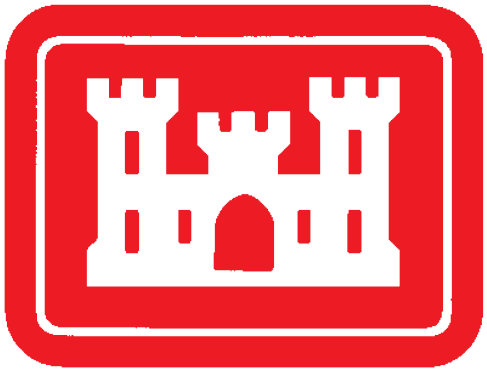
Final
Site Investigation Report

Defense Logistics Agency Property, Environmental Consulting Services at Area 4, Fort McCoy, WI
Fort McCoy, Monroe, Wisconsin
Contract No: W9128F22F0074

July 2023

U.S. Army Corps of Engineers, Omaha District
1616 Capital Ave #3300
Omaha, NE, 68102



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EXECUTIVE SUMMARY

A previous investigation was conducted in September, 2020 by Leisnoi-KEMRON 8A JV (LKJV) Environmental Services at the Defense Logistics Agency (DLA) property (Areas #1 through #5) in which soil and groundwater samples were collected and analyzed for VOCs, SVOCs, RCRA Metals, and PCBs. Analytical results from the unfiltered groundwater samples collected in Area #4 (Site) indicated exceedances of the Wisconsin Department of Natural Resources (WDNR) Enforcement Standard (ES) and Preventative Action Limit (PAL) for arsenic, chromium, and lead.

In accordance with the Performance Work Statement (USACE, 2023), Sustainment and Restoration Services (SRS) conducted a supplemental groundwater investigation at the Site. The groundwater investigation consisted of advancement of soil borings and installation of temporary groundwater monitoring wells for field-filtered groundwater grab sample collection.

From 22 May 2023 to 24 May 2023, Probe Technologies Incorporated (PTI), under the direction of SRS, advanced twenty soil borings to depths of 12 to 20 feet below ground surface (bgs). Soil cores were logged by field personnel and each boring was converted to a temporary groundwater monitoring well. Fifteen temporary groundwater monitoring wells were installed at the Site of which five were installed south of the Site to represent upgradient conditions. A field-filtered grab groundwater sample was collected from each temporary monitoring well and shipped to the laboratory for analysis of arsenic, cadmium, chromium, and lead.

Arsenic was detected in one groundwater grab sample at a concentration of 1.62 µg/L below the WDNR ES of 10 µg/L, but exceeding the PAL of 1.0 µg/L. Other GW samples collected from similar depths at the Site did not exceed the WDNR ES or the PAL.

The soil and groundwater data collected from the previous investigation for Areas #1, #2, #3, and #5 and the new groundwater results acquired by SRS for Area #4 will be provided to WDNR in a closure request. SRS has prepared a Case Closure Form (Form 4400-202) to WDNR for review. This Case Closure will contain an exemption for groundwater for the PAL exceedance.

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ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
ft	feet
ES	Enforcement Standard
DLA	Defense Logistics Agency
DPT	Direct Push Technology
ES	Enforcement Standard
GPR	Ground penetrating radar
IDW	Investigation-derived waste
LKJV	Leisnoi-KEMRON 8A JV Environmental Services
mg/kg	milligrams per kilograms
OES	Oneida Environmental Services
PAL	Preventable Action Limits
PCBs	Polychlorinated Biphenyls
PID	photoionization detector
PTI	Probe Technologies Incorporated
PVC	Polyvinyl chloride
PWS	Performance Work Statement
QA	Quality assurance
QAPP	Quality Assurance Project Plan
QC	Quality control
RCRA	Resource Conservation and Recovery Act
RFP	Request for Proposal
SOP	Standard operating procedure
SRS	Sustainment and Restoration Services, LLC
SVOC	semi volatile organic compound
UFP-QAPP	Uniform Federal Policy – Quality Assurance Project Plan
USACE	U.S. Army Corps of Engineers
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound
WDNR	Wisconsin Department of Natural Resources
WMP	Waste Management Plan

1.0 BACKGROUND INFORMATION

1.1 LOCATION AND SITE CONSTRAINTS

Fort McCoy is a U.S. Army facility located on 60,000 acres in Monroe County, Wisconsin as depicted in Figure 1. Fort McCoy was first established as Camp McCoy in the early 1900s and became Fort McCoy in 1974 where the primary focus had been training. However, Camp McCoy served as a temporary internment and prisoner of war camp during WW II. The present mission of Fort McCoy is that of a Total Force Training Center. Fort McCoy is located in west central Wisconsin. The closest major city (La Crosse) is approximately 30 miles west of Fort McCoy. DLA has historically used the Site at Fort McCoy as a storage facility and scrapyard operation.

1.2 PROJECT DESCRIPTION

Pursuant to the Contract #W9128F22F0074, Sustainment and Restoration Services, LLC (SRS) on behalf of the United States Army Corps of Engineers (USACE) Omaha District has prepared this Site Investigation Report to document concentrations of specified metals in the groundwater for DLA property Area #4 (Site) located at Fort McCoy, in Monroe County, Wisconsin. The Site consists of a telephone line easement path bound by Tarr Creek to the north and DLA property Area #5 to the south. A Site Map depicting the site location, the general layout of the Site, and sampling locations is included as **Figure 1**.

This groundwater investigation for Area #4 is a continuation of a previous investigation conducted by a previous consultant, LKJV Environmental Services. On 14 September 2020, LKJV mobilized to Fort McCoy and conducted collection and analysis of 123 soil samples and 18 groundwater samples from installed borings at all areas of the site. The samples were transported to the laboratory and were analyzed for: volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), Resource Conservation and Recovery Act (RCRA) Metals, and Polychlorinated Biphenyls (PCBs) utilizing the appropriate United Stated Environmental Protection Agency (USEPA) analytical methods. Groundwater sample results from Area #4 indicated exceedances of arsenic, chromium, and lead above the Wisconsin Department of Natural Resources (WDNR) Enforcement Standards (ES) and the Preventative Action Limits (PAL) or only above the PAL. It was inferred that the exceedances may have been attributed to samples with high turbidity being analyzed. The USACE Omaha District later concluded that the area should be resampled using field filtration methods to lower the turbidity of analyzed samples, therefore producing a more accurate representation of dissolved metals in the groundwater. The USACE Omaha district then issued a new Request for Proposal (RFP) dated 18 November 2021. SRS was awarded the contract on 25 April 2022. The work described in this Site Investigation Report was performed in accordance with the previously submitted and approved Uniform Federal Policy Quality Assurance Project Plan (UFP-QAPP).

In accordance with the revised PWS dated January 2023 (USACE, 2023), the objectives of this contract were to:

- Establish background metals concentrations in groundwater for arsenic, cadmium, chromium, and lead.
- Re-collect groundwater samples from the locations identified with metals contamination.

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2.0 WORK SCOPE

2.1 FIELD TASKS

2.1.1 Site Clearing and Utility Locate

Before the installation of all temporary monitoring wells, Oneida Environmental Services (OES) marked the soil boring/temporary monitoring well locations with a Treble GPS unit using location data acquired from previous consultant's report for the Site. If a location was offset due to refusal, SRS personnel recorded the distance and direction of the offset in a field book. Soil boring/temporary monitoring well location data is included as **Appendix F**.

Prior to beginning drilling operations, a private utility locate was completed by a subcontractor, Probe Technologies Incorporated (PTI), and Wisconsin Diggers Hotline (811) was also notified to perform a public utility locate. Field personnel from SRS began the investigation by walking the Site to see if the previously surveyed areas needed to be offset for drill rig access. No clearance of vegetation was needed at Area #4 to access the soil boring locations. Before drilling began, PTI, the drilling subcontractor, cleared each boring of subsurface utilities using a stainless-steel hand-auger up to 5 feet below ground surface (bgs). The utility locations were marked by Wisconsin Diggers Hotline (811) and confirmed by ground penetrating radar (GPR) utilized by Subsurface Radar Solutions (a subcontractor to PTI). No State of Wisconsin or local permits were necessary for this investigation.

2.1.2 Groundwater Investigation

Soil borings were advanced at the Site using a Direct Push Technology (DPT) drilling rig operated by PTI. The soil borings were advanced along the southern boundary of Tarr creek which was accessed via an unpaved road east of the Site.

Fifteen soil borings were advanced to depths of 12 feet to 20 feet bgs until one to two feet below the water table was reached. Five background locations (BS01, BS02, BS03, BS04, and BS05) were also advanced to depths of approximately 12 feet bgs until the water table was exceeded one to two feet bgs. Each soil boring was logged using the ASTM D2487-17e1 and Unified Soil Classification System (USCS) by an onsite SRS project geologist. Geologic boring logs that include temporary well construction information, soil characterization, and groundwater data are included as **Appendix C**.

Each soil boring installed (i.e., SB/TW01, SB/TW02, SB/TW03, SB/TW04, SB/TW05, SB/TW06, SB/TW07, SB/TW08, SB/TW09, SB/TW10, SB/TW11, SB/TW12, SB/TW13, SB/TW14, SB/TW15, BS01, BS02, BS03, BS04, and BS05) was converted into temporary groundwater monitoring wells, shown on **Figure 1**.

The temporary monitoring wells were installed to depths ranging from 12 to 20 feet bgs, with a screened interval of 10 feet that bracketed the water table. The temporary monitoring wells were constructed with 10 feet sections of 1-inch schedule 40 PVC casings with factory slotted screens. Groundwater grab sampling techniques in conjunction with 0.45-micron field filters were employed to sample the temporary monitoring wells using a peristaltic pump. Groundwater was pumped up the temporary monitoring well from the subsurface using LDPE tubing with a peristaltic pump and through a 0.45-micron field filter located after the pump. Groundwater was collected in laboratory supplied containers immediately after the field filter. All collected sampling purge water was disposed of on the ground adjacent to the temporary monitoring well location. Temporary monitoring wells were installed with a stick-up completion to facilitate removal once the groundwater sample was collected.

Groundwater grab sampling activities were conducted in accordance with the standard operating procedures (SOPs) found in Appendix C of the UFP-QAPP (SRS, 2023). Field forms for the sampling event along with the corresponding field calibration logs are included as **Appendix E**. The groundwater samples were submitted to Pace Analytical for analysis of metals for arsenic, cadmium, chromium, and lead by DOD methods 6020. QA/QC samples were collected for the same analysis. QA/QC samples collected for groundwater included field duplicates, MS/MSDs, equipment blank, and a field blank.

One equipment blank sample (EB-01-052423) was collected from water level indicator used for depth to groundwater measurements in the temporary groundwater monitoring wells. The water level indicator was decontaminated in accordance with the SOPs presented in Appendix C of the UFP-QAPP (SRS, 2023). Vendor-supplied deionized water was poured over the decontaminated water level indicator and captured in a laboratory-supplied container. The sample was submitted to Pace Analytical for analysis of metals for arsenic, cadmium, chromium, and lead by DOD methods 6020.

2.1.3 Well Abandonment

After sampling was complete, PTI decommissioned the temporary groundwater monitoring wells by filling the borings with bentonite pellets then backfilling to ground surface with the soil recovered from the DPT sleeves during drilling.

2.1.4 IDW Management

Soil investigation derived waste (IDW) that could not be returned to the borings was spread throughout the vegetated area to match the condition of the surrounding area. Groundwater IDW was returned to the surrounding area during sampling with permission from Fort McCoy personnel.

3.0 ANALYTICAL RESULTS

Analytical laboratory reports from Pace Analytical and are included as **Appendix F**, summarized in **Table 1,** and shown on **Figure 2.**

3.1 GROUNDWATER ANALYTICAL RESULTS

Of the twenty groundwater grab samples collected south of Tarr creek and along the southern railroad tracks, only one sample (SB-TW-11-GW-052223) exceeded the PAL for arsenic but not the WDNR ES. The sample result was 1.62 µg/L and the PAL for arsenic is 1.0 µg/L.

Lead was detected in the equipment blank sample (EB-01-052423) at a concentration of 55.4 µg/L that exceeded the PAL of 1.5 µg/L and the WDNR ES of 15 µg/L; however, no WDNR ES or PAL lead exceedances were detected in other samples collected at the Site. This indicates that the water level meter did not affect other samples collected. SRS investigated the potential cause of the exceedance; however it appears to be anomalous and its cause is unknown. . A figure summarizing the analytical results at each sample location is included as **Figure 2.**

4.0 CONCLUSIONS

Analytical results concluded that of the 15 groundwater samples collected, one sample (SB-TW-11-GW-052223) had a slight exceedance over the PAL for arsenic but not the WDNR ES for arsenic. The sample result was 1.62 µg/L and the PAL for arsenic is 1.0 µg/L. All 5 background samples had zero detections for metal concentrations. This indicates that the detections are residual; the remaining residual concentrations will likely degrade naturally.

SRS has prepared and submitted a Case Closure Form (Form 4400-202) to WDNR for review. This Case Closure will summarize soil and groundwater analytical data from DLA Property Areas #1 through #5. A groundwater closure exemption was requested since only one arsenic PAL exceedance was reported at one location and no WDNR exceedances were reported. When approved the DLA Property will return to the control of the installation after the Case Closure with WDNR and Environmental Condition Property investigation by USACE.

5.0 REFERENCES

Defense Logistics Agency Property, Environmental Consulting Services at Fort McCoy, WI. USACE. 2021. Performance Work Statement (PWS). Contract No. W9128F18D0054

Defense Logistics Agency Property, Environmental Consulting Services at Fort McCoy, WI. USACE. 2023. Performance Work Statement (PWS) Contract Modification. Contract No. W9128F22F0074 (g6ct9mew23442)

Leisnoi-KEMRON 8A JV (LKJV). 2021. Completion Report for Fort McCoy Environmental Investigation Services for the Transfer of The Defense Logistics Agency (DLA) Property.

SRS. 2023. Uniform Federal Policy Quality Assurance Project Plan (UFP-QAPP) for Fort McCoy Defense Logistics Agency Property Groundwater Investigation. March 2023.

Wisconsin Department of Natural Resources (WDNR). Table I - Drinking Water & Groundwater Quality Health Standards/Advisory Levels. Web: https://dnr.wisconsin.gov/sites/default/files/topic/DrinkingWater/HALtable.pdf

WDNR. Public Health Groundwater Quality Standards. Web: https://dnr.wisconsin.gov/topic/Groundwater/CurrentStandards.html

USGS. Alderwood Lake Quandrangle. 2022.

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TABLES

Table 1
Groundwater Analytical Results
Fort McCoy Groundwater Investigation

			Sample ID	SB-TW-01-GW-052323	SB-TW-02-GW-052323	SB-TW-03-GW-052323	SB-TW-04-GW-052323	SB-TW-05-GW-052323	SB-TW-06-GW-052323	SB-TW-07-GW-052323	SB-TW-08-GW-052323	SB-TW-09-GW-052323
			Sampling Date	23-May-23	23-May-23	23-May-23	23-May-23	23-May-23	23-May-23	23-May-23	23-May-23	23-May-23
Analyte (ug/L)	**Matrix**	**WDNR ES (ug/L)**	**PAL (ug/L)**									
Arsenic	AQ	10	1	0.439 J	0.310 J	0.402 J	0.210 J	0.328 J	0.500 U	0.251 J	0.334 J	0.365 J
Cadmium	AQ	5	0.5	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Chromium*	AQ	100	10	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U
Lead	AQ	15	1.5	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U

Notes:
PAL - Preventative Action Limit
WDNR - Wisconsin Dept of Natural Resources
ES - Enforcement Standard
LOD - Limit of Detection

Results above the PAL appear in **bold** font
Results above the WDNR ES appear shaded

ug/L - Micrograms per liter
DUP - Field duplicate
J - The reported result is an estimated value.
U - Not detected above the LOD

Table 1
Groundwater Analytical Results
Fort McCoy Groundwater Investigation

			Sample ID	SB-TW-10-GW-052223	SB-TW-11-GW-052223	SB-TW-12-GW-052223	SB-TW-13-GW-052223	SB-TW-13-DUP-GW-052223	SB-TW-14-GW-052223	SB-TW-15-GW-052223	EB-01-052423	FB-01-052423
			Sampling Date	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23	24-May-23	24-May-23
Analyte (ug/L)	**Matrix**	**WDNR ES (ug/L)**	**PAL (ug/L)**									
Arsenic	AQ	10	1	0.555 J	**1.62**	0.298 J	0.900	0.866	0.560 J	0.397 J	0.500 U	0.500 U
Cadmium	AQ	5	0.5	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Chromium*	AQ	100	10	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U
Lead	AQ	15	1.5	1.07 J	1.50 U	1.50 U	0.521 J	1.50 U	1.50 U	1.50 U	**55.4**	1.50 U

Notes:
PAL - Preventative Action Limit
WDNR - Wisconsin Dept of Natural Resources
ES - Enforcement Standard
LOD - Limit of Detection

Results above the PAL appear in **bold** font
Results above the WDNR ES appear shaded

ug/L - Micrograms per liter
DUP - Field duplicate
J - The reported result is an estimated value.
U - Not detected above the LOD

Table 1
Groundwater Analytical Results
Fort McCoy Groundwater Investigation

			Sample ID	BS-01-GW-052423	BS-02-GW-052423	BS-03-GW-052423	BS-04-GW-052423	BS-04-DUP-GW-052423	BS-05-GW-052423
			Sampling Date	24-May-23	24-May-23	24-May-23	24-May-23	24-May-23	24-May-23
Analyte (ug/L)	**Matrix**	**WDNR ES (ug/L)**	**PAL (ug/L)**						
Arsenic	AQ	10	1	0.356 J	0.337 J	0.209 J	0.281 J	0.351 J	0.599 J
Cadmium	AQ	5	0.5	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Chromium*	AQ	100	10	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U	15.0 U
Lead	AQ	15	1.5	0.731 J	1.50 U	1.50 U	0.550 J	1.50 U	1.50 U

Notes:
PAL - Preventative Action Limit
WDNR - Wisconsin Dept of Natural Resources
ES - Enforcement Standard
LOD - Limit of Detection

Results above the PAL appear in **bold** font
Results above the WDNR ES appear shaded

ug/L - Micrograms per liter
DUP - Field duplicate
J - The reported result is an estimated value.
U - Not detected above the LOD

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FIGURES

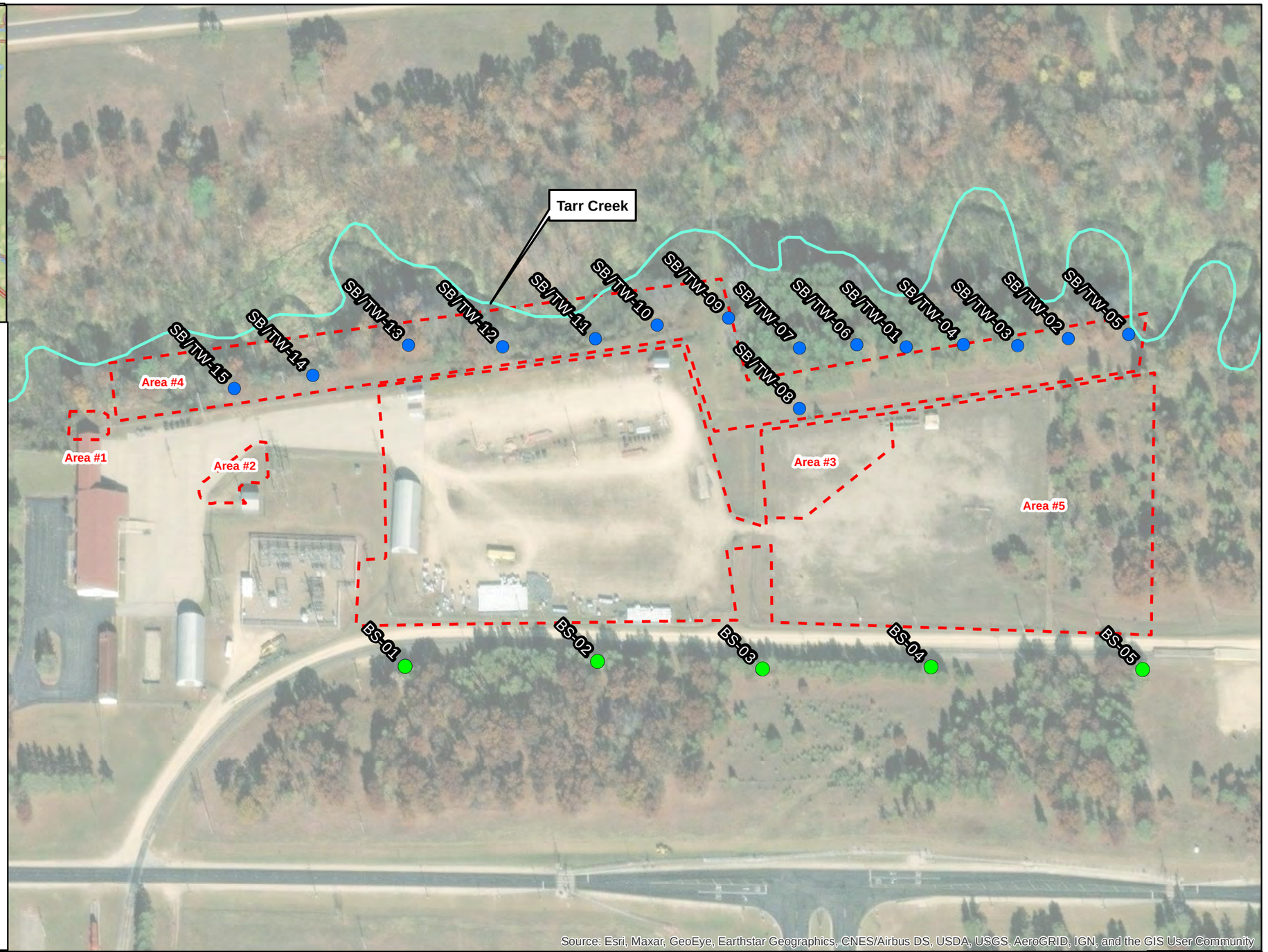
Legend

- Background Sample Location (BS)
- Soil Boring (SB) / Temporary Wells (TW)
- Tarr Creek
- Area Boundary

