WATER WELL RECORD (WWC-5)

Constructed

KOLAR DOC ID 1809175 WELL ID 047MW056

✓ Original Record ☐ Correction ☐ Change in Well Use

LOCATION OF WATER WELL

Latitude	38.934038	Longitude	-95.035391	Section	12	Township	13	Range	21 ✓E ☐W	Fraction	NW ¼ NW ¼ SW ¼
Datum	WGS84	Elevation	925	County	Johnson						

WATER WELL OWNER

Name	
Business	Sunflower Redevelopment, LL(
Address	10345 West 103rd St. DeSoto Kans 66019
Well location ☐ at owner's address	Former Sunflower Army Ammunition Plant SWMU 45 DeSoto, Kansas

WELL WATER USE

Environmental Remediation / Monitoring Mc

COMPLETION

Depth of completed well: 86 ft.

Depth(s) groundwater encountered:

(1) 50 ft.; (2) _____ ft.;

(3) _____ ft.; (4) ☐ dry well

Static water level in well: 51.76 ft.

✓ measured below land surface on (mm/dd/yy): 10/31/2024

☐ measured above land surface on (mm/dd/yy): _____

Estimated yield: _____ gpm

Water level was: _____ ft. after _____ hours pumping _____ gpm

Pump installed? ☐ Yes ✓ No

Water well disinfected? ☐ Yes ☐ No

Date disinfected (mm/dd/yy): _____

Aquifer, if known:

NEAREST SOURCE OF POTENTIAL CONTAMINATION

Source: _____

Distance from well: _____ Direction from well: _____

Source description: _____

Source: _____

Distance from well: _____ Direction from well: _____

Source description: _____

☐ No potential source of contamination within 100 feet.

PERMIT & ID NUMBERS (AS REQUIRED)

DWR Application No.: _____

KDHE / EPA Project Code: C404671050

Site Name: SWMU 47

KDHE UIC Class V Form Completed: ☐ Yes ✓ No

County Permit: ☐ Yes ✓ No Permit ID: _____

Lease Name & Well #: _____

# of boreholes: _____ # of dewatering wells: _____

CONSTRUCTION

Borehole interval: from 0 to 24 ft. from 24 to 86 ft.

Borehole diameter: 10.62 in. 6.0 in.

Casing height above land surface: 30 in.

If casing height is less than 12 in. has a variance been approved?* ☐ Yes ✓ No

*variance not required for monitoring or environmental remediation wells

Casing type: ThermalPlastic

Blank casing interval: 0 ft. to 76 ft.

Blank casing diameter: 2 in.

Casing joints: Threaded

Weight: _____ lbs/ft.

Wall thickness or gauge no.: 40

Blank casing interval: _____ ft. to _____ ft.

Blank casing diameter: _____ in.

Casing joints: _____

Weight: _____ lbs/ft.

Wall thickness or gauge no.: _____

Grout interval: 2 ft. to 72 ft.

Grout material: Bentonite

Grout interval: _____ ft. to _____ ft.

Grout material: _____

Screen / perforation material: Other

Screen / perforation openings: Wire wrapped

Screen / perforation intervals:

From 76 ft. to 86 ft.

Slot size .01 unit inches

From _____ ft. to _____ ft.

Slot size _____ unit _____

Gravel pack intervals:

Gravel pack not used: ☐ Gravel size _____ in

From 72 ft. to 86 ft.

Gravel pack not used: ☐ Gravel size _____ in

From _____ ft. to _____ ft.

