064-029	UH01064-030	UH01064-026	UH01064-027	UH01064-028	UH01064-037	UH01064-038	UH01064-040	UH01064-039	UH06017-001	UH06017-002	UH06017-003	UH06017-004
Sample Date		07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	07/31/2019	08/01/2019	08/01/2019	08/01/2019	08/01/2019
Parameter (µg/L)																		
Chromium	5,000.00	<100	51 [J]	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - TCLP METALS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	RCRA Maximum Concentration	HS-SB-4701	HS-SB-4701	HS-SB-4703	HS-SB-4703	HS-SB-4705	HS-SB-4705	HS-SB-4709	HS-SB-4709	HS-SB-4710	HS-SB-4711	HS-SB-4711	HS-SB-4711	HS-SB-4712	HS-SB-4712	HS-SB-4713	HS-SB-4713	HS-SB-4714
Sample Name		HS-SB-4701 (11-12)	HS-SB-4701 (7-8)	HS-SB-4703 (11-12)	HS-SB-4703 (7-8)	HS-SB-4705 (13-14)	HS-SB-4705 (7-8)	HS-SB-4709 (13-14)	HS-SB-4709 (7-8)	HS-SB-4710 (9-10)	HS-SB-4711 (13-14)	HS-SB-4711 (7-8)	HS-SB-4711 (7-8) DUP	HS-SB-4712 (6-7)	HS-SB-4712 (9-10)	HS-SB-4713 (10-11)	HS-SB-4713 (7-8)	HS-SB-4714 (6-7)
Depth Interval (Feet below ground surface)		11 - 12	7 - 8	11 - 12	7 - 8	13 - 14	7 - 8	13 - 14	7 - 8	9 - 10	13 - 14	7 - 8	7 - 8	6 - 7	9 - 10	10 - 11	7 - 8	6 - 7
Laboratory Sample ID		UH09048-006	UH09048-005	UH09048-013	UH09048-012	UH09048-017	UH09048-016	UH09050-025	UH09050-005	UH09048-001	UH09050-008	UH09050-006	UH09050-007	UH09048-003	UH09048-004	UH09050-014	UH09050-013	UH09048-014
Sample Date		08/06/2019	08/06/2019	08/07/2019	08/07/2019	08/07/2019	08/07/2019	08/07/2019	08/07/2019	08/06/2019	08/07/2019	08/07/2019	08/07/2019	08/06/2019	08/06/2019	08/07/2019	08/07/2019	08/07/2019
Parameter (µg/L)																		
Chromium	5,000.00	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - TCLP METALS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	RCRA Maximum Concentration	HS-SB-4714	HS-SB-4715	HS-SB-4715	HS-SB-4716	HS-SB-4716	HS-SB-4716	HS-SB-4717	HS-SB-4717	HS-SB-4718	HS-SB-4718	HS-SB-4719	HS-SB-4719	HS-SB-4720	HS-SB-4720	HS-SB-4721	HS-SB-4721	HS-SB-4722
Sample Name		HS-SB-4714 (9-10)	HS-SB-4715 (6-7)	HS-SB-4715 (9-10)	HS-SB-4716 (6-7)	HS-SB-4716 (6-7) DUP	HS-SB-4716 (9-10)	HS-SB-4717 (6-7)	HS-SB-4717 (9-10)	HS-SB-4718 (10-11)	HS-SB-4718 (7-8)	HS-SB-4719 (6-7)	HS-SB-4719 (9-10)	HS-SB-4720 (13-14)	HS-SB-4720 (7-8)	HS-SB-4721 (13-14)	HS-SB-4721 (7-8)	HS-SB-4722 (10-11)
Depth Interval (Feet below ground surface)		9 - 10	6 - 7	9 - 10	6 - 7	6 - 7	9 - 10	6 - 7	9 - 10	10 - 11	7 - 8	6 - 7	9 - 10	13 - 14	7 - 8	13 - 14	7 - 8	10 - 11
Laboratory Sample ID		UH09048-015	UH09050-017	UH09050-018	UH09048-007	UH09048-008	UH09048-009	UH09050-020	UH09050-021	UH09048-019	UH09048-018	UH09050-023	UH09050-024	UH09050-004	UH09050-003	UH09050-002	UH09050-001	UH09050-010
Sample Date		08/07/2019	08/07/2019	08/07/2019	08/06/2019	08/06/2019	08/06/2019	08/07/2019	08/07/2019	08/07/2019	08/07/2019	08/08/2019	08/08/2019	08/07/2019	08/07/2019	08/07/2019	08/07/2019	08/07/2019
Parameter (µg/L)																		
Chromium	5,000.00	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYSIS - TCLP METALS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	RCRA Maximum Concentration	HS-SB-4722	HS-SB-4724	HS-SB-4724	HS-SB-4726	HS-SB-4726	HS-SB-4728	HS-SB-4728	HS-SB-4730	HS-SB-4730	HS-SB-518
Sample Name		HS-SB-4722 (6-7)	HS-SB-4724 (10-11)	HS-SB-4724 (7-8)	HS-SB-4726 (11-12)	HS-SB-4726 (7-8)	HS-SB-4728 (11-12)	HS-SB-4728 (7-8)	HS-SB-4730 (6-7)	HS-SB-4730 (9-10)	HS-SB-518 (11-12)
Depth Interval (Feet below ground surface)		6 - 7	10 - 11	7 - 8	11 - 12	7 - 8	11 - 12	7 - 8	6 - 7	9 - 10	11 - 12
Laboratory Sample ID		UH09050-009	UH09050-012	UH09050-011	UH09050-016	UH09050-015	UH09050-022	UH09050-019	UH09048-010	UH09048-011	UH09048-002
Sample Date		08/07/2019	08/07/2019	08/07/2019	08/07/2019	08/07/2019	08/07/2019	08/07/2019	08/07/2019	08/07/2019	08/06/2019
Parameter (µg/L)											
Chromium	5,000.00	<100	13 [J]	<100	<100	<100	<100	<100	<100	13 [J]	<100

TABLE 1 NOTES
1855 House Street NE
Plainfield Township, Kent County, MI

NOTES:

1. Concentration and criteria units are micrograms per Liter (µg/L) or parts per billion (ppb).
2. RCRA Maximum Concentration criteria are based on "Table 1, Maximum Concentration of Contaminants for the Toxicity Characteristic," 40 CFR 261.24, last amended March 13, 2002.
3. Bold, italic number with thick line border or italic parameter name indicates that parameter was detected above the RCRA Maximum Concentration.
4. Abbreviations include:
   "< RL" indicates the parameter was analyzed for but not detected above the method detection limit; RL = Reporting Limit.
   "DUP" indicates a duplicate sample.

TABLE 2A
SUMMARY OF SOIL SAMPLE ANALYSIS - VOCS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	Statewide Default Background[2]	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	Part 201 Generic Residential Soil Cleanup Criteria – Soil Volatilization to Indoor Air Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Infinite Source Volatile Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Particulate Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Direct Contact[2]	EGLE Residential Soil Recommended Volatilization to Indoor Air Interim Action Screening Level[3]	U.S. EPA Residential Soil Regional Removal Management Levels[4]	1781 House
Sample Name										1781 House ST Composite
Laboratory Sample ID(s)										UH06020-001/19080384-01A
Sample Date										08/02/2019
Parameter (µg/kg)										
Acetone	NA	15,000	34,000	290,000,000	130,000,000	390,000,000,000	23,000,000	260,000	180,000,000	<770
Benzene	NA	100	4,000	1,600	13,000	380,000,000	180,000	2	120,000	<77
Bromodichloromethane	NA	1,600	ID	1,200	9,100	84,000,000	110,000	NCL	29,000	<77
Bromoform	NA	1,600	ID	150,000	900,000	2,800,000,000	820,000	NCL	1,900,000	<77
2-Butanone (MEK)	NA	260,000	44,000	54,000,000	29,000,000	67,000,000,000	120,000,000	NCL	81,000,000	<770
Bromomethane (Methyl bromide)	NA	200	100	860	11,000	330,000,000	320,000	NCL	21,000	<150
Carbon disulfide	NA	16,000	ID	76,000	1,300,000	47,000,000,000	7,200,000	NCL	2,300,000	<77
Carbon tetrachloride	NA	100	760	190	3,500	130,000,000	96,000	NCL	65,000	<77
Chlorobenzene	NA	2,000	500	120,000	770,000	4,700,000,000	4,300,000	82	830,000	<77
Chloroethane	NA	8,600	22,000	2,900,000	30,000,000	670,000,000,000	2,600,000	330	41,000,000	<150
Chloroform	NA	1,600	7,000	7,200	45,000	1,300,000,000	1,200,000	0	32,000	<77
Chloromethane (Methyl chloride)	NA	5,200	ID	2,300	40,000	4,900,000,000	1,600,000	7	330,000	<77
Cyclohexane	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	20,000,000	<77
1,2-Dibromo-3-chloropropane (DBCP)	NA	10	ID	220	260	560,000	4,400	NCL	530	<77
Dibromochloromethane	NA	1,600	ID	3,900	24,000	130,000,000	110,000	NCL	830,000	<77
1,2-Dibromoethane (EDB)	NA	20	110	670	1,700	14,000,000	92	NCL	3,600	<77
1,2-Dichlorobenzene	NA	14,000	280	11,000,000	39,000,000	100,000,000,000	19,000,000	NCL	5,400,000	<77
1,3-Dichlorobenzene	NA	170	680	26,000	79,000	200,000,000	200,000	10	NCL	<77
1,4-Dichlorobenzene	NA	1,700	360	19,000	77,000	450,000,000	400,000	23	260,000	<77
Dichlorodifluoromethane	NA	95,000	ID	900,000	53,000,000	3,300,000,000,000	52,000,000	NCL	260,000	<150
1,1-Dichloroethane	NA	18,000	15,000	230,000	2,100,000	33,000,000,000	27,000,000	3	360,000	<77
1,2-Dichloroethane	NA	100	7,200	2,100	6,200	120,000,000	91,000	NCL	46,000	<77
1,1-Dichloroethene	NA	140	2,600	62	1,100	62,000,000	200,000	12	680,000	<77
cis-1,2-Dichloroethene	NA	1,400	12,000	22,000	180,000	2,300,000,000	2,500,000	2	470,000	<77
trans-1,2-Dichloroethene	NA	2,000	30,000	23,000	280,000	4,700,000,000	3,800,000	39	4,700,000	<77
1,2-Dichloropropane	NA	100	4,600	4,000	25,000	270,000,000	140,000	NCL	47,000	<77
cis-1,3-Dichloropropene	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<77
trans-1,3-Dichloropropene	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<77
Ethylbenzene	NA	1,500	360	87,000	720,000	10,000,000,000	22,000,000	12	580,000	<77
2-Hexanone	NA	20,000	ID	990,000	1,100,000	2,700,000,000	32,000,000	NCL	600,000	<770
Isopropylbenzene	NA	91,000	3,200	400,000	1,700,000	5,800,000,000	25,000,000	NCL	5,800,000	<77
Methyl acetate	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	230,000,000	71 [J]
Methyl tertiary butyl ether (MTBE)	NA	800	140,000	9,900,000	25,000,000	200,000,000,000	1,500,000	74	4,700,000	<77
4-Methyl-2-pentanone	NA	36,000	ID	37,000,000	45,000,000	140,000,000,000	56,000,000	NCL	99,000,000	<770
Methylcyclohexane	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<390
Methylene chloride	NA	100	30,000	45,000	210,000	6,600,000,000	1,300,000	130	1,000,000	<77
Styrene	NA	2,700	2,100	250,000	970,000	5,500,000,000	400,000	NCL	18,000,000	<77
1,1,2,2-Tetrachloroethane	NA	170	1,600	4,300	10,000	54,000,000	53,000	NCL	60,000	<77

TABLE 2A
SUMMARY OF SOIL SAMPLE ANALYSIS - VOCS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	Statewide Default Background[2]	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	Part 201 Generic Residential Soil Cleanup Criteria – Soil Volatilization to Indoor Air Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Infinite Source Volatile Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Particulate Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Direct Contact[2]	EGLE Residential Soil Recommended Volatilization to Indoor Air Interim Action Screening Level[3]	U.S. EPA Residential Soil Regional Removal Management Levels[4]	1781 House
Sample Name										1781 House ST Composite
Laboratory Sample ID(s)										UH06020-001/19080384-01A
Sample Date										08/02/2019
Parameter (µg/kg)										
Tetrachloroethene	NA	100	1,200	11,000	170,000	2,700,000,000	200,000	6	240,000	<77
Toluene	NA	16,000	5,400	330,000	2,800,000	27,000,000,000	50,000,000	3,700	15,000,000	<77
1,1,2-Trichloro-1,2,2-Trifluoroethane	NA	9,000,000	1,700	5,100,000	180,000,000	5,100,000,000,000	1,000,000,000	NCL	20,000,000	<77
1,2,4-Trichlorobenzene	NA	4,200	5,900	9,600,000	28,000,000	25,000,000,000	990,000	53	170,000	<77
1,1,1-Trichloroethane	NA	4,000	1,800	250,000	3,800,000	67,000,000,000	500,000,000	450	24,000,000	<77
1,1,2-Trichloroethane	NA	100	6,600	4,600	17,000	190,000,000	180,000	NCL	4,500	<77
Trichloroethene	NA	100	4,000	1,000	11,000	130,000,000	110,000	0	12,000	<77
Trichlorofluoromethane	NA	52,000	NA	2,800,000	92,000,000	3,800,000,000,000	79,000,000	NCL	70,000,000	<77
Vinyl chloride	NA	40	260	270	4,200	350,000,000	3,800	0	5,900	<77
m+p - Xylenes	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<77
o - Xylenes	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	1,900,000	<77
Xylenes (total)	NA	5,600	980	6,300,000	46,000,000	290,000,000,000	410,000,000	280	1,700,000	<150

TABLE 2B
SUMMARY OF SOIL SAMPLE ANALYSIS - SVOCS
1855 House Street NE
Plainfield Township, Kent County, MI

See After Table 1E For Notes

Sample Location	Statewide Default Background[2]	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	Part 201 Generic Residential Soil Cleanup Criteria – Soil Volatilization to Indoor Air Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Infinite Source Volatile Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Particulate Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Direct Contact[2]	EGLE Residential Soil Recommended Volatilization to Indoor Air Interim Action Screening Level[3]	U.S. EPA Residential Soil Regional Removal Management Levels[4]	1781 House
Sample Name										1781 House ST Composite
Laboratory Sample ID(s)										UH06020-001/19080384-01A
Sample Date										08/02/2019
Parameter (µg/kg)										
Acenaphthene	NA	300,000	8,700	190,000,000	81,000,000	14,000,000,000	41,000,000	NCL	11,000,000	<17
Acenaphthylene	NA	5,900	ID	1,600,000	2,200,000	2,300,000,000	1,600,000	NCL	NCL	<17
Acetophenone	NA	30,000	ID	120,000,000	44,000,000	33,000,000,000	47,000,000	NCL	23,000,000	<85
Anthracene	NA	41,000	ID	1,000,000,000	1,400,000,000	67,000,000,000	230,000,000	NCL	54,000,000	<17
Atrazine	NA	60	150	NLV	NLV	ID	71,000	NCL	240,000	<85
Benzidine	NA	1,000	1,000	NLV	NLV	46,000	1,000	NCL	53	<420
Benzo(a)anthracene	NA	NLL	NLL	NLV	NLV	ID	20,000	NCL	110,000	35
Benzo(a)pyrene	NA	NLL	NLL	NLV	NLV	1,500,000	2,000	NCL	11,000	42
Benzo(b)fluoranthene	NA	NLL	NLL	ID	ID	ID	20,000	NCL	110,000	58
Benzo(g,h,i)perylene	NA	NLL	NLL	NLV	NLV	800,000,000	2,500,000	NCL	NCL	27
Benzo(k)fluoranthene	NA	NLL	NLL	NLV	NLV	ID	200,000	NCL	1,100,000	23
Butyl benzyl phthalate	NA	2,200,000	120,000	NLV	NLV	47,000,000,000	36,000,000	NCL	29,000,000	<85
Caprolactam	NA	120,000	NA	NLV	NLV	670,000,000	53,000,000	NCL	94,000,000	<85
Carbazole	NA	9,400	1,100	NLV	NLV	62,000,000	530,000	NCL	NCL	<85
4-Chloro-3-methyl phenol	NA	5,800	280	NLV	NLV	ID	4,500,000	NCL	19,000,000	<85
bis(2-Chloroethyl)ether	NA	100	100	8,300	3,800	9,400,000	13,000	NCL	23,000	<85
2-Chloronaphthalene	NA	620,000	NA	ID	ID	ID	56,000,000	NCL	14,000,000	<85
2-Chlorophenol	NA	900	360	430,000	960,000	1,200,000,000	1,400,000	NCL	1,200,000	<85
Chrysene	NA	NLL	NLL	ID	ID	ID	2,000,000	NCL	11,000,000	42
Dibenzo(a,h)anthracene	NA	NLL	NLL	NLV	NLV	ID	2,000	NCL	11,000	<17
Dibenzofuran	NA	ID	1,700	2,000,000	130,000	6,700,000	ID	NCL	220,000	<85
3,3'-Dichlorobenzidine	NA	2,000	2,000	NLV	NLV	6,500,000	6,600	NCL	120,000	<85
2,4-Dichlorophenol	NA	1,500	330	NLV	NLV	5,100,000,000	660,000	NCL	570,000	<85
Diethylphthalate	NA	110,000	2,200	NLV	NLV	3,300,000,000	170,000,000	NCL	150,000,000	<85
Dimethyl phthalate	NA	1,500,000	NA	NLV	NLV	3,300,000,000	1,000,000,000	NCL	NCL	<85
2,4-Dimethylphenol	NA	7,400	7,600	NLV	NLV	4,700,000,000	11,000,000	NCL	3,800,000	<85
Di-n-butyl phthalate	NA	960,000	11,000	NLV	NLV	3,300,000,000	27,000,000	NCL	19,000,000	<85
4,6-Dinitro-2-methylphenol	NA	830	NA	NLV	NLV	130,000,000	79,000	NCL	15,000	<420
2,4-Dinitrotoluene	NA	430	NA	NLV	NLV	16,000,000	48,000	NCL	170,000	<160
Di-n-octylphthalate	NA	100,000,000	ID	NLV	NLV	31,000,000,000	6,900,000	NCL	1,900,000	<85
1,2-Diphenylhydrazine(as azobenzene)	NA	4,200	ID	6,100,000	630,000	100,000,000	140,000	NCL	560,000	<85

TABLE 2B
SUMMARY OF SOIL SAMPLE ANALYSIS - SVOCS
1855 House Street NE
Plainfield Township, Kent County, MI

Sample Location	Statewide Default Background[2]	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	Part 201 Generic Residential Soil Cleanup Criteria – Soil Volatilization to Indoor Air Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Infinite Source Volatile Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Particulate Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Direct Contact[2]	EGLE Residential Soil Recommended Volatilization to Indoor Air Interim Action Screening Level[3]	U.S. EPA Residential Soil Regional Removal Management Levels[4]	1781 House
Sample Name										1781 House ST Composite
Laboratory Sample ID(s)										UH06020-001/19080384-01A
Sample Date										08/02/2019
Parameter (µg/kg)										
bis(2-Ethylhexyl)phthalate	NA	NLL	NLL	NLV	NLV	700,000,000	2,800,000	NCL	3,800,000	<85
Fluoranthene	NA	730,000	5,500	1,000,000,000	740,000,000	9,300,000,000	46,000,000	NCL	7,200,000	70
Fluorene	NA	390,000	5,300	580,000,000	130,000,000	9,300,000,000	27,000,000	NCL	7,200,000	<17
Hexachlorobenzene	NA	1,800	350	41,000	17,000	6,800,000	8,900	NCL	21,000	<85
Hexachlorobutadiene	NA	26,000	91	130,000	130,000	140,000,000	100,000	NCL	120,000	<85
Hexachlorocyclopentadiene	NA	320,000	ID	30,000	50,000	13,000,000	2,300,000	NCL	5,300	<420
Hexachloroethane	NA	430	1,800	40,000	550,000	230,000,000	230,000	NCL	130,000	<85
Indeno(1,2,3-c,d)pyrene	NA	NLL	NLL	NLV	NLV	ID	20,000	NCL	110,000	23
Isophorone	NA	15,000	26,000	NLV	NLV	12,000,000,000	4,800,000	NCL	38,000,000	<85
2-Methylnaphthalene	NA	57,000	4,200	2,700,000	1,500,000	670,000,000	8,100,000	NCL	720,000	<17
2-Methylphenol	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	9,500,000	<85
3+4-Methylphenol	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	19,000,000	<160
Naphthalene	NA	35,000	730	250,000	300,000	200,000,000	16,000,000	NCL	380,000	<17
Nitrobenzene	NA	330	3,600	91,000	54,000	47,000,000	100,000	NCL	380,000	<85
2-Nitrophenol	NA	400	ID	NLV	NLV	ID	630,000	NCL	NCL	<160
N-Nitrosodi-n-propylamine	NA	330	NA	NLV	NLV	1,600,000	1,200	NCL	7,800	<85
N-Nitrosodiphenylamine (Diphenylamine)	NA	5,400	NA	NLV	NLV	2,200,000,000	1,700,000	NCL	11,000,000	<85
Pentachlorophenol	NA	22	17,000	NLV	NLV	100,000,000	90,000	NCL	100,000	<420
Phenanthrene	NA	56,000	2,100	2,800,000	160,000	6,700,000	1,600,000	NCL	NCL	27
Phenol	NA	88,000	9,000	NLV	NLV	40,000,000,000	40,000,000	NCL	57,000,000	<85
Pyrene	NA	480,000	ID	1,000,000,000	650,000,000	6,700,000,000	29,000,000	NCL	5,400,000	60
2,4,5-Trichlorophenol	NA	39,000	NA	NLV	NLV	23,000,000,000	23,000,000	NCL	19,000,000	<85
2,4,6-Trichlorophenol	NA	2,400	330	NLV	NLV	1,000,000,000	710,000	NCL	190,000	<85