N

0 60 120 240 360 480

Feet



ONEIDA Sustainment and Restoration Services

PROJECT: U.S. Army DLA Property Area #4 Storage Yard Fort McCoy Approximately Lat:44.011631, Long:-90.679379 Fort McCoy, Monroe County, Wisconsin Contract No: W9128F18D0054		TITLE: SAMPLE LOCATION MAP		FIGURE 1
DATE DRAWN: 6-27-2023	SCALE: As Shown	DRAWN BY: SS	CHECKED BY: JHH	

N

Legend

- Background Sample Location (BS)
- Soil Boring (SB) / Temporary Wells (TW)
- Tarr Creek
- Area Boundary

0 60 120 240 360 480 Feet

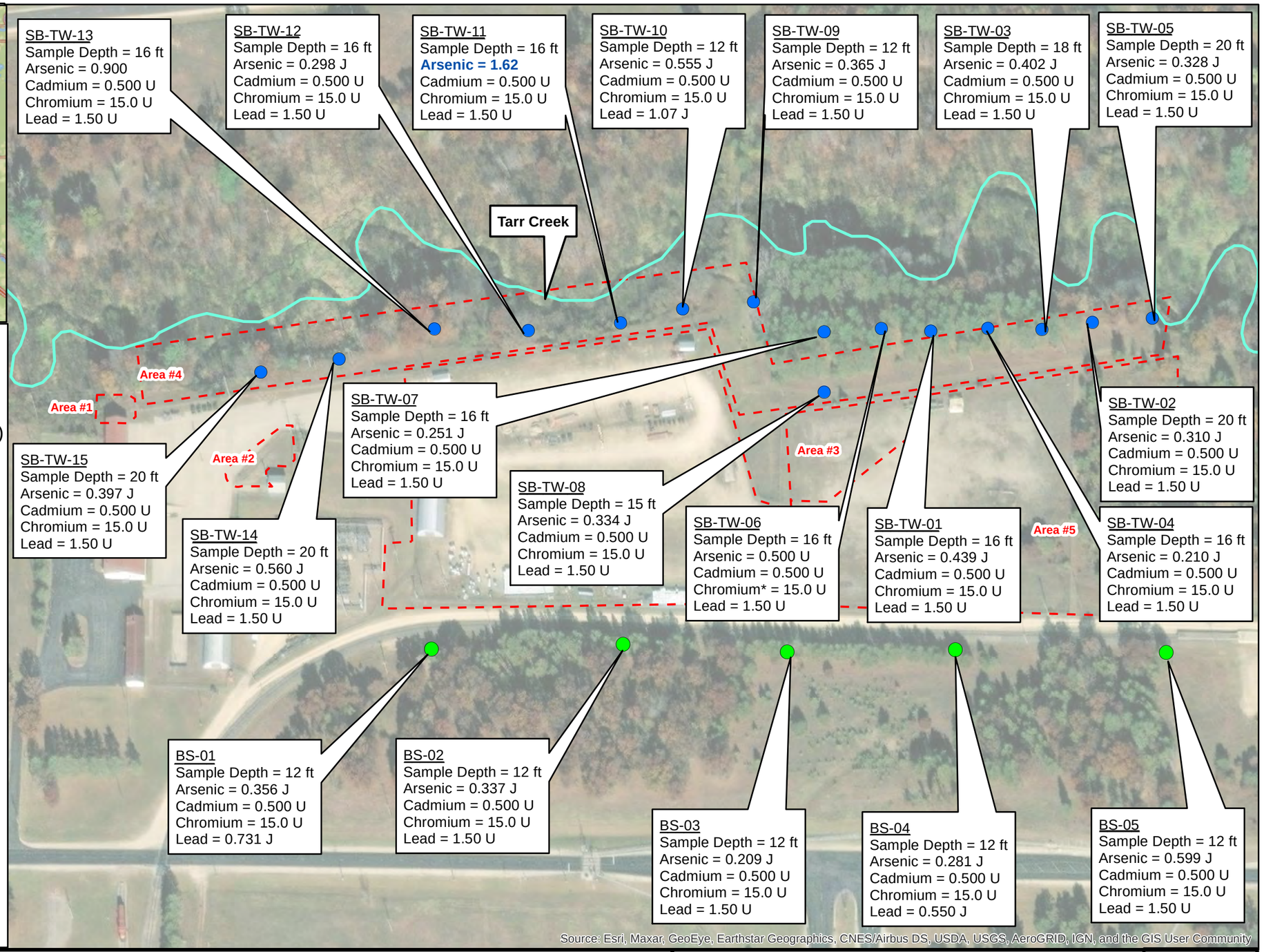
Notes:

PAL - Preventative Action Limit
WDNR ES - Wisconsin Dept of Natural Resources Enforcement Standard

Results above the PAL appear in bold blue font

WDNR ES: Arsenic (µg/L) = 10
WDNR PAL: Arsenic ((µg/L) = 1
WDNR ES: Cadmium (µg/L) = 5
WDNR PAL: Cadmium ((µg/L) = 0.5
WDNR ES: Chromium (µg/L) = 100
WDNR PAL: Chromium (µg/L) = 10
WDNR ES: Lead (µg/L) = 15
WDNR PAL: Lead (µg/L) = 1.5

µg/L - Micrograms per liter
J - The reported result is an estimated value.
U - Not detected above the LOD (Limits of Detection)



ONEIDA Sustainment and Restoration Services

PROJECT: U.S. Army DLA Property Area #4 Storage Yard Fort McCoy
Approximately Lat:44.011631, Long:-90.679379
Fort McCoy, Monroe County, Wisconsin
Contract No: W9128F18D0054

TITLE: SAMPLE & DATA LOCATION MAP

FIGURE 2

DATE DRAWN: 6-29-2023

SCALE: As Shown

DRAWN BY: SS

CHECKED BY: JHH

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APPENDIX A

PHOTOGRAPHIC LOG

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 1 **Location:** South 8th Ave **Date:** May 23, 2023 **Photographer:** Sam Santoso **Subject:** View of property from road.	
Official Photograph No. 2 **Location:** BS-02 **Date:** May 24, 2023 **Photographer:** Sam Santoso **Subject:** View of property.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 3 **Location:** SB/TW-01 **Date:** May 23, 2023 **Photographer:** Sam Santoso **Subject:** View of SB/TW-01 prior to investigation activities.	
Official Photograph No. 4 **Location:** SB/TW-01 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-01 post investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 5 **Location:** SB/TW-02 **Date:** May 23, 2023 **Photographer:** Sam Santoso **Subject:** View of SB/TW-02 prior to investigation activities.	
Official Photograph No. 6 **Location:** SB/TW-02 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-02 post investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 7 **Location:** SB/TW-02 **Date:** May 23, 2023 **Photographer:** Sam Santoso **Subject:** View of SB/TW-02 soils.	
Official Photograph No. 8 **Location:** SB/TW-03 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-03 post investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 9 **Location:** SB/TW-04 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-04 post investigation activities.	
Official Photograph No. 10 **Location:** SB/TW-05 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-05 post investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 11 **Location:** SB/TW-06 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-06 post investigation activities.	
Official Photograph No. 12 **Location:** SB/TW-07 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-07 post investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 13 **Location:** SB/TW-08 **Date:** May 28, 2023 **Photographer:** Sam Santoso **Subject:** View of SB/TW-08 during investigation activities.	
Official Photograph No. 14 **Location:** SB/TW-08 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-08 post investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 15 **Location:** SB/TW-09 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-09 post investigation activities.	
Official Photograph No. 16 **Location:** SB/TW-10 **Date:** May 23, 2023 **Photographer:** Sam Santoso **Subject:** View of SB/TW-10 prior to investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 17 **Location:** SB/TW-10 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-10 post investigation activities.	
Official Photograph No. 18 **Location:** SB/TW-11 **Date:** May 23, 2023 **Photographer:** Sam Santoso **Subject:** View of SB/TW-11 prior to investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 19 **Location:** SB/TW-11 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-11 post investigation activities.	
Official Photograph No. 20 **Location:** SB/TW-12 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-12 post investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 21 **Location:** SB/TW-13 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-13 post investigation activities.	
Official Photograph No. 22 **Location:** SB/TW-14 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-14 post investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 23 **Location:** SB/TW-15 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-15 post investigation activities.	
Official Photograph No. 24 **Location:** BS-01 **Date:** May 24, 2023 **Photographer:** Sam Santoso **Subject:** View of BS-01 post investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 25 **Location:** BS-02 **Date:** May 24, 2023 **Photographer:** Sam Santoso **Subject:** View of BS-02 prior to investigation activities.	
Official Photograph No. 26 **Location:** BS-03 **Date:** May 24, 2023 **Photographer:** Sam Santoso **Subject:** View of BS-03 prior to investigation activities.	

Fort McCoy

Contract No: W9128F22F0074

Official Photograph No. 27 **Location:** BS-05 **Date:** May 24, 2023 **Photographer:** Jack Heltzer **Subject:** View of BS-05 post investigation activities.	
Official Photograph No. 28 **Location:** SB/TW-08 **Date:** May 23, 2023 **Photographer:** Jack Heltzer **Subject:** View of SB/TW-08-GW sample being field filtered.	

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APPENDIX B

DAILY REPORTS AND SIGNED HEALTH AND SAFETY/QC DOCUMENTATION

DAILY FIELD RECORD

ONEIDA Sustainment and Restoration Services

Project and Task Number: S2022014	Date: 05/22/23
Project Name: Fort McCoy - GW Investigation	Field Activity: Direct Push, GW Grab Sampling
Location: Fort McCoy, Monroe County, Wisconsin	Weather: 51°-80° F; 30.11 Hg; Mostly Cloudy

PERSONNEL: Name	Company	Time In	Time Out
Sam Santoso	SRS	0800	1715
Jack Heltzer	SRS	0800	1715

PERSONAL SAFETY CHECKLIST

x	Steel-toed Boots	x	Hard Hat		Tyvek Coveralls
x	Nitrile Gloves	x	Safety Glasses		1/2-Face Respirator

DRUM I.D.	DESCRIPTION OF CONTENTS AND QUANTITY	LOCATION

TIME	DESCRIPTION OF WORK PERFORMED
0800	Arrive on site - Jack H & Sam S
0810	Go through site safety, APP/SSHP/AHA's about Project.
0820	Scope out borings/boring locations near Tarr Creek.
0900	Train tracks are ACTIVE. May impact site work.
1000	Probe Technologies (Dan Bendorf & Eric Plante) & Matt Savino (GPR)
1015	arrive on site. Go through AHA's safety, and roles of people.
1015	Walk site with 5 personnel to GPR/Clear working areas. Some adjusted.
	See field note book for specific offset information.
1130	Mob back to vehicles - drscuss plan of action for day. Break Lunch.
1200	Return to site for hand clearing SB/TW-15
1309	Finish drilling SB/TW-15; GW Grab sample; WT@ 15:8 APPX.
1310	Start hand auger & drilling SB/TW-14; Collect sample at 1350
1410	Start hand auger & drilling SB/TW-13; Collect sample at 1432
1455	Start hand auger & drilling SB/TW-12; Collect sample at 1520
1540	Start hand auger & drilling SB/TW-11; Collect sample at 1605
1620	Start hand auger & drilling SB/TW-10; Collect sample at 1645
1700	Pack up site & equipment. 1715 All personnel leave site.

ONEIDA Sustainment and Restoration Services

DAILY SAFETY TAILGATE MEETING FORM
FORT McCOY, MONROE COUNTY, WISCONSIN

Date: 5/22/23
SSHO: Sam Santoso

ITEMS TO BE DISCUSSED WITH SITE PERSONNEL:

- X Safety responsibilities and communication protocols
- X Site Layout: work zones, emergency equipment, sanitation, staging area, parking
- X Personal protective equipment required
- X Requirements for equipment and tool inspections, operations, use
- X Exposure to hazardous substances and control measures
- X General safe work practices, housekeeping
- X Emergency action plan and procedures, evacuation
- X First Aid and Emergency Response procedures
- X Hospital and Urgent Care Locations: Tomah Health - 501 Gopher Ave Tomah, WI 54660
- X **HASP Sections, Safety Plans, AHAs reviewed:** Yes, 3 AHA's reviewed.
- X **Other hazards and hazard controls to review (Note below)**

Planned Work Tasks and Safety Items Discussed:

Work areas tidy; animal hazards (ie. snakes, ticks, spiders); falls, trips, slips; Ear protection; Hard hat; train/rail road tracks

ONEIDA Sustainment and Restoration Services

DAILY SAFETY TAILGATE MEETING FORM
FORT McCOY, MONROE COUNTY, WISCONSIN

The following personnel were present for discussion of the topics listed above and have read and understand the applicable contents of the Accident Prevention Plan.

NAME	SIGNATURE	COMPANY	DATE
Sam Santoso		SRS	05/22/23
Jack Heltzel		SRS	05/22/23
Eric Plante		Probe Technologies	05/22/23
Matt Savino		SRS	5/22-23
Dan Bondorf		PRCSE	5/22
Jack Heltzel		SRS	5/22

ONEIDA Sustainment and Restoration Services

DAILY WORKER SIGN-IN LOG
FORT McCOY, MONROE COUNTY, WISCONSIN

SRS Site Supervisor or Site Safety and Health Officer (SSHO) will have site personnel sign in and sign out when working at the site each day.

Date	Name	Company	Work Area and Task(s) at the Site	Level of Protection	Time IN	Time OUT
5/22	SAM SANTOSO	SRS	outside	D	0800	1715
5/22	Eric Plantz	Probe Technologies	outside	D	0900	1716
5/22	Matt Savino	SRS	Outside	D	0900	1200
5/22	DAN Bonzart	PROBE TECHNOLOGIES	OUTSIDE	D	0900	1710
5/22	Jack Heltzel	SRS	Outside	D	0800	1715

DRILLING EQUIPMENT

Contract Name and Number: Fort McCoy DLA Property / S20 22014	Contractor/Subcontractor: PROBE TECHNOLOGIES
Government Inspector: N/A	Location: U.S. Army Area #4 Storage Yard
Contractor Inspector: Dan Bendorf	Date: 5/22/23

Equipment name and number: Geoprobe 6022DT

	Yes	No	N/A
1. Is a copy of the operation and maintenance manual for drilling equipment available? (18.H.02)		X	
2. Has a survey been conducted to identify overhead electrical hazards and potential ground hazards and their locations identified in the site layout plan? (18.H.03)	X		
3. Does the hazard analysis contain copies of Safety Data Sheets for all drilling fluids available? (18.H.04a)			X
4. Have all members of the drilling crew been trained the operation, inspection, and maintenance of the equipment; the safety features and procedures to be used; and overhead electrical lines and underground hazards? (18.H.05a)	X		
5. Does the drilling equipment have two easily accessible emergency shut down devices (one for the operator and one for the helper)? (18.H.06)		X	
6. Is the equipment posted with a warning of electrical hazards? (18.H.07a)	X		
7. Is there a spotter or an electrical proximity warning device available to ensure safe distances from power lines are maintained? (18.H.07b)		X	
8. Before moving earth drilling equipment, has the travel route been surveyed for overhead and terrain hazards, particularly overhead electrical hazards? (18.H.08a)	X		
9. Is equipment set-up in a stable manner, with cribbing if necessary? (18.H.09.a)			X
10. Are outriggers being used in accordance with the manufacturer's recommendations? (18.H.09.b)	X		
11. Are drill crew members prohibited from wearing loose clothing, jewelry, or equipment which might become caught in moving machinery? (18.H.11.b)	X		
12. Are steps being taken to control dust? (18.H.11.i)	X		
13. Are augers cleaned only when the rotating mechanism is in neutral and the auger is stopped? (18.H.11.j)	X		
14. Means shall be provided to guard against employee contact with auger. (guard around the auger; barricade around the perimeter of the auger; electronic brake activated by a presence-sensing device). 18.H.11.l	X		

Comments:

This checklist is based on EM 385-1-1, dated 30 November 2014. Use of this checklist is optional.

DAILY FIELD RECORD

Page 1 of 1

Project and Task Number: S2022014	Date: 05/23/23
Project Name: Fort McCoy - GW Investigation	Field Activity: DPT; GW Grab Sampling
Location: Fort McCoy, Monroe County, Wisconsin	Weather: 58° → (52°-81°); Sunny; 30.11 Hg; 3mph wind

PERSONNEL: Name	Company	Time In	Time Out
SAM SANTOSO	SRS	0730	1515
Jack Heltzer	SRS	0730	1515

PERSONAL SAFETY CHECKLIST

x	Steel-toed Boots	x	Hard Hat		Tyvek Coveralls
x	Nitrile Gloves	x	Safety Glasses		1/2-Face Respirator

DRUM I.D.	DESCRIPTION OF CONTENTS AND QUANTITY	LOCATION

TIME	DESCRIPTION OF WORK PERFORMED
0730	Arrive on site w/Jack H, Dan
0800	Begin drilling SB/TW-09; Collect sample at 0830
0840	Begin drilling SB/TW-08; Collect sample at 0905
0920	Begin drilling SB/TW-07; Collect sample for MS/MSD at 0950
1000	Begin drilling SB/TW-06; Collect sample at 1030
1035	Begin drilling SB/TW-01; Collect sample at 1115
1115	Lunch break -
1210	start SB/TW-04, Collect sample at 1230.
1240	Start SB/TW-03; Collect sample at 1312.
1320	Start SB/TW-02; (some backfill 1-3' some @ 4'); sample at 1355
1400	Start SB/TW-05; Collect sample at 1455.
1500	Start to demobilize and set up on background sampling area.
1515	All personnel leave site.

ONEIDA Sustainment and Restoration Services

DAILY SAFETY TAILGATE MEETING FORM
FORT McCOY, MONROE COUNTY, WISCONSIN

Date: 05/23/23
SSHO: SAM SANTOSO

ITEMS TO BE DISCUSSED WITH SITE PERSONNEL:

- X Safety responsibilities and communication protocols
- X Site Layout: work zones, emergency equipment, sanitation, staging area, parking
- X Personal protective equipment required
- X Requirements for equipment and tool inspections, operations, use
- X Exposure to hazardous substances and control measures
- X General safe work practices, housekeeping
- X Emergency action plan and procedures, evacuation
- X First Aid and Emergency Response procedures
- X Hospital and Urgent Care Locations:
  Tomah Health - 501 Gopher Ave Tomah, WI 54660
- X **HASP Sections, Safety Plans, AHAs reviewed:** yes - Reiterated AHA's
- X **Other hazards and hazard controls to review (Note below)**

Planned Work Tasks and Safety Items Discussed:

Keep work areas tidy, no found ticks yesterday but still be aware & check, slips trips and falls, Ear protection, hard hats and clear communication

ONEIDA
Sustainment and
Restoration Services

DAILY SAFETY TAILGATE MEETING FORM
FORT McCOY, MONROE COUNTY, WISCONSIN

The following personnel were present for discussion of the topics listed above and have read and understand the applicable contents of the Accident Prevention Plan.