LITHOLOGIC LOG

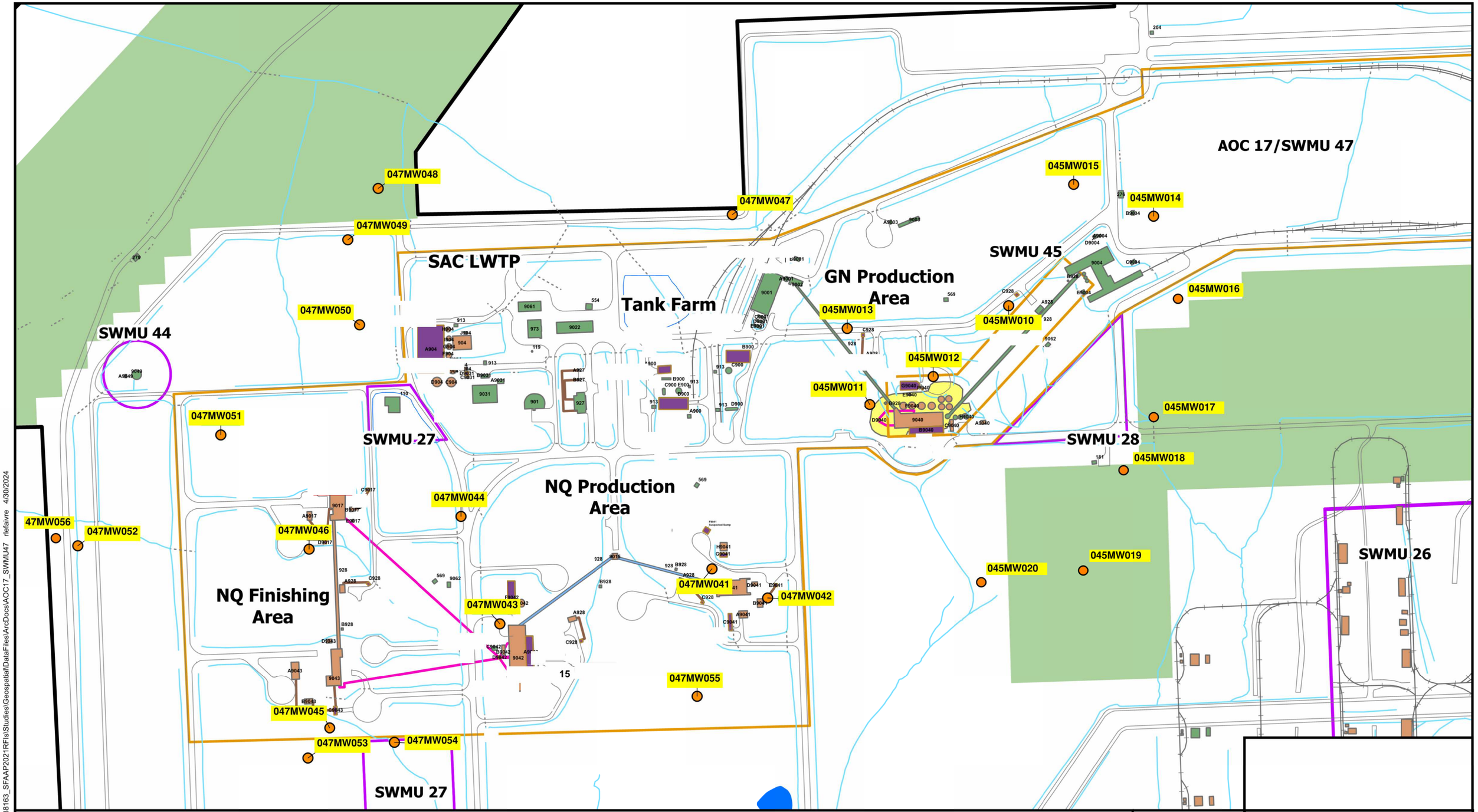
FROM	TO	LITHOLOGY INTERVALS
0	86	other,See Attached

COMMENTS

CONTRACTOR'S OR LANDOWNERS CERTIFICATION

This water well was constructed ✓ reconstructed ☐ pursuant to the stated water well contractor's license and was completed on 10/31/2024. I certify that this record is true to the best of my knowledge and belief. This water well record was completed on 01/12/2025 under the business name of Razek Environmental, LLC, Kansas Water Well Contractor's License No. 759 under the authority of the designated person as defined in K.A.R. 28-30-2(j) and signed and certified by the electronic signature of the designated person at its submittal: Anthony Poulter.

Send one copy to WATER WELL OWNER and retain one for your records. Fee of $5.00 for each constructed well.



Legend

- Monitoring Well

BURNS McDONNELL

Monitoring Well Locations

AOC 17 / SWMUs 45 & 47 RFI Work Plan
Former Sunflower Army Ammunition Plant
De Soto, Kansas

Issued: 4/30/2024

Source: Burns & McDonnell Engineering

Path: Z:\Clients\ENS\USCOE\138163_SFAAP2021RFI\Studies\Geospatial\DataFiles\ArcDocs\AOC17_SWMU47 rlefaivre 4/30/2024

HTW DRILLING LOG

HOLE NO. 047MW056

1. COMPANY NAME: Burns & McDonnell	2. DRILLING SUBCONTRACTOR: RAZEK ENV., Inc.	SHEET 1 OF 11 SHEETS
3. PROJECT: SFAAP	4. LOCATION: SWMU 47	
5. NAME OF DRILLER: T. Poulter	6. MANUFACTURER'S DESIGNATION OF DRILL: GeoProbe 7822 DT	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2-inch MacroCore Sampler; 6-inch AR Bit; 10-inch AR Bit (Surface Casing); 10-inch AR PFD AR Bit; 10-5/8-inch HSA	8. HOLE LOCATION: E: 2155502.8030 N: 232584.3850	
	9. SURFACE ELEVATION: 924.99 ft amsl	
	10. DATE STARTED: 10/30/24	11. DATE COMPLETED: 11/7/24
12. OVERBURDEN THICKNESS: 22.0 ft	15. DEPTH GROUNDWATER ENCOUNTERED: 19.0 ft bgs	
13. DEPTH DRILLED INTO ROCK: 65.0 ft	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 11/19/24 51.76 ft btoc	
14. TOTAL DEPTH OF HOLE: 87.0 ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
NA						NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		047MW056		S. Woodland