TABLE 2C
SUMMARY OF SOIL SAMPLE ANALYSIS - METALS
1855 House Street NE
Plainfield Township, Kent County, MI

See After Table 1E For Notes

Sample Location	Statewide Default Background[2]	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	Part 201 Generic Residential Soil Cleanup Criteria – Soil Volatilization to Indoor Air Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Infinite Source Volatile Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Particulate Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Direct Contact[2]	EGLE Residential Soil Recommended Volatilization to Indoor Air Interim Action Screening Level[3]	U.S. EPA Residential Soil Regional Removal Management Levels[4]	1781 House
Sample Name										1781 House ST Composite
Laboratory Sample ID(s)										UH06020-001/19080384-01A
Sample Date										08/02/2019
Parameter (µg/kg)										
Aluminum	6,900,000	1,000	NA	NLV	NLV	ID	50,000,000	NCL	230,000,000	***10,000,000***
Antimony	NA	4,300	94,000	NLV	NLV	13,000,000	180,000	NCL	94,000	<580
Arsenic	5,800	4,600	4,600	NLV	NLV	720,000	7,600	NCL	68,000	2,900
Barium	75,000	1,300,000	660,000	NLV	NLV	330,000,000	37,000,000	NCL	46,000,000	***90,000***
Beryllium	NA	51,000	320,000	NLV	NLV	1,300,000	410,000	NCL	470,000	99 [J]
Boron	NA	10,000	140,000	NLV	NLV	ID	48,000,000	NCL	47,000,000	<15,000
Cadmium	1,200	6,000	3,000	NLV	NLV	1,700,000	550,000	NCL	NCL	120 [J]
Chromium (Total)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	15,000
Cobalt	6,800	800	2,000	NLV	NLV	13,000,000	2,600,000	NCL	70,000	4,000
Copper	32,000	5,800,000	100,000	NLV	NLV	130,000,000	20,000,000	NCL	9,400,000	8,000
Iron	12,000,000	6,000	NA	NLV	NLV	ID	160,000,000	NCL	160,000,000	9,800,000
Lead	21,000	700,000	2,500,000	NLV	NLV	100,000,000	400,000	NCL	400,000	18,000
Magnesium	NA	8,000,000	NA	NLV	NLV	6,700,000,000	1,000,000,000	NCL	NCL	6,600,000
Mercury	130	1,700	50	48,000	52,000	20,000,000	160,000	0	33,000	23 [J]
Molybdenum	NA	1,500	64,000	NLV	NLV	ID	2,600,000	NCL	1,200,000	<2,900
Nickel	20,000	100,000	100,000	NLV	NLV	13,000,000	40,000,000	NCL	4,600,000	9,600
Selenium	410	4,000	400	NLV	NLV	130,000,000	2,600,000	NCL	1,200,000	<1,500
Silver	1,000	4,500	100	NLV	NLV	6,700,000	2,500,000	NCL	1,200,000	<290
Sodium	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	120,000
Thallium	NA	2,300	4,200	NLV	NLV	13,000,000	35,000	NCL	2,300	100 [J]
Titanium	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	240,000
Vanadium	NA	72,000	430,000	NLV	NLV	ID	750,000	NCL	1,200,000	19,000
Zinc	47,000	2,400,000	230,000	NLV	NLV	ID	170,000,000	NCL	70,000,000	33,000

TABLE 2D

SUMMARY OF SOIL SAMPLE ANALYSIS - INORGANICS/GENERAL CHEMISTRY

1855 House Street NE

Plainfield Township, Kent County, MI

See After Table 1E For Notes

Sample Location	Statewide Default Background[2]	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	Part 201 Generic Residential Soil Cleanup Criteria – Soil Volatilization to Indoor Air Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Infinite Source Volatile Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Particulate Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Direct Contact[2]	EGLE Residential Soil Recommended Volatilization to Indoor Air Interim Action Screening Level[3]	U.S. EPA Residential Soil Regional Removal Management Levels[4]	1781 House
Sample Name										1781 House ST Composite
Laboratory Sample ID(s)										UH06020-001/19080384-01A
Sample Date										08/02/2019
Parameter (µg/kg)										
Acetic Acid	NA	84,000	180,000	NLV	NLV	17,000,000,000	130,000,000	NCL	NCL	<20,000
Formic Acid	NA	200,000	ID	1,500,000	210,000	130,000,000	320,000,000	NCL	87,000	<20,000
Cyanide - Total	390	4,000	100	NLV	NLV	250,000	12,000	NCL	69,000	280 [J]
Cyanide, Available	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	72
Ammonia - N (gas diffusion)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<1,300
Nitrate-Nitrite - N (soluble)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	3,200
Chloride (soluble)	NA	5,000,000	NCL	NLV	NLV	ID	500,000	NCL	NCL	<13,000
Phosphorus	NA	1,300,000	20,000	NLV	NLV	67,000,000	1,000,000,000	NCL	NCL	***290,000***
Sulfate (soluble)	NA	5,000,000	NA	NLV	NLV	ID	ID	NCL	NCL	<13,000
Sulfide (Acid Soluble)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<100,000

TABLE 2E
SUMMARY OF SOIL SAMPLE ANALYSIS - PFAS
1855 House Street NE
Plainfield Township, Kent County, MI

See After Table 1E For Notes

Sample Location	Statewide Default Background[2]	Part 201 Generic Residential Soil Cleanup Criteria – Drinking Water Protection[2]	Part 201 Generic Groundwater Cleanup Criteria – Groundwater Surface Water Interface[2]	Part 201 Generic Residential Soil Cleanup Criteria – Soil Volatilization to Indoor Air Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Infinite Source Volatile Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Particulate Soil Inhalation[2]	Part 201 Generic Residential Soil Cleanup Criteria – Direct Contact[2]	EGLE Residential Soil Recommended Volatilization to Indoor Air Interim Action Screening Level[3]	U.S. EPA Residential Soil Regional Removal Management Levels[4]	1781 House
Sample Name										1781 House ST Composite
Laboratory Sample ID(s)										UH06020-001/19080384-01A
Sample Date										08/02/2019
Parameter (µg/kg)										
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<13
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<13
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<2.5
N-Methyl perfluorooctane sulfonamide (MeFOSA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<2.5
Perfluorobutane sulfonic acid (PFBS)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	3,800,000	<6.3
Perfluorodecane sulfonic acid (PFDS)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluoroheptane sulfonic acid (PFHpS)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorononane sulfonic acid (PFNS)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorooctane sulfonamide (FOSA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluoropentane sulfonic acid (PFPeS)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorohexane sulfonic acid (PFHxS)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorobutanoic acid (PFBA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorodecanoic acid (PFDA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorododecanoic acid (PFDoDA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluoroheptanoic acid (PFHpA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorohexanoic acid (PFHxA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorononanoic acid (PFNA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorooctanoic acid (PFOA)	NCL	NCL	10,000	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorooctane sulfonic acid (PFOS)	NCL	NCL	0.24	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluoropentanoic acid (PFPeA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorotetradecanoic acid (PFTeDA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluorotridecanoic acid (PFTrDA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3
Perfluoroundecanoic acid (PFUnDA)	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	NCL	<6.3

TABLES 1A TO 1E NOTES
1855 House Street NE
Plainfield Township, Kent County, MI

NOTES:

1. Concentration and criteria units are micrograms per kilogram (µg/kg) or parts per billion (ppb). Calculated criteria and concentrations are rounded to two significant digits. "ND" indicates the parameters used in the calculation were not detected. "NC" indicates not calculated.
2. Michigan Part 201 Soil Cleanup Criteria are based on "Table 2, Soil: Residential Part 201 Generic Cleanup Criteria and Screening Levels/Part 213 Tier I Risk Based Screening Levels," Michigan Administrative Code, Cleanup Criteria Requirements for Response Activity, Rules 299.46 and 299.49, effective December 30, 2013; updated June 25, 2018.

   Abbreviations Include:

   "ID" indicates insufficient data to develop criterion.

   "NA" indicates a criterion or value is not available or, in the case of background, not applicable.

   "NCL" indicates no criterion listed in EGLE Table 2.

   "NLL" indicates the substance is not likely to leach under most soil conditions.

   "NLV" indicates the substance is not likely to volatilize under most conditions.

   Footnotes Include:

   (B) - Background, as defined in R 299.1(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.

   (C) - The criterion developed under R 299.20 to R 299.26 exceeds the chemical-specific soil saturation screening level (C_{sat}).

   (D) - The calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 ppb.

   (F) - Criterion is based on adverse impacts to plant life and phytotoxicity.

   (G) - Groundwater surface water interface protection (GSIP) criterion depends on the pH or water hardness, or both, of the receiving surface water. EGLE's Footnote (G) GSI/GSIPC Calculation spreadsheet was utilized to calculate GSI criterion presented. The Rogue River is the receiving surface water for the Site. Hardness (220 mg $CaCO_3$/L) and pH (7.5 standard units) used in the calculations were the lowest (most-conservative) of the calculated mean and median of the Rogue River surface water samples collected in Rockford, MI at the former tannery (TA-SW-01, TA-SW-02, TA-SW-03, TA-SW-05, and TA-SW-07) rounded to two significant digits and water hardness or pH for the Rogue River near Rockford published in United States Geological Survey Circular 323, "Water Resources of the Grand Rapids Area, Michigan," Table 1, 1954.

   (M) - Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.

   (N) - Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) shall not, when added together, exceed the nitrate drinking water protection criterion of 2.0E+5 µg/kg.

   (P) - Total cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with soil criteria.

   (W) - Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the drinking water protection criterion of 1,600 µg/kg.

   (CC) - The generic soil GSI protection criteria for unionized ammonia are 580 µg/kg and 1,100 µg/kg for cold water and warm water surface water, respectively. The percent conversion factor in the table for cold water (20°C or 68°F) and pH (8.0 standard units) is 3.82%.

   (DD) - Residential direct contact criteria are protective of both prenatal and postnatal exposure.

   (EE) - The applicable GSI criteria for phosphorus is 1,000 µg/L. The footnote does not specify a GSIP criterion, however, the GSIP for phosphorus refers to Footnote EE. Conservatively, a value of 20 times the GSI criterion (20,000 µg/kg) was used.
3. EGLE Residential Soil Recommended Volatilization to Indoor Air Interim Action Screening Levels (RIASLs) for were based on EGLE's Toxics Steering Group's "Media-Specific Interim Action Screening Levels," published in August 2017. The EGLE published the RIASLs in August 2017, and recently removed the RIASLs from the EGLE website. The EGLE is reportedly evaluating the RIASLs for appropriate use and applicability. These are included for reference.

   Abbreviations Include:

   "NCL" indicates no value listed in the Media-Specific Interim Action Screening Levels table.

   Footnotes Include:

   (M) - Site-specific criterion may be below target detection limits (TDL).
4. U.S. EPA Residential Soil Regional Removal Management Levels (RMLs) were based on "Generic RML Tables," updated November 2018.
5. To the extent that samples listed in these tables contain or consist of waste material, in whole or in part, the comparison to the EGLE Part 201 generic cleanup criteria does not imply applicability of the criteria because the physical and chemical properties of the waste material are expected to be different from the default values or assumptions used to derive the Generic Soil Cleanup Criteria in the Cleanup Criteria Requirements for Response Activity Rules (R299.1-299.50).
6. Bold, italic number with thick line border or italic parameter name indicates that parameter was detected above the Michigan Part 201 Soil Cleanup Criteria. Per MCL 324.20101(e)(i), if state-wide default background levels are available and greater than a risk-based generic cleanup criterion, then the state-wide default background levels are used as a substitute for that generic cleanup criterion.
7. Abbreviations include:

   "< RL" indicates the parameter was analyzed for but not detected above the method detection limit; RL = Reporting Limit.

   "DUP" indicates a duplicate sample.

   "B" indicates the parameter was also detected in the method blank.

   "J" indicates the parameter was detected at a concentration greater than the limit of quantitation (LOQ) but less than the detection limit (DL) and the result is estimated.

   "H" indicates the sample was analyzed out of holding time.
8. Sample names presented are from Shealy Environmental Services, Inc. laboratory reports. Sample names presented in ALS Environmental lab reports may have minor differences based on laboratory interpretation of the chains of custody.

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4100
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)	Equipment Installed
	C-1	0-5	60	57		NR	C-1:	1	TOPSOIL	0.6	No Equipment Installed
	S-1	0-1				2.6	S-1: 0-0.6': Black, TOPSOIL, Silt, moist.				
1							0.6-1': Brown, Clayey SILT, little fine Sand, Sand lens from		CLAYEY SILT	1	
	S-2	1-2				1.6	0.8'-0.9', moist.	2	SAND	1.2	
							S-2: 1-1.2': Brown, fine to medium SAND, little Silt, moist.				
2							1.2'-2': Brown, Clayey SILT, little fine Sand, moist.				
	S-3	2-3				1.2	S-3: Brown, Clayey SILT, little fine Sand, moist.	3			
3											
	S-4	3-4				2.0	S-4: Brown, Clayey SILT, little fine Sand, moist.		CLAYEY SILT		
4											
	S-5	4-5				3.5	S-5: No recovery.				
5											
	C-2	5-10	60	51		NR	C-2:			5.4	
	S-6	5-6				2.4	S-6: 5-5.4': Brown, Clayey SILT, little fine Sand, moist.		SILTY CLAY	5.8	
6							5.4-6': Brown, fine to medium SAND, little Silt, moist.		SAND	6.1	
	S-7	6-7				4.1	S-7: 6-6.1': Brown, fine to medium SAND, little Silt, moist.	4	SILTY CLAY	6.2	
							6.1-6.2': Brown, Silty CLAY, little fine Sand, moist.				
7							6.2-7': Light gray, fine to medium SAND, trace Silt, moist.		WASTE		
	S-8	7-8				2.6	S-8: 7-7.6': Light gray, fine to medium SAND, trace Silt,				
							moist.			7.6	
8							7.6-8': Brown, Silty CLAY, little fine Sand, moist.				
	S-9	8-9				4.6	S-9: Brown, Silty CLAY, little fine Sand, moist.		SILTY CLAY		
9										9	
	S-10	9-10				2.7	S-10: 9-9.1': Brown, fine to medium SAND, little Silt, moist.		SAND	9.1	
							9.1-10': Brown, CLAY, little fine Sand, moist.				
10											
	C-3	10-15	60	60		NR	C-3:				
	S-11	10-11				2.4	S-11: Light gray, fine to medium SAND, trace Silt, wet.		SAND		
11											
	S-12	11-12				2.3	S-12: 11-11.8': Light gray, fine to medium SAND, trace Silt,				
							wet.			11.8	
12							11.8-12': Brown, CLAY, little fine Sand, moist.				
	S-13	12-13			12-13	0.6	S-13: 12-12.5': Brown, CLAY, little fine Sand, moist.		CLAY	12.5	
							12.5-12.8': Brown, fine to coarse SAND, some Clayey Silt,		SAND	12.8	
13							moist.			13	
	S-14	13-14				0.7	12.8-13': White, coarse SAND, trace Silt.		SAND	13.1	
							S-14: 13-13.1': Brown, Silty CLAY, little fine Sand, moist.		SILTY CLAY		
14									SAND		

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.0 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4100

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4100** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				1.7	13.1-14': Light brown, fine to medium SAND, little Silt, moist. S-15: Light brown, fine to medium SAND, little Silt, moist.			
	C-4	15-20	60	43	15-16	NR	C-4:			
16	S-16	15-16				1.8	S-16: Light brown, fine to medium SAND, little Silt, moist.			
	S-17	16-17				1.1	S-17: Light brown, fine to medium SAND, little Silt, moist.		SAND	
17	S-18	17-18				1.6	S-18: 17-17.9': Light brown, fine to medium SAND, little Silt, moist.			
18							17.9-18': Brown, CLAY, little fine Sand, moist.			17.9
	S-19	18-19				0.4	S-19: 18-18.4': Brown, CLAY, little fine Sand, moist. 18.4-19': No recovery.			
19	S-20	19-20				N/A	S-20: No recovery.		CLAY	
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4100

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4101
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA

Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	53		NR	C-1:	1	TOPSOIL 0.3	No Equipment Installed
	S-1	0-1				0.0	S-1: 0-0.4': Black, TOPSOIL, Silt, moist.			
1							0.4-1': Brown, Clayey SILT, little fine Sand, Sand lenses at		CLAYEY SILT 1	
	S-2	1-2				1.2	0.6', moist.	2		
							S-2: Light brown, fine to medium SAND, little Silt, Clay		SAND	
2							lenses at 1.1'-1.2', moist.		2	
	S-3	2-3				0.4	S-3: Brown, Clayey SILT, little fine Sand, Sand lenses from	3		
							2.7'-2.8'.			
3										
	S-4	3-4				1.2	S-4: Brown, Clayey SILT, little fine Sand, moist.			
4										
	S-5	4-5				0.2	S-5: Brown, Clayey SILT, little fine Sand, moist.			
5										
	C-2	5-10	60	58		NR	C-2:			
	S-6	5-6				2.0	S-6: Brown, Clayey SILT, little fine Sand, Rock fragments		CLAYEY SILT	
6							from 5.5'-5.6', moist.			
	S-7	6-7				0.3	S-7: Brown, Clayey SILT, little fine Sand, moist.			
7										
	S-8	7-8				4.2	S-8: Brown, Clayey SILT, little fine Sand, moist.			
8										
	S-9	8-9				0.3	S-9: Brown, Clayey SILT, little fine Sand, moist.			
9									9	
	S-10	9-10				0.6	S-10: Brown, CLAY, little fine Sand, moist.			
10									CLAY	
	C-3	10-15	60	48		NR	C-3:			
	S-11	10-11				0.9	S-11: 10-10.7': Brown, CLAY, little fine Sand, moist.		10.7	
11							10.7-11': Brown, fine to coarse SAND, some Silt, moist.			
	S-12	11-12				0.6	S-12: Brown, fine to coarse SAND, some Silt, white and			
							black Clay 11.2'-11.3', moist.			
12					12-13					
	S-13	12-13				1.4	S-13: Light brown, fine to medium SAND, little Silt, dark gray		SAND	
							Clay lenses from 12.2'-12.3', lenses of brown Clay from			
13							12.6'-12.7'.			
	S-14	13-14				1.2	S-14: 13-13.8': Light brown, fine to medium SAND, little Silt,			
							moist.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.0 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4101

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4101** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15			15-16	N/A	13.8-14': No recovery. S-15: No recovery.			
	C-4	15-20	60	50		NR	C-4:			
	S-16	15-16				1.7	S-16: Light brown, fine to medium SAND, little Silt, moist.			
16	S-17	16-17				0.3	S-17: Light brown, fine to medium SAND, little Silt, moist.		SAND	
17	S-18	17-18				0.0	S-18: Light brown, fine to medium SAND, little Silt, moist.			
18										18
	S-19	18-19				0.2	S-19: 18-18.8': Light brown, fine to medium SAND, little Silt, moist.			
19	S-20	19-20				0.1	18.8-19': Brown, CLAY, little fine Sand, Sand lense at 18.2', moist. S-20: 19-19.2': Brown, CLAY, little fine Sand, moist.		CLAY	
20							19.2-20': No recovery.			20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4101