NAME	SIGNATURE	COMPANY	DATE
SAM SANTOSO		SRS	05/23/23
Jack Heltzel		SRS	05/23/23
DAN BENDORF		PROBE TECH	5/23/23
Eric Plante		Probe Tech	5/23/23

DRILLING EQUIPMENT	
Contract Name and Number: 520214 FORT McCOY DLA PROPERTY	Contractor/Subcontractor: PROBE TECHNOLOGIES
Government Inspector: NA	Location: US ARMY AREA #4 STORAGE YARD
Contractor Inspector: DAN BENDORF	Date: 5/23/23
Equipment name and number: GEOPROBE 6620 DT	

	Yes	No	N/A
1. Is a copy of the operation and maintenance manual for drilling equipment available? (18.H.02)		X	
2. Has a survey been conducted to identify overhead electrical hazards and potential ground hazards and their locations identified in the site layout plan? (18.H.03)	X		
3. Does the hazard analysis contain copies of Safety Data Sheets for all drilling fluids available? (18.H.04a)			X
4. Have all members of the drilling crew been trained the operation, inspection, and maintenance of the equipment; the safety features and procedures to be used; and overhead electrical lines and underground hazards? (18.H.05a)	X		
5. Does the drilling equipment have two easily accessible emergency shut down devices (one for the operator and one for the helper)? (18.H.06)		X	
6. Is the equipment posted with a warning of electrical hazards? (18.H.07a)	X		
7. Is there a spotter or an electrical proximity warning device available to ensure safe distances from power lines are maintained? (18.H.07b)		X	
8. Before moving earth drilling equipment, has the travel route been surveyed for overhead and terrain hazards, particularly overhead electrical hazards? (18.H.08a)	X		
9. Is equipment set-up in a stable manner, with cribbing if necessary? (18.H.09.a)			X
10. Are outriggers being used in accordance with the manufacturer's recommendations? (18.H.09.b)	X		
11. Are drill crew members prohibited from wearing loose clothing, jewelry, or equipment which might become caught in moving machinery? (18.H.11.b)	X		
12. Are steps being taken to control dust? (18.H.11.i)	X		
13. Are augers cleaned only when the rotating mechanism is in neutral and the auger is stopped? (18.H.11.j)	X		
14. Means shall be provided to guard against employee contact with auger. (guard around the auger; barricade around the perimeter of the auger; electronic brake activated by a presence-sensing device). 18.H.11.l	X		

Comments:

This checklist is based on EM 385-1-1, dated 30 November 2014. Use of this checklist is optional.

ONEIDA Sustainment and Restoration Services

DAILY HEALTH AND SAFETY INSPECTION CHECKLIST
FORT McCOY, MONROE COUNTY, WISCONSIN

The Site Safety and Health Officer (SSHO) will perform a safety inspection with this checklist for each day that work tasks are performed at the site. If this checklist is not used, the SSHO will document safety activities on an equivalent report form or daily log that include the contents of this checklist.

Checklist Items	Description
1. What safety tasks were performed today? *Identify one or more of the following areas and specify and describe the task(s).* a. Safety plan review and training b. Tools, equipment, PPE, work site inspection c. Implementation of safety procedures and controls	B.) Working around a rig to be safe, communicate clearly needs each group has ad to work around / wait if necessary.
2. What safety topics (e.g., newly encountered hazards) were discussed and addressed today?	Wearing gloves different to the task at hand ie.) cut resistant if working on rig and sharps
3. What safety deficiencies, including near misses or accidents, were observed today? What were the corrective actions? *Note the times when deficiencies were observed and when corrections were made or are scheduled to be completed.*	No noted near misses, deficiencies, or accidents
4. What other safety issues or findings were observed today?	All personel wore long pants, hard hats, high visibility clothing
5. Miscellaneous notes	No found ticks yesterday, but still be aware.
Inspection Performed By:	SAM SANTOSO
Date of Inspection:	05/23/23

ONEIDA
Sustainment and
Restoration Services

DAILY SAFETY TAILGATE MEETING FORM
FORT McCOY, MONROE COUNTY, WISCONSIN

Date: 5/24/23
SSHO: SAM SANTOSO

ITEMS TO BE DISCUSSED WITH SITE PERSONNEL:

- x Safety responsibilities and communication protocols
- x Site Layout: work zones, emergency equipment, sanitation, staging area, parking
- x Personal protective equipment required
- x Requirements for equipment and tool inspections, operations, use
- x Exposure to hazardous substances and control measures
- x General safe work practices, housekeeping
- x Emergency action plan and procedures, evacuation
- x First Aid and Emergency Response procedures
- x Hospital and Urgent Care Locations:
  Tomah Health; 501 Gopher Ave, Tomah WI, 54660
- x **HASP Sections, Safety Plans, AHAs reviewed:** AHA's 1-3, Mob & Demob, DPT safety
- x **Other hazards and hazard controls to review (Note below)**

Planned Work Tasks and Safety Items Discussed:

Work area is adjacent to railroad tracks that are in use. Being aware of its potential danger and staying clear of its tracks during work and staging. Keep work area tidy and neat. Ear protection when drilling.

DAILY FIELD RECORD

ONEIDA Sustainment and Restoration Services

Project and Task Number: S2022014	Date: 05/24/23
Project Name: Fort McCoy - GW Investigation	Field Activity: GW Grab Sampling, DPT drilling
Location: Fort McCoy, Monroe County, Wisconsin	Weather: 51°-71°; 30.23 Hg; 13mph wind

PERSONNEL: Name	Company	Time In	Time Out
Sam Santoso	SRS	0730	1130
Jack Heltzer	SRS	0730	1130

PERSONAL SAFETY CHECKLIST

x	Steel-toed Boots	x	Hard Hat		Tyvek Coveralls
x	Nitrile Gloves	x	Safety Glasses		1/2-Face Respirator

DRUM I.D.	DESCRIPTION OF CONTENTS AND QUANTITY	LOCATION

TIME	DESCRIPTION OF WORK PERFORMED
0730	Arrive on site - Conduct Safety Meeting covering Railroad awareness
0740	Start hand augering and drilling ~~SB/TW-~~ BS-05. Collect@ 0805
0815	Start hand augering and drilling BS-04; Collet sample@0835 → Dup.
0850	Start hand augering and drilling BS-03; Collect sample @ 0905
0915	Start hand augering and drilling BS-02; Collect sample@ 0935
0945	Start hand augering and drilling BS-01; Collect sample @ 1010
1030	Mobilize rig to trailer/Staging area
1015*	Collected FB-01 (Field Blank)
1025*	Collected EB-01 (Equipment Blank)
1048	Probe Technology/ Dan & Eric finish packing equipment & leave site.
1050	SRS Personnel double check areas for cleanliness.
1130	All personnel have left site & contact responsible parties to let them know work has been completed.
-Note To All-	Duplicates SB/TW-13 @ 5/22/23 @ 1432; BS-04 @ 5/24/23 @ 0835; MS/MSD was SB/TW-07 @ 5/23/23 @ 0950

ONEIDA
Sustainment and
Restoration Services

DAILY SAFETY TAILGATE MEETING FORM
FORT McCOY, MONROE COUNTY, WISCONSIN

The following personnel were present for discussion of the topics listed above and have read and understand the applicable contents of the Accident Prevention Plan.

NAME	SIGNATURE	COMPANY	DATE
SAM SANTOSO		SRS	05/24/23
DAN BENDORF		PROBE TECH	5/24/23
Eric Plante		Probe Tech	5/24/25/23
Jack Heltzel		SRS	5/24/23

Daily Worker Sign-IN Log

Fort McCoy, Monroe County, Wisconsin

Date	Name	Company	Work Area	Level of Protection	TIME IN	TIME Out
05/24/23	SAM SANTOSO	SRS	Outside	D	0730	1130
05/24/23	Jack Heltzer	SRS	Outside	D	0730	1130
5/24/23	Eric Plante	Probe Tech	outside	D	0730	~1050
5/24/23	DAN BENDORF	PROBE TECH	OUTSIDE	D	0730	~1050
SJH						

ONEIDA Sustainment and Restoration Services

DAILY HEALTH AND SAFETY INSPECTION CHECKLIST
FORT McCOY, MONROE COUNTY, WISCONSIN

The Site Safety and Health Officer (SSHO) will perform a safety inspection with this checklist for each day that work tasks are performed at the site. If this checklist is not used, the SSHO will document safety activities on an equivalent report form or daily log that include the contents of this checklist.

Checklist Items	Description
1. What safety tasks were performed today? *Identify one or more of the following areas and specify and describe the task(s).* a. Safety plan review and training b. Tools, equipment, PPE, work site inspection c. Implementation of safety procedures and controls	C.) Discussed how to be safe, why our ppe has requirements, using proper lifting techniques.
2. What safety topics (e.g., newly encountered hazards) were discussed and addressed today?	Railroad cognizant, though more clear of vegetation still check for fleas, ticks, bugs at end of day.
3. What safety deficiencies, including near misses or accidents, were observed today? What were the corrective actions? *Note the times when deficiencies were observed and when corrections were made or are scheduled to be completed.*	No noted near misses, accidents, or safety deficiencies were noted.
4. What other safety issues or findings were observed today?	Complacency on safety, proper lifting techniques, and overhead branches.
5. Miscellaneous notes	None.
Inspection Performed By:	Sam Santoso
Date of Inspection:	05/24/23

DRILLING EQUIPMENT	
Contract Name and Number: Fort McCoy DLA Property / S2022014	Contractor/Subcontractor: PROBE TECHNOLOGIES
Government Inspector: N/A	Location: U.S. Army Area #4 Storage Yard
Contractor Inspector: DAN BENDORF	Date: 5/24/23
Equipment name and number: 6620 DT	

	Yes	No	N/A
1. Is a copy of the operation and maintenance manual for drilling equipment available? (18.H.02)		X	
2. Has a survey been conducted to identify overhead electrical hazards and potential ground hazards and their locations identified in the site layout plan? (18.H.03)	X		
3. Does the hazard analysis contain copies of Safety Data Sheets for all drilling fluids available? (18.H.04a)			X
4. Have all members of the drilling crew been trained the operation, inspection, and maintenance of the equipment; the safety features and procedures to be used; and overhead electrical lines and underground hazards? (18.H.05a)	X		
5. Does the drilling equipment have two easily accessible emergency shut down devices (one for the operator and one for the helper)? (18.H.06)		X	
6. Is the equipment posted with a warning of electrical hazards? (18.H.07a)	X		
7. Is there a spotter or an electrical proximity warning device available to ensure safe distances from power lines are maintained? (18.H.07b)		X	
8. Before moving earth drilling equipment, has the travel route been surveyed for overhead and terrain hazards, particularly overhead electrical hazards? (18.H.08a)	X		
9. Is equipment set-up in a stable manner, with cribbing if necessary? (18.H.09.a)			X
10. Are outriggers being used in accordance with the manufacturer's recommendations? (18.H.09.b)	X		
11. Are drill crew members prohibited from wearing loose clothing, jewelry, or equipment which might become caught in moving machinery? (18.H.11.b)	X		
12. Are steps being taken to control dust? (18.H.11.i)	X		
13. Are augers cleaned only when the rotating mechanism is in neutral and the auger is stopped? (18.H.11.j)	X		
14. Means shall be provided to guard against employee contact with auger. (guard around the auger; barricade around the perimeter of the auger; electronic brake activated by a presence-sensing device). 18.H.11.l	X		

Comments:

This checklist is based on EM 385-1-1, dated 30 November 2014. Use of this checklist is optional.

ONEIDA Sustainment and Restoration Services

WEEKLY HEALTH AND SAFETY INSPECTION CHECKLIST
FORT McCOY, MONROE COUNTY, WISCONSIN

The Site Safety and Health Officer (SSHO) will perform a safety inspection with this checklist on a weekly basis or after every 5 days that work tasks for this project are performed, at minimum. Notes and comments for inspected items will be added to the second page of this checklist.

CHECKLIST	Yes	No	N/A
1. Are the Injury and Illness Prevention Program and Health and Safety Plan kept in a location that is known and accessible to all site personnel? Location of IIPP and HASP:	X		
2. Does the site copy of the HASP contain updated revisions (i.e., hand-written field notes or approved amendments) that reflect current tasks and conditions?		X	
3. Are OSHA and contract safety compliance plans available and implemented, according to encountered hazards and planned work tasks? E.g., HAZWOPER Health & Safety Plan, Fall Protection Plan, Excavation and Trenching Plan, Hazard Communication Program, Control of Hazardous Energy Program.	X		
4. Have hazards and hazard controls been reviewed with site personnel according to their work task(s) and documented? E.g., tailgate, Activity Hazard Analysis, compliance plans	X		
5. Are training records, inspections reports, daily field forms properly filled out, kept current, and filed in an organized manner? File location: Oneida Server	X		
6. Is the Site Layout Plan posted in an accessible location? Does it show updated locations of each work feature (designated work zones, entry/exit roads, emergency and safety supplies, auxiliary areas for staging, trailer, lunch/break, portable restroom, parking)? Location of Site Layout Plan: Paper Copy & Electronic	X		
7. Is there an Emergency Action Plan with map(s) to the nearest emergency medical facility with the phone number and address posted and made available to all site personnel?	X		
8. Are job site posters posted in a conspicuous location?			X
9. Has site communication and emergency contact information between the SSHO/ Supervisor and site personnel been clearly established and/or effectively working?	X		
10. Are there 2 designated First Aid/CPR responders for each work shift? Do site personnel know who those are? Sam Santoso & Jack Heltzer	X		
11. Are work zones boundaries clearly defined and maintained to keep unauthorized personnel out? Method of work zone: Outside, but can spot if visitors approach.		X	
12. Are the emergency and sanitary items in a readily accessible location and checked to ensure they are properly supplied or operating? a. Fire Extinguisher(s). Qty 3 b. First aid kit(s) and bloodborne pathogen kit(s). Qty. 3 c. Eyewash station(s). Qty Ø d. Restroom/handwashing facility. Qty. Ø	X		
13. Are chemicals that are used and stored at the site in containers and identified with labels and hazard warnings?			X
14. Does each chemical being used and stored at the site have its own Safety Data Sheet (SDS)? Location of SDSs:			X
15. Are the site personnel wearing the proper personal protection equipment (PPE) for the work they are performing?	X		
16. Is the site kept clean and cleared of unnecessary materials, debris and trip hazards?	X		
17. Have hazard controls for physical hazards (e.g., weather, biological, traffic, electrical, noise, trip hazards, struck-by hazards) that are currently observed at the site been sufficiently implemented for site workers?	X		
18. HAZWOPER: Are controls used to prevent exposure to hazardous substances (i.e., air monitoring, correct PPE/respirators, work zone delineation, decontamination) being correctly implemented? Have monitoring exposure and calibration records been kept?			X
19. Is there any observed safety deficiency that needs correction?		X	

ONEIDA Sustainment and Restoration Services

NOTES/COMMENTS

Inspected items included: continued working and operable drilling equipment & rig (trailer).

- No broken lights or trailer appeared to be in poor working condition.
- Geoprobe rig appeared to work fine during all holes and had no signs of leaks.
- Drill operator cleared and brushed off ~~out~~ any debris from rig before loading.
- All work areas looked over a second time to ensure no left items behind and Steaks back in place.
- All personal were reviewed daily about general & specific practices at work.

INSPECTION PERFORMED BY

SSHO Name:	Date:
SAM SANTOSO	05/24/23

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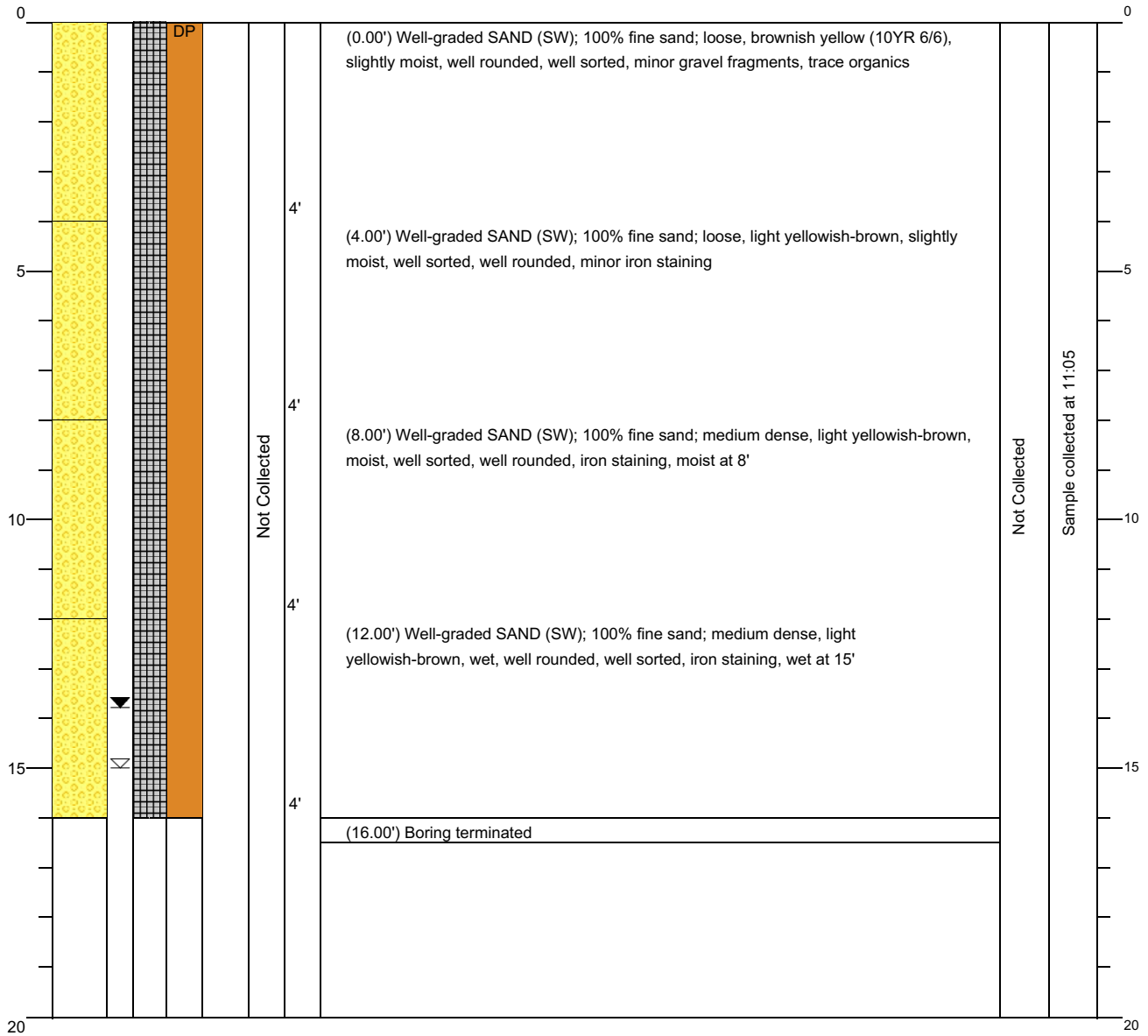
APPENDIX C

GEOLOGICAL BORING LOGS

ONEIDA Sustainment and Restoration Services

Client:	**USACE - Omaha**	**BORING LOG**	
Project:	**Fort McCoy**	**Boring No.**	**SB-TW-01**
Address:	**1654 S 11th Ave, Fort McCoy, WI**	**Page:**	**1 of 1**

Drilling Start Date:	**05/23/2023 10:40**	Boring Depth (ft):	**16.0**
Drilling End Date:	**05/23/2023 11:00**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**15**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**13.78**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012291, -90.677279**



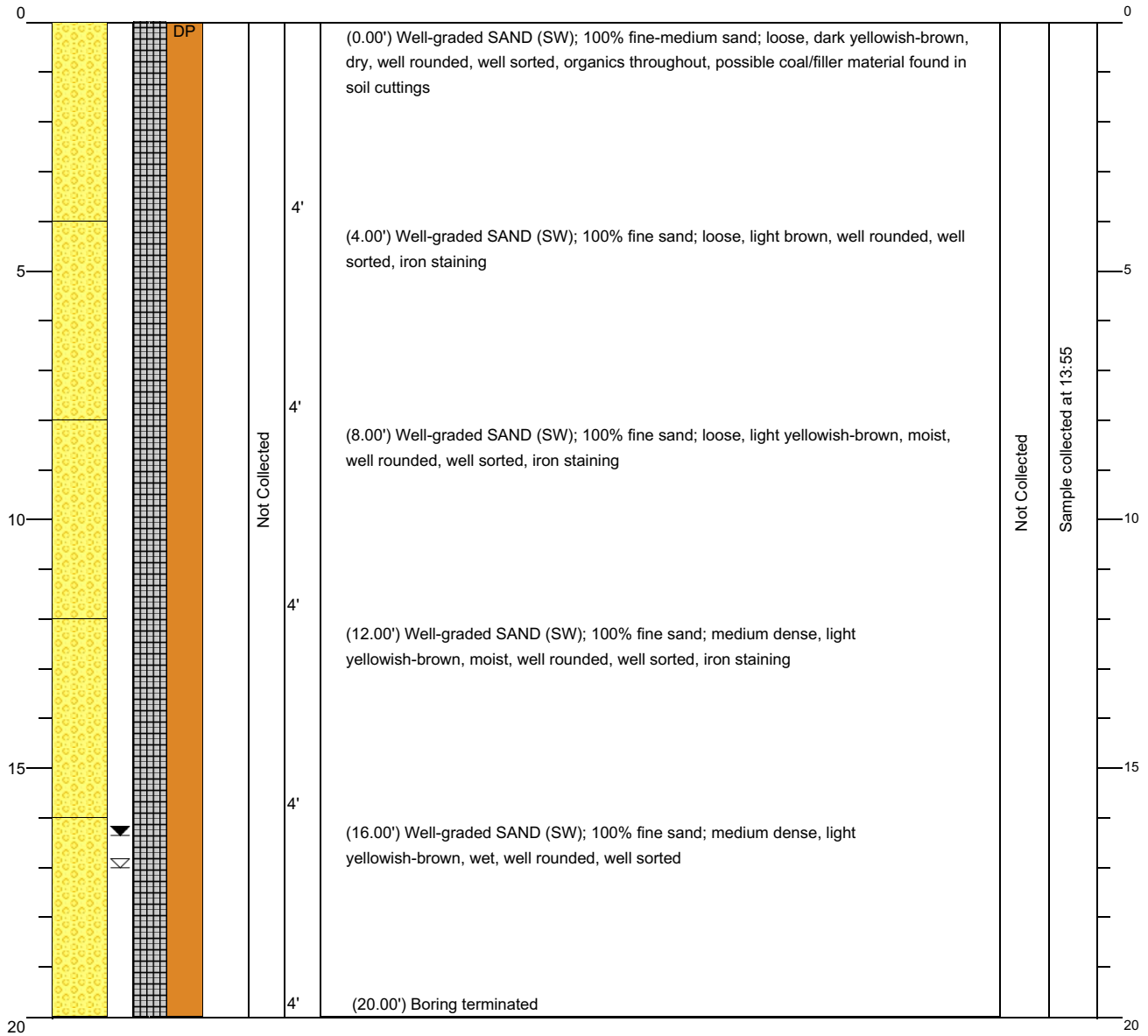
NOTES: Hole precleared to 5.0' on 05/23/2023 10:35 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-01-GW-052323 collected at 15.5-16.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services