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	0	SILT, with clay, MH, dark grayish brown (10YR 4/2), damp, stiff consistency, non-plasticity.	BZ = 0.0 PID LEL = 0 O_2 = 20.9 0.0	NA	NA	Recovery	DP @ 0850 HSA @ 0935 11/1/24 - 1320 Begin HSA drilling w/ 10 5/8-inch bit
	1		0.0				
	2	Clay, with silt, CL, very dark gray (10YR 3/1), damp, hard consistency, medium plasticity, trace oxidation reddish brown 5YR 5/3)	0.0			4/5	
	3		0.0				
	4		0.0				

HTW DRILLING LOG

HOLE NO. 045MW056

PROJECT SFAAP - SWMU 47 | INSPECTOR S. Woodland | SHEET 2 OF 11 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay, with silt to very fine sand, silt, CL, very dark gray (10YR 3/1), damp, hard consistency, medium plasticity, trace oxidation reddish brown 5YR 5/3)	BZ = 0.0 PID LEL = 0 O_2 = 20.9 0.0	NA	NA	Recovery	0854 0947
	6		0.0				
						5/5	
	7	gray (10YR 6/1), moist, very stiff consistency	0.0				
	8		0.0				
	9		0.0				
	10		BZ = 0.0 LEL = 0 O_2 = 20.9 0.0				0901 0959
	11		0.0				
	12		0.0			5/5	
	13		0.0				

HTW DRILLING LOG

HOLE NO. 047MW056

PROJECT SFAAP - SWMU 47 | INSPECTOR S. Woodland | SHEET 3 OF 11 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Clay with silt to very fine sand, CL, yellowish brown (10YR 5/4), moist, very stiff consistency, medium plasticity, trace oxidation reddish brown (5YR 5/3).	BZ = 0.0 PID LEL = 0 O_2 = 20.9 0.0	NA	NA	Recovery 5/5	
	15		BZ = 0.0 LEL = 0 O_2 = 20.9 0.0				0907 1010
	16		0.0				
	17	SAND, trace fines, yellowish gray (5Y 7/2), damp, fine sand, poorly graded, trace oxidation reddish brown (5YR 5/3).	0.0			5/5	
	18		0.0				
	19		0.0				
	20		BZ = 0.0 LEL = 0 O_2 = 20.9				0917 1022
	21	medium gray (N5)				4/4	

HTW DRILLING LOG

HOLE NO. 047MW056

PROJECT SFAAP - SWMU 47 | INSPECTOR S. Woodland | SHEET 4 OF 11 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	22	SAND, trace fines, medium gray (N5), damp, fine sand, poorly graded, trace oxidation reddish brown (5YR 5/3). wet	BZ = 0.0 PID LEL = 0 O_2 = 20.9	NA	NA	Recovery 4/4	0917 DP Refusal @ 24.0 ft
	23						
	24	SHALE, dark yellowish orange (10YR 6/6), thinly laminated LIMESTONE, medium gray (N5), fresh.					0935 Begin HSA Drilling w/ 10 5/8-inch bit
	25						11/1/24 - 1408 HSA Refusal @ 24.0 ft 1436 - Begin AR drilling w/ 6-inch bit
	26						
	27	SHALE, medium gray (N5)					
	28		BZ = 0.0 LEL = 0 O_2 = 20.9				0846
	29						

HTW DRILLING LOG

HOLE NO. 047MW056

PROJECT SFAAP - SWMU 47 | INSPECTOR S. Woodland | SHEET 5 OF 11 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		SHALE, medium gray (N5)	BZ = 0.0 PID LEL = 0 O_2 = 20.9	NA	NA	Recovery	
						NA	
		1453 - 11/1/24					
	31	1454 - 11/1/24					1328 - Stop AR drilling @ 31.0 ft bgs
							1410 - Set and grout in 8-inch Sch. 40 surface casing at 24.0
	32						10/30/24 - End
	33		BZ = 0.0 LEL = 0 O_2 = 20.9				
	34						
	35	LIMESTONE, medium gray (N6), fresh					
	36						1500 - 11/1/24 1502 - 11/1/24
	37						
	38		BZ = 0.0 LEL = 0 O_2 = 20.9				