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4102** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson **Drilling Co.:** Stearns Drilling **Foreman:** Gary Geerligs	**Start Date:** 7/8/2019 **Finish Date:** 7/8/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 6620 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) / Stratum Description / Depth (ft.)	Equipment Installed
	C-1	0-5	60			NR	C-1:	1	TOPSOIL 0.2	
	S-1	0-1				0.0	S-1: 0-0.2': Black, TOPSOIL, Silt, moist.			
1							0.2-1': Brown, Clayey SILT, little fine Sand, moist.			
	S-2	1-2				0.0	S-2: Brown, Clayey Silt, little fine Sand, Sand lenses from 1'-1.1', moist.	2		No Equipment Installed
2	S-3	2-3				0.0	S-3: Brown, Clayey SILT, little fine Sand, Rock fragments from 2'-2.1', moist.	3		
3	S-4	3-4			3-4	0.0	S-4: Brown, Clayey SILT, little fine Sand, Rock fragments from 3'-3.1', moist.			
4	S-5	4-5			4-5	0.0	S-5: 4-4.7': Brown, Clayey SILT, little fine Sand, moist. 4.7-5': No recovery.			
5									CLAYEY SILT	
	C-2	5-10	60	57		NR	C-2:			
	S-6	5-6				0.0	S-6: Brown, Clayey SILT, little fine Sand, Sand lenses from 5.2'-5.4', moist.			
6	S-7	6-7				0.0	S-7: Brown, Clayey SILT, little fine Sand, moist.			
7	S-8	7-8				0.0	S-8: Brown, Clayey SILT, little fine Sand, moist.			
8	S-9	8-9				0.0	S-9: 9-9.4': Brown, Clayey SILT, little fine Sand, moist. 9.4-9.8': Brown, fine to medium SAND, some Silt, moist.			
9	S-10	9-10				0.0	9.8-10': No recovery. S-10: No recovery.		9.4	
10									SAND 10	
	C-3	10-15	60	60		NR	C-3:			
	S-11	10-11				0.0	S-11: Light brown, fine to medium SAND, little Silt, moist.			
11	S-12	11-12				0.0	S-12: Light brown, fine to medium SAND, little Silt, moist.			
12	S-13	12-13				0.0	S-13: Light brown, fine to medium SAND, little Silt, moist.		SAND	
13	S-14	13-14				0.0	S-14: Light brown, fine to medium SAND, little Silt, moist.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.0 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4102

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4102
SHEET: 2 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				0.0	S-15: 14-14.2': Light brown, fine to medium SAND, little Silt, moist. 14.2-15': No recovery.			
	C-4	15-20	60	42		NR	C-4:			
16	S-16	15-16				0.0	S-16: Light brown, fine to medium SAND, trace Silt, moist.			
17	S-17	16-17				0.0	S-17: Light brown, fine to medium SAND, little Silt, Clay lenses from 16.3'-16.4', Rock fragments from 16.4'-16.5', moist.			
18	S-18	17-18				0.0	S-18: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
19	S-19	18-19				0.0	S-19: 189-18.5': Light brown, fine to medium SAND, little Silt, Rock fragments, moist. 18.5-19': No recovery.			
20	S-20	19-20				N/A	S-20: No recovery.			20
21							End of exploration at 20 feet.			
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4102

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4103
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) / Stratum Description / Depth (ft.)	Equipment Installed
	C-1	0-5	60	53		NR	C-1:	1	TOPSOIL 0.2	No Equipment Installed
	S-1	0-1				1.0	S-1: 0-0.2': Black, TOPSOIL, Silt, moist.			
1							0.2-1': Brown, Clayey SILT, little fine Sand, gray			
	S-2	1-2				0.9	discoloration from 0.6'-0.7', moist, roots present.	2		
							S-2: Brown, Clayey SILT, little fine Sand, moist.			
2	S-3	2-3				0.7	S-3: Brown, Clayey SILT, little fine Sand, moist.	3		
3									CLAYEY SILT	
	S-4	3-4				0.7	S-4: Brown, Clayey SILT, little fine Sand, Sand lense from 3.9'-4.0, moist.			
4	S-5	4-5				0.5	S-5: 4-4.4': Brown, Clayey SILT, little fine Sand, moist.			
							4.4-5': No recovery.			
5	C-2	5-10	60	58		NR	C-2:		5.4	
	S-6	5-6				1.0	S-6: 5-5.4': Brown, Clayey SILT, little fine Sand, moist.		SAND 5.8	
6							5.4-5.8': Brown, fine to medium SAND, little Silt, moist.			
	S-7	6-7				1.9	5.8-6': Brown, SILT & CLAY, little fine Sand, moist.			
							S-7: Brown, SILT & CLAY, little fine Sand, Sand lenses,			
7							moist.			
	S-8	7-8				0.8	S-8: Brown, SILT & CLAY, little fine Sand, moist.			
8									SILT & CLAY	
	S-9	8-9				0.7	S-9: Brown, SILT & CLAY, little fine Sand, moist.			
9	S-10	9-10				0.8	S-10: 9-9.7': Brown, SILT & CLAY, little fine Sand, moist.			
							9.7-10': Brown, fine to coarse SAND, some Silt, moist.		9.7	
10	C-3	10-15	60	47		NR	C-3:			
	S-11	10-11				0.6	S-11: Brown, fine to medium SAND, little Silt, moist.			
11										
	S-12	11-12				1.1	S-12: Light brown, fine to medium SAND, trace Silt, moist.			
12									SAND	
	S-13	12-13			12-13	1.0	S-13: Light brown, fine to medium SAND, trace Silt, moist.			
13										
	S-14	13-14				1.2	S-14: Light brown, fine to medium SAND, trace Silt, moist.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.3 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4103

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4103** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	42	15-16	NR	C-4:			
	S-16	15-16				0.8	S-16: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
16	S-17	16-17				1.0	S-17: Light brown, fine to medium SAND, trace Silt, moist.			
17	S-18	17-18				0.8	S-18: 17-17.4': Light brown, fine to medium SAND, trace Silt, moist.			17.4
18							17.4-18': Brown, CLAY, little fine Sand, moist.			
	S-19	18-19				1.3	S-19: 18-18.5': Light brown, fine to medium SAND, trace Silt, moist.		CLAY	
19							18.5-19': No recovery.			
	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4103

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide** **House Street** **Rockford, Michigan**	**EXPLORATION NO.:** HS-SB-4104 **SHEET:** 1 of 2 **PROJECT NO:** 16.0062335.52 **REVIEWED BY:** BLW

Logged By: Sean Stevenson **Drilling Co.:** Stearns Drilling **Foreman:** Gary Geerligs	**Start Date:** 7/9/2019 **Finish Date:** 7/9/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 6620 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) / Stratum Description / Depth (ft.)	Equipment Installed
	C-1	0-5	60	42		NR	C-1:	1	TOPSOIL 0.2	No Equipment Installed
	S-1	0-1				2.8	S-1: 0-0.2': Black, TOPSOIL, Silt, moist.			
1							0.2-1': Brown, Clayey SILT, little fine Sand, moist.			
	S-2	1-2				2.6	S-2: Brown, Clayey SILT, little fine Sand, moist.	2		
									CLAYEY SILT	
2										
	S-3	2-3				3.5	S-3: Brown, Clayey SILT, little fine Sand, moist. Dark brown discoloration at 2.8'.	3		
3									3	
	S-4	3-4				1.8	S-4: 3-3.2': Dark gray, CLAY, trace fine Sand, moist.		CLAY 3.2	
							3.2-3.5': Brown, Clayey SILT, little fine Sand, moist.			
4							3.5-4': No recovery.			
	S-5	4-5				N/A	S-5: No recovery.			
									CLAYEY SILT	
5										
	C-2	5-10	60	45		NR	C-2:		5.5	
	S-6	5-6				3.1	S-6: 5-5.5': Brown, Clayey SILT, little fine Sand, Sand lens from 5.2'-5.3', moist.			
6									SAND	
	S-7	6-7				4.2	5.5-6': Light brown, fine to medium SAND, trace Silt, moist.		6.5	
							S-7: 6-6.5': Light brown, fine to medium SAND, trace Silt, moist.			
7										
	S-8	7-8				3.0	6.5-7': Brown, Clayey SILT, little fine Sand, moist.		CLAYEY SILT	
							S-8: 7-7.8': Brown, Clayey SILT, little fine Sand, Sand lens from 6.4'-6.5', moist.		7.8	
8										
	S-9	8-9				2.9	7.8-8': Light Brown, fine to medium SAND, trace Silt, moist.			
							S-9: 8-8.8': Light Brown, fine to medium SAND, trace Silt, moist.			
9										
	S-10	9-10				N/A	8.8-9': No recovery.			
							S-10: No recovery.			
10										
	C-3	10-15	60	44		NR	C-3:			
	S-11	10-11				3.9	S-11: Light Brown, fine to medium SAND, trace Silt, rock fragments from 10.9'-11.0', moist.			
11									SAND	
	S-12	11-12				3.3	S-12: Light Brown, fine to medium SAND, trace Silt, moist.			
12										
	S-13	12-13				4.8	S-13: Light Brown, fine to medium SAND, trace Silt, moist.			
13										
	S-14	13-14				2.4	S-14: 13-13.7': Light Brown, fine to medium SAND, trace Silt, moist.			
14							13.7-14': No recovery.			

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.0 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4104

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4104** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	44		NR	C-4:			
	S-16	15-16				1.8	S-16: Light Brown, fine to coarse SAND, trace Silt, moist.			
16									SAND	
	S-17	16-17				2.9	S-17: Light Brown, fine to coarse SAND, trace Silt, moist.			
17										
	S-18	17-18				4.2	S-18: 17-17.6': Light Brown, fine to coarse SAND, trace Silt, moist.			17.6
18							17.6-18': Brown, CLAY, little fine Sand, moist.		CLAY	
	S-19	18-19				2.4	S-19: 18-18.2': Brown, CLAY, little fine Sand, moist.			18.2
							18.2-18.6': Light brown, fine to medium SAND, trace Silt,			
19							Clay lense from 18.6'-18.7', moist.			
	S-20	19-20				N/A	18.6-19': No recovery.		SAND	
20							S-20: No recovery.			20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4104

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4105
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83
Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	51		NR	C-1:	1	TOPSOIL 0.5	No Equipment Installed
	S-1	0-1				4.0	S-1: 0-0.5': Black, TOPSOIL, moist.			
1							0.5-1': Brown, Clayey SILT, some fine to medium Sand, moist.	2		
	S-2	1-2				5.4	S-2: Brown, Clayey SILT, some fine to medium Sand, moist.		CLAYEY SILT	
2	S-3	2-3				2.6	S-3: 2-2.7': Brown, Clayey SILT, little fine to medium Sand, moist.	3	2.7	
3							2.7-3': Light brown, fine to medium SAND, little Silt, moist.		CLAY 3	
	S-4	3-4				3.3	S-4: Brown, SILT & CLAY, little fine Sand, moist, roots present.	4		
4	S-5	4-5				2.9	S-5: 4-4.2': Brown, SILT & CLAY, little fine Sand, moist.		SILT & CLAY	
							4.2-5': No Recovery.			
5									5	
	C-2	5-10	60	50		NR	C-2:		SILTY CLAY 5.7	
	S-6	5-6				3.8	S-6: Dark brown, Silty CLAY, little fine Sand, moist.			
6	S-7	6-7				5.7	S-7: Brown, SILT & CLAY, little fine Sand, moist, Clay lens from 6.3'-6.4'.		SILT & CLAY	
7									7	
	S-8	7-8				6.5	S-8: 7-7.1': Brown, fine to medium SAND, little Silt, moist.		SAND 7.1	
							7.1-8': Brown, SILT & CLAY, little fine Sand, moist.		SILT & CLAY	
8	S-9	8-9				1.8	S-9: 8-8.5': Brown, SILT & CLAY, little fine Sand, rock fragments, moist.		8.5	
9							8.5-8.7': Brown, fine to coarse SAND, little Silt, moist.			
	S-10	9-10				3.4	8.7-9': Light gray, fine SAND, trace Silt, moist.			
10							S-10: 9-9.2': Light brown, fine to medium SAND, trace Silt, moist.			
	C-3	10-15	60	47		NR	9.2-10': No recovery.			
	S-11	10-11				2.3	C-3:			
11	S-12	11-12				7.8	S-11: Light brown, fine to medium SAND, little Silt, moist.			
							S-12: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
12	S-13	12-13			12-13	6.5	S-13: Light brown, fine to medium SAND, trace Silt, moist.			
13	S-14	13-14				2.8	S-14: 13-13.9': Light brown, fine to medium SAND, trace Silt, moist.			
14							13.9-14': No recovery.			

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.0 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4105

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4105** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	41	15-16	NR	C-4:			
	S-16	15-16				5.5	S-16: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
16	S-17	16-17				6.1	S-17: Light brown, fine to medium SAND, trace Silt, moist.			
17	S-18	17-18				2.7	S-18: 17-17.5': Light brown, fine to medium SAND, little Silt, moist.			17.5
18							17.5-18': Brown, CLAY, little fine Sand, moist.			
	S-19	18-19				7.7	S-19: 18-18.4': Brown, CLAY, little fine Sand, moist.			
19							18.4-19': No recovery.		CLAY	
	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4105

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4106** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson **Drilling Co.:** Stearns Drilling **Foreman:** Gary Geerligs	**Start Date:** 7/9/2019 **Finish Date:** 7/9/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 6620 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	55		NR	C-1:	1	TOPSOIL 0.3	
	S-1	0-1				1.3	S-1: 0-0.3': Black, TOPSOIL, Silt, moist.			
1							0.3-1': Brown, Clayey SILT, little fine Sand, moist.			
	S-2	1-2				1.3	S-2: Brown, Clayey SILT, little fine Sand, moist.	2		No Equipment Installed
2	S-3	2-3				1.8	S-3: Brown, Clayey SILT, little fine Sand, moist.	3		
3	S-4	3-4				1.5	S-4: Brown, Clayey SILT, little fine Sand, moist.			
4	S-5	4-5				1.4	S-5: 4-4.6': Brown, Clayey SILT, little fine Sand, moist.			
							4.6-5': No recovery.		CLAYEY SILT	
5	C-2	5-10	60	58		NR	C-2:			
	S-6	5-6				4.9	S-6: Brown, Clayey SILT, little fine Sand, moist.			
6	S-7	6-7				3.3	S-7: Brown, Clayey SILT, little fine Sand, moist.			
7	S-8	7-8				3.3	S-8: Brown, Clayey SILT, little fine Sand, rock fragments, moist.			
8	S-9	8-9				5.4	S-9: 8-8.6': Brown, Clayey SILT, little fine Sand, moist.			
							8.6-9': Light brown, fine to coarse SAND, little fine Gravel,		8.6	
9							trace Silt, Clay lenses from 8.7'-8.8', moist.			
	S-10	9-10				3.5	S-10: Light brown, fine to medium SAND, trace Silt, moist.			
10	C-3	10-15	60	51		NR	C-3:			
	S-11	10-11				3.1	S-11: Light brown, fine to medium SAND, trace Silt, Clay			
11							lenses from 10.8'-10.9', moist.			
	S-12	11-12				3.3	S-12: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
12	S-13	12-13			12-13	3.4	S-13: Light brown, fine to medium SAND, trace Silt, moist.			
13	S-14	13-14				4.0	S-14: Light brown, fine to medium SAND, trace Silt, moist.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 1.1 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4106

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4106** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15			15-16	7.0	S-15: 14-14.2': Light brown, fine to medium SAND, trace Silt, moist.			
							14.2-15': No recovery.			
	C-4	15-20	60	48		NR	C-4:			
16	S-16	15-16				7.6	S-16: Light brown, fine to medium SAND, trace Silt, fractured rock and black discoloration from 12.4'-12.5', moist.		SAND	
	S-17	16-17				3.6	S-17: Light brown, fine to medium SAND, trace Silt, moist.			
17	S-18	17-18				3.8	S-18: 17-17.8': Light brown, fine to medium SAND, trace Silt, moist.			
							17.8-18': Brown, CLAY, little fine Sand, moist.			17.8
18	S-19	18-19				3.9	S-19: 19-19.8': Brown, CLAY, little fine Sand, Sand lenses from 19.1'-19.3', moist.			
							19.8-20.0': No recovery.		CLAY	
19	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4106

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4107
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	55		NR	C-1:	1	TOPSOIL 0.2	No Equipment Installed
	S-1	0-1				0.7	S-1: 0-0.2': Black, TOPSOIL, Silt, moist.			
1							0.2-1': Brown, fine to medium SAND, little Silt, moist.		SAND	
	S-2	1-2				1.0	S-2: 1-1.2': Brown, fine to medium SAND, little Silt, moist.	2	1.2	
							1.2-2': Brown, Clayey SILT, some fine Sand, moist.			
2										
	S-3	2-3				1.2	S-3: Brown, Clayey SILT, some fine Sand, rock fragments	3		
							from 2.4'-2.6', moist.			
3					3-4					
	S-4	3-4				0.8	S-4: Brown, Clayey SILT, some fine Sand, moist.		CLAYEY SILT	
4										
	S-5	4-5				1.6	S-5: 4-4.6': Brown, Clayey SILT, some fine Sand, moist.			
							4.6-5': No recovery.			
5					5-6				5	
	C-2	5-10	60	55		NR	C-2:			
	S-6	5-6				1.3	S-6: Brown, SILT & CLAY, little fine Sand, moist.		SILT & CLAY	
6									6	
	S-7	6-7				1.2	S-7: 6-6.3': Brown, fine to medium SAND, somt Silt, moist.		SAND 6.3	
							6.3-7': Brown, SILT & CLAY, little fine Sand, moist.			
7										
	S-8	7-8				1.0	S-8: 7-7.8': Brown, SILT & CLAY, little fine Sand, Sand lens		SILT & CLAY	
							at 7.4', moist.		7.8	
8							7.8-8': Brown, fine to medium SAND, some Silt, moist.		SAND 8.2	
	S-9	8-9				0.9	S-9: 8-8.2': Brown, fine to medium SAND, some Silt, moist.			
							8.2-9': Brown, Silty CLAY, little fine Sand, moist.		SILT & CLAY	
9									9	
	S-10	9-10				1.2	S-10: 9-9.3': Brown, fine to medium SAND, little Silt, moist.			
							9.3-10': No recovery.			
10									SAND	
	C-3	10-15	60	50		NR	C-3:			
	S-11	10-11				1.1	S-11: 10-10.8': Light brown, fine to medium SAND, trace		10.8	
11							Silt, Clay lens from 10.7'-10.9', moist.		WHITE SAND 11	
	S-12	11-12				0.9	10.8-11': White, coarse SAND, trace Silt, moist.			
							S-12: Light brown, fine to medium SAND, trace Silt, moist			
12										
	S-13	12-13				0.9	S-13: Light brown, fine to medium SAND, trace Silt, moist			
									SAND	
13										
	S-14	13-14				0.8	S-14: Light brown, fine to medium SAND, trace Silt, moist			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.5 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4107

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4107** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				1.1	S-15: 14-14.2': Light brown, fine to medium SAND, trace Silt, moist 14.2-15': No recovery.			
	C-4	15-20	60	48		NR	C-4:			
	S-16	15-16				1.0	S-16: Light brown, fine to medium SAND, trace Silt, moist.			
16	S-17	16-17				1.2	S-17: Light brown, fine to medium SAND, trace Silt, discoloration from 16.6'-16.7', moist.		SAND	
17	S-18	17-18				1.1	S-18: 17-17.8': Light brown, fine to medium SAND, trace Silt, moist.			
18							17.8-18': Brown, CLAY, little fine Sand, moist.			17.8
	S-19	18-19				0.7	S-19: 18-18.5': Brown, CLAY, little fine Sand, moist.		CLAY	18.5
19							18.5-18.8': Light brown, fine to medium SAND, trace Silt, moist.		SAND	18.8
	S-20	19-20				N/A	18.8-19': Brown, CLAY, little fine Sand, moist. S-20: No recovery.		CLAY	
20										20
21							End of exploration at 20 feet.			
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4107