Client:	**USACE - Omaha**	**BORING LOG**	
Project:	**Fort McCoy**	**Boring No.**	**SB-TW-02**
Address:	**1654 S 11th Ave, Fort McCoy, WI**	**Page:**	**1 of 1**

Drilling Start Date:	**05/23/2023 13:25**	Boring Depth (ft):	**20**
Drilling End Date:	**05/23/2023 13:45**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**17**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**16.35**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012332, -90.676349**



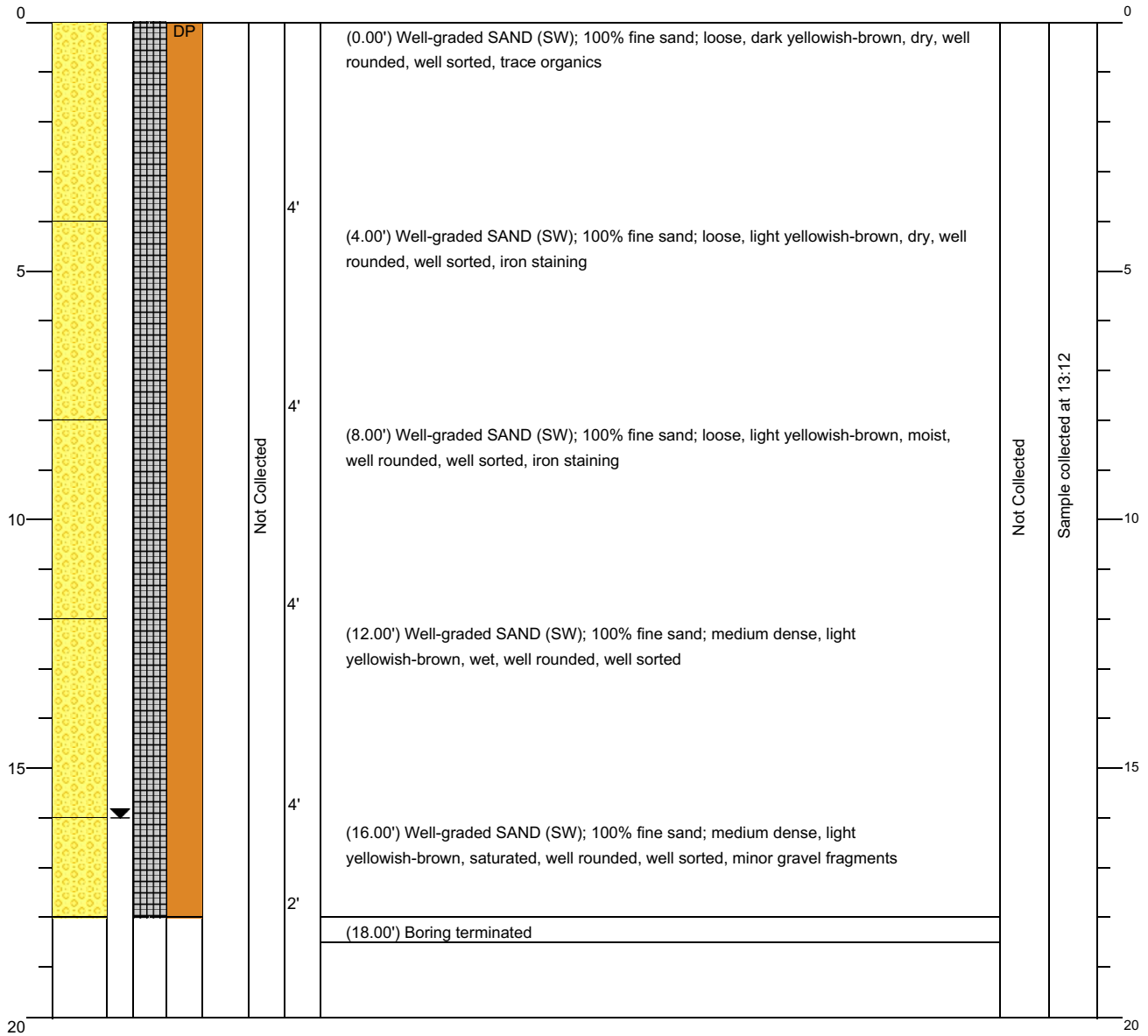
NOTES: Hole precleared to 5' on 05/23/2023 13:20 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-02-GW-052323 collected at 19.5-20.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services

Client:	**USACE - Omaha**	**BORING LOG**	
Project:	**Fort McCoy**	**Boring No.**	**SB-TW-03**
Address:	**1654 S 11th Ave, Fort McCoy, WI**	**Page:**	**1 of 1**

Drilling Start Date:	**05/23/2023 12:45**	Boring Depth (ft):	**18**
Drilling End Date:	**05/23/2023 13:05**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**16**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**15.99**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012301, -90.676639**

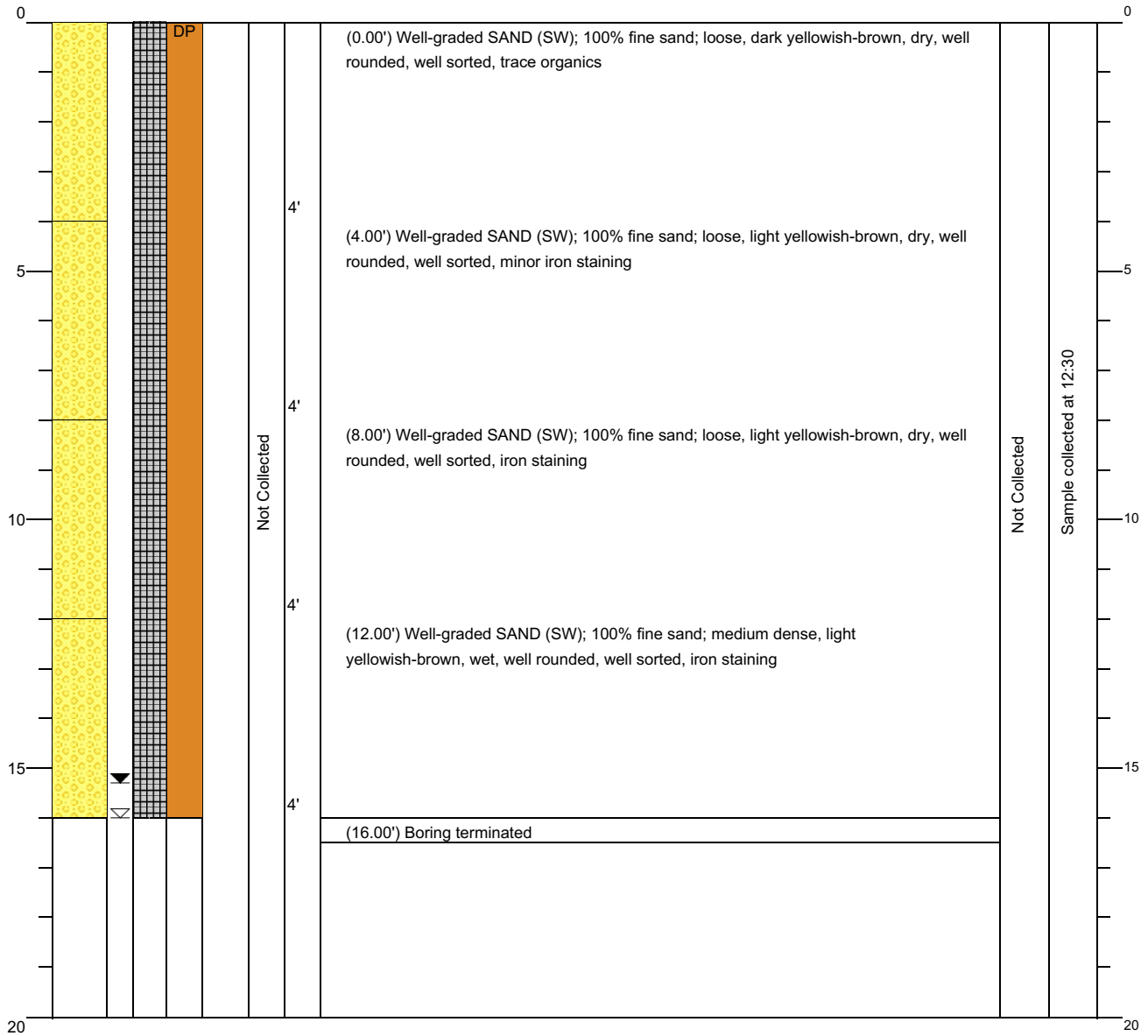


NOTES: Hole precleared to 5' on 05/23/2023 12:40 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-03-GW-052323 collected at 17.5-18.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	Client: USACE - Omaha	BORING LOG
	Project: Fort McCoy	Boring No. SB-TW-04
	Address: 1654 S 11th Ave, Fort McCoy, WI	Page: 1 of 1

Drilling Start Date:	**5/23/2023 12:15**	Boring Depth (ft):	**16**
Drilling End Date:	**5/23/2023 12:25**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**16**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**15.29**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012304, -90.676951**

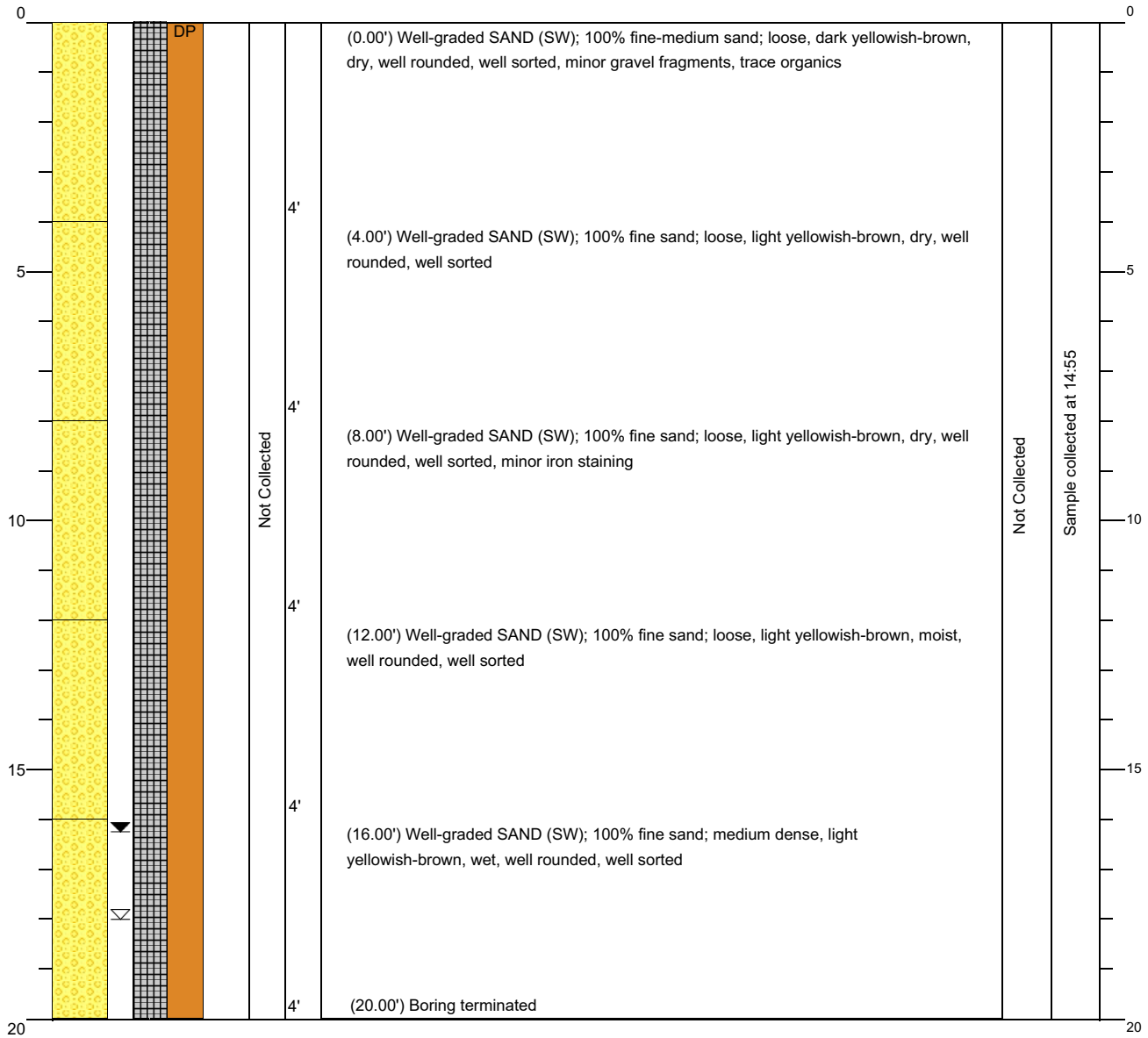


NOTES: Hole precleared to 5' on 5/23/2023 12:10 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-04-GW-052323 collected at 15.5-16.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	Client: USACE - Omaha	BORING LOG
	Project: Fort McCoy	Boring No. SB-TW-05
	Address: 1654 S 11th Ave, Fort McCoy, WI	Page: 1 of 1

Drilling Start Date:	**05/23/2023 14:05**	Boring Depth (ft):	**20**
Drilling End Date:	**05/23/2023 14:50**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**18**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**16.25**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012351, -90.676004**

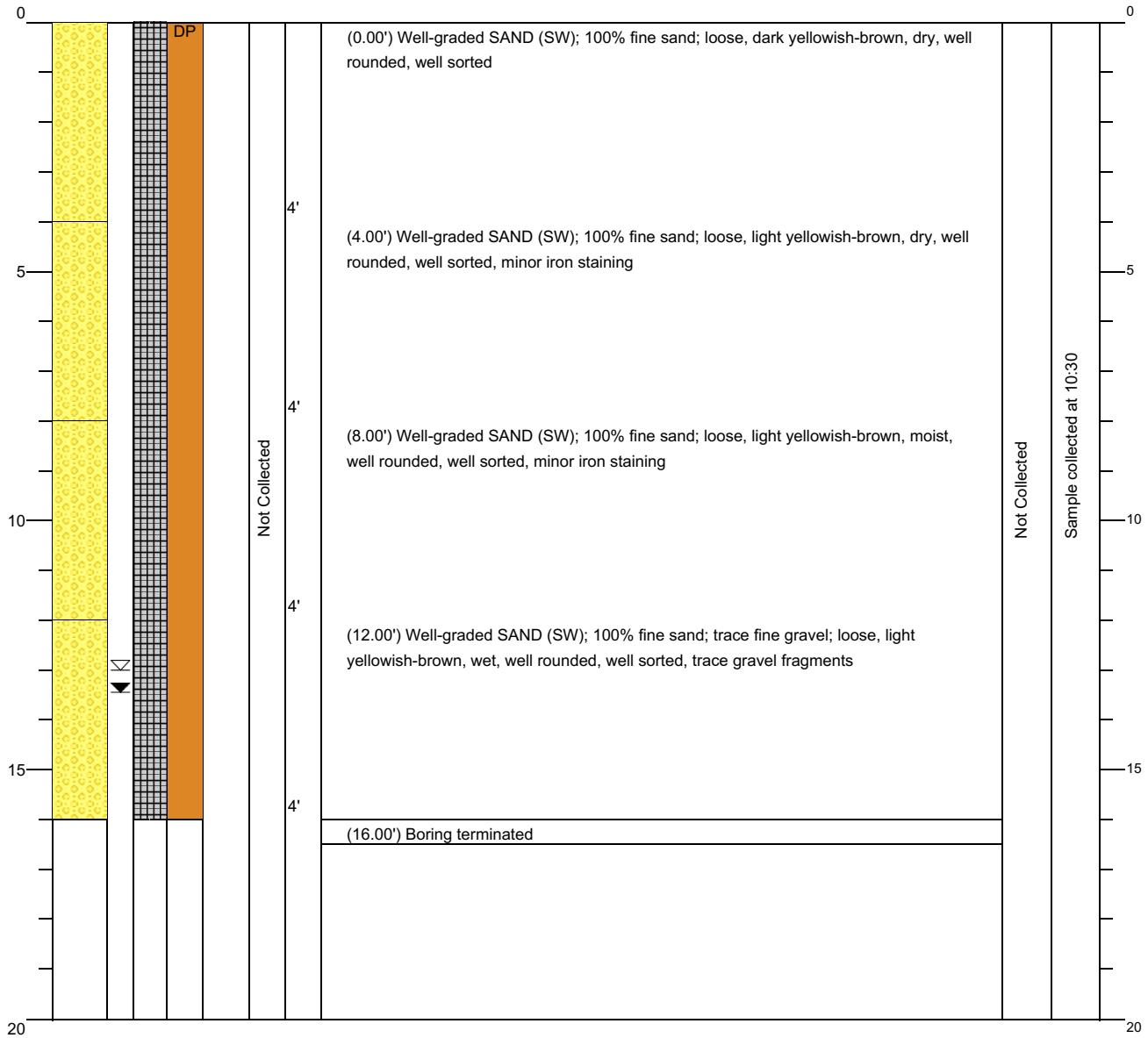


NOTES: Hole precleared to 5' on 05/23/2023 14:00 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-05-GW-052323 collected at 19.5-20.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	Client: USACE - Omaha	BORING LOG
	Project: Fort McCoy	Boring No. SB-TW-06
	Address: 1654 S 11th Ave, Fort McCoy, WI	Page: 1 of 1

Drilling Start Date:	**05/23/2023 10:05**	Boring Depth (ft):	**16**
Drilling End Date:	**05/23/2023 10:15**	Boring Diameter (in):	**5.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**13**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**13.44**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012299, -90.677563**

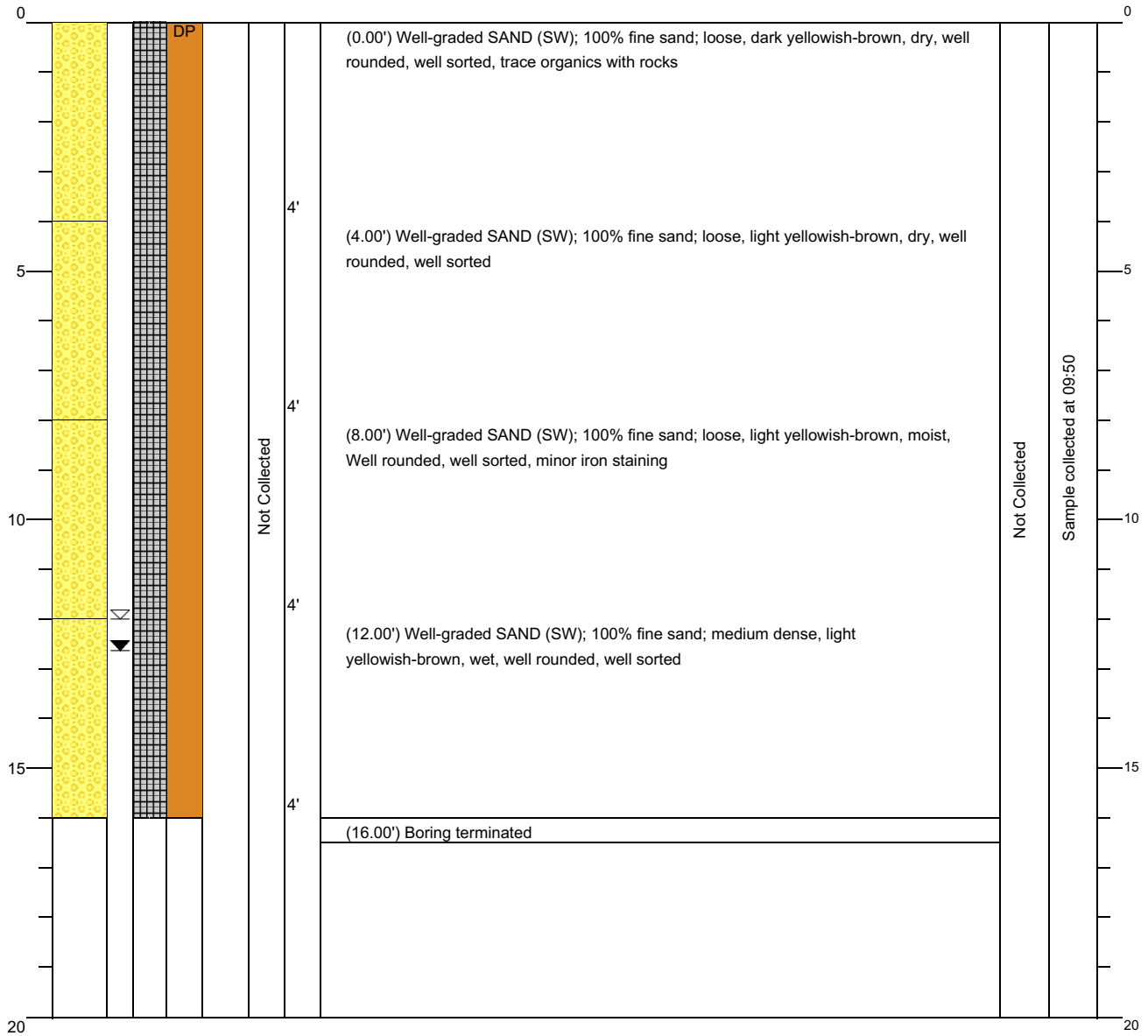


NOTES: Hole precleared to 5' on 05/23/2023 10:00 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-06-GW-052323 collected at 15.5-16.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	Client: USACE - Omaha	BORING LOG
	Project: Fort McCoy	Boring No. SB-TW-07
	Address: 1654 S 11th Ave, Fort McCoy, WI	Page: 1 of 1

Drilling Start Date:	**05/23/2023 09:25**	Boring Depth (ft):	**16**
Drilling End Date:	**05/23/2023 09:40**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**12**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**12.62**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012283, -90.677892**

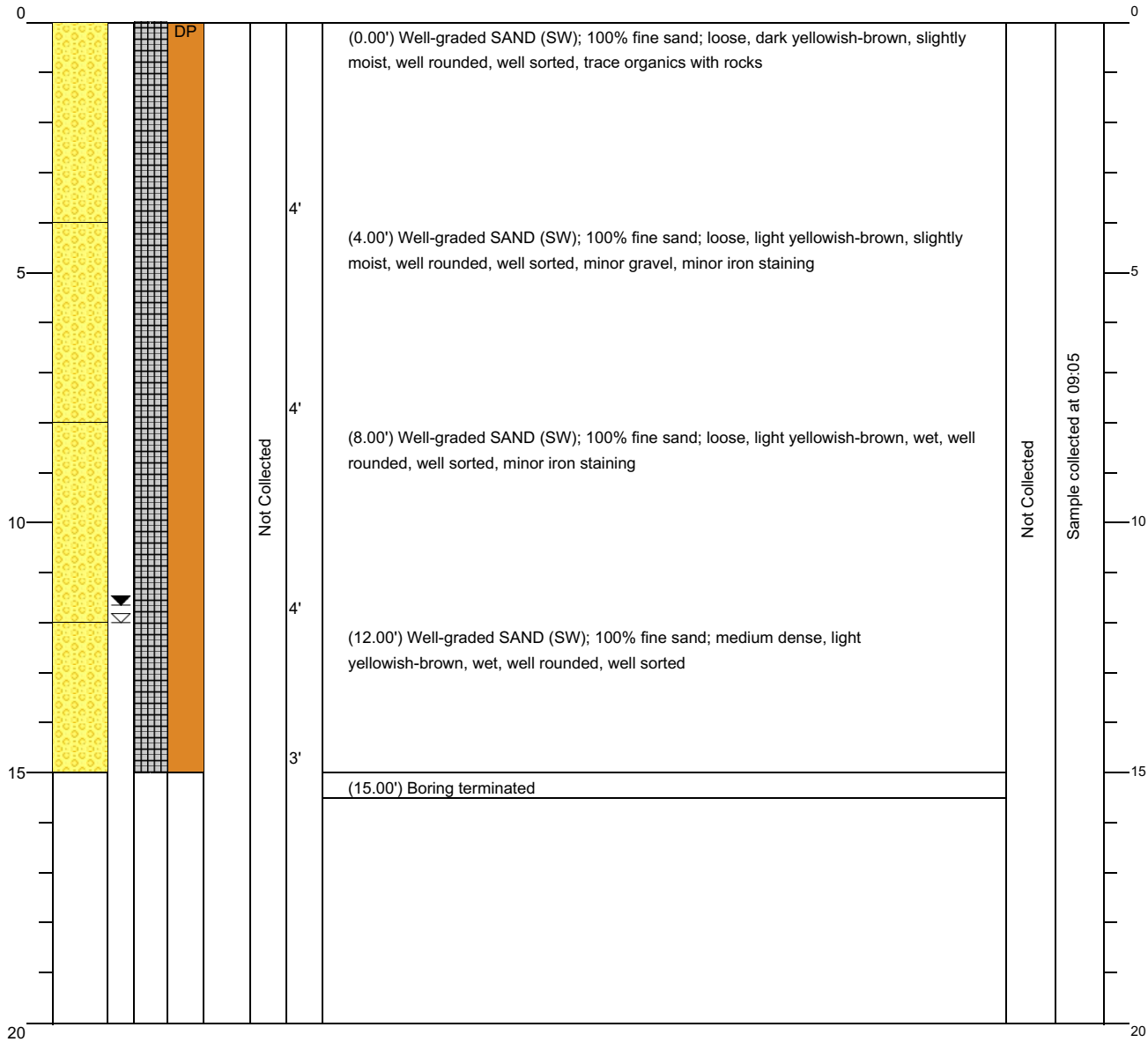


NOTES: Hole precleared to 5' on 05/23/2023 09:20 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-07-GW-052323 collected at 15.5-16.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	Client: USACE - Omaha	BORING LOG
	Project: Fort McCoy	Boring No. SB-TW-08
	Address: 1654 S 11th Ave, Fort McCoy, WI	Page: 1 of 1

Drilling Start Date:	**05/23/2023 08:45**	Boring Depth (ft):	**15**
Drilling End Date:	**05/23/2023 09:00**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**12**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**11.64**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012033, -90.677889**

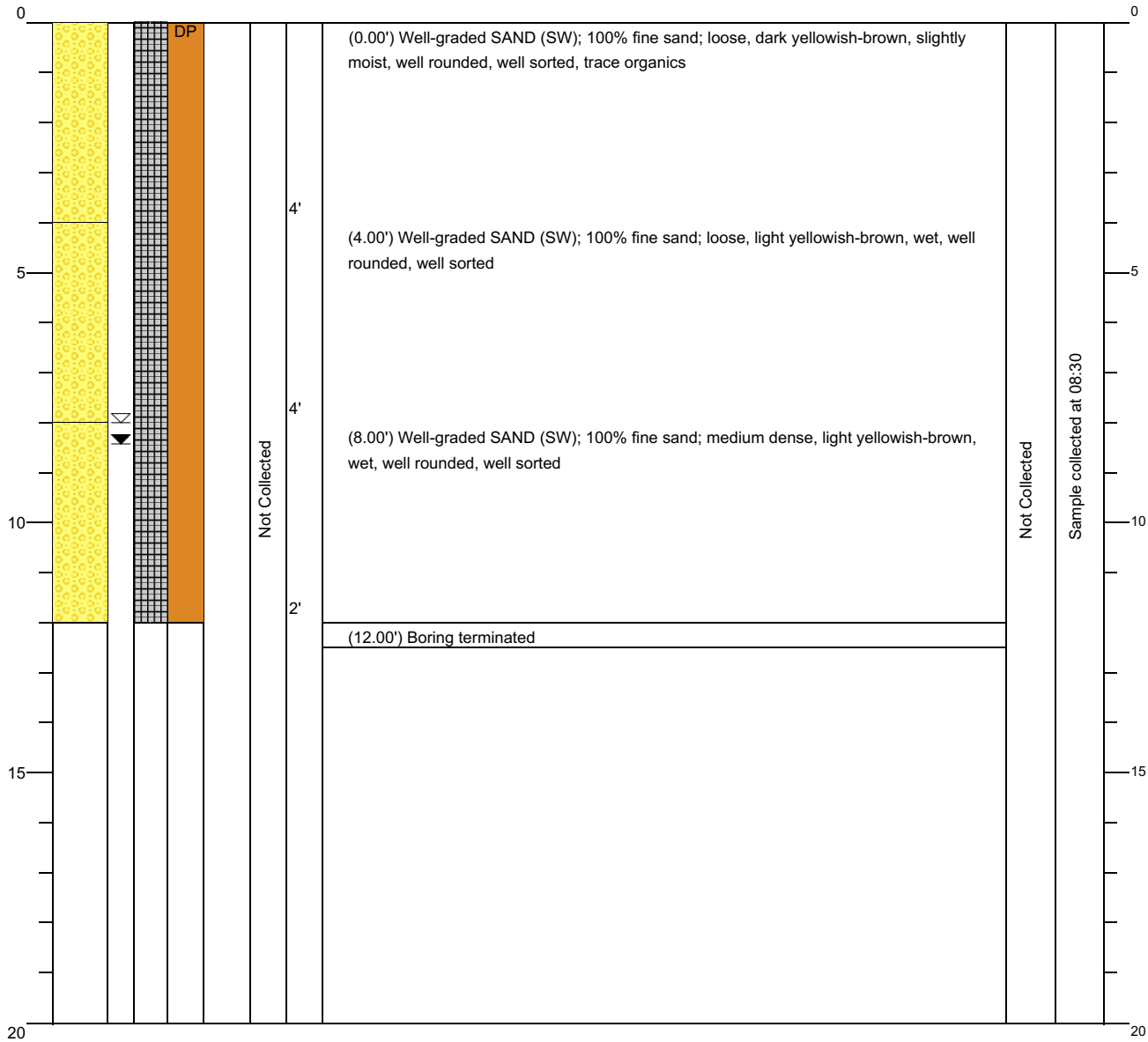


NOTES: Hole precleared to 5' on 05/23/2023 08:40 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-08-GW-052323 collected at 14.5-15.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	Client: USACE - Omaha	BORING LOG
	Project: Fort McCoy	Boring No. SB-TW-09
	Address: 1654 S 11th Ave, Fort McCoy, WI	Page: 1 of 1

Drilling Start Date:	**05/23/2023 08:05**	Boring Depth (ft):	**12**
Drilling End Date:	**05/23/2023 08:20**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**8**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**8.42**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012405, -90.6783**

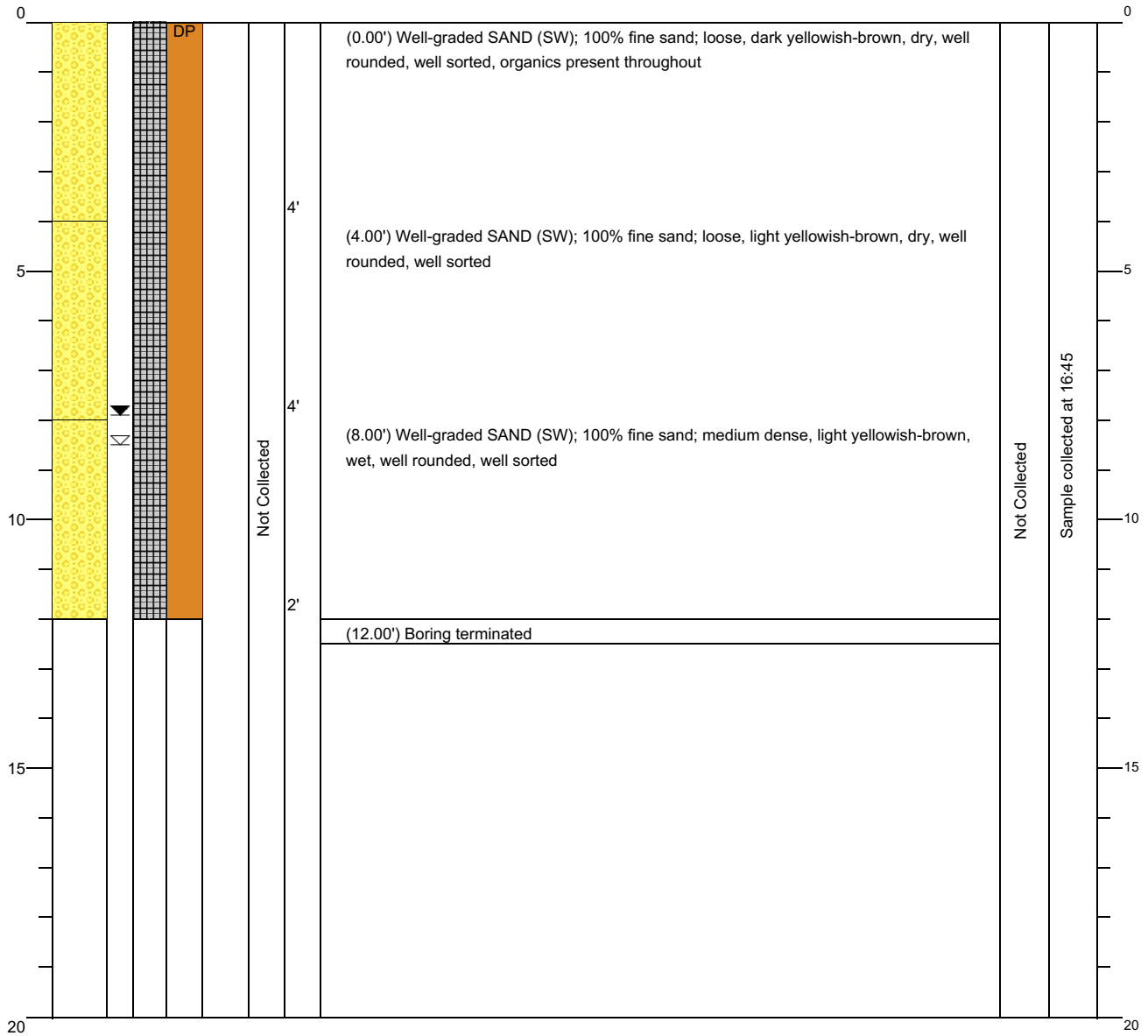


NOTES: Hole precleared to 5' on 05/23/2023 08:00 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-09-GW-052323 collected at 11.5-12.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	**Client:** USACE - Omaha **Project:** Fort McCoy **Address:** 1654 S 11th Ave, Fort McCoy, WI	**BORING LOG** **Boring No.** SB-TW-10 **Page:** 1 of 1

Drilling Start Date:	**05/22/2023 16:25**	Boring Depth (ft):	**12**
Drilling End Date:	**05/22/2023 16:35**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**8.5**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**7.9**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012373, -90.678708**

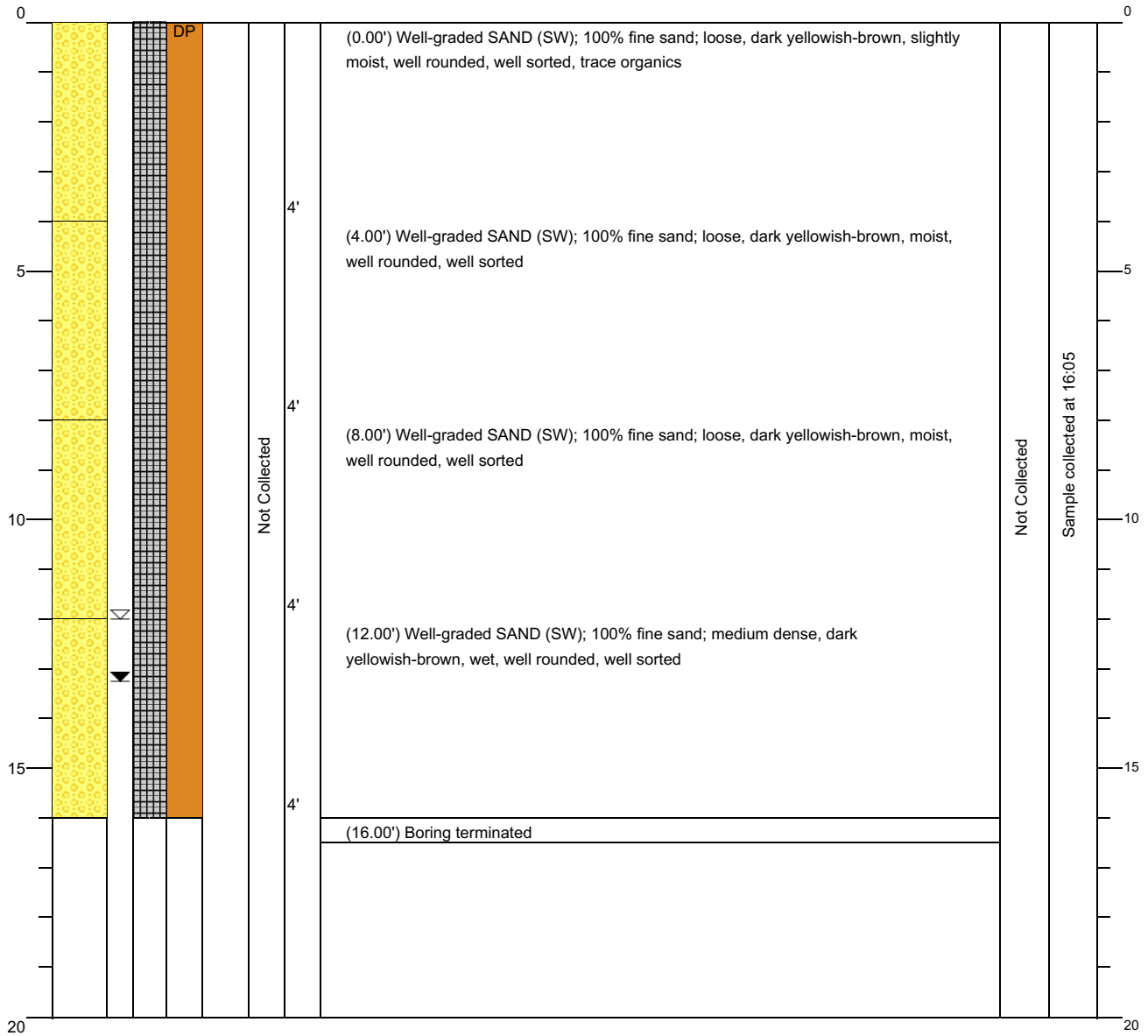


NOTES: Hole precleared to 5' on 05/22/2023 16:20 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-10-GW-052223 collected at 11.5-12.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	Client: USACE - Omaha	BORING LOG
	Project: Fort McCoy	Boring No. SB-TW-11
	Address: 1654 S 11th Ave, Fort McCoy, WI	Page: 1 of 1

Drilling Start Date:	**05/22/2023 15:45**	Boring Depth (ft):	**16**
Drilling End Date:	**05/22/2023 16:00**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**12**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**13.24**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012314, -90.679063**

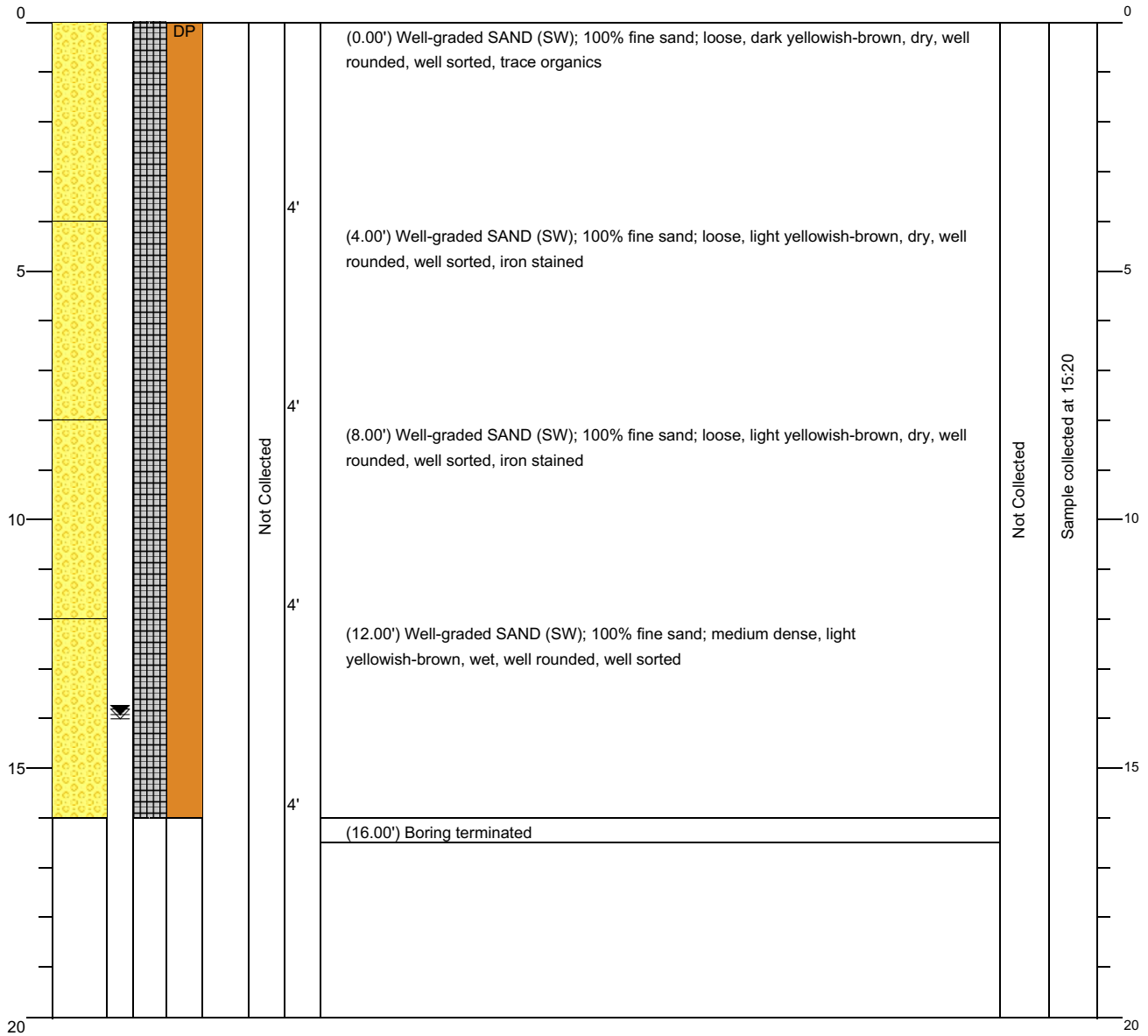


NOTES: Hole precleared to 5' on 05/22/2023 15:40 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-11-GW-052223 collected at 15.5-16.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	Client: USACE - Omaha	BORING LOG
	Project: Fort McCoy	Boring No. SB-TW-12
	Address: 1654 S 11th Ave, Fort McCoy, WI	Page: 1 of 1