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4132
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	55		NR	C-1:	1	TOPSOIL 0.5	No Equipment Installed
	S-1	0-1				0.3	S-1: 0-0.5': Brown, TOPSOIL, moist.			
1							0.5-1': Brown, Silty CLAY, moist.			
	S-2	1-2				0.5	S-2: 1-1.8': Brown, Silty CLAY, moist.	2	CLAY	
							1.8-2': Brown, fine SAND, some Clay, moist.		1.8	
2									SAND 2	
	S-3	2-3				0.5	S-3: Brown, CLAY, some Sand, moist	3		
3									SANDY CLAY	
	S-4	3-4				0.9	S-4: Brown CLAY, little Sand, moist.	4	3.3	
4									CLAY 4	
	S-5	4-5				3.0	S-5: Brown CLAY, some Sand, moist.			
5										
	C-2	5-10	60	36		NR	C-2:			
	S-6	5-6				1.5	S-6: Brown CLAY, some Sand, moist.			
6										
	S-7	6-7				2.1	S-7: Brown CLAY, some Sand, moist.			
7									SANDY CLAY	
	S-8	7-8				5.0	S-8: Brown CLAY, some Sand, lens of black, sandy waste, moist.			
8										
	S-9	8-9				N/A	S-9: No recovery.			
9										
	S-10	9-10				N/A	S-10: No recovery.			
									9.6	
10									CLAY 10.1	
	C-3	10-15	60	45		NR	C-3:			
	S-11	10-11				4.4	S-11: 10-10.5': Gray, CLAY, some Sand, moist.			
11							10.5-11': Gray, CLAY Waste, moist.			
	S-12	11-12				17.2	S-12: 11-11.4': Gray-brown, CLAY Waste, wet.		CLAY WASTE	
							11.4-12': Dark gray, CLAY Waste, moist.			
12									12.1	
	S-13	12-13				94.3	S-13: 12-12.5': Dark gray, CLAY Waste, moist.			
							12.5-13': Black, fine SAND Waste, moist.		SAND WASTE 12.7	
13										
	S-14	13-14				5.1	S-14: 13-13.1': Black, fine SAND Waste, moist.			
							13.1'-14': Light brown, CLAY, moist.		CLAY	
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.9 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Makayla Myers

Boring No.:
HS-SB-4132

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4132
SHEET: 2 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.		CLAY	
	C-4	15-20	60	36		NR	C-4:			
	S-16	15-16				0.7	S-16: Gray-brown, CLAY, moist.			15.7
16	S-17	16-17				1.1	S-17: 16-16.4': Gray-brown, CLAY, moist.			
							16.4-16.8': Gray, coarse SAND, some Clay, moist.			
17							16.8-17': Gray, coarse SAND, moist.			
	S-18	17-18				0.9	S-18: 17-17.6': Gray, coarse SAND, moist.			
							17.6-18': Tan, fine to medium SAND, moist.			
18	S-19	18-19				N/A	S-19: No recovery.		SAND	
19	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4132

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4133
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) / Stratum Description / Depth (ft.)	Equipment Installed
	C-1	0-5	60	50		NR	C-1:	1	TOPSOIL 0.2	No Equipment Installed
	S-1	0-1				0.1	S-1: 0-0.2': Black, TOPSOIL, Silt, moist.			
1							0.2-1': Brown, Clayey SILT, little fine Sand, moist.			
	S-2	1-2				0.3	S-2: Brown, Clayey SILT, little fine Sand, Sand lens from 1.6'-1.8', moist.	2		
2									CLAYEY SILT	
	S-3	2-3				0.2	S-3: Brown, Clayey SILT, little fine Sand, Sand lenses from 2.1'-2.2', moist.	3		
3										
	S-4	3-4				0.0	S-4: 3-3.9': Brown, Clayey SILT, little fine Sand, Sand lenses, moist.	4	3.4	
4							3.9-4': Brown, Silty CLAY, little fine Sand, moist.			
	S-5	4-5				0.2	S-5: 4-4.2': Brown, Silty CLAY, little fine Sand, moist.			
							4.2-5': No recovery.			
5										
	C-2	5-10	60	47		NR	C-2:			
	S-6	5-6				0.4	S-6: Brown, Silty CLAY, some fine Sand, moist.			
6									SILTY CLAY	
	S-7	6-7				0.6	S-7: Brown, Silty CLAY, little fine Sand, moist.			
7										
	S-8	7-8				1.1	S-8: Brown, Silty CLAY, little fine Sand, moist.			
8									8	
	S-9	8-9				17.9	S-9: 8-8.6': Black-gray, SILT & CLAY, trace fine Sand Waste, moist.		WASTE 8.6	
9							8.6-9': Brown, fine to medium SAND, little Silt, Clay lens, moist.		SAND 8.8	
	S-10	9-10				N/A	S-10: No recovery.			
10									SILTY CLAY	
	C-3	10-15	60	55		NR	C-3:			
	S-11	10-11				5.0	S-11: Brown, Silty CLAY, little fine Sand, moist.			
11										
	S-12	11-12				24.3	S-12: 11-11.3': Brown, Silty CLAY, little fine Sand, moist.		11.3	
							11.3-12': Gray, CLAY, trace fine Sand Waste, moist.		WASTE	
12									12	
	S-13	12-13				2.2	S-13: Brown, Silty CLAY, little fine Sand, moist.		SILTY CLAY	
13									13	
	S-14	13-14				1.1	S-14: 13-13.3': Light gray, fine to medium SAND, little Silt, moist.		SAND 13.3	
14							13.3-14': Brown, Clayey SILT, little fine Sand, moist.		CLAYEY SILT	

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.0 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4133

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4133** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				0.4	S-15: 14-14.6': Brown, Clayey SILT, little fine Sand, moist. 14.6-15': No recovery.		CLAYEY SILT	15
	C-4	15-20	60	35		NR	C-4:		SAND	15.5
	S-16	15-16				0.5	S-16: 15-15.5': Brown, fine to medium SAND, little Silt, moist.		SILTY CLAY	16
16	S-17	16-17				0.3	15.5-16': Brown, Silty CLAY, little fine Sand, moist. S-17: Light brown, fine to medium SAND, little Silt, rock fragments, Clay lenses from 16.1'-16.2', moist.			
17	S-18	17-18				0.4	S-18: 17-17.9': Light brown, fine to medium SAND, little Silt, Clay lenses from 17.4'-17.5', moist.			
18	S-19	18-19				N/A	17.9-18': No recovery. S-19: No recovery.		SAND	
19	S-20	19-20				N/A	S-20: No recovery.			
20							End of exploration at 20 feet.			20
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4133

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4134
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83
Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)	Equipment Installed
	C-1	0-5	60	48		NR	C-1:	1	TOPSOIL	0.3	
	S-1	0-1				1.0	S-1: 0-0.3': Brown, TOPSOIL, moist.				
1							0.3-1': Brown, Clayey SILT, moist.		CLAYEY SILT	1	
	S-2	1-2				2.6	S-2: 1-1.5': Light brown, fine to medium SAND, moist.	2	SAND	1.5	No Equipment Installed
							1.5=2': Brown, CLAY with Sand lenses, moist.				
2									SANDY CLAY	2	
	S-3	2-3				1.4	S-3: 2-2.4': Brown, CLAY with Sand lenses, moist.	3			
							2.4-3': Orange-brown, Silty CLAY, moist.				
3											
	S-4	3-4				0.6	S-4: Orange-brown, Silty CLAY, moist.	4			
									SILTY CLAY		
4											
	S-5	4-5				N/A	S-5: No recovery.				
5											
	C-2	5-10	60	56		NR	C-2:			5.2	
	S-6	5-6				2.2	S-6: 5-5.2': Brown, Silty CLAY, Sand lenses, moist.		SAND	5.6	
6							5.2-6': Gray, fine Sandy CLAY, waste, moist.				
	S-7	6-7				2.1	S-7: 6-6.2': Grey, CLAY, waste, moist.				
							6.2-7': Grey, CLAY, some Sand, waste, moist.				
7											
	S-8	7-8				5.1	S-8: Grey, CLAY, some Sand, waste, moist.		WASTE		
8											
	S-9	8-9				122.0	S-9: 8-8.7': Black, CLAY, light gray Clay lenses, waste, moist.			8.7	
9							8.7-9': Dark brown, Silty SAND, waste, moist.				
	S-10	9-10				2.7	S-10: 9-9.3': Dark brown, Silty SAND, waste, moist.		SAND	9.3	
							9.3-10': Gray, CLAY with fine Gravel, waste, moist.				
10											
	C-3	10-15	60	52		NR	C-3:				
	S-11	10-11				2.4	S-11: Gray, Silty CLAY, waste, moist.				
11											
	S-12	11-12				200.1	S-12: Black and gray, CLAY, little coarse Sand, moist.		WASTE		
12											
	S-13	12-13				270	S-13: Black and gray, CLAY, little coarse Sand, waste, moist.				
13										13.1	
	S-14	13-14				65.7	S-14: 13-13.1': Black, CLAY, waste, moist.				
							13.1-14': Brown, CLAY, moist.		CLAY		
14											

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.3 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Makayla Myers

Boring No.:
HS-SB-4134

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/3/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4134** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				3.6	S-15: Brown, CLAY, moist.		CLAY	15
	C-4	15-20	60	43		NR	C-4:		WASTE	15.6
	S-16	15-16				19.2	S-16: 15-15.4': Black, CLAY, waste, moist.			
16							15.4-16': Red-brown, CLAY, moist.		CLAY	16.5
	S-17	16-17				15.3	S-17: 16-16.5': Red-brown, CLAY, moist.			
							16.5-16.8': Gray, coarse SAND and GRAVEL, moist.		GRAVEL	16.8
17							16.8-17': Brown, CLAY, moist.		CLAY	17
	S-18	17-18				1.2	S-18: 17-17.2': Gray, coarse SAND and GRAVEL, moist.		GRAVEL	17.2
							17.2-19': Light brown, medium SAND, moist.			
18	S-19	18-19				0.0	S-19: 18-18.6': Light brown, medium SAND, moist.			
							18.6-19': No recovery.		SAND	
19	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4134

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/3/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4135** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/8/2019 **Finish Date:** 7/8/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	51		NR	C-1:	1	TOPSOIL 0.4	
	S-1	0-1				0.0	S-1: 0-0.4': Brown, TOPSOIL, moist.			
1							0.4-1': Brown, Silty CLAY, moist.			
	S-2	1-2				0.9	S-2: Brown, Silty CLAY, moist.	2		No Equipment Installed
2	S-3	2-3				0.2	S-3: 2-2.8': Brown, medium Sandy CLAY, moist.	3		
							2.8-3': Brown, Silty CLAY, moist.			
3	S-4	3-4				0.0	S-4: Brown, Silty CLAY with Clay lens, moist.	4	SILTY CLAY	
4	S-5	4-5				0.4	S-5: 4-4.2': Brown, Silty CLAY with Clay lens, moist.			
							4.2-5': No recovery.			
5	C-2	5-10	60	44		NR	C-2:			
	S-6	5-6				1.2	S-6: 5-5.9': Brown, Silty CLAY with Clay lens, moist.			
							5.9-6': Gray, fine SAND, waste, moist.		5.9	
6	S-7	6-7				4.8	S-7: 6-6.2': Gray, fine SAND, waste, moist.		SAND & WASTE 6.2	
							6.2-7': Gray, Silty CLAY with Sand lenses, waste, moist.		SILTY CLAY & WASTE	
7	S-8	7-8				15.6	S-8: 7-7.3': Gray, Silty CLAY with Clay lenses, waste, moist.		7.3	
							7.3-8': Black/dark gray, fine SAND, waste, moist.			
8	S-9	8-9				7.3	S-9: 8-8.3': Black/dark gray, fine SAND, waste, moist.		SAND	
							8.3-8.7': Black/dark gray, fine SAND, moist.		8.7	
9							8.7-9': Gray-brown, CLAY, moist.		CLAY 9	
	S-10	9-10				N/A	S-10: No recovery.			
10	C-3	10-15	60	46		NR	C-3:			
	S-11	10-11				0.0	S-11: Gray-brown, Silty CLAY, moist.		SILTY CLAY	
11	S-12	11-12				0.0	S-12: 11-11.6': Gray-brown, Silty CLAY, moist.			
							11.6-12': Brown, medium SAND, moist.		11.6	
12	S-13	12-13			12-13	0.3	S-13: 12-12.3': Gray, CLAY, moist.		SAND 12.3	
							12.3-12.8': Brown, medium SAND, moist.		CLAY 12.8	
13							12.8-13': Gray, CLAY, moist.		SAND 13	
	S-14	13-14				1.5	S-14: 13-13.5': Gray, CLAY, moist.		CLAY 13.5	
							13.5-14': Gray, medium SAND, moist.		SAND	
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.3 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Makayla Myers

Boring No.:
HS-SB-4135

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4135** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.		SAND	
	C-4	15-20	60	42	15-16	NR	C-4:			15
	S-16	15-16				0.0	S-16: Gray, CLAY, moist.			
16	S-17	16-17				0.6	S-17: Gray, CLAY, moist.		CLAY	
17										17
	S-18	17-18				0.5	S-18: 17-17.6': Gray, coarse SAND with Clay lenses, moist.			
18							17.6'-18': Gray, medium SAND, moist.			
	S-19	18-19				0.4	S-19: 18-18.5': Gray, medium SAND, moist.			
19							18.5-19': No recovery.		SAND	
	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4135

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4136
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)	Equipment Installed
	C-1	0-5	60	46		NR	C-1:	1	TOPSOIL	0.5	
	S-1	0-1				0.0	S-1: 0-0.5': Brown, TOPSOIL, moist.				
1							0.5-1': Brown, CLAY, some Sand, moist, roots present.				
	S-2	1-2				0.0	S-2: Brown, CLAY, some Sand, moist.	2	CLAY		No Equipment Installed
2										2	
	S-3	2-3				0.0	S-3: 2-2.5': Tan, fine SAND, moist.	3	SAND	2.5	
							2.5-3': Brown, CLAY, moist.		CLAY		
3										3.2	
	S-4	3-4				13.2	S-4: 3-3.2': Gray, CLAY, moist.	4	SAND WASTE	3.5	
							3.2-3.5': Dark gray, fine SAND waste, moist.				
4							3.5-3.8': Black, Sandy CLAY, waste, moist.				
	S-5	4-5				N/A	3.8-4': No recovery.				
							S-5: No recovery.		CLAY WASTE		
5											
	C-2	5-10	60	46		NR	C-2:				
	S-6	5-6				85.5	S-6: Dark gray, CLAY Waste, moist.				
6										6	
	S-7	6-7				27.0	S-7: 6-6.3': Dark gray, CLAY Waste, moist.		SAND WASTE	6.3	
							6.3-6.8': Black, fine SAND, moist.				
7							6.8-7': Gray, CLAY, moist.		CLAY	7.1	
	S-8	7-8				26.5	S-8: 7-7.4': Gray, CLAY, moist.		SAND	7.4	
							7.4-7.6': Black, fine SAND, moist.		CLAY	7.7	
8							7.6-7.9': Dark gray, CLAY, moist.		SAND	7.8	
	S-9	8-9				1.6	7.9-8': Black, fine SAND, moist.				
							S-9: 8-8.5': Gray, Sandy CLAY, moist.				
9							8.5-9': Gray-brown, fine Sandy CLAY, moist.				
	S-10	9-10				N/A	S-10: No recovery.		CLAY		
10											
	C-3	10-15	60	56		NR	C-3:				
	S-11	10-11				3.3	S-11: 10-10.5': Brown, Silty CLAY, trace fine Sand, moist.			10.6	
11							10.5-10.7': Green/black, fine to medium SAND, moist.		SAND	10.8	
	S-12	11-12				2.3	10.7-11': Brown, Sandy CLAY, some Gravel, moist.				
							S-12: Brown, Silty CLAY, some Gravel, moist.				
12											
	S-13	12-13				1.9	S-13: Brown, Silty CLAY, some Gravel, moist.		CLAY		
13											
	S-14	13-14				2.5	S-14: 13-13.2': Brown, Silty CLAY with Gravel, moist.				
							13.2-13.7': Light brown, Sandy CLAY, moist.				
14							13.7-13.9': Gray, Silty CLAY waste, moist.			13.9	

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.3 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Makayla Myers

Boring No.:
HS-SB-4136

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4136** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/8/2019
Finish Date: 7/8/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				1.2	13.9-14': Tan-brown, coarse SAND. S-15: Tan-brown, coarse SAND.		SAND	
	C-4	15-20	60	56		NR	C-4:			
	S-16	15-16				3.4	S-16: 15-15.6': Dark gray, coarse SAND, Clay lenses, moist.			15.6
16							15.6-15.8': Dark gray, Sandy CLAY, moist.		CLAY	15.8
	S-17	16-17				2.2	15.8-16': Light gray, coarse SAND and GRAVEL, moist. S-17: Light brown, fine to medium SAND, moist.		SAND & GRAVEL	16
17	S-18	17-18				1.5	S-18: Light brown, fine to medium SAND, moist.			
18	S-19	18-19				N/A	S-19: No recovery.		SAND	
19	S-20	19-20				N/A	S-20: No recovery.			
20							End of exploration at 20 feet.			20
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4136

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4137** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/9/2019 **Finish Date:** 7/9/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)	Equipment Installed
	C-1	0-5	60	54		NR	C-1:	1	TOPSOIL	0.6	No Equipment Installed
	S-1	0-1				2.5	S-1: 0-0.6': Brown, TOPSOIL, moist.				
1							0.6-1': Brown, medium SAND, moist, roots present.				
	S-2	1-2				1.4	S-2: Brown, fine SAND, some Silt, moist.	2	SAND	2	
2	S-3	2-3				1.3	S-3: Brown, Silty CLAY, moist.	3	CLAY	3	
3	S-4	3-4				1.2	S-4: Dark brown, SAND & SILT, moist.				
4	S-5	4-5				1.5	S-5: 4-4.5': Dark brown, SAND & SILT, moist.				
							4.5-5': No recovery.		SILT		
5	C-2	5-10	60	53		NR	C-2:				
	S-6	5-6				3.3	S-6: Brown, SAND & SILT, moist.				
6	S-7	6-7				1.7	S-7: 6-6.3': Brown, SAND & SILT, moist.			6.3	
							6.3-7': Brown, Silty CLAY, moist.				
7	S-8	7-8				1.6	S-8: Brown, Silty CLAY, moist.				
8	S-9	8-9				1.8	S-9: Brown, Silty CLAY, moist.		CLAY		
9	S-10	9-10				1.6	S-10: 9-9.4': Brown, Silty CLAY, moist.				
							9.4-10': No recovery.				
10										10	
	C-3	10-15	60	45		NR	C-3:		SAND	10.5	
	S-11	10-11				1.4	S-11: 10-10.5': Dark tan, fine SAND, moist.				
11							10.5-11': Brown, CLAY, moist.				
	S-12	11-12				1.4	S-12: Brown, CLAY, moist.				
12	S-13	12-13			12-13	1.4	S-13: Brown, CLAY, moist.		CLAY		
13	S-14	13-14				1.3	S-14: 13-13.8': Brown, CLAY, moist.				
							13.8-14': No recovery.				
14											

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.9 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Makayla Myers

Boring No.:
HS-SB-4137

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4137** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	44	15-16	NR	C-4:			
	S-16	15-16				1.0	S-16: Brown, CLAY, moist.		CLAY	
16	S-17	16-17				1.0	S-17: 16-16.7': Brown, CLAY, moist.			
							16.7-17': Gray, medium to coarse SAND, moist.			16.7
17	S-18	17-18				1.2	S-18: 17-17.2': Gray, medium to coarse SAND, moist.			
							17.2-18': Tan, fine SAND, moist.			
18	S-19	18-19				1.1	S-19: 18-18.7': Tan, fine SAND, moist.		SAND	
							18.7-19': No recovery.			
19	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4137