Drilling Start Date:	**05/22/2023 15:00**	Boring Depth (ft):	**16**
Drilling End Date:	**05/22/2023 15:09**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**14**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**13.92**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012278, -90.679594**

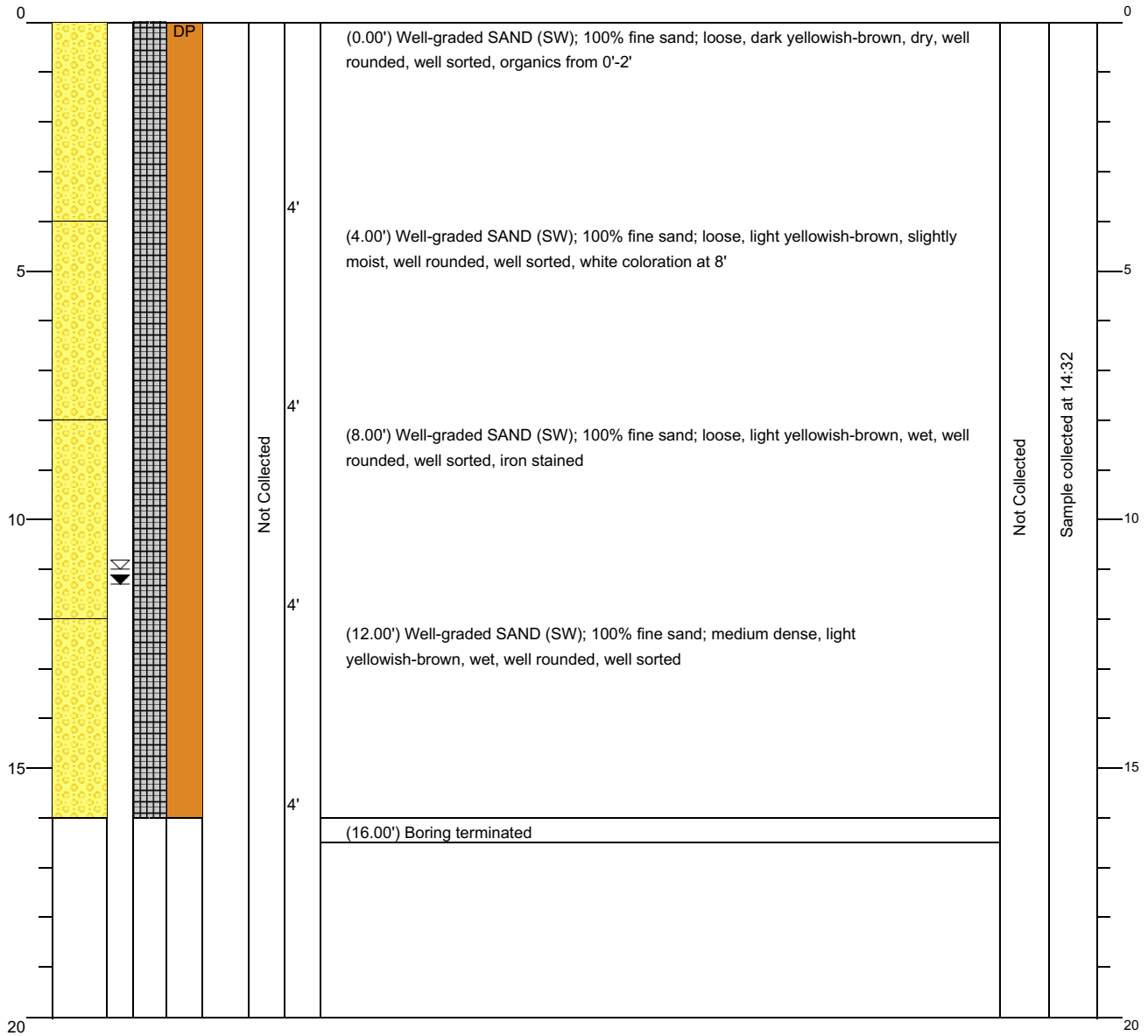


NOTES: Hole precleared to 5' on 05/22/2023 14:55 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-12-GW-052223 collected at 15.5-16.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	Client: USACE - Omaha	BORING LOG
	Project: Fort McCoy	Boring No. SB-TW-13
	Address: 1654 S 11th Ave, Fort McCoy, WI	Page: 1 of 1

Drilling Start Date:	**05/22/2023 14:15**	Boring Depth (ft):	**16**
Drilling End Date:	**05/22/2023 14:23**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**11**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**11.31**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012282, -90.680135**

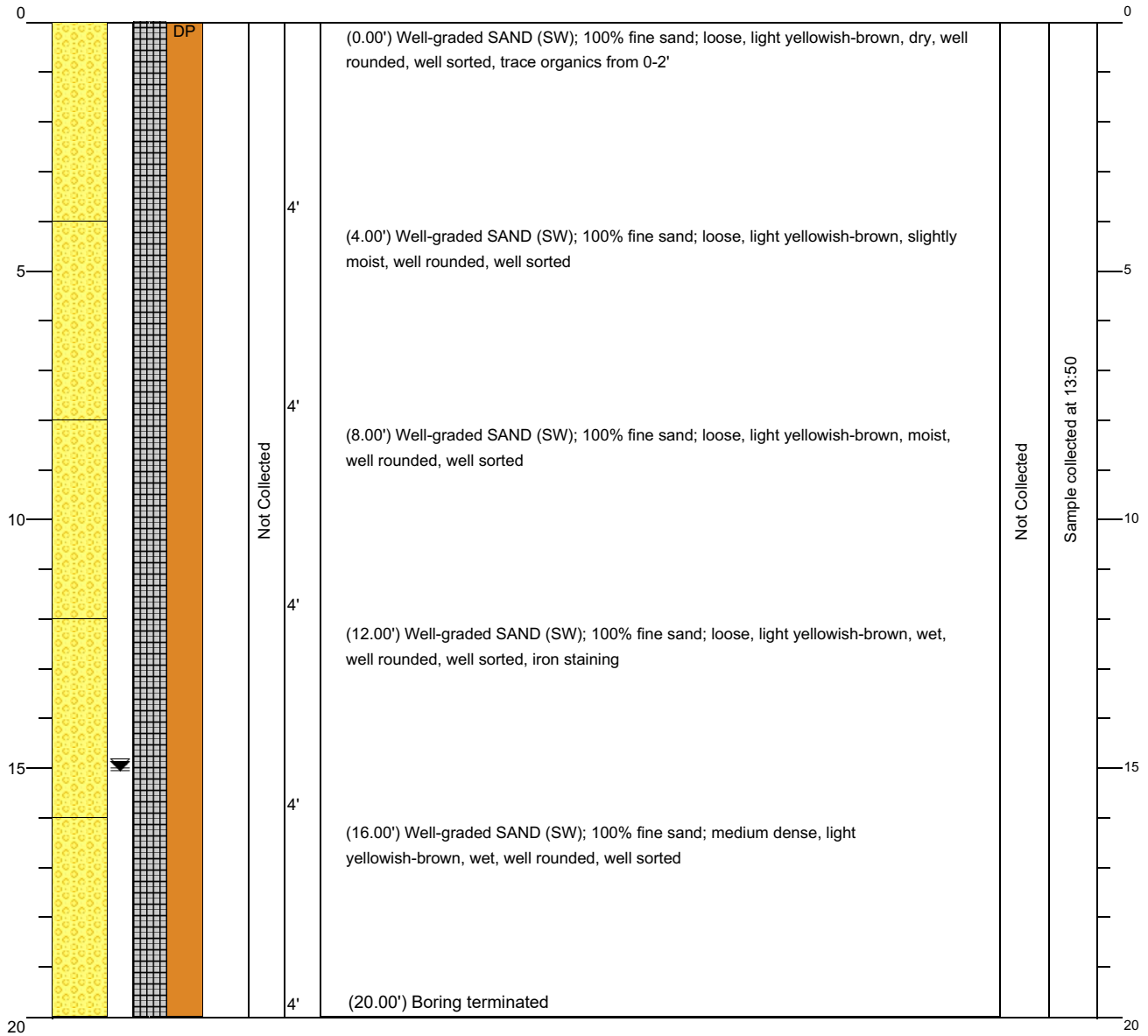


NOTES: Hole precleared to 5' on 05/22/2023 14:10 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-13-GW052223- collected at 15.5-16.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	Client: USACE - Omaha	BORING LOG
	Project: Fort McCoy	Boring No. SB-TW-14
	Address: 1654 S 11th Ave, Fort McCoy, WI	Page: 1 of 1

Drilling Start Date:	**05/22/2023 13:15**	Boring Depth (ft):	**20**
Drilling End Date:	**05/22/2023 13:40**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**15**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**15.05**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012153, -90.680683**



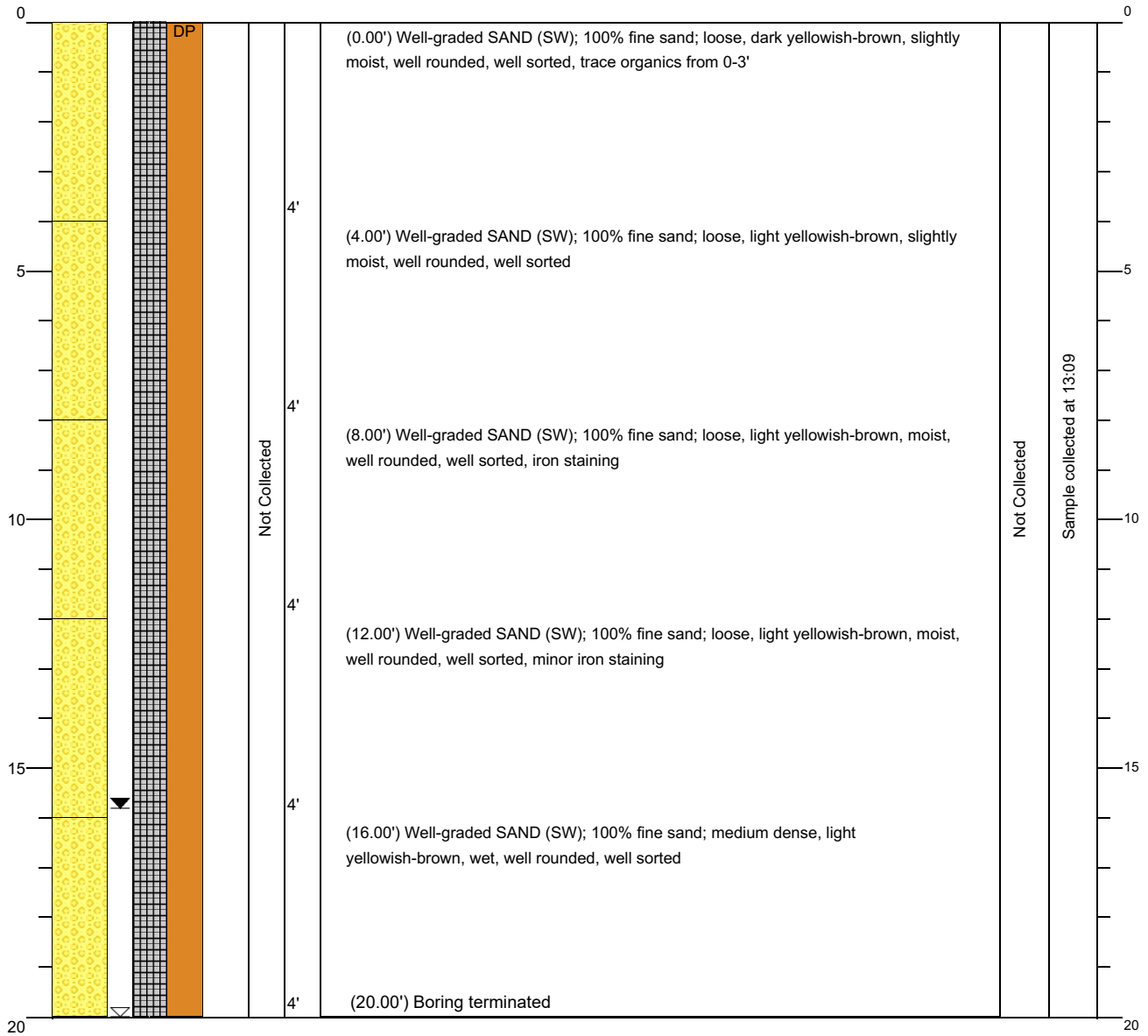
NOTES: Hole precleared to 5' on 05/22/2023 13:10 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-14-GW-052223 collected at 19.5-20.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services

Client:	**USACE - Omaha**	**BORING LOG**	
Project:	**Fort McCoy**	**Boring No.**	**SB-TW-15**
Address:	**1654 S 11th Ave, Fort McCoy, WI**	**Page:**	**1 of 1**

Drilling Start Date:	**05/22/2023 12:35**	Boring Depth (ft):	**20**
Drilling End Date:	**05/22/2023 12:55**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**20**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**15.8**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.012096, -90.681132**

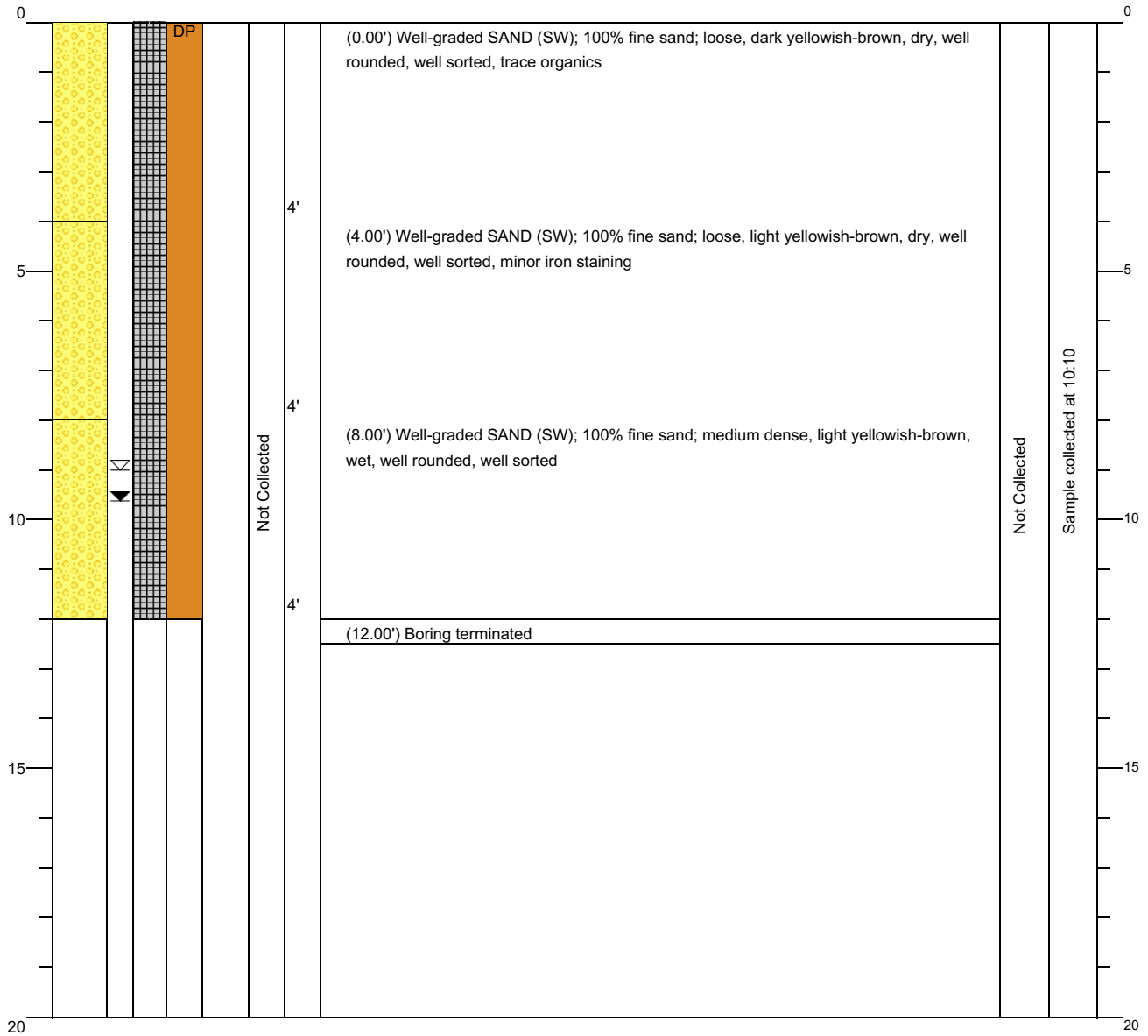


NOTES: Hole precleared to 5' on 05/22/2023 12:30 by Probe Technologies Incorporated using hand auger. Water sample SB-TW-15-GW-052223 collected at 19.5-20.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	**Client:** USACE - Omaha **Project:** Fort McCoy **Address:** 1654 S 11th Ave, Fort McCoy, WI	**BORING LOG** **Boring No.** BS-01 **Page:** 1 of 1

Drilling Start Date:	**05/24/2023 09:50**	Boring Depth (ft):	**12**
Drilling End Date:	**05/24/2023 10:05**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**9**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**9.63**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.010956, -90.680139**



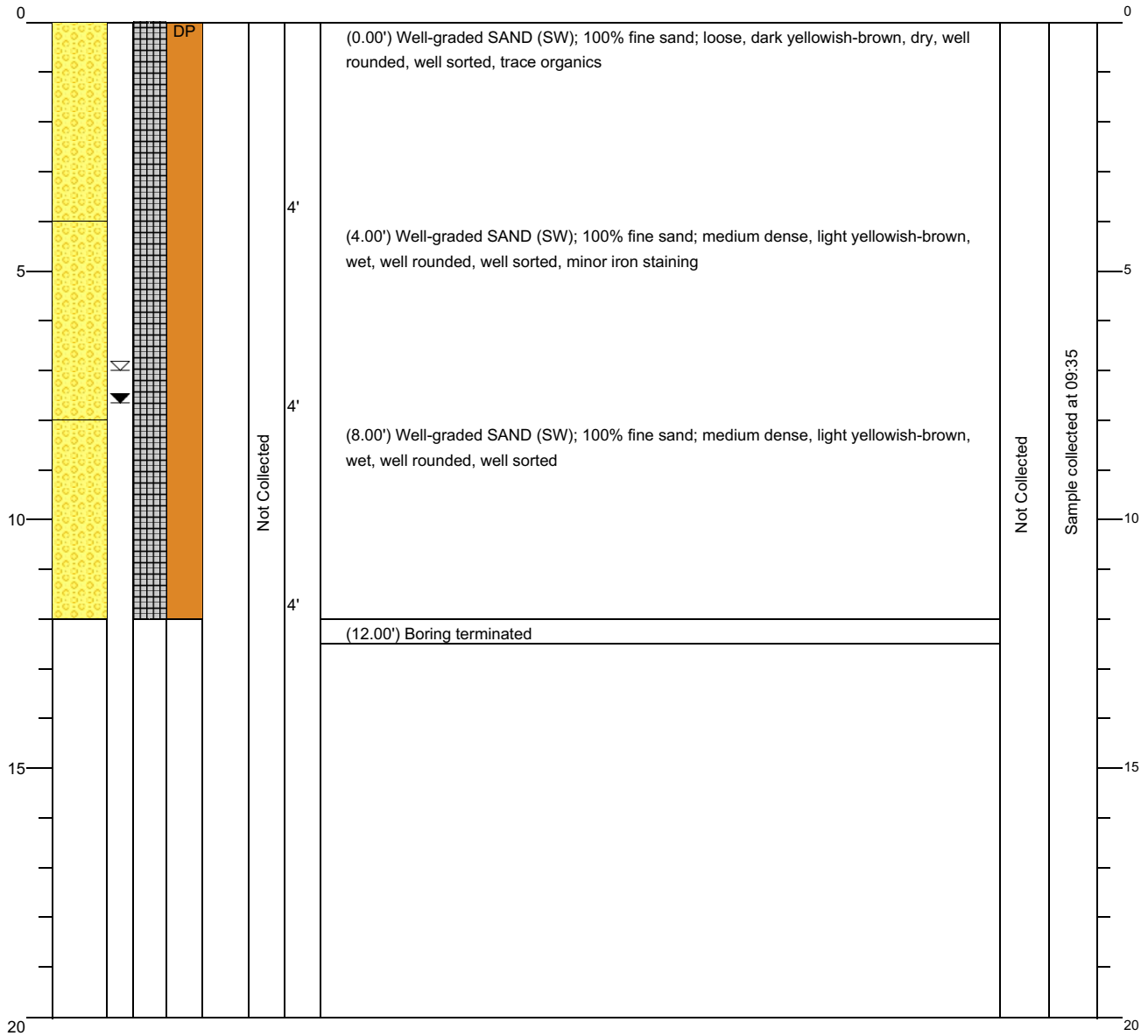
NOTES: Hole precleared to 5' on 05/24/2023 09:45 by Probe Technologies Incorporated using hand auger. Water sample BS-01-GW-052423 collected at 11.5-12.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services

Client:	**USACE - Omaha**	**BORING LOG**	
Project:	**Fort McCoy**	**Boring No.**	**BS-02**
Address:	**1654 S 11th Ave, Fort McCoy, WI**	**Page:**	**1 of 1**

Drilling Start Date:	**05/24/2023 09:20**	Boring Depth (ft):	**12**
Drilling End Date:	**05/24/2023 09:30**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**7**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**7.65**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.010979, -90.679033**

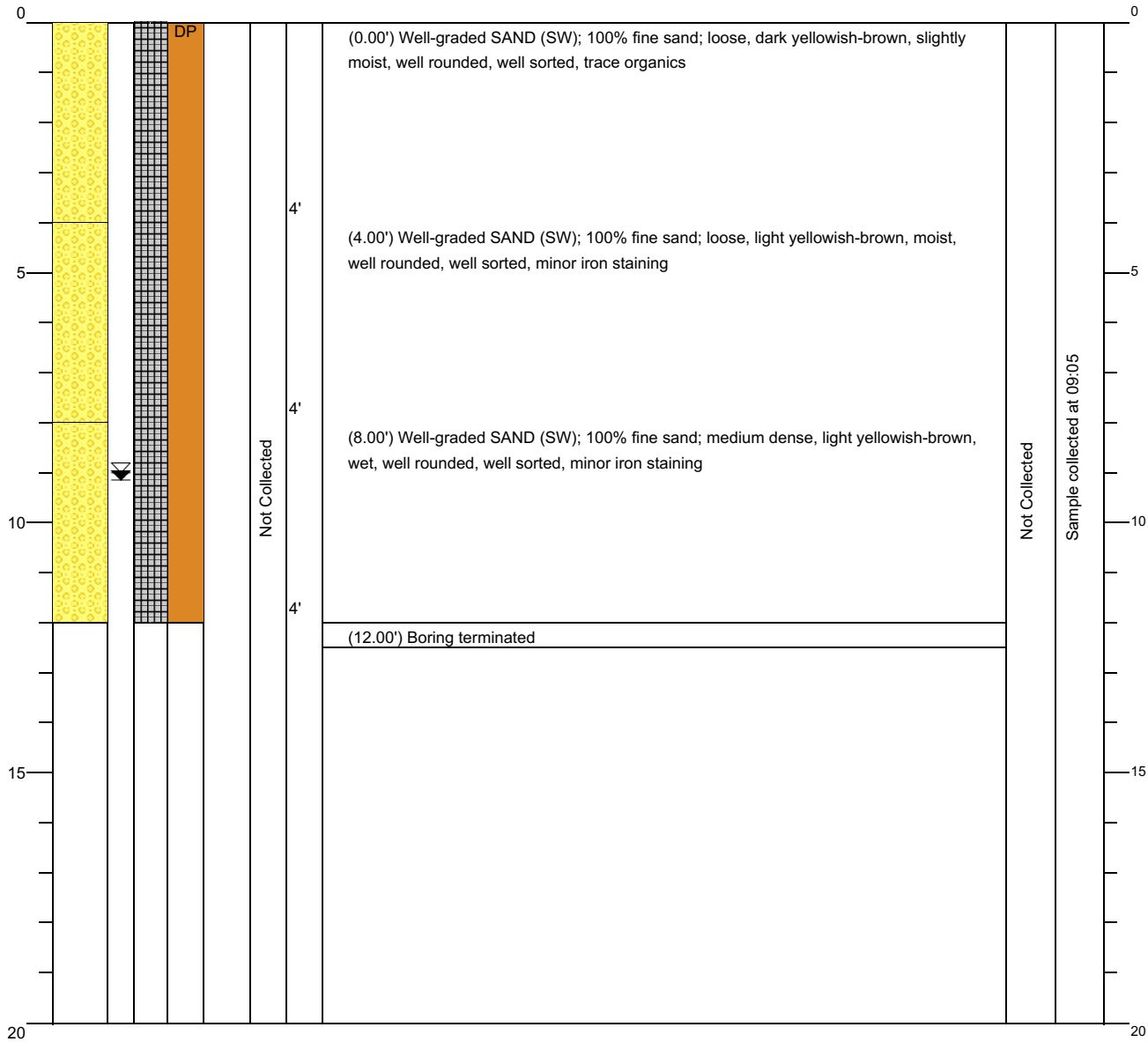


NOTES: Hole precleared to 5' on 05/24/2023 09:15 by Probe Technologies Incorporated using hand auger. Water sample BS-02-GW-052423 collected at 11.5-12.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services	Client: USACE - Omaha	BORING LOG
	Project: Fort McCoy	Boring No. BS-03
	Address: 1654 S 11th Ave, Fort McCoy, WI	Page: 1 of 1

Drilling Start Date:	**05/24/2023 08:55**	Boring Depth (ft):	**12**
Drilling End Date:	**05/24/2023 09:00**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**9**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**9.15**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.010952, -90.678092**



NOTES: Hole precleared to 5' on 05/24/2023 08:50 by Probe Technologies Incorporated using hand auger. Water sample BS-03-GW-052423 collected at 11.5-12.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services

Client:	**USACE - Omaha**	**BORING LOG**	
Project:	**Fort McCoy**	**Boring No.**	**BS-04**
Address:	**1654 S 11th Ave, Fort McCoy, WI**	**Page:**	**1 of 1**

Drilling Start Date:	**05/24/2023 08:20**	Boring Depth (ft):	**12**
Drilling End Date:	**05/24/2023 08:30**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**10**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**9.37**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.010966, -90.677123**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT: Sample Type	COLLECT: Time	COLLECT: Blow Counts	COLLECT: Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	MEASURE: PID (ppm)	MEASURE: Lab Sample	DEPTH (ft)
0				DP		Not Collected	4'	(0.00') Well-graded SAND (SW); 100% fine sand; loose, dark yellowish-brown, dry, well rounded, well sorted, trace organics	Not Collected	Sample collected at 08:35	0
5							4'	(4.00') Well-graded SAND (SW); 100% fine sand; loose, light yellowish-brown, dry, well rounded, well sorted, minor iron staining			5
10		▼					4'	(8.00') Well-graded SAND (SW); 100% fine sand; medium dense, light yellowish-brown, wet, well rounded, well sorted, minor iron staining			10
								(12.00') Boring terminated			
15											15
20											20

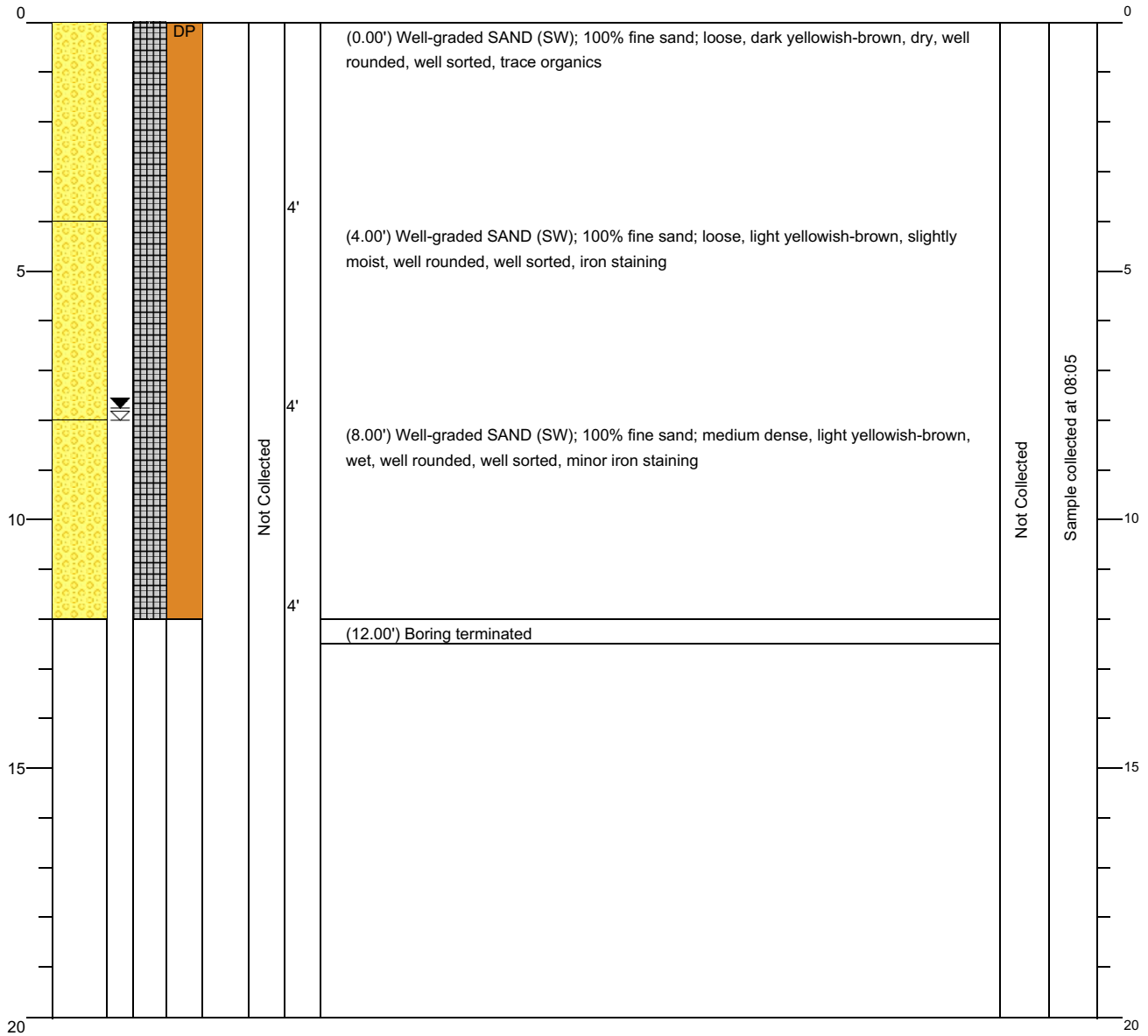
NOTES: Hole precleared to 5' on 05/24/2023 08:15 by Probe Technologies Incorporated using hand auger. Water sample BS-04-GW-052423 collected at 11.5-12.0 ft bgs.

Checked by: John Hamel

ONEIDA Sustainment and Restoration Services

Client:	**USACE - Omaha**	**BORING LOG**	
Project:	**Fort McCoy**	**Boring No.**	**BS-05**
Address:	**1654 S 11th Ave, Fort McCoy, WI**	**Page:**	**1 of 1**

Drilling Start Date:	**05/24/2023 07:45**	Boring Depth (ft):	**12**
Drilling End Date:	**05/24/2023 08:00**	Boring Diameter (in):	**2.00**
Drilling Company:	**Probe Technologies Incorporated**	Sampling Method(s):	**Direct Push**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**8**
Drilling Equipment:	**Geoprobe 6620 D2**	DTW After Drilling (ft):	**7.75**
Driller:	**Dan Bendorf**	Ground Surface Elev. (ft):	**N/A**
Logged By:	**Jack Heltzer**	Location (Lat, Long):	**44.010962, -90.675906**



NOTES: Hole precleared to 5' on 05/24/2023 07:40 by Probe Technologies Incorporated using hand auger. Water sample BS-05-GW-052423 collected at 11.5-12.0 ft bgs.

Checked by: John Hamel

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APPENDIX D

SAMPLING FIELD FORMS

Chain of Custody Page 1 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Company Name/Address:	Billing Information:
Sustainment & Restoration Services - GA 2152 Northwest Parkway	**Accounts Payable** **1033 N Mayfair Rd** **Suite 200** **Milwaukee, WI 53226**
Report to: **Keely Meadows**	Email To: **kmeadows@oescgroup.com**
Project Description: **Fort McCoy**	City/State Collected: Fort McCoy Wisconsin
Phone: **678-778-7531**	Client Project #
Collected by (print): JH/SS	Site/Facility ID #
Collected by (signature):	P.O. #
Immediately Packed on Ice N___ Y✓	Quote #
	Date Results Needed: STD

Pres Chk

Please Circle: PT MT (CT) ET

Lab Project # **SUSRESMGA-FORT MCCOY**

Rush? (Lab MUST Be Notified) ✓
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

SDG #

Table #

Acctnum: **SUSRESMGA**
Template: **T230472**
Prelogin: **P999720**
PM: **873 - Heather J Wagner**
PB: JH 5/16/23

Shipped Via: **FedEX Ground**

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DOD As,Cd,Cr,Pb 6020 250ml HDPE-HNO3	Remarks	Sample # (lab only)
SB-TW-15-GW-052223	G	GW	/	05/22/23	1309	1	X		
SB-TW-14-GW-052223	G	GW	/	05/22/23	1350	1	X		
SB-TW-13-GW-052223	G	GW	/	05/22/23	1432	1	X		
SB-TW-12-GW-052223	G	GW	/	05/22/23	1520	1	X		
SB-TW-11-GW-052223	G	GW	/	05/22/23	1605	1	X		
SB-TW-10-GW-052223	G	GW	/	05/22/23	1645	1	X		
SB-TW-09-GW-052323	G	GW	/	05/23/23	0830	1	X		
SB-TW-08-GW-052323	G	GW	/	05/23/23	0905	1	X		
SB-TW-07-GW-052323	G	GW	/	05/23/23	0950	1	X		
SB-TW-07-MS-GW-052323	G	GW	/	05/23/23	~~1030~~ JH 0950	1	X		

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP __Y __N
COC Signed/Accurate:	__Y __N
Bottles arrive intact:	__Y __N
Correct bottles used:	__Y __N
Sufficient volume sent:	__Y __N
If Applicable	
VOA Zero Headspace:	__Y __N
Preservation Correct/Checked:	__Y __N
RAD Screen <0.5 mR/hr:	__Y __N

Relinquished by : (Signature)	Date: 05/24/23	Time: 1230	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

Company Name/Address:
Sustainment & Restoration Services - GA

2152 Northwest Parkway

Billing Information:
Accounts Payable
1033 N Mayfair Rd
Suite 200
Milwaukee, WI 53226

Pres Chk

Report to:
Keely Meadows

Email To: **kmeadows@oescgroup.com**

Project Description:
Fort McCoy

City/State Collected: Fort McCoy Wisconsin

Please Circle: PT MT CT ET

Phone: **678-778-7531**

Client Project #

Lab Project #
SUSRESMGA-FORT MCCOY

Collected by (print):
JH/SS

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ✓ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
STD

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DOD As,Cd,Cr,Pb 6020 250ml HDPE-HNO3											
SB-TW-07-MSP-GW-052323	G	GW	/	05/23/23	0950	1	X											
SB-TW-06-GW-052323	G	GW	/	05/23/23	1030	1	X											
SB-TW-01-GW-052323	G	GW	/	05/23/23	1105	1	X											
SB-TW-04-GW-052323	G	GW	/	05/23/23	1230	1	X											
SB-TW-03-GW-052323	G	GW	/	05/23/23	1312	1	X											
SB-TW-02-GW-052323	G	GW	/	05/23/23	1355	1	X											
SB-TW-05-GW-052323	G	GW	/	05/23/23	1455	1	X											
BS-05-GW-052423	G	GW	/	05/24/23	0805	1	X											
BS-04-GW-052423	G	GW	/	05/24/23	0835	1	X											
BS-03-GW-052423	G	GW	/	05/24/23	0905	1	X											

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG #

Table #

Acctnum: **SUSRESMGA**
Template: **T230472**
Prelogin: **P999720**
PM: **873 - Heather J Wagner**
PB: CS 5/16/23

Shipped Via: **FedEX Ground**

Remarks | Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	05/24/23	1230		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time

Hold: | Condition: NCF / OK

Chain of Custody Page 3 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Company Name/Address:
Sustainment & Restoration Services - GA
2152 Northwest Parkway

Billing Information:
Accounts Payable
1033 N Mayfair Rd
Suite 200
Milwaukee, WI 53226

Pres Chk

Report to: **Keely Meadows**
Email To: **kmeadows@oescgroup.com**

Project Description: **Fort McCoy**
City/State Collected: Fort McCoy Wisconsin
Please Circle: PT MT (CT) ET

Phone: **678-778-7531**
Client Project #
Lab Project # **SUSRESMGA-FORT MCCOY**

Collected by (print): JH/SS
Site/Facility ID #
P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ✓ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed: STD
Quote #

SDG #
Table #
Acctnum: **SUSRESMGA**
Template: **T230472**
Prelogin: **P999720**
PM: **873 - Heather J Wagner**
PB: CS 5/16/23
Shipped Via: **FedEX Ground**

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DOD As,Cd,Cr,Pb 6020 250mlHDPE-HNO3	Remarks	Sample # (lab only)
BS-02-GW-052423	G	GW	~~05/23~~ JH	05/24/23	0935	1	X		
BS-01-GW-052423	G	GW	/	05/24/23	1010	1	X		
SB-13-TW-13-DUP-GW-052223	G	GW	/	05/22/23	1432	1	X		
BS-~~05~~ JH04 -DUP-~~GW-052423~~ GW-052423 JH	G	GW	/	05/24/23	0835	1	X		
EB-01-052423	G	GW	/	05/24/23	1625	1	X		
FB-01-052423	G	GW	/	05/24/23	1015	1	X		
		GW				1	X		
		GW				1	X		
		GW				1	X		
		GW				1	X		

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	05/24/23	1230		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

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APPENDIX E

SITE SURVEY DATA

APPENDIX E – SITE SURVEY DATA

Projection: WGS 1984 Web Mercator
Method/Equipment: GPS via Trimble

Location ID	Latitude	Longitude	Appendix A Photographic Log
SB/TW-01	44.01229	-90.6773	3, 4, 5
SB/TW-02	44.01233	-90.6763	5, 6, 7
SB/TW-03	44.0123	-90.6766	8
SB/TW-04	44.0123	-90.677	9
SB/TW-05	44.01235	-90.676	10
SB/TW-06	44.0123	-90.6776	11
SB/TW-07	44.01228	-90.6779	12
SB/TW-08	44.01203	-90.6779	13, 14
SB/TW-09	44.01241	-90.6783	15
SB/TW-10	44.01237	-90.6787	16, 17
SB/TW-11	44.01231	-90.6791	18, 19
SB/TW-12	44.01228	-90.6796	20
SB/TW-13	44.01228	-90.6801	21
SB/TW-14	44.01215	-90.6807	22
SB/TW-15	44.0121	-90.6811	23
BS-01	44.01096	-90.6801	24
BS-02	44.01098	-90.679	25
BS-03	44.01095	-90.6781	26
BS-04	44.01097	-90.6771	Not Pictured
BS-05	44.01096	-90.6759	27