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4138** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/9/2019 **Finish Date:** 7/9/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	56		NR	C-1:	1	TOPSOIL 0.3	
	S-1	0-1				2.3	S-1: 0-0.3': Dark brown, TOPSOIL, moist.			
1							0.3-1': Brown, Silty CLAY, moist.			
	S-2	1-2				1.7	S-2: Brown, Silty CLAY, moist.	2	CLAY	No Equipment Installed
2										
	S-3	2-3				3.1	S-3: 2-2.3': Brown, Sandy CLAY, with Clay lenses, moist.	3	2.3	
							2.3-3': Dark brown, SILT, moist.		SILT	
3									3	
	S-4	3-4				1.4	S-4: 3-3.7': Light brown, fine SAND, moist.		SAND	
							3.7-4': Brown-gray, Silty CLAY, moist.		3.7	
4										
	S-5	4-5				1.0	S-5: Brown-gray, Silty CLAY, moist.			
5									CLAY	
	C-2	5-10	60	50		NR	C-2:			
	S-6	5-6				1.5	S-6: Brown-gray, Silty CLAY, moist.			
6										
	S-7	6-7				1.1	S-7: 6-6.2': Brown-gray, Silty CLAY, moist.		6.2	
							6.2-7': Brown, medium SAND, some Clay, moist.		SAND	
7									7	
	S-8	7-8				1.0	S-8: 7-7.5': Brown, Silty CLAY, moist.			
							7.5-8': Brown, CLAY, moist.			
8										
	S-9	8-9				1.1	S-9: Brown, CLAY, moist.		CLAY	
9										
	S-10	9-10				1.0	S-10: 9-9.1': Brown, CLAY, moist.			
							9.1-10': No recovery.			
10									10	
	C-3	10-15	60	35		NR	C-3:			
	S-11	10-11				1.5	S-11: Brown, fine to medium SAND, with Clay lenses, moist.			
11					11-12				SAND	
	S-12	11-12				1.4	S-12: Brown, fine to medium SAND, with Clay lenses, moist.			
12									12.2	
	S-13	12-13				1.2	S-13: 12-12.2': Brown, fine to medium SAND, with Clay lenses, moist.			
13					13-14		12.2-13': Brown, CLAY, moist.		CLAY	
	S-14	13-14				N/A	S-14: No recovery.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.9 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Makayla Myers

Boring No.:
HS-SB-4138

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4138
SHEET: 2 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	36		NR	C-4:		CLAY	
	S-16	15-16				1.3	S-16: Brown, CLAY, moist.			
16	S-17	16-17				1.4	S-17: 16-16.3': Brown, CLAY, moist.			16.3
							16.3-17': Brown, medium to coarse SAND, moist.			
17	S-18	17-18				1.4	S-18: 17-17.4': Brown, medium to coarse SAND, moist.			
							17.4-18': Dark brown, fine to medium SAND, moist.			
18	S-19	18-19				N/A	S-19: No recovery.		SAND	
19	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4138

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4139
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)	Equipment Installed
	C-1	0-5	60	55		NR	C-1:	1	TOPSOIL	0.4	No Equipment Installed
	S-1	0-1				1.3	S-1: 0-0.4': Black, TOPSOIL, Silt, moist.				
1							0.4-1': Brown, Clayey SILT, little fine Sand, moist.				
	S-2	1-2				1.1	S-2: Brown, Clayey SILT, little fine Sand, sand seam from 1.2'-1.3', moist.	2			
2									CLAYEY SILT		
	S-3	2-3				1.7	S-3: Brown, Clayey SILT, little fine Sand, sand seam from 2.5'-2.6', moist.	3			
3											
	S-4	3-4				1.1	S-4: 3-3.5': Brown, Clayey SILT, little fine Sand, sand seam from 1.2'-1.3', moist.	4		3.5	
							3.5-4': Brown, Silty CLAY, little fine Sand, moist.		SILTY CLAY	4	
4	S-5	4-5				1.1	S-5: 4-4.3': Brown, Clayey SILT, little fine Sand, Sand lens 4.2'-4.3', moist.		CLAYEY SILT	4.3	
							4.3-5': No recovery.				
5	C-2	5-10	60	48		NR	C-2:		SAND		
	S-6	5-6				1.4	S-6: Light brown, fine to medium SAND, trace Silt, Clay lense from 5.2'-5.3', moist.				
6	S-7	6-7				1.3	S-7: 6-6.2': Light brown, fine to medium SAND, trace Silt, moist.			6.2	
									CLAYEY SILT		
7	S-8	7-8			7-8	1.1	6.2-7': Brown, Clayey SILT, little fine Sand, moist.			7	
							S-8: Brown, Silty CLAY, little fine Sand, moist.				
8	S-9	8-9				1.2	S-9: Brown, Silty CLAY, little fine Sand, moist.		SILTY CLAY		
9										9	
	S-10	9-10				N/A	S-10: No recovery.		NO RECOVERY		
10										10	
	C-3	10-15	60	48	10-11	NR	C-3:		SAND	10.2	
	S-11	10-11				1.2	S-11: 10-10.2': Light brown, fine to medium SAND, trace Silt, moist.		CLAYEY SILT		
11										11.2	
	S-12	11-12				1.3	10.2-11': Brown, Clayey SILT, little fine Sand, moist.		CLAY	11.3	
							S-12: 11-11.2': Brown, Clayey SILT, little fine Sand, moist.			11.5	
12							11.2-11.3': Brown, CLAY, little fine Sand, moist.		SAND	11.8	
	S-13	12-13				1.6	11.3-11.5': Brown, fine to medium SAND, some Silt, rock fragments, moist.		CLAY		
13									SAND		
	S-14	13-14				1.5	11.5-11.7': Brown, CLAY, little fine Sand, moist.				
							11.7-12': Brown, fine to medium SAND, some Silt, trace fine Gravel, moist.				
14											

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.9 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Makayla Myers

Boring No.:
HS-SB-4139

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4139** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/9/2019
Finish Date: 7/9/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-13: Brown, fine to medium SAND, little Silt, moist. S-14: 13-13.7': Brown, fine to medium SAND, little Silt, moist.			
	C-4	15-20	60	47		NR	13.7-14': No recovery.			
	S-16	15-16				1.6	S-15: No recovery.			
16							C-4:		SAND	
	S-17	16-17				1.6	S-16: Light brown, fine to medium SAND, trace Silt, moist.			
							S-17: Light brown, fine to medium SAND, trace Silt, black discoloration from 16'-16.1', moist.			
17	S-18	17-18				1.3	S-18: 17-17.9': Light brown, fine to medium SAND, trace Silt, moist.			
										17.9
18	S-19	18-19				2.8	17.9-18': Brown, CLAY, little fine Sand, moist.		CLAY	18
							S-19: 18-18.7': Light brown, fine to medium SAND, little Silt, moist.			
19	S-20	19-20				N/A	18.7-19': No recovery. S-20: No recovery.		SAND	
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4139

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4200** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/11/2019
Finish Date: 7/11/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	54		NR	C-1:	1		
	S-1	0-1				0.5	S-1: Brown, Clayey SILT, little fine Sand, Sand lens, rock fragments, moist, roots present.			
1	S-2	1-2				0.4	S-2: Brown, Clayey SILT, little fine Sand, Sand lens, moist.	2	CLAYEY SILT	No Equipment Installed
2	S-3	2-3				0.4	S-3: 2-2.2': Brown, Clayey SILT, little fine Sand, Sand lens, rock fragments, moist.	3	2.2	
3	S-4	3-4				0.4	2.2-3': Brown, CLAY & SILT, little fine Sand, moist. S-4: Brown, CLAY & SILT, little fine Sand, Sand lenses, moist.		CLAY & SILT	
4	S-5	4-5				0.5	S-5: 4-4.2': Brown, CLAY & SILT, little fine Sand, moist.		4.2	
							4.2-5': Gray, CLAY, trace fine Sand, waste, moist.		WASTE	
5	C-2	5-10	60	36		NR	C-2:		5.3	
	S-6	5-6				0.3	S-6: 5-5.3': Brown-gray, CLAY, trace fine Sand, waste, moist.			
6	S-7	6-7				0.4	5.3-6': Light brown, fine to medium SAND, trace Silt, rock fragments, moist.			
7	S-8	7-8				0.4	S-7: Light brown, fine to medium SAND, trace Silt, Clay lens, moist.			
8	S-9	8-9				N/A	S-8: Light brown, fine to medium SAND, trace Silt, Clay lenses, moist. S-9: No recovery.			
9	S-10	9-10				N/A	S-10: No recovery.			
10	C-3	10-15	60	44		NR	C-3:		SAND	
	S-11	10-11				0.4	S-11: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.			
11	S-12	11-12				0.4	S-12: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.			
12	S-13	12-13			12-13	0.3	S-13: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.			
13	S-14	13-14				0.3	S-14: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.3 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4200

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4200** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/11/2019
Finish Date: 7/11/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	46	15-16	NR	C-4:			
	S-16	15-16				0.4	S-16: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.		SAND	
16	S-17	16-17				0.3	S-17: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, Clay lens, moist.			
17	S-18	17-18				0.3	S-18: Brown, CLAY, little fine Sand, moist.			17.2
18	S-19	18-19				0.4	S-19: Brown, CLAY, little fine Sand, moist.		CLAY	
19	S-20	19-20				N/A	S-20: No recovery.			
20							End of exploration at 20 feet.			20
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4200

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4206** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson **Drilling Co.:** Stearns Drilling **Foreman:** Gary Geerligs	**Start Date:** 7/10/2019 **Finish Date:** 7/10/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 6620 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)	Equipment Installed
	C-1	0-5	60	50		NR	C-1:	1	TOPSOIL	0.5	
	S-1	0-1				1.5	S-1: 0-0.5': Black, TOPSOIL, Silt, moist.				
1							0.5-1': Brown, Clayey SILT, little fine Sand, moist.		CLAYEY SILT		
	S-2	1-2				1.1	S-2: 1-1.4': Brown, Clayey SILT, little fine Sand, moist.	2		1.4	No Equipment Installed
							1.4-2': Brown, fine SAND, little Silt, moist.				
2											
	S-3	2-3				1.1	S-3: Light brown, fine to medium SAND, trace Silt, moist.	3			
3											
	S-4	3-4				2.5	S-4: 3-3.8': Light brown, fine to medium SAND, trace Silt, moist.		SAND		
4							3.8-4': Brown, CLAY & SILT, little fine Sand, moist.				
	S-5	4-5				1.3	S-5: 4-4.2': Brown, CLAY & SILT, little fine Sand, moist.				
							4.2-5': No recovery.				
5											
	C-2	5-10	60	58		NR	C-2:			5.2	
	S-6	5-6				1.1	S-6: 5-5.2': Light brown, fine to medium SAND, trace Silt, moist.				
6											
	S-7	6-7				1.5	5.2-6': Brown, Silty CLAY, little fine Sand, moist.				
							S-7: Brown, Silty CLAY, little fine Sand, moist.				
7					7-8						
	S-8	7-8				1.1	S-8: Brown, CLAY & SILT, little fine Sand, moist.		SILTY CLAY		
8											
	S-9	8-9				1.2	S-9: Brown, CLAY & SILT, some fine to medium Sand, moist.				
9											
	S-10	9-10				1.1	S-10: 9-9.5': Brown, CLAY & SILT, some fine to medium Sand, moist.			9.5	
10							9.5-10': Brown, fine to coarse SAND, some Silt, moist, tan/gray discoloration at 9.6'-9.8'.				
	C-3	10-15	60	46	10-11	NR	C-3:				
	S-11	10-11				1.1	S-11: Light brown, fine to medium SAND, trace Silt, moist.				
11											
	S-12	11-12				1.2	S-12: Light brown, fine to medium SAND, trace Silt, Clay lens from 11.3'-11.4', moist.		SAND		
12											
	S-13	12-13				1.4	S-13: Light brown, fine to medium SAND, trace Silt, moist.				
13											
	S-14	13-14				1.1	S-14: 13-13.8': Light brown, fine to medium SAND, trace Silt, moist.				
14							13.8-14': No recovery.				

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.9 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4206

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4206
SHEET: 2 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/10/2019
Finish Date: 7/10/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	51		NR	C-4:			
	S-16	15-16				1.5	S-16: Light brown, fine to medium SAND, trace Silt, moist.			
16	S-17	16-17				1.2	S-17: Light brown, fine to medium SAND, trace Silt, moist.			
									SAND	
17	S-18	17-18				1.3	S-18: Light brown, fine to medium SAND, trace Silt, Clay lens from 17.2'-17.3', moist.			
18	S-19	18-19				1.3	S-19: 18-18.6': Light brown, fine to medium SAND, trace Silt, moist.			
							18.6-19': Light brown, fine to coarse SAND, little Silt, moist.			
19	S-20	19-20				1.2	S-20: 19-19.2': Brown, CLAY, little fine Sand, moist.			19.3
							19.2-20': No recovery.		CLAY	
20							End of exploration at 20 feet.			20
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4206

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4208
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/10/2019
Finish Date: 7/10/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	52		NR	C-1:	1	TOPSOIL 0.4	No Equipment Installed
	S-1	0-1				3.4	S-1: 0-0.4': Black, TOPSOIL, Silt, moist.			
1							0.4-1': Brown, Clayey SILT, little fine Sand, moist.			
	S-2	1-2				2.5	S-2: Brown, Clayey SILT, little fine Sand, rock fragments from 1.3'-1.4', moist, roots present.	2		
2										
	S-3	2-3				2.2	S-3: Brown, Clayey SILT, little fine Sand, Sand lens from 2.4'-2.5' and from 2.8'-3', moist.	3		
3										
	S-4	3-4				2.9	S-4: Brown, Clayey SILT, little fine Sand, dark gray discoloration from 3'-3.1', moist.	4	SILTY CLAY	
4										
	S-5	4-5				2.9	S-5: 4-4.3': Brown, Clayey SILT, little fine Sand, Clay lens at 4.4 moist.			
5							4.3-5': No recovery.			
	C-2	5-10	60	42		NR	C-2:			
	S-6	5-6				3.2	S-6: 5-5.7': Brown, Silty CLAY, little fine Sand, Sand lens from 5.5'-5.6', moist.		5.7	
6	S-7	6-7				13.2	5.7-6': Gray, CLAY, trace fine Sand, moist.		CLAY 6.5	
							S-7: 6-6.5': Gray, CLAY, trace fine Sand, moist.			
7							6.5-7': Black, CLAY, trace fine Sand, waste, moist.			
	S-8	7-8				81.7	S-8: Black, CLAY, trace fine Sand, waste, moist.		WASTE	
8										
	S-9	8-9				30.3	S-9: 8-8.5': Black, CLAY, trace fine Sand, waste, moist.		8.4	
							8.5-9': No recovery.			
9	S-10	9-10				N/A	S-10: No recovery.			
10										
	C-3	10-15	60	45		NR	C-3:			
	S-11	10-11				2.1	S-11: Light brown, fine to medium SAND, trace Silt, black Sand seam from 10.3'-10.4', moist.			
11	S-12	11-12				5.9	S-12: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
12										
	S-13	12-13				1.8	S-13: Light brown, fine to medium SAND, trace Silt, moist.			
13										
	S-14	13-14				1.8	S-14: 13-13.8': Light brown, fine to medium SAND, trace Silt, moist.			
14							13.8-14': No recovery.		13.8	

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.9 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4208

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/3/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4208
SHEET: 2 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/10/2019
Finish Date: 7/10/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA

Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
	S-15	14-15				N/A	S-15: No recovery.		NO RECOVERY	
15									NO RECOVERY	15
	C-4	15-20	60	38		NR	C-4:			
	S-16	15-16				2.5	S-16: Light brown, fine to medium SAND, trace Silt, Clay lens from 15.5'-15.7', moist.			
16	S-17	16-17				1.4	S-17: 16-16.8': Light brown, fine to medium SAND, trace Silt, moist.		SAND	16.8
17	S-18	17-18				1.3	16.8-17': Brown, CLAY, little fine Sand, moist. S-18: 17-17.9': Brown, CLAY, little fine Sand, moist.		CLAY	17.9
18	S-19	18-19				1.1	17.9-18': Light brown, fine to medium SAND, trace Silt, moist. S-19: 18-18.2': Light brown, fine to medium SAND, trace Silt, moist.			
19	S-20	19-20				N/A	18.2-19': No recovery. S-20: No recovery.		SAND	
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4208

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/3/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4210** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/10/2019
Finish Date: 7/10/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) / Stratum Description / Depth (ft.)	Equipment Installed
	C-1	0-5	60	53		NR	C-1:	1	TOPSOIL 0.4	No Equipment Installed
	S-1	0-1				4.7	S-1: 0-0.4': Black, TOPSOIL, Silt, moist.			
1							0.4-1': Brown, Clayey SILT, little fine Sand, Sand lens from			
	S-2	1-2				4.2	0.8'-0.9', moist.	2		
							S-2: Brown, Clayey SILT, little fine Sand, Sand lens from		CLAYEY SILT	
2							1.2'-1.3' and 1.7'-1.8', moist.			
	S-3	2-3				5.0	S-3: 2-2.7': Brown, Clayey SILT, little fine Sand, Sand lens	3		
							from 2.5'-2.6', moist.		2.7	
3							2.7'-4': Brown, fine to medium SAND, little Silt, moist.		SAND 3	
	S-4	3-4				2.8	S-4: Brown, Clayey SILT, little fine Sand, brown Sand seam			
							from 3.3'-3.4', moist.		CLAYEY SILT	
4										
	S-5	4-5				5.2	S-5: 4-4.4': Brown, Clayey SILT, little fine Sand, moist.		4.4	
							4.4-5': No recovery.			
5										
	C-2	5-10	60	43		NR	C-2:		SAND	
	S-6	5-6				3.1	S-6: 5-5.8': Light brown, fine to medium SAND, some Silt,			
6							Clay lens from 5.2'-5.3', moist.		5.8	
	S-7	6-7				4.6	5.8-6': Brown, CLAY & SILT, little fine Sand, moist.			
							S-7: Brown, CLAY & SILT, little fine Sand, moist.			
7					7-8				CLAY & SILT	
	S-8	7-8				1.9	S-8: 7-7.9': Brown, CLAY & SILT, little fine Sand, moist.			
							7.9-8': Light brown, fine SAND, some Silt, rock fragments,			
8							moist.		7.9	
	S-9	8-9				2.0	S-9: 8-8.6': Light brown, fine to medium SAND, trace Silt,			
							moist.			
9							8.6-9': No recovery.			
	S-10	9-10				N/A	S-10: No recovery.			
10					10-11					
	C-3	10-15	60	45		NR	C-3:			
	S-11	10-11				3.1	S-11: Light brown, fine to medium SAND, trace Silt, moist.			
11									SAND	
	S-12	11-12				3.5	S-12: Light brown, fine to medium SAND, trace Silt, moist.			
12										
	S-13	12-13				2.4	S-13: Light brown, fine to medium SAND, trace Silt, moist.			
13										
	S-14	13-14				2.9	S-14: 13-13.8': Light brown, fine to medium SAND, trace			
							Silt, moist.			
14							13.8-14': No recovery.			

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.5 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4210

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4210** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/10/2019
Finish Date: 7/10/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	43		NR	C-4:			
	S-16	15-16				3.0	S-16: Light brown, fine to medium SAND, trace Silt, moist.			
16	S-17	16-17				2.6	S-17: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
17	S-18	17-18				2.3	S-18: 17-17.8': Light brown, fine to medium SAND, little Gravel, trace Silt, moist.			
18							17.8-18': Brown, CLAY, little fine Sand, moist.			17.9
	S-19	18-19				2.9	S-19: 18-18.3': Brown, CLAY, little fine Sand, moist.		CLAY	18.4
19							18.3-18.6': Light brown, fine to medium SAND, some Silt, moist.			
	S-20	19-20				N/A	18.6-19': No recovery. S-20: No recovery.		SAND	
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4210

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4266** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/10/2019 **Finish Date:** 7/10/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)	Equipment Installed
	C-1	0-5	60	51		NR	C-1:	1	TOPSOIL	0.5	
	S-1	0-1				2.8	S-1: 0-0.5': Brown, TOPSOIL, moist.				
1							0.5-1': Reddish-brown, SAND & CLAY, moist.				
	S-2	1-2				3.0	S-2: Reddish-brown, SAND & CLAY, rock fragments, moist.	2			No Equipment Installed
2	S-3	2-3				3.3	S-3: 2-2.5': Reddish-brown, SAND & CLAY, moist.	3			
							2.5-3': Reddish-brown, Clayey SAND, moist.		SAND		
3	S-4	3-4				3.6	S-4: Reddish-brown, Clayey SAND, moist.				
4	S-5	4-5				3.2	S-5: 4-4.2': Reddish-brown, Clayey SAND, moist.				
							4.2-5': No recovery.			4.7	
5	C-2	5-10	60	51		NR	C-2:				
	S-6	5-6				1.7	S-6: 5-5.4': Reddish-brown, Clayey SAND, moist.				
6							5.4-6': Brown, Sandy CLAY, moist.				
	S-7	6-7				1.5	S-7: 6-6.2': Brown, Sandy CLAY, moist.				
							6.2-6.8': Red-brown, Silty CLAY, moist.		CLAY		
7							6.8-7': Brown, CLAY, moist.				
	S-8	7-8				2.5	S-8: Brown, CLAY, moist.				
8										8.1	
	S-9	8-9				1.8	S-9: 8-8.8': Brown, CLAY, moist.		SAND	8.5	
							8.8-9': Light brown, fine SAND, moist.				
9	S-10	9-10				2.6	S-10: 9-9.2': Light brown, fine SAND, moist.				
							9.2-10': No recovery.				
10	C-3	10-15	60	57		NR	C-3:				
	S-11	10-11				2.0	S-11: Gray-brown, Silty CLAY, moist.				
11	S-12	11-12			11-12	3.0	S-12: Gray-brown, Silty CLAY, rock fragments, moist.		CLAY		
12	S-13	12-13				2.5	S-13: Gray-brown, Silty CLAY, moist.				
13	S-14	13-14				2.7	S-14: Red-brown, CLAY, moist.				
14											

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.7 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Makayla Myers

Boring No.:
HS-SB-4266

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4266
SHEET: 2 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/10/2019
Finish Date: 7/10/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15			14-15	2.3	S-15: 14-14.8': Gray-brown, Silty CLAY, moist. 14.8-15': No recovery.			
	C-4	15-20	60	60		NR	C-4:		CLAY	
16	S-16	15-16				2.8	S-16: Gray-brown, Silty CLAY, moist.			16
	S-17	16-17				2.1	S-17: Gray, coarse SAND & GRAVEL, moist.			
17	S-18	17-18				2.1	S-18: Gray, coarse SAND & GRAVEL, moist.			
18	S-19	18-19				2.0	S-19: Light brown, fine SAND, moist.		SAND	
19	S-20	19-20				N/A	S-20: No recovery.			
20							End of exploration at 20 feet.			20
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils
Blows/FT Density
0-4 -- Very Loose
4-10 -- Loose
10-30 -- Medium Dense
30-50 -- Dense
>50 -- Very Dense

Cohesive Soils
Blows/FT Consistency
<2 -- Very Soft
2-4 -- Soft
4-8 -- M. Stiff
8-15 -- Stiff
15-30 -- V. Stiff
>30 -- Hard

Plasticity
SM Thread Diameter Rolled

None	SILT
1/4"	Clayey SILT
1/8"	SILT & CLAY
1/16"	CLAY & SILT
1/32"	Silty CLAY
1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4266

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4267** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/10/2019 **Finish Date:** 7/10/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	54		NR	C-1:	1	TOPSOIL 0.5	No Equipment Installed
	S-1	0-1				2.9	S-1: 0-0.5': Dark brown, TOPSOIL, moist.			
1							0.5-1': Reddish-brown, Sandy CLAY, moist.			
	S-2	1-2				2.5	S-2: 1-1.5': Reddish-brown, Sandy CLAY, moist.	2	SANDY CLAY 1.5	
							1.5-2': Brown, Silty CLAY, moist.			
2	S-3	2-3				1.8	S-3: Brown, Silty CLAY, moist.	3		
3	S-4	3-4				3.1	S-4: Brown, Silty CLAY, Sand lenses, moist.			
4	S-5	4-5				2.0	S-5: 4-4.5': Brown, Silty CLAY, Sand lenses, moist.		SILTY CLAY	
							4.5-5': No recovery.			
5	C-2	5-10	60	58		NR	C-2:			
	S-6	5-6				2.5	S-6: 5-5.3': Brown, Silty CLAY, moist.			
6							5.3-6': Gray-brown, Silty CLAY, moist.			
	S-7	6-7				2.9	S-7: 6-6.8': Gray-brown, Silty CLAY, moist.		6.3	
							6.8-7': Brown, CLAY, moist.			
7	S-8	7-8				2.4	S-8: Brown, CLAY, moist.			
8	S-9	8-9				2.5	S-9: Brown, CLAY, moist.		CLAY	
9	S-10	9-10				2.2	S-10: 9-9.4': Brown, CLAY, moist.			
							9.4-10': Brown, CLAY, some fine Sand, moist.			
10									10	
	C-3	10-15	60	51		NR	C-3:			
	S-11	10-11				4.4	S-11: 10-10.8': Brown, Clayey SAND, moist.		SAND 10.8	
11							10.8-11': Brown, CLAY, moist.			
	S-12	11-12				3.8	S-12: Brown, CLAY, moist.			
12	S-13	12-13			12-13	3.3	S-13: Brown, CLAY, moist.		CLAY	
13	S-14	13-14				4.4	S-14: Brown, CLAY, moist.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 1.0 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Makayla Myers

Boring No.:
HS-SB-4267

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4267** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/10/2019
Finish Date: 7/10/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
	S-15	14-15				4.2	S-15: 14-14.2': Brown, CLAY, moist.			
							14.2-15': No recovery.		CLAY	
15										15
	C-4	15-20	60	53	15-16	NR	C-4:		SAND	15.5
	S-16	15-16				3.6	S-16: 15-15.5': Brown, fine SAND, moist.			
16							15.5-16': Brown, CLAY, moist.		CLAY	16.2
	S-17	16-17				3.5	S-17: 16-16.2': Brown, CLAY, moist.			
							16.2-17': Gray-tan, coarse SAND and Gravel, moist.		SAND & GRAVEL	
17										17
	S-18	17-18				2.6	S-18: 17-17.7': Gray-tan, coarse SAND and Gravel, moist.			
							17.7-18': Light brown, fine SAND, moist.			
18										
	S-19	18-19				3.2	S-19: Light brown, fine SAND, moist.			
									SAND	
19										
	S-20	19-20				2.4	S-20: 19-19.4': Light brown, fine SAND, moist.			
							19.4-20': No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4267

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4270
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/10/2019
Finish Date: 7/10/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)	Equipment Installed
	C-1	0-5	60	50		NR	C-1:	1	TOPSOIL	0.4	No Equipment Installed
	S-1	0-1				2.6	S-1: 0-0.4': Dark brown, TOPSOIL, moist				
1							0.4-1': Brown, Silty CLAY, moist.				
	S-2	1-2				2.9	S-2: Brown, Silty CLAY, fine Sand seams, moist.	2			
2	S-3	2-3				2.7	S-3: Brown, Silty CLAY, fine Sand seams, moist.	3	SILTY CLAY		
3	S-4	3-4				3.3	S-4: 3-3.5': Brown, Silty CLAY, fine Sand seams, moist.	4		3.5	
							3.5-4': Brown, CLAY, moist.				
4	S-5	4-5				2.6	S-5: 4-4.1': Brown, CLAY, moist.		CLAY		
							4.1-5': No Recovery.				
5	C-2	5-10	60	60		NR	C-2:			5	
	S-6	5-6				3.3	S-6: 5-5.5': Tan, Clayey fine SAND, moist.		SAND	5.5	
							5.5-5.7': Dark brown, SILT, moist.				
6	S-7	6-7				5.1	5.7-6': Brown, CLAY, moist.		CLAY		
							S-7: 6-6.5': Brown, CLAY, moist.			6.5	
7							6.5-7': Gray, Sandy CLAY, waste, moist.				
	S-8	7-8				9.8	S-8: 7-7.5': Gray, Sandy CLAY, waste, moist.		WASTE		
							7.5-7.7': Black, SAND, waste, moist.			7.7	
8							7.7-8': Gray/brown/black, CLAY, streaks of waste, moist.				
	S-9	8-9				8.9	S-9: 8-8.2': Gray/brown/black, CLAY, streaks of waste,		CLAY		
							moist.			8.8	
9							8.2-8.4': Brown, CLAY, moist.				
	S-10	9-10				11.7	8.4-9': Black, Sandy Waste, moist.		SANDY CLAY		
							S-10: 9-9.1': Black, Sandy Waste, moist.				
10										10	
	C-3	10-15	60	52		NR	9.1-10': No recovery.		CLAY	10.3	
	S-11	10-11				65.3	C-3:				
11							S-11: 10-10.3': Brown, CLAY, moist.				
	S-12	11-12				321.2	10.3-10.8': Black, SAND, waste, moist.				
							10.8-10.9': Brown, CLAY, moist.		WASTE		
12							10.9-11': Dark gray, CLAY, waste, moist.				
	S-13	12-13				157.0	S-12: 11-11.2': Dark gray, CLAY, waste, moist.				
							11.2-11.4': White/gray, fine SAND, waste, moist.			12.8	
13							11.4-12': Gray, CLAY, waste, moist.				
	S-14	13-14				3.1	S-13: 12-12.5': Gray, CLAY, seams of black sandy waste,		CLAY		
							moist.			13.9	
14											

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.9 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Makayla Myers

Boring No.:
HS-SB-4270

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4270** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/10/2019
Finish Date: 7/10/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				1.7	12.5-12.8': Black, SAND, waste, moist. 12.8-13': Brown, CLAY, moist.			
	C-4	15-20	60	36		NR	S-14: 13-13.9': Brown, CLAY, moist. 13.9-14': Light brown, fine SAND, moist.			
16	S-16	15-16				3.3	S-15: Light brown, fine SAND, moist. C-4:			
	S-17	16-17				2.1	S-16: Light brown, fine to medium SAND, streaks of waste, moist.			
17	S-18	17-18				2.0	S-17: Light brown, fine to medium SAND, streaks of waste, moist.		SAND	
18	S-19	18-19				N/A	S-18: Light brown, fine to medium SAND, streaks of waste, moist. S-19: No recovery.			
19	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4270

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4272** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/10/2019 **Finish Date:** 7/10/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	50		NR	C-1:	1	TOPSOIL 0.4	No Equipment Installed
	S-1	0-1				1.5	S-1: 0-0.4': Dark brown, TOPSOIL, moist.			
1							0.4-1': Brown, Clayey SAND, moist.			
	S-2	1-2				1.3	S-2: Brown, Clayey SAND, moist.	2	SAND	
2									2	
	S-3	2-3				1.3	S-3: 2-2.7': Brown, Silty CLAY, moist.	3	CLAY	
							2.7-3': Gray-brown, SILT, moist.		2.7	
3										
	S-4	3-4				1.4	S-4: Gray-brown, SILT, moist.	4	SILT	
4									4	
	S-5	4-5				8.0	S-5: 4-4.2': Black, fine SAND, waste, moist.		WASTE SAND 4.2	
							4.2-5': No recovery.			
5										
	C-2	5-10	60	52		NR	C-2:		WASTE - SILTY CLAY	
	S-6	5-6				44.0	S-6: 5-5.4': Gray-brown, SILT, waste, moist.			
6							5.4-6': Dark gray, CLAY, waste, moist.			
	S-7	6-7				66.7	S-7: Black and gray, fine to coarse SAND, waste, moist.		6.4	
									SAND 6.5	
7										
	S-8	7-8				3.7	S-8: 7-7.9': Black and gray, fine to coarse SAND, waste, moist.		CLAY	
8							7.9-8': Brown, fine SAND, moist.		7.9	
	S-9	8-9				2.2	S-9: 8-8.3': Brown, fine SAND, moist.		SAND 8.3	
							8.3-9': Brown, CLAY, moist.		CLAY	
9									9.1	
	S-10	9-10				1.6	S-10: 9-9.3': Brown, CLAY, moist.			
							9.3-10': No recovery.			
10										
	C-3	10-15	60	40		NR	C-3:		SILTY CLAY	
	S-11	10-11				1.8	S-11: Brown, Silty CLAY, little fine Sand, moist.			
11									11	
	S-12	11-12				3.7	S-12: 11-11.5': Brown, fine to coarse SAND, some Silty Clay, moist.			
12							11.5-12': Light brown, fine to medium SAND, trace Silt, moist.			
	S-13	12-13				2.4	S-13: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
13										
	S-14	13-14				1.4	S-14: 13-13.3': Light brown, fine to medium SAND, trace Silt, moist.			
14							13.3-14': No recovery.			

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 1.0 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Makayla Myers

Boring No.:
HS-SB-4272

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4272** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/10/2019
Finish Date: 7/10/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	40		NR	C-4:			
	S-16	15-16				2.0	S-16: Light brown, fine to medium SAND, trace Silt, moist.			
16	S-17	16-17				1.4	S-17: Light brown, fine to medium SAND, trace Silt, moist.			
17	S-18	17-18				1.3	S-18: 17-17.2': Light brown, fine to medium SAND, trace Silt, moist.		SAND	
18	S-19	18-19				1.3	17.2-17.6': Brown, fine to medium SAND, some Silt, moist. 17.6-18': Light brown, fine to medium SAND, trace Silt, moist.			
19	S-20	19-20				N/A	S-19: 18-18.3': Light brown, fine to medium SAND, trace Silt, moist. 18.3-19': No recovery.			
20							S-20: No recovery.			20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4272

GEOPROBE LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4264
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/11/2019
Finish Date: 7/11/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	54		NR	C-1:	1		
	S-1	0-1				0.5	S-1: 0-0.6': Dark brown, TOPSOIL, moist.		TOPSOIL 0.6	
1							0.6-1': Brown, CLAY & SILT, some fine Sand, moist.			
	S-2	1-2				0.6	S-2: Brown, CLAY & SILT, some fine Sand, moist.	2		No Equipment Installed
2	S-3	2-3				0.6	S-3: Brown, CLAY & SILT, Sand seams at 2.5' and 2.9', moist.	3	CLAY & SILT	
3	S-4	3-4				0.6	S-4: Brown, CLAY & SILT, Sand seams at 3.6' and 3.9', moist.			
4									4	
	S-5	4-5				0.5	S-5: 4-4.3': Yellow-brown, fine SAND, some Silt, moist.		SAND 4.3	
							4.3-5': Brown, Silty CLAY, moist.			
5	C-2	5-10	60	57		NR	C-2:			
	S-6	5-6				0.7	S-6: Brown, Silty CLAY, moist.			
6	S-7	6-7				0.7	S-7: Brown, Silty CLAY, moist.		SILTY CLAY	
7	S-8	7-8				0.3	S-8: Brown, Silty CLAY, moist.			
8	S-9	8-9				0.5	S-9: 8-8.6': Brown, Silty CLAY, moist.			
							8.6-9': Brown, CLAY, gravel/rock fragments, moist.		8.6	
9									CLAY 9	
	S-10	9-10				0.5	S-10: Brown, Silty CLAY, moist.			
10									SILTY CLAY 10	
	C-3	10-15	60	60		NR	C-3:			
	S-11	10-11				0.7	S-11: 10-10.8': Brown, CLAY, little Silt, moist.		CLAY 10.8	
11							10.8-11': Brown, coarse SAND, some Silt, rock fragments,		SAND 11	
	S-12	11-12				0.4	moist.			
							S-12: Brown, Silty CLAY, moist.			
12					12-13				SILTY SAND	
	S-13	12-13				0.4	S-13: 12-12.5': Brown, Silty CLAY, moist.		12.5	
							12.5-13': Gray-brown, medium coarse SAND & CLAY, little			
13							Silt, moist.		SAND & CLAY 13	
	S-14	13-14				0.4	S-14: Gray-brown, SILT & CLAY, moist.			
14									CLAY 13.8	

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.3 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Makayla Myers

Boring No.:
HS-SB-4264

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4264
SHEET: 2 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/11/2019
Finish Date: 7/11/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
	S-15	14-15				0.5	S-15: Gray-brown, SILT & CLAY, rock fragments, moist.		SILT & CLAY	
15	C-4	15-20	60	43	15-16	NR	C-4:		SILT & CLAY	
	S-16	15-16				0.4	S-16: Brown, SILT & CLAY, rock fragments, moist.			
16										16
	S-17	16-17				9.3	S-17: 16-16.8': Yellow-brown, GRAVEL and coarse SAND, some Silt, some fine Sand, moist.		SAND & GRAVEL	
17							16.8-17': Light brown, fill SAND, some Gravel, moist.			17
	S-18	17-18				0.4	S-18: 17-17.5': Light brown, fine to medium SAND, some Gravel, moist.			
18							17.5-18': Light brown, fine to medium SAND, little Silt, moist.			
	S-19	18-19				0.4	S-19: 18-18.4': Light brown, fine to medium SAND, little Silt, moist.		SAND	
19	S-20	19-20				N/A	18-19': No recovery. S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4264

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4265
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/11/2019
Finish Date: 7/11/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)	Equipment Installed
	C-1	0-5	60	54		NR	C-1:	1	TOPSOIL	0.4	No Equipment Installed
	S-1	0-1				1.2	S-1: 0-0.4': Dark brown to brown, TOPSOIL, moist.				
1							0.4-1': Brown, Clayey SILT, little Gravel, moist.		SILT	1	
	S-2	1-2				1.4	S-2: Brown, CLAY & SILT, moist, roots present.	2	CLAY & SILT	2	
2	S-3	2-3				1.2	S-3: 2-2.4': Brown, CLAY & SILT, moist.	3	CLAY	2.4	
							2.4-3': Brown, Silty CLAY, moist.		CLAY & SILT	3	
3	S-4	3-4				1.1	S-4: Brown, CLAY & SILT, little fine Sand, rock fragments, moist.		CLAY & SAND	4	
4	S-5	4-5				1.1	S-5: 4-4.5': Brown-gray, CLAY and fine Sand, some Silt, moist.				
5							4.5-5': No recovery.				
	C-2	5-10	60	55		NR	C-2:				
	S-6	5-6				0.8	S-6: Brown, CLAY, some Silt, moist.				
6	S-7	6-7				0.8	S-7: Brown, CLAY, some Silt, rock fragments, moist.		CLAY		
7	S-8	7-8				0.8	S-8: 7-7.9': Gray-brown, CLAY, little Silt, moist.				
							7.9-8': Gray, fine to medium SAND, some Silt, moist.			7.9	
8	S-9	8-9				0.7	S-9: 8-8.5': Gray, fine to medium SAND, some Silt, moist.		SAND	8.5	
							8.5-9': Gray-brown, CLAY, little Silt, moist.		CLAY	9	
9	S-10	9-10				0.8	S-10: 9-9.6': Brown, CLAY & SILT, moist.				
							9.6-10': No recovery.		CLAY & SILT	10	
10	C-3	10-15	60	50		NR	C-3:				
	S-11	10-11				1.1	S-11: 10-10.6': Gray-brown, CLAY, some Silt, moist.		CLAY	10.6	
11	S-12	11-12				0.8	10.6-11': Brown, medium to coarse SAND, some Clay, moist.				
							S-12: Gray-brown, CLAY, some Silt, little fine to medium Sand, moist.		SAND		
12	S-13	12-13			12-13	0.9	S-13: 12-12.5': Gray-brown, CLAY, some Silt, moist.			12.5	
							12.5-13': Brown, SILT & CLAY, moist.				
13	S-14	13-14				0.8	S-14: Brown, SILT & CLAY, moist.		SILT & CLAY		
14											

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.6 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Makayla Myers

Boring No.:
HS-SB-4265

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4265
SHEET: 2 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/11/2019
Finish Date: 7/11/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
	S-15	14-15				0.9	S-15: 14-14.2': Brown, SILT & CLAY, moist. 14.2-15': No recovery.		SILT & CLAY	14.5
15	C-4	15-20	60	50	15-16	NR	C-4:		GRAVEL & SAND	15.5
	S-16	15-16				0.7	S-16: Gray-brown, GRAVEL & medium to coarse Sand, little Silt, moist.			
16	S-17	16-17				0.6	S-17: Light brown, medium to coarse SAND, little Silt, rock fragments, moist.			
17	S-18	17-18				0.7	S-18: Light brown, fine to medium SAND, some Silt, moist.			
18	S-19	18-19				0.7	S-19: Light brown, fine to medium SAND, some Silt, moist.		SAND	
19	S-20	19-20				N/A	S-20: 19-19.1': Light brown, fine to medium SAND, some Silt, moist. 19.1-20': No recovery.			20
20							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4265