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APPENDIX F

ANALYTICAL REPORTS

ANALYTICAL REPORT

June 07, 2023

Sustainment & Restoration Services - GA

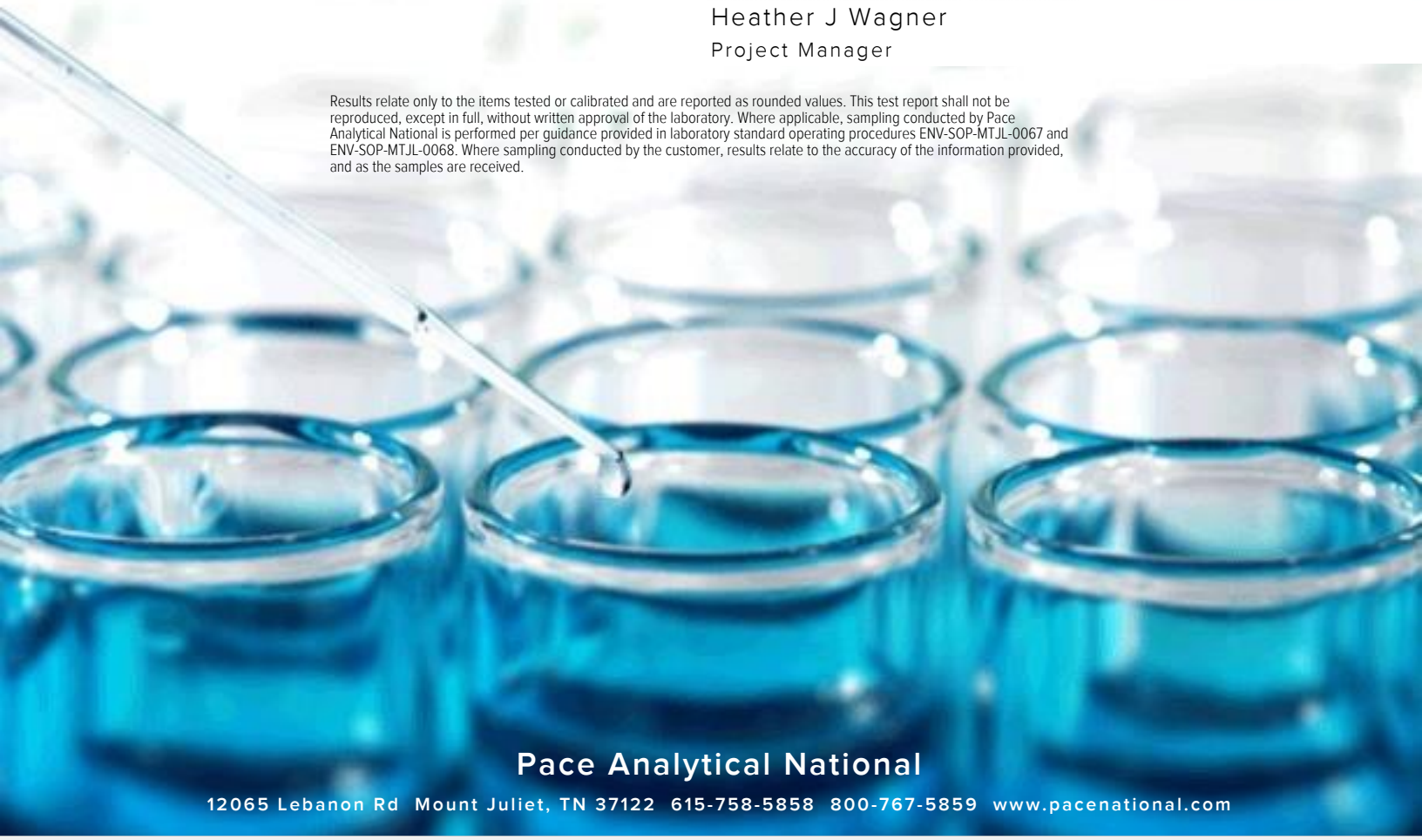
Sample Delivery Group:	L1620149
Samples Received:	05/25/2023
Project Number:	
Description:	Fort McCoy

Report To:

Keely Meadows
2152 Northwest Parkway
Suite J
Marietta, GA 30067

Entire Report Reviewed By:

Heather J Wagner
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SB-TW-15-GW-052223 L1620149-01 GW

Collected by: JH/SS | Collected date/time: 05/22/23 13:09 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 11:48	SJM	Mt. Juliet, TN

SB-TW-14-GW-052223 L1620149-02 GW

Collected by: JH/SS | Collected date/time: 05/22/23 13:50 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 11:51	SJM	Mt. Juliet, TN

SB-TW-13-GW-052223 L1620149-03 GW

Collected by: JH/SS | Collected date/time: 05/22/23 14:32 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 11:55	SJM	Mt. Juliet, TN

SB-TW-12-GW-052223 L1620149-04 GW

Collected by: JH/SS | Collected date/time: 05/22/23 15:20 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 11:58	SJM	Mt. Juliet, TN

SB-TW-11-GW-052223 L1620149-05 GW

Collected by: JH/SS | Collected date/time: 05/22/23 16:05 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:08	SJM	Mt. Juliet, TN

SB-TW-10-GW-052223 L1620149-06 GW

Collected by: JH/SS | Collected date/time: 05/22/23 16:45 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:11	SJM	Mt. Juliet, TN

SB-TW-09-GW-052323 L1620149-07 GW

Collected by: JH/SS | Collected date/time: 05/23/23 08:30 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:20	SJM	Mt. Juliet, TN

SB-TW-08-GW-052323 L1620149-08 GW

Collected by: JH/SS | Collected date/time: 05/23/23 09:05 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:23	SJM	Mt. Juliet, TN

SB-TW-07-GW-052323 L1620149-09 GW

Collected by: JH/SS | Collected date/time: 05/23/23 09:50 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 11:35	SJM	Mt. Juliet, TN

SB-TW-06-GW-052323 L1620149-10 GW

Collected by: JH/SS | Collected date/time: 05/23/23 10:30 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:27	SJM	Mt. Juliet, TN

SB-TW-01-GW-052323 L1620149-11 GW

Collected by: JH/SS | Collected date/time: 05/23/23 11:05 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:30	SJM	Mt. Juliet, TN

SB-TW-04-GW-052323 L1620149-12 GW

Collected by: JH/SS | Collected date/time: 05/23/23 12:30 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:33	SJM	Mt. Juliet, TN

SB-TW-03-GW-052323 L1620149-13 GW

Collected by: JH/SS | Collected date/time: 05/23/23 13:12 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:37	SJM	Mt. Juliet, TN

SB-TW-02-GW-052323 L1620149-14 GW

Collected by: JH/SS | Collected date/time: 05/23/23 13:55 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:40	SJM	Mt. Juliet, TN

SB-TW-05-GW-052323 L1620149-15 GW

Collected by: JH/SS | Collected date/time: 05/23/23 14:55 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:43	SJM	Mt. Juliet, TN

BS-05-GW-052423 L1620149-16 GW

Collected by: JH/SS | Collected date/time: 05/24/23 08:05 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:53	SJM	Mt. Juliet, TN

BS-04-GW-052423 L1620149-17 GW

Collected by: JH/SS | Collected date/time: 05/24/23 08:35 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 12:57	SJM	Mt. Juliet, TN

BS-03-GW-052423 L1620149-18 GW

Collected by: JH/SS | Collected date/time: 05/24/23 09:05 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 13:00	SJM	Mt. Juliet, TN

BS-02-GW-052423 L1620149-19 GW

Collected by: JH/SS | Collected date/time: 05/24/23 09:35 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 13:03	SJM	Mt. Juliet, TN

BS-01-GW-052423 L1620149-20 GW

Collected by: JH/SS | Collected date/time: 05/24/23 10:10 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068786	1	06/01/23 07:18	06/01/23 13:07	SJM	Mt. Juliet, TN

SB-TW-13-DUP-GW-052223 L1620149-21 GW

Collected by: JH/SS | Collected date/time: 05/22/23 14:32 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068783	1	05/31/23 09:41	05/31/23 14:51	JPD	Mt. Juliet, TN

BS-04-DUP-GW-052423 L1620149-22 GW

Collected by: JH/SS | Collected date/time: 05/24/23 08:35 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068783	1	05/31/23 09:41	05/31/23 14:54	JPD	Mt. Juliet, TN

EB-01-052423 L1620149-23 GW

Collected by: JH/SS | Collected date/time: 05/24/23 10:25 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068783	1	05/31/23 09:41	05/31/23 14:58	JPD	Mt. Juliet, TN

FB-01-052423 L1620149-24 GW

Collected by: JH/SS | Collected date/time: 05/24/23 10:15 | Received date/time: 05/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2068783	1	05/31/23 09:41	05/31/23 15:01	JPD	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Heather J Wagner
Project Manager

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.397	J	0.195	0.500	0.650	1	06/01/2023 11:48	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 11:48	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 11:48	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 11:48	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.560	J	0.195	0.500	0.650	1	06/01/2023 11:51	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 11:51	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 11:51	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 11:51	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.900		0.195	0.500	0.650	1	06/01/2023 11:55	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 11:55	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 11:55	WG2068786
Lead	7439-92-1	0.521	J	0.513	1.50	1.71	1	06/01/2023 11:55	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.298	J	0.195	0.500	0.650	1	06/01/2023 11:58	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 11:58	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 11:58	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 11:58	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	1.62		0.195	0.500	0.650	1	06/01/2023 12:08	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:08	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:08	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 12:08	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.555	J	0.195	0.500	0.650	1	06/01/2023 12:11	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:11	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:11	WG2068786
Lead	7439-92-1	1.07	J	0.513	1.50	1.71	1	06/01/2023 12:11	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.365	J	0.195	0.500	0.650	1	06/01/2023 12:20	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:20	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:20	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 12:20	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.334	J	0.195	0.500	0.650	1	06/01/2023 12:23	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:23	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:23	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 12:23	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.251	J	0.195	0.500	0.650	1	06/01/2023 11:35	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 11:35	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 11:35	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 11:35	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.500	U	0.195	0.500	0.650	1	06/01/2023 12:27	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:27	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:27	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 12:27	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.439	J	0.195	0.500	0.650	1	06/01/2023 12:30	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:30	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:30	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 12:30	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.210	J	0.195	0.500	0.650	1	06/01/2023 12:33	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:33	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:33	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 12:33	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.402	J	0.195	0.500	0.650	1	06/01/2023 12:37	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:37	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:37	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 12:37	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.310	J	0.195	0.500	0.650	1	06/01/2023 12:40	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:40	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:40	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 12:40	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.328	J	0.195	0.500	0.650	1	06/01/2023 12:43	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:43	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:43	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 12:43	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.599	J	0.195	0.500	0.650	1	06/01/2023 12:53	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:53	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:53	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 12:53	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.281	J	0.195	0.500	0.650	1	06/01/2023 12:57	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 12:57	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 12:57	WG2068786
Lead	7439-92-1	0.550	J	0.513	1.50	1.71	1	06/01/2023 12:57	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.209	J	0.195	0.500	0.650	1	06/01/2023 13:00	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 13:00	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 13:00	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 13:00	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.337	J	0.195	0.500	0.650	1	06/01/2023 13:03	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 13:03	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 13:03	WG2068786
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	06/01/2023 13:03	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.356	J	0.195	0.500	0.650	1	06/01/2023 13:07	WG2068786
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	06/01/2023 13:07	WG2068786
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	06/01/2023 13:07	WG2068786
Lead	7439-92-1	0.731	J	0.513	1.50	1.71	1	06/01/2023 13:07	WG2068786

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.866		0.195	0.500	0.650	1	05/31/2023 14:51	WG2068783
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	05/31/2023 14:51	WG2068783
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	05/31/2023 14:51	WG2068783
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	05/31/2023 14:51	WG2068783

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.351	J	0.195	0.500	0.650	1	05/31/2023 14:54	WG2068783
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	05/31/2023 14:54	WG2068783
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	05/31/2023 14:54	WG2068783
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	05/31/2023 14:54	WG2068783

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.500	U	0.195	0.500	0.650	1	05/31/2023 14:58	WG2068783
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	05/31/2023 14:58	WG2068783
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	05/31/2023 14:58	WG2068783
Lead	7439-92-1	55.4		0.513	1.50	1.71	1	05/31/2023 14:58	WG2068783

Metals (ICPMS) by Method 6020

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Arsenic	7440-38-2	0.500	U	0.195	0.500	0.650	1	05/31/2023 15:01	WG2068783
Cadmium	7440-43-9	0.500	U	0.160	0.500	0.533	1	05/31/2023 15:01	WG2068783
Chromium	7440-47-3	15.0	U	5.60	15.0	18.7	1	05/31/2023 15:01	WG2068783
Lead	7439-92-1	1.50	U	0.513	1.50	1.71	1	05/31/2023 15:01	WG2068783

Method Blank (MB)

(MB) R3931127-1 05/31/23 13:00

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Arsenic	0.500	U	0.195	0.500	0.650
Cadmium	0.500	U	0.160	0.500	0.533
Chromium	15.0	U	5.60	15.0	18.7
Lead	1.50	U	0.513	1.50	1.71

Laboratory Control Sample (LCS)

(LCS) R3931127-2 05/31/23 13:04

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	50.0	50.0	100	84.0-116	
Cadmium	50.0	52.0	104	87.0-115	
Chromium	50.0	49.9	99.9	85.0-116	
Lead	50.0	47.1	94.2	88.0-115	

L1620025-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1620025-01 05/31/23 15:53 • (MS) R3931127-6 05/31/23 15:59 • (MSD) R3931127-7 05/31/23 16:03

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	50.0	10.0	51.4	50.1	103	100	20	84.0-116			2.64	20
Cadmium	50.0	10.0	46.2	46.2	92.3	92.4	20	87.0-115			0.0509	20
Chromium	50.0	300	300	300	0.000	0.000	20	85.0-116	J6 U	J6 U	0.000	20
Lead	50.0	30.0	54.2	50.6	108	101	20	88.0-115			6.77	20

Method Blank (MB)

(MB) R3931662-1 06/01/23 11:28

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Arsenic	0.500	U	0.195	0.500	0.650
Cadmium	0.500	U	0.160	0.500	0.533
Chromium	15.0	U	5.60	15.0	18.7
Lead	1.50	U	0.513	1.50	1.71

Laboratory Control Sample (LCS)

(LCS) R3931662-2 06/01/23 11:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	50.0	51.7	103	84.0-116	
Cadmium	50.0	53.7	107	87.0-115	
Chromium	50.0	52.1	104	85.0-116	
Lead	50.0	49.2	98.4	88.0-115	

L1620149-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1620149-09 06/01/23 11:35 • (MS) R3931662-4 06/01/23 11:41 • (MSD) R3931662-5 06/01/23 11:45

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	50.0	0.251	52.1	50.8	104	101	1	84.0-116			2.53	20
Cadmium	50.0	0.500	53.9	53.8	108	108	1	87.0-115			0.302	20
Chromium	50.0	15.0	51.6	50.1	103	100	1	85.0-116			3.02	20
Lead	50.0	1.50	50.2	48.9	100	97.7	1	88.0-115			2.79	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

DL	Detection Limit.
LOD	Limit of Detection.
LOQ	Limit of Quantitation.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
U	Below Detectable Limits: Indicates that the analyte was not detected.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Sustainment & Restoration Services - GA

2152 Northwest Parkway

Billing Information:
Accounts Payable
1033 N Mayfair Rd
Suite 200
Milwaukee, WI 53226

Pres Chk

Report to:
Keely Meadows

Email To: **kmeadows@oescgroup.com**

Project Description:
Fort McCoy

City/State Collected: Fort McCoy Wisconsin

Please Circle: PT MT (CT) ET

Phone: **678-778-7531**

Client Project #

Lab Project #
SUSRESMGA-FORT MCCOY

Collected by (print):
JH/SS

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ✓ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: STD

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DOD As,Cd,Cr,Pb 6020 250mlHDPE-HNO3	Remarks	Sample # (lab only)
SB-TW-15-GW-052223	G	GW	/	05/22/23	1309	1	X		-01
SB-TW-14-GW-052223	G	GW	/	05/22/23	1350	1	X		-02
SB-TW-13-GW-052223	G	GW	/	05/22/23	1432	1	X		-03
SB-TW-12-GW-052223	G	GW	/	05/22/23	1520	1	X		-04
SB-TW-11-GW-052223	G	GW	/	05/22/23	1605	1	X		-05
SB-TW-10-GW-052223	G	GW	/	05/22/23	1645	1	X		-06
SB-TW-09-GW-052323	G	GW	/	05/23/23	0830	1	X		-07
SB-TW-08-GW-052323	G	GW	/	05/23/23	0905	1	X		-08
SB-TW-07-GW-052323	G	GW	/	05/23/23	0950	1	X		-09
SB-TW-07-MS-GW-052323	G	GW	/	05/23/23	~~1030~~ 0950 JH	1	X		

Chain of Custody Page 1 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 162049
G018

Acctnum: **SUSRESMGA**
Template: **T230472**
Prelogin: **P999720**
PM: **873 - Heather J Wagner**
PB: 05/16/23
Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 6181 5469 5993

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: ✓ Y __N
Bottles arrive intact: ✓ Y __N
Correct bottles used: ✓ Y __N
Sufficient volume sent: ✓ Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: ✓ Y __N
RAD Screen <0.5 mR/hr: ✓ Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	05/24/23	1230	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 4.2 °C Bottles Received: 26
NSAT 4.2 0:4.2

Date: 5/25/23 Time: 8145

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Company Name/Address:
Sustainment & Restoration Services - GA

2152 Northwest Parkway

Billing Information:
Accounts Payable
1033 N Mayfair Rd
Suite 200
Milwaukee, WI 53226

Pres Chk

Report to: **Keely Meadows**

Email To: **kmeadows@oescgroup.com**

Project Description: **Fort McCoy**

City/State Collected: Fort McCoy Wisconsin

Please Circle: PT MT CT ET

Phone: **678-778-7531**

Client Project #

Lab Project # **SUSRESMGA-FORT MCCOY**

Collected by (print): JH/SS

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ✓ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: STD

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DOD As,Cd,Cr,Pb 6020 250ml HDPE-HNO3										Remarks	Sample # (lab only)
SB-TW-07-MSP-GW-052323	G	GW	—	05/23/23	0950	1	X											-09
SB-TW-06-GW-052323	G	GW	—	05/23/23	1030	1	X											-10
SB-TW-01-GW-052323	G	GW	—	05/23/23	1105	1	X											-11
SB-TW-04-GW-052323	G	GW	—	05/23/23	1230	1	X											-12
SB-TW-03-GW-052323	G	GW	—	05/23/23	1312	1	X											-13
SB-TW-02-GW-052323	G	GW	—	05/23/23	1355	1	X											-14
SB-TW-05-GW-052323	G	GW	—	05/23/23	1455	1	X											-15
BS-05-GW-052423	G	GW	—	05/24/23	0805	1	X											-16
BS-04-GW-052423	G	GW	—	05/24/23	0835	1	X											-17
BS-03-GW-052423	G	GW	—	05/24/23	0905	1	X											-18

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 162049

Table #

Acctnum: **SUSRESMGA**
Template: **T230472**
Prelogin: **P999720**
PM: **873 - Heather J Wagner**
PB: C05/16/23

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking # 6481 5469 5913

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	05/24/23	1230	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 4.2°C Bottles Received: 26
NSAT 4.2+0=4.2

Date: 5/25/23 Time: 8:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Chain of Custody Page 3 of 3

Pace PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Company Name/Address:	**Sustainment & Restoration Services - GA** **2152 Northwest Parkway**
Billing Information:	**Accounts Payable** **1033 N Mayfair Rd** **Suite 200** **Milwaukee, WI 53226**
Email To:	**kmeadows@oescgroup.com**
Report to:	**Keely Meadows**
Project Description:	**Fort McCoy**
City/State Collected:	Fort McCoy Wisconsin
Please Circle:	PT MT (CT) ET
Phone:	**678-778-7531**
Client Project #	
Lab Project #	**SUSRESMGA-FORT MCCOY**
Collected by (print):	JH/SS
Site/Facility ID #	
P.O. #	
Collected by (signature):	
Immediately Packed on Ice N ___ Y ✓	
Rush? (Lab MUST Be Notified)	___ Same Day ✓ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Quote #	
Date Results Needed	STD

SDG # L620149
Table #
Acctnum: **SUSRESMGA**
Template: **T230472**
Prelogin: **P999720**
PM: **873 - Heather J Wagner**
PB: CS 5/16/23
Shipped Via: **FedEX Ground**

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DOD As,Cd,Cr,Pb 6020 250ml HDPE-HNO3	Remarks	Sample # (lab only)
BS-02-GW-052423	G	GW	~~05/23~~ JH	05/24/23	0935	1	X		-19
BS-01-GW-052423	G	GW	/	05/24/23	1018	1	X		-20
SB-~~13~~-TW-13-Dup-GW-052223	G	GW	/	05/22/23	1432	1	X		-21
BS-~~05~~-Dup-~~052423~~ JH 04 GW-052423 JH	G	GW	/	05/24/23	0835	1	X		-22
EB-01-052423	G	GW	/	05/24/23	1625	1	X		-23
FB-01-052423	G	GW	/	05/24/23	1015	1	X		-24
		GW				1	X		
		GW				1	X		
		GW				1	X		
		GW				1	X		

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking # 6481 5469 5993

Trip Blank Received: Yes / No HCL / MeoH TBR

Temp: 4.2 °C Bottles Received: 26

NSA7 4.2 to 4.2

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

	Date:	Time:	
Relinquished by : (Signature)	05/24/23	1230	Received by: (Signature)
Relinquished by : (Signature)			Received by: (Signature)
Relinquished by : (Signature)			Received for lab by: (Signature)

Date: 5/25/23 Time: 8:45