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4268** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/10/2019 **Finish Date:** 7/10/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	53		NR	C-1:	1	TOPSOIL 0.4	
	S-1	0-1				1.3	S-1: 0-0.4': Black, TOPSOIL, moist.		GRAVEL 0.6	
1							0.4-0.6': Brown, fine GRAVEL, trace Sand, moist.			
	S-2	1-2				1.1	0.6-1': Brown, Clayey SILT, little fine Sand, moist.	2		No Equipment Installed
							S-2: Brown, Clayey SILT, little fine Sand, moist.			
2										
	S-3	2-3				1.1	S-3: Brown, Clayey SILT, little fine Sand, Sand lenses from 2.5'-2.6' and 2.8'-2.9', moist.	3		
3										
	S-4	3-4				1.1	S-4: Brown, Clayey SILT, some fine Sand, moist.		SILT	
4										
	S-5	4-5				1.0	S-5: 4-4.4': Brown, Clayey SILT, some fine Sand, moist.			
							4.4-5': No recovery.			
5										
	C-2	5-10	60	38		NR	C-2:			
	S-6	5-6				1.0	S-6: 5-5.7': Brown, Clayey SILT, moist.		5.7	
6							5.7-6': Black, SILT, trace Sand, trace Gravel, moist.			
	S-7	6-7				1.1	S-7: Light brown, fine to medium SAND, trace Silt, moist.			
7										
	S-8	7-8				1.0	S-8: Light brown, fine to medium SAND, trace Silt, moist.			
8										
	S-9	8-9				1.0	S-9: 8-8.2': Light brown, fine to medium SAND, trace Silt, moist.			
9							8.2-9': No recovery.			
	S-10	9-10				N/A	S-10: No recovery.		SAND	
10										
	C-3	10-15	60	50		NR	C-3:			
	S-11	10-11				1.3	S-11: Light brown, fine to medium SAND, trace Silt, moist.			
11										
	S-12	11-12				1.6	S-12: Light brown, fine to medium SAND, trace Silt, Clay lenses from 11.2'-11.4', moist.			
12										
	S-13	12-13			12-13	1.2	S-13: 12-12.7': Light brown, fine to medium SAND, trace Silt, moist.		12.7	
13							12.7-13': Brown, CLAY & SILT, little fine Sand, moist.			
	S-14	13-14				0.9	S-14: Brown, CLAY & SILT, little fine Sand, moist.		CLAY & SILT	
14									14	

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.9 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Makayla Myers

Boring No.:
HS-SB-4268

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA **GeoEnvironmental, Inc.** *Engineers and Scientists*	**Wolverine World Wide** **House Street** **Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4268** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/10/2019 **Finish Date:** 7/10/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				1.0	S-15: 14-14.2': Brown, CLAY & SILT, little fine Sand, moist. 14.2-15': No recovery.			
	C-4	15-20	60	37	15-16	NR	C-4:			
16	S-16	15-16				1.1	S-16: Light brown, fine to medium SAND, moist.			
	S-17	16-17				1.3	S-17: Light brown, fine to medium SAND, moist.			
17	S-18	17-18				1.2	S-18: Light brown, fine to medium SAND, moist.		SAND	
18	S-19	18-19				1.1	S-19: 18-18.1': Light brown, fine to medium SAND, moist. 18.1-19': No recovery.			
19	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4268

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4269** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/11/2019 **Finish Date:** 7/11/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	55		NR	C-1:	1	TOPSOIL 0.5	No Equipment Installed
	S-1	0-1				0.6	S-1: 0-0.5': Dark brown, TOPSOIL, moist.			
1							0.5-1': Brown, SILT & CLAY, some fine Sand, Sand seam, moist.			
	S-2	1-2				0.3	S-2: Brown, SILT & CLAY, some fine Sand, rock fragments, moist.	2		
2	S-3	2-3				0.3	S-3: Brown, SILT & CLAY, some fine Sand, sand seam at 2.7', moist.	3		
3	S-4	3-4				0.2	S-4: Brown, SILT & CLAY, some fine Sand, Sand seam from 3.2'-3.5', moist.		SILT & CLAY	
4	S-5	4-5				0.2	S-5: Brown, SILT & CLAY, some fine Sand, moist.			
5	C-2	5-10	60	47		NR	C-2:			
	S-6	5-6				0.5	S-6: Brown, SILT & CLAY, some fine Sand, moist.			
6	S-7	6-7				0.5	S-7: 6-6.5': Brown, SILT & CLAY, some fine Sand, moist.		6.5	
							6.5-6.8': Brown, fine to medium SAND, moist.		SAND 6.8	
7							6.8-7': Brown, Silty CLAY, moist.		SILTY CLAY 7.4	
	S-8	7-8				0.4	S-8: 7-7.4': Brown, Silty CLAY, Sand seam, moist.			
							7.4-8': Brown, SILT & CLAY, some fine Sand, moist.		SILT & CLAY 8	
8					8-9					
	S-9	8-9				4.8	S-9: 8-8.8': Gray, CLAY and fine Sand, some Silt, moist.		CLAY & SAND 8.8	
							8.8-8.9': Dark gray, CLAY, waste, moist.			
9							8.9-9': No recovery.			
	S-10	9-10				N/A	S-10: No recovery.		CLAY 10	
10	C-3	10-15	60	35		NR	C-3:			
	S-11	10-11				0.6	S-11: Gray-brown, CLAY & SILT, some fine Sand, moist.			
11					11-12				CLAY & SILT	
	S-12	11-12				0.4	S-12: 11-11.8': Gray-brown, CLAY & SILT, some fine Sand, moist.		11.8	
12							11.8-12': Brown, Silty CLAY, moist.			
	S-13	12-13				0.3	S-13: Brown, Silty CLAY, moist.			
13	S-14	13-14				N/A	S-14: No recovery.		SILTY CLAY	
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.3-0.2 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Makayla Myers

Boring No.:
HS-SB-4269

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4269
SHEET: 2 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/11/2019
Finish Date: 7/11/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	45		NR	C-4:			
	S-16	15-16				0.5	S-16: Gray-brown, fine SAND & CLAY, little Silt, moist.		SILTY CLAY	
16	S-17	16-17				0.3	S-17: 16-16.4': Gray-brown, fine SAND & CLAY, little Silt, moist.			
17	S-18	17-18				0.4	16.4-17': Brown, medium to coarse SAND & CLAY, some Gravel, moist.			17.2
18	S-19	18-19				0.4	S-18: 17-17.2': Brown, medium to coarse SAND & CLAY, some Gravel, moist. 17.2-18': Brown, fine to medium SAND, some Gravel, little Silt, moist.		SAND	
19	S-20	19-20				N/A	S-19: Light Brown, fine to medium SAND, some Silt, moist. S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4269

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4271** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/11/2019 **Finish Date:** 7/11/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	53		NR	C-1:	1		No Equipment Installed
	S-1	0-1				0.5	S-1: Dark brown, SILT & CLAY, little fine Sand, rock fragments, moist.		SILT & CLAY	
1	S-2	1-2				0.6	S-2: 1-1.7': Dark brown, SILT & CLAY, little fine Sand, rock fragments, moist.	2	1.7	
2	S-3	2-3				0.6	1.7-2': Brown, fine to medium SAND & CLAY, some Silt, Sand seam, moist.	3	SAND & CLAY	
3	S-4	3-4				0.5	S-3: Brown, fine to medium SAND & CLAY, some Silt, Sand seam, moist. S-4: Brown, CLAY, some Silt, Sand seams, moist.		3	
4	S-5	4-5				0.6	S-5: Brown, CLAY, some Silt, moist.		CLAY	
5	C-2	5-10	60	46	5-6	NR	C-2:		5	
	S-6	5-6				0.6	S-6: Brown, fine SAND & CLAY, little Silt, moist.		SAND & CLAY	
6	S-7	6-7				0.7	S-7: Dark gray, Silty CLAY, little Sand, waste, moist.		6	
7	S-8	7-8				0.5	S-8: Dark gray, Silty CLAY, little Sand, waste, moist.		SILTY CLAY	
8	S-9	8-9			8-9	0.8	S-9: Dark gray, Silty CLAY, little Sand, waste, moist.			
9	S-10	9-10				N/A	S-10: No recovery.		9 NO RECOVERY	
10	C-3	10-15	60	56		NR	C-3:		10	
	S-11	10-11				0.3	S-11: Gray-brown, Silty CLAY, little Sand, moist.		SILTY CLAY	
11	S-12	11-12				0.4	S-12: 11-11.4': Gray-brown, Silty CLAY, little Sand, moist.		11.4	
12	S-13	12-13				0.3	11.4-12': Gray brown, fine to medium SAND, some Clay, little Silt, moist. S-13: Gray-brown, SILT & CLAY, little fine Sand, moist.		SAND 12	
13	S-14	13-14				0.2	S-14: 13-13.2': Gray-brown, Silty CLAY, little Sand, moist.		SILT & CLAY	
							13.2-14': Brown, Silty CLAY, some fine Sand, moist.		13.2 SILTY CLAY	
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.4 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Makayla Myers

Boring No.:
HS-SB-4271

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4271
SHEET: 2 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/11/2019
Finish Date: 7/11/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA

Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				0.2	S-15: 14-14.3': Brown, Silty CLAY, some fine Sand, moist. 14.3-15': No recovery.		SILTY CLAY	15
	C-4	15-20	60	43		NR	C-4:			
16	S-16	15-16				0.6	S-16: Brown, Sandy CLAY, some Silt, moist.		SANDY CLAY	16
17	S-17	16-17				0.5	S-17: Gray-brown, coarse SAND & GRAVEL, moist.		SAND & GRAVEL	17
18	S-18	17-18				0.5	S-18: Light brown, fine to medium SAND, some Gravel, rock fragments, moist.			
19	S-19	18-19				0.6	S-19: Light brown, fine to medium SAND, some Silt, moist.		SAND	
20	S-20	19-20				N/A	S-20: No recovery.			20
21							End of exploration at 20 feet.			
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4271

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4300** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson **Drilling Co.:** Stearns Drilling **Foreman:** Gary Geerligs	**Start Date:** 7/11/2019 **Finish Date:** 7/11/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 6620 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) / Stratum Description / Depth (ft.)	Equipment Installed
	C-1	0-5	60	39		NR	C-1:	1	TOPSOIL 0.3	No Equipment Installed
	S-1	0-1				0.2	S-1: 0-0.3': Black, SILT, trace fine Sand. 0.3-1': Brown, Clayey SILT, little fine Sand, moist.			
1	S-2	1-2				0.7	S-2: Brown, Clayey SILT, little fine Sand, Sand lenses, moist, roots present.	2	CLAYEY SILT	
2	S-3	2-3				0.1	S-3: 2-2.8': Brown, Clayey SILT, little fine Sand, rock fragments, moist.	3		
3	S-4	3-4				0.1	2.8-3': Light brown/brown, fine to medium SAND, little Silt, rock fragments, moist.		2.8	
4	S-5	4-5				N/A	S-4: 3-3.2': Light brown/brown, fine to medium SAND, little Silt, rock fragments, moist. 3.2-4': No recovery. S-5: No recovery.		SAND	
5	C-2	5-10	60	58		NR	C-2:		5	
	S-6	5-6				0.1	S-6: Brown, Clayey SILT, little fine Sand, rock fragments, moist.			
6	S-7	6-7			6-7	0.1	S-7: Brown, Clayey SILT, little fine Sand, rock fragments, Sand lens, moist.			
7	S-8	7-8				0.2	S-8: Brown, Clayey SILT, little fine Sand, moist.		CLAYEY SILT	
8	S-9	8-9			8-9	0.2	S-9: Brown, Clayey SILT, little fine Sand, moist.			
9	S-10	9-10				0.1	S-10: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, Clay lens, moist.		9	
10	C-3	10-15	60	42		NR	C-3:			
	S-11	10-11				0.1	S-11: Light brown, fine to medium SAND, trace Silt, moist.			
11	S-12	11-12				0.1	S-12: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
12	S-13	12-13				0.1	S-13: Light brown, fine to medium SAND, trace Silt, moist.			
13	S-14	13-14				0.4	S-14: Light brown, fine to medium SAND, trace Silt, moist.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.1 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4300

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4300** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/11/2019
Finish Date: 7/11/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	44		NR	C-4:			
	S-16	15-16				0.3	S-16: Light brown, fine to medium SAND, trace Silt, moist.			
16	S-17	16-17				0.3	S-17: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, Clay lens, moist.		SAND	
17	S-18	17-18				0.3	S-18: Brown, fine to medium SAND, trace Silt, trace fine Gravel, moist, gray discoloration.			
18										18
	S-19	18-19				0.3	S-19: Brown, CLAY, little fine Sand, moist.			
19	S-20	19-20				N/A	S-20: No recovery.		CLAY	
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4300

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4301** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson **Drilling Co.:** Stearns Drilling **Foreman:** Gary Geerligs	**Start Date:** 7/11/2019 **Finish Date:** 7/11/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 6620 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) / Stratum Description / Depth (ft.)	Equipment Installed
	C-1	0-5	60	47		NR	C-1:	1	TOPSOIL 0.2	No Equipment Installed
	S-1	0-1				1.3	S-1: 0-0.2': Black, SILT, trace fine Sand, moist, roots present.			
1										
	S-2	1-2				1.0	0.2-1': Brown, Clayey SILT, little fine Sand, moist.	2		
							S-2: Brown, Clayey SILT, little fine Sand, moist.		CLAYEY SILT	
2										
	S-3	2-3				1.0	S-3: 2-2.8': Brown, Clayey SILT, little fine Sand, rock fragments, moist.	3		
							2.8-3': Brown, CLAY & SILT, little fine Sand, moist.		2.8	
3										
	S-4	3-4				1.3	S-4: 3-3.9': Brown, CLAY & SILT, little fine Sand, rock fragments, moist.	4		
4							3.9-4': No recovery.			
	S-5	4-5				N/A	S-5: No recovery.		CLAY & SILT	
5										
	C-2	5-10	60	31		NR	C-2:		5.2	
	S-6	5-6				1.3	S-6: 5-5.2': Dark brown, CLAY & SILT, little fine Sand, moist.		CLAY	
6										
	S-7	6-7				6.2	5.2-6': Brown, CLAY, little fine Sand, Sand lens, rock fragments, moist.		6.2	
									WASTE 6.8	
7							S-7: 6-6.2': Brown, CLAY, little fine Sand, moist.			
	S-8	7-8				0.9	6.2-6.8': Black, CLAY, trace fine Sand, waste, moist.			
							6.8-7': Light brown, fine to medium SAND, trace Silt, moist.			
8										
	S-9	8-9				N/A	S-8: 7-7.6': Light brown, fine to medium SAND, trace Silt, moist.			
							7.6-8': No recovery.			
9										
	S-10	9-10				N/A	S-9: No recovery.			
							S-10: No recovery.			
10										
	C-3	10-15	60	36		NR	C-3:			
	S-11	10-11				1.3	S-11: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.		SAND	
11										
	S-12	11-12				1.9	S-12: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.			
12										
	S-13	12-13				0.9	S-13: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.			
13										
	S-14	13-14				N/A	S-14: No recovery.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.8 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4301

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4301** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson **Drilling Co.:** Stearns Drilling **Foreman:** Gary Geerligs	**Start Date:** 7/11/2019 **Finish Date:** 7/11/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 6620 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	51		NR	C-4:		SAND	
	S-16	15-16				1.1	S-16: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.			
16										16
	S-17	16-17				1.2	S-17: Brown, CLAY, little fine Sand, moist.			
17										
	S-18	17-18				0.8	S-18: Brown, CLAY, little fine Sand, moist.		CLAY	
18										18.2
	S-19	18-19				1.0	S-19: 18-18.2': Brown, CLAY, little fine Sand, moist.			
							18.2-19': Light brown, fine to medium SAND, trace Silt, trace fine Gravel, Clay lens, moist.		SAND	
19										19
	S-20	19-20				1.8	S-20: 19-19.2': Brown, CLAY, little fine Sand, Sand lens, moist.		CLAY	
20							19.2-20': No recovery.			20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4301

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4302** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson **Drilling Co.:** Stearns Drilling **Foreman:** Gary Geerligs	**Start Date:** 7/10/2019 **Finish Date:** 7/10/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 6620 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	58		NR	C-1:	1	TOPSOIL 0.4	No Equipment Installed
	S-1	0-1				1.3	S-1: 0-0.4': Dark brown, TOPSOIL, moist.			
1							0.4-1': Brown, Clayey SILT, trace fine Sand, moist.		CLAY & SILT	
	S-2	1-2				1.3	S-2: 1-1.4': Brown, Clayey SILT, some fine Sand, moist.	2	1.4	
							1.4-1.8': Light brown, fine to medium SAND, little Silt, moist.		SAND 1.8	
2							1.8-2': Brown, fine to medium SAND, some Silt, moist.			
	S-3	2-3				1.5	S-3: Brown, Clayey SILT, little Sand, Sand lenses from	3		
							2.1'-2.3', moist.			
3										
	S-4	3-4				1.4	S-4: 3-3.4': Brown, Clayey SILT, little Sand,			
							3.4-4': Brown, Silty CLAY, little fine Sand, moist.		SILT & CLAY	
4										
	S-5	4-5				1.4	S-5: 4-4.8': Brown, Silty CLAY, little fine Sand, moist.			
							4.8-5': No recovery.			
5									5	
	C-2	5-10	60	40		NR	C-2:		SILTY CLAY	
	S-6	5-6				2.0	S-6: 5-5.6': Brown, Silty CLAY, little fine Sand, Sand seam		5.6	
6					6-7		from 5.1'-5.2' and 5.4'-5.6', moist.			
	S-7	6-7				1.5	5.6-6': Brown, CLAY, little fine Sand, moist.			
							S-7: Brown, CLAY, little fine Sand, Sand seam from			
7							6.6'-6.8', moist.			
	S-8	7-8				1.5	S-8: Brown, CLAY, little fine Sand, moist.		CLAY	
8					8-9					
	S-9	8-9				1.1	S-9: 8-8.8': Brown, CLAY, little fine Sand, moist.			
							8.8-9': No recovery.		8.8	
9										
	S-10	9-10				N/A	S-10: No recovery.			
10										
	C-3	10-15	60	48		NR	C-3:			
	S-11	10-11				1.2	S-11: Light brown, fine to medium SAND, trace Silt, moist.			
11										
	S-12	11-12				1.1	S-12: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
12										
	S-13	12-13				1.3	S-13: Light brown, fine to medium SAND, trace Silt, moist.			
13										
	S-14	13-14				1.8	S-14: Light brown, fine to medium SAND, trace Silt, moist.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 1.1 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4302

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4302
SHEET: 2 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/10/2019
Finish Date: 7/10/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA

Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	50		NR	C-4:			
	S-16	15-16				1.7	S-16: Light brown, fine to medium SAND, trace Silt, moist.			
16	S-17	16-17				1.1	S-17: Light brown, fine to medium SAND, trace Silt, moist.			
									SAND	
17	S-18	17-18				1.1	S-18: Light brown, fine to medium SAND, trace Silt, Clay lens from 17.6'-17.8', moist.			
18	S-19	18-19				1.4	S-19: Light brown, fine to medium SAND, trace Silt, moist.			
19	S-20	19-20				1.4	S-20: 19-19.1': Brown, CLAY, little fine Sand, moist. 19.1-20': No recovery.			19.2
20									CLAY	20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4302

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 8/30/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4303** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/12/2019
Finish Date: 7/12/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)	Equipment Installed
	C-1	0-5	60	53		NR	C-1:	1	TOPSOIL	0.4	No Equipment Installed
	S-1	0-1				1.2	S-1: 0-0.4': Black, SILT, trace fine Sand, moist, roots present.		CLAYEY SILT	0.8	
1	S-2	1-2				2.2	0.4-0.8': Brown, Clayey SILT, little fine Sand, moist.	2	SAND	1.2	
							0.8-1': Brown, fine to medium SAND, trace Silt, moist.				
2	S-3	2-3				1.0	S-2: 1-1.2': Brown, fine to medium SAND, trace Silt, moist. 1.2-2': Brown, Clayey SILT, little fine Sand, Sand lens, rock fragments, moist.	3	CLAYEY SILT		
3	S-4	3-4				0.8	S-3: Brown, Clayey SILT, little fine Sand, Sand lens, rock fragments, moist.				
							S-4: 3-3.7': Brown, Clayey SILT, little fine Sand, moist.			3.7	
4	S-5	4-5				0.8	3.7-4': Light brown, fine to medium SAND, little Silt, moist.		SAND	4.4	
							S-5: Light brown, fine to medium SAND, little Silt, Clay lens, moist.		NO RECOVERY	5	
5	C-2	5-10	60	53	5-6	NR	C-2:				
	S-6	5-6				0.7	S-6: Brown, Clayey SILT, little fine Sand, moist.				
6	S-7	6-7				0.8	S-7: Brown, Clayey SILT, little fine Sand, moist.				
7	S-8	7-8			7-8	0.8	S-8: Brown, Clayey SILT, little fine Sand, moist.		CLAYEY SILT		
8	S-9	8-9				0.8	S-9: Brown, Clayey SILT, little fine Sand, moist.				
9	S-10	9-10				0.7	S-10: Brown, Clayey SILT, little fine Sand, moist.				
10										10	
	C-3	10-15	60	45		NR	C-3:				
	S-11	10-11				1.1	S-11: Light brown, fine to medium SAND, trace Silt, rock fragments, moist.				
11	S-12	11-12				1.0	S-12: Light brown, fine to medium SAND, trace Silt, moist.				
12	S-13	12-13				0.7	S-13: Light brown, fine to medium SAND, trace Silt, moist.		SAND		
13	S-14	13-14				0.8	S-14: Light brown, fine to medium SAND, trace Silt, moist.				
14											

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.6 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4303

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4303** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/12/2019
Finish Date: 7/12/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	40		NR	C-4:			
	S-16	15-16				1.1	S-16: Light brown, fine to medium SAND, trace Silt, Clay lens, moist.			
16	S-17	16-17				0.8	S-17: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
17	S-18	17-18				1.1	S-18: 17-17.8': Light brown, fine to medium SAND, little Silt, trace fine Gravel, moist.			17.8
18							17.8-18': Brown, CLAY, little fine Sand, moist.			
	S-19	18-19				2.0	S-19: 18-18.3': Brown, CLAY, little fine Sand, moist. 18.3-19': No recovery.			
19	S-20	19-20				N/A	S-20: No recovery.		CLAY	
20							End of exploration at 20 feet.			20
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4303

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4304** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/11/2019
Finish Date: 7/11/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) / Stratum Description / Depth (ft.)	Equipment Installed
	C-1	0-5	60	50		NR	C-1:	1	TOPSOIL 0.2	
	S-1	0-1				0.5	S-1: 0-0.2': Black, SILT, trace fine Sand, moist.			
1							0.2-1': Brown, Clayey SILT, little fine Sand, moist.			
	S-2	1-2				0.5	S-2: Brown, Clayey SILT, little fine Sand, moist.	2	CLAYEY SILT	No Equipment Installed
2									2	
	S-3	2-3				0.5	S-3: Brown, CLAY & SILT, little fine Sand, moist.	3		
3									CLAY & SILT	
	S-4	3-4				0.5	S-4: 3-3.3': Brown, CLAY & SILT, little fine Sand, moist.		3.3	
							3.3-3.7': Gray, CLAY, trace fine Sand, waste, moist, roots		WASTE 3.7	
4							present.			
	S-5	4-5				0.4	3.7-4': Brown, Silty CLAY, lttle fine Sand, moist.		CLAY	
							S-5: Brown, Silty CLAY, little fine Sand, moist.			
5									5	
	C-2	5-10	60	39		NR	C-2:			
	S-6	5-6				0.6	S-6: Gray, CLAY, trace fine Sand, moist.			
6										
	S-7	6-7				0.4	S-7: Light brown, fine to medium SAND, trace Silt, moist.			
7										
	S-8	7-8				0.5	S-8: 7-7.8': Light brown/brown, fine to medium SAND, little			
							Silt, moist.			
8							7.8-8': Gray, fine to medium SAND, trace Silt, moist.			
	S-9	8-9				0.5	S-9: Gray, fine to medium SAND, trace Silt, moist.			
9										
	S-10	9-10				N/A	S-10: No recovery.			
									SAND	
10										
	C-3	10-15	60	45		NR	C-3:			
	S-11	10-11				0.4	S-11: Light brown, fine to medium SAND, trace Silt, moist.			
11										
	S-12	11-12				0.5	S-12: Light brown, fine to medium SAND, trace Silt, moist.			
12										
	S-13	12-13				0.4	S-13: Light brown, fine to medium SAND, trace Silt, moist.			
13										
	S-14	13-14				0.6	S-14: Light brown, fine to medium SAND, trace Silt, moist.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.4 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4304

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4304** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/11/2019
Finish Date: 7/11/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	44		NR	C-4:			
	S-16	15-16				0.6	S-16: Light brown, fine to medium SAND, trace Silt, moist.		SAND	
16	S-17	16-17				0.6	S-17: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, Clay lens, moist.			
17	S-18	17-18				0.7	S-18: 17-17.4': Light brown, fine to medium SAND, trace Silt, moist.			17.4
18							17.4-18': Brown, CLAY, little fine Sand, moist.			
	S-19	18-19				0.8	S-19: Brown, CLAY, little fine Sand, moist.		CLAY	
19	S-20	19-20				N/A	S-20: No recovery.			
20							End of exploration at 20 feet.			20
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4304

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4306
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/12/2019
Finish Date: 7/12/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	53		NR	C-1:	1	TOPSOIL 0.4	No Equipment Installed
	S-1	0-1				1.2	S-1: 0-0.4': Dark brown, SILT, trace fine Sand, moist, roots present.			
1	S-2	1-2				1.5	0.4-1': Brown, Clayey SILT, little fine Sand, moist, roots present.	2	CLAYEY SILT	
2	S-3	2-3				1.6	S-2: Brown, Clayey SILT, little fine Sand, rock fragments, moist.	3	2.6	
							S-3: 2-2.6': Brown, Clayey Silt, little fine Sand, moist.			
3	S-4	3-4				1.3	2.6-3': Brown, CLAY & SILT, little fine Sand, moist. S-4: Brown, CLAY & SILT, little fine Sand, Sand seam, rock fragments, moist.	4		
4	S-5	4-5				1.2	S-5: Brown, CLAY & SILT, little fine Sand, moist.		CLAY & SILT	
5	C-2	5-10	60	44		NR	C-2:			
	S-6	5-6				2.7	S-6: 5-5.8': Brown, CLAY & SILT, little fine Sand, moist.		5.8	
6	S-7	6-7				20.2	5.8-6': Black, CLAY, trace fine Sand, waste, moist. S-7: Black, CLAY, trace fine Sand, waste, moist.		WASTE	
7	S-8	7-8				6.2	S-8: 7-7.7': Black, CLAY, trace fine Sand, waste, moist.			
							7.7-8': Brown, fine to medium SAND, little Silt, moist.		7.7	
8	S-9	8-9				1.5	S-9: Brown, fine to medium SAND, little Silt, moist.			
9	S-10	9-10				N/A	S-10: No recovery.			
10	C-3	10-15	60	42		NR	C-3:			
	S-11	10-11				2.6	S-11: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.		SAND	
11	S-12	11-12				1.8	S-12: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.			
12	S-13	12-13				2.0	S-13: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.			
13	S-14	13-14				2.5	S-14: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 1.0 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Sean Stevenson

Boring No.:
HS-SB-4306

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4306** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Sean Stevenson
Drilling Co.: Stearns Drilling
Foreman: Gary Geerligs

Start Date: 7/12/2019
Finish Date: 7/12/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 6620 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	38		NR	C-4:			
	S-16	15-16				2.2	S-16: Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.		SAND	
16	S-17	16-17				2.0	S-17: 16-16.8': Light brown, fine to medium SAND, trace Silt, trace fine Gravel, moist.			16.8
17	S-18	17-18				1.5	16.8-17': Brown, CLAY, little fine Sand, moist. S-18: 17-17.8': Brown, CLAY, little fine Sand, moist.		CLAY	17.8
18	S-19	18-19				1.5	17.8-18': Brown, fine to medium SAND, trace Silt, trace fine Gravel, Clay lens, moist. S-19: Brown, fine to medium SAND, trace Silt, trace fine Gravel, Clay lens, moist.			
19	S-20	19-20				N/A	S-20: No recovery.		SAND	
20							End of exploration at 20 feet.			20
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Sean Stevenson

Boring No.:
HS-SB-4306

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4400** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/12/2019 **Finish Date:** 7/12/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	54		NR	C-1:	1	TOPSOIL 0.5	
	S-1	0-1				3.7	S-1: 0-0.5': Dark brown, TOPSOIL, some Clay, moist.			
1							0.5-1': Brown, SILT, some Sand, moist.			
	S-2	1-2				1.6	S-2: Brown, SILT, some Sand, rock fragments, moist.	2	SILT	No Equipment Installed
2									2	
	S-3	2-3				1.0	S-3: Brown, SILT & SAND, some Clay, moist.	3	SILT & SAND	
3									3	
	S-4	3-4				1.3	S-4: Brown, SILT & SAND, some Clay, moist.			
4										
	S-5	4-5				1.3	S-5: Brown, Silty CLAY, moist.		SILT & CLAY	
5										
	C-2	5-10	60	48		NR	C-2:		5.5	
	S-6	5-6				2.1	S-6: 5-5.5': Brown, SILT & CLAY, moist.			
6							5.5-6': Brown, CLAY, some Silt, moist.		CLAY 6	
	S-7	6-7				2.8	S-7: 6-6.3': Dark brown, SILT, moist.		SILT 6.3	
							6.3-7': Light brown, medium to fine SAND, some Silt, moist.			
7										
	S-8	7-8				1.5	S-8: Light brown, medium to fine SAND, some Silt, moist.		SAND	
8										
	S-9	8-9				2.1	S-9: 8-8.5': Light brown, medium to fine SAND, some Silt, moist.		8.5	
9							8.5-9': Light brown, CLAY, some Silt, moist.			
	S-10	9-10				N/A	S-10: No recovery.		CLAY	
10									10	
	C-3	10-15	60	50		NR	C-3:		SILT & CLAY 10.5	
	S-11	10-11				1.2	S-11: 10-10.5': Brown, SILT & CLAY, moist.			
11					11-12		10.5-11': Brown, CLAY, some Silt, rock fragments, moist.			
	S-12	11-12				1.4	S-12: Brown, CLAY, some Silt, rock fragments, moist.		CLAY	
12										
	S-13	12-13				1.7	S-13: 12-12.8': Brown, CLAY, some Silt, rock fragments, moist.		12.8	
13					13-14		12.8-13': Dark brown, SAND, some Clay, little Silt, moist.			
	S-14	13-14				2.2	S-14: 13-13.5': Dark brown, SAND, some Clay, little Silt, moist.		SAND	
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.7 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.

Logger:
Makayla Myers

Boring No.:
HS-SB-4400

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4400** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/12/2019
Finish Date: 7/12/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				1.4	13.5-14': Light brown, fine to medium SAND, some Silt, moist.			
							S-15: Light brown, fine to medium SAND, some Silt, moist.			
	C-4	15-20	60	39		NR	C-4:			
	S-16	15-16				2.1	S-16: Light brown, fine to medium SAND, some Silt, moist.			
16	S-17	16-17				1.9	S-17: Light brown, fine to medium SAND, some Silt, moist.			
17	S-18	17-18				1.7	S-18: Light brown, fine to medium SAND, some Silt, moist.		SAND	
18	S-19	18-19				1.2	S-19: Light brown, fine to medium SAND, some Silt, moist.			
19	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4400

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4401** **SHEET: 1 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers **Drilling Co.:** Stearns Drilling **Foreman:** Roger Christenson	**Start Date:** 7/12/2019 **Finish Date:** 7/12/2019 **Final Depth (ft.):** 20	**BORING COORDINATES (International Feet):** **N** TBD **E** TBD **H. Datum:** MI State Plane S Zone NAD83
Type of Rig: Geoprobe **Rig Model:** 7822 DT **Drilling Method:** Direct Push	**Sampler Type:** Macro Core **Sampler O.D. (in.):** 2.25" **Sampler Length (in.):** 5.0'	**Offset of Boring From Original Location:** NA **Ground Elevation:** See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)	Equipment Installed
	C-1	0-5	60	48		NR	C-1:	1			
	S-1	0-1				5.0	S-1: 0-0.6': Dark brown, TOPSOIL, moist.		TOPSOIL	0.6	
1							0.6-1': Brown, SILT, some fine Sand, little Clay, moist.		SILT	1	
	S-2	1-2				2.4	S-2: 1-1.4': Brown, fine to medium SAND, some Silt, moist.	2	SAND	1.4	No Equipment Installed
							1.4-2': Brown, CLAY & SILT, little Sand, moist.				
2	S-3	2-3				0.9	S-3: 2-2.5': Brown, CLAY & SILT, little Sand, moist.	3	CLAY & SILT	2.5	
							2.5-3': Red-brown, Silty CLAY, rock fragments, moist.		SILT & CLAY	3	
3	S-4	3-4				1.4	S-4: Brown, fine to medium SAND & CLAY, some Silt, rock fragments, moist.	4			
4	S-5	4-5				N/A	S-5: No recovery.		SAND & CLAY		
5	C-2	5-10	60	42		NR	C-2:				
	S-6	5-6				2.3	S-6: 5-5.5': Brown, fine to medium SAND & CLAY, some Silt, rock fragments, moist.			5.5	
6	S-7	6-7				2.9	5.5-6': Gray-brown, CLAY, little Silt, waste, moist.				
							S-7: Gray-brown, CLAY, little Silt, waste, moist.				
7	S-8	7-8				3.7	S-8: 7-7.5': Gray, CLAY, little Silt, waste, moist.				
							7.5-8': Black, CLAY, waste, moist.				
8	S-9	8-9				45.5	S-9: 8-8.3': Brown, CLAY, little Silt, waste, moist.				
							8.3-9': Gray, CLAY, some Silt, waste, moist.				
9	S-10	9-10				N/A	S-10: No recovery.		WASTE		
10	C-3	10-15	60	38		NR	C-3:				
	S-11	10-11				48.6	S-11: 10-10.4': Gray, CLAY, some Silt, waste, moist.				
11	S-12	11-12				94.7	10.4-10.8': Black, CLAY, some Sand, some Silt, waste, moist.				
							10.8-11': Brown, CLAY, little Silt, waste, moist.				
12	S-13	12-13				55.4	S-12: 11-11.3': Brown, CLAY, little Silt, waste, moist.				
							11.3-12': Gray, Silty CLAY, waste, rock fragments, moist.				
13	S-14	13-14				4.5	S-13: 12-12.5': Gray, Silty CLAY, waste, rock fragments, moist.			12.8	
							12.5-12.8': Dark gray, CLAY, little Silt, waste, moist.		SAND		
14							12.8-13': Tan and black, fine to medium SAND, some Silt,				

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

MISSDIG Ticket Number:
B91621870

REMARKS

1. Field screening of samples for organic vapors was performed with a MiniRAE 3000 photoionization detector equipped with a 10.6 eV lamp. Readings above background levels are shown in parts per million by volume (ppmv) of isobutylene. ND represents <0.1 ppmv. Background was measured at 0.4 ppmv.
2. Groundwater was not encountered during drilling or upon completion.
3. Borehole was backfilled with Bentonite upon completion.
4. Waste odor noted in sample.

Logger:
Makayla Myers

Boring No.:
HS-SB-4401

GEOPROBE LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Wolverine World Wide House Street Rockford, Michigan**	**EXPLORATION NO.: HS-SB-4401** **SHEET: 2 of 2** **PROJECT NO: 16.0062335.52** **REVIEWED BY: BLW**

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/12/2019
Finish Date: 7/12/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
Rig Model: 7822 DT
Drilling Method: Direct Push

Sampler Type: Macro Core
Sampler O.D. (in.): 2.25"
Sampler Length (in.): 5.0'

Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description	Depth (ft.)
15	S-15	14-15				N/A	waste, moist. S-14: Tan and black, fine to medium SAND, some Silt, waste, moist.			
	C-4	15-20	60	30		NR	S-15: No recovery. C-4:			
16	S-16	15-16				7.3	S-16: Tan and brown, fine to medium SAND, some Silt, moist.		SAND	
	S-17	16-17				5.2	S-17: Light brown, fine to medium SAND, some Silt, Clay lens at 16.8', moist.			
17	S-18	17-18				1.1	S-18: Light brown, fine to medium SAND, some Silt, Clay lens at 17.4', moist.			17.5
18	S-19	18-19				N/A	S-19: No recovery.			
19									NO RECOVERY	
	S-20	19-20				N/A	S-20: No recovery.			
20										20
							End of exploration at 20 feet.			
21										
22										
23										
24										
25										
26										
27										
28										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
	>30 -- Hard	1/64"	CLAY

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REMARKS

Logger:
Makayla Myers

Boring No.:
HS-SB-4401

WOLVERINE WORLD WIDE.GPJ; GZA GEOPROBE WITH EQUIP WOLVERINE; 9/4/2019

GEOPROBE LOG

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wolverine World Wide
House Street
Rockford, Michigan

EXPLORATION NO.: HS-SB-4402
SHEET: 1 of 2
PROJECT NO: 16.0062335.52
REVIEWED BY: BLW

Logged By: Makayla Myers
Drilling Co.: Stearns Drilling
Foreman: Roger Christenson

Start Date: 7/12/2019
Finish Date: 7/12/2019
Final Depth (ft.): 20

BORING COORDINATES (International Feet):
N TBD **E** TBD
H. Datum: MI State Plane S Zone NAD83

Type of Rig: Geoprobe
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Drilling Method: Direct Push

Sampler Type: Macro Core
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Offset of Boring From Original Location:
NA
Ground Elevation: See Survey **V. Datum:** See Survey

Depth (ft)	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Submitted To Lab	PID (ppm)	Sample Description & Configuration Modified Burmister	Remark	Elev. (ft.) Stratum Description Depth (ft.)	Equipment Installed
	C-1	0-5	60	52		NR	C-1:	1	TOPSOIL 0.5	No Equipment Installed
	S-1	0-1				0.9	S-1: 0-0.5': Dark brown, TOPSOIL, moist.			
1							0.5-1': Brown, SILT & CLAY, little fine Sand, moist.			
	S-2	1-2				0.9	S-2: Brown, SILT & CLAY, little fine Sand, moist.	2	SIILT & CLAY	
2										
	S-3	2-3				0.9	S-3: 2-2.5': Brown, SILT & CLAY, little fine Sand, moist.	3	2.5	
							2.5-3': Dark brown, Silty SAND, some Clay, moist.			
3										
	S-4	3-4				1.0	S-4: Dark brown, Silty SAND, some Clay, moist.	4		
4										
	S-5	4-5				1.1	S-5: Dark brown, Silty SAND, some Clay, moist.		SILTY CLAY	
5										
	C-2	5-10	60	47		NR	C-2:			
	S-6	5-6				12.6	S-6: 5-5.6': Dark brown, Silty SAND, some Clay, moist.		5.6	
6							5.6-6': Gray-black, CLAY, little Sand, waste, moist.			
	S-7	6-7				21.6	S-7: 6-6.5': Gray-black, CLAY, little Sand, waste, moist.		WASTE 6.5	
							6.5-7': Brown, Silty CLAY, some Silt, moist.		SILTY CLAY 7	
7										
	S-8	7-8				2.2	S-8: Brown, CLAY, some Silt, moist.			
8										
	S-9	8-9				2.5	S-9: 8-8.3': Brown, CLAY, some Silt, moist.		CLAY	
							8.3-9': Gray-brown, CLAY, some fine Sand, some Silt, moist.			
9										
	S-10	9-10				N/A	S-10: No recovery.			
10									10	
	C-3	10-15	60	42		NR	C-3:			
	S-11	10-11				0.9	S-11: Gray-brown, SILT & CLAY, little fine Sand, moist.		SILT & CLAY	
11										
	S-12	11-12				1.1	S-12: 11-11.5': Gray-brown, SILT & CLAY, little fine Sand, moist.		11.5	
12							11.5-12': Gray-brown, fine to coarse SAND, some Silt & Clay, rock fragments, moist.			
	S-13	12-13				1.4	S-13: Gray-brown, fine to coarse SAND, some Silt & Clay, rock fragments, moist.		SAND	
13										
	S-14	13-14				1.0	S-14: Gray-brown, fine to coarse SAND, some Silt & Clay, rock fragments, moist.			
14										

Granular Soils Blows/FT Density	Cohesive Soils Blows/FT Consistency	Plasticity SM Thread Diameter Rolled	
0-4 -- Very Loose	<2 -- Very Soft	None	SILT
4-10 -- Loose	2-4 -- Soft	1/4"	Clayey SILT
10-30 -- Medium Dense	4-8 -- M. Stiff	1/8"	SILT & CLAY
30-50 -- Dense	8-15 -- Stiff	1/16"	CLAY & SILT
>50 -- Very Dense	15-30 -- V. Stiff	1/32"	Silty CLAY
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2. Groundwater was not encountered during drilling or upon completion.
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15	S-15	14-15				N/A	S-15: No recovery.			
	C-4	15-20	60	39		NR	C-4:			
	S-16	15-16				0.9	S-16: Gray-brown, fine to coarse SAND, some Silt & Clay, rock fragments, moist.		SAND	
16	S-17	16-17				0.8	S-17: Gray-brown, fine to coarse SAND, some Silt & Clay, rock fragments, moist.			
17	S-18	17-18				0.8	S-18: 17-17.3': Gray-brown, fine to coarse SAND, some Silt & Clay, rock fragments, moist.			17.3
							17.3-17.5': Dark brown, fine SAND & CLAY, moist.		SAND & CLAY	17.5
18	S-19	18-19				0.7	17.5-18': Brown, fine to medium SAND, some Silt, moist. S-19: Gray-brown, fine to medium SAND, some Silt, moist.			
19	S-20	19-20				N/A	S-20: No recovery.		SAND	
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							End of exploration at 20 feet.			
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