HTW DRILLING LOG

HOLE NO. 047MW056

PROJECT SFAAP - SWMU 47 | INSPECTOR S. Woodland | SHEET 6 OF 11 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	40	LIMESTONE, medium gray (N6), fresh	BZ = 0.0 PID LEL = 0 O_2 = 20.9	NA	NA	Recovery NA	
	41						1515 - 11/1/24 1517 - 11/1/24
	42						
	43		BZ = 0.0 LEL = 0 O_2 = 20.9				
	44						
	45						
	46						1532 - 11/1/24 1533 - 11/1/24
	47						10/31/24 @ 1115 Stop AR Drilling 11/1/24 @ 1010 Off-set 10.0 ft. south 1320 Begin drilling

HTW DRILLING LOG

HOLE NO. 047MW056

PROJECT SFAAP - SWMU 47 | INSPECTOR S. Woodland | SHEET 7 OF 11 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		LIMESTONE, medium gray (N6), fresh	BZ = 0.0 PID LEL = 0 O_2 = 20.9	NA	NA	Recovery	
	49					NA	
	50						
	51						1545 - 11/1/24
			BZ = 0.0 LEL = 0 O_2 = 20.9				1545 - 11/1/24
	52	SHALE, black (N2), fresh					
	53						
	54						
	55						
	56						1552 - 11/1/24
			BZ = 0.0 LEL = 0 O_2 = 20.9				1553 - 11/1/24

HTW DRILLING LOG

HOLE NO. 047MW056

PROJECT SFAAP - SWMU 47 | INSPECTOR S. Woodland | SHEET 8 OF 11 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
			BZ = 0.0 PID LEL = 0 O_2 = 20.9	NA	NA	Recovery NA	
	58						
	59						
	60	LIMESTONE, medium light gray (N7), fresh					
	61						1603 - 11/1/24
			BZ = 0.0 LEL = 0 O_2 = 20.9				1604 - 11/1/24
	62						
	63						
	64						
	65						
		SHALE, black (N2), fresh					1618 - 11/1/24

HTW DRILLING LOG

HOLE NO. 047MW056

PROJECT SFAAP - SWMU 47 | INSPECTOR S. Woodland | SHEET 9 OF 11 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		SHALE, black (N2), fresh	BZ = 0.0 PID LEL = 0 O_2 = 20.9	NA	NA	Recovery	1619 - 11/1/24
						NA	
	67						
	68						
	69						
	70	SHALE, medium light gray (N7) ,fresh					
	71						1622 - 11/1/24
			BZ = 0.0 LEL = 0 O_2 = 20.9				1624 - 11/1/24
	72						
	73						
	74						

HTW DRILLING LOG

HOLE NO. 047MW056

PROJECT SFAAP - SWMU 47 | INSPECTOR S. Woodland | SHEET 10 OF 11 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		SHALE, medium light gray (N7) ,fresh	BZ = 0.0 PID LEL = 0 O_2 = 20.9	NA	NA	Recovery	
						NA	
	76						1628 - 11/1/24
			BZ = 0.0 LEL = 0 O_2 = 20.9				1628 - 11/1/24
	77						
	78						
	79						
	80						
							1635 - 11/1/24
	81		BZ = 0.0 LEL = 0 O_2 = 20.9				1636 - 11/1/24
	82						
	83	LIMESTONE					

HTW DRILLING LOG

HOLE NO. 047MW056

PROJECT SFAAP - SWMU 47 | INSPECTOR S. Woodland | SHEET 11 OF 11 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	85	LIMESTONE	BZ = 0.0 PID LEL = 0 O_2 = 20.9	NA	NA	Recovery NA	11/1/24 - 1644 Stop AR drill
	86	AR Stop @ 86.0 ft Construct Monitoring Well					
	87						
	88						
	89						
	90						
	91						
	92						

10/30/24
0850 - Begin DP probing.
0917 - DP Refusal @ 24.0 ft bgs.
0935 - Begin HSA drilling w/ 10 5/8-inch bit.
1035 - HSA Refusal @ 24.0 ft bgs.
1142 - Begin AR drilling w/ 6-inch bit.
1236 - Stop AR drilling @ 31.0 ft bgs.
1300 - Begin ream borehole with 10-inch PFD AR bit.
1328 - Stop AR drilling @ 31.0 ft bgs.
1410 - Set and grout in 8-inch PVC Schedule 40 surface casing at 24.0 ft bgs.

10/31/24
0840 - Top of grout 19.0 ft bgs.
0850 - Begin AR drilling with 6-inch bit @ 19.0 ft bgs.
1030 - Stop AR drilling at 47.0 ft bgs. Trip rods to clear drill bit. While tripping out, surface casing was dislodged.
1115 - Reset surface casing and continue drilling. Water continuing to enter borehole. Will attempt to pull surface casing and install smaller diameter casing on 11/1/24.

11/1/24
0840 - Attempt to pull 8-inch surface casing and install 6-inch diameter casing.
1000 - Ream borehole w/ 6-inch AR drill bit. Water still entering borehole below surface casing.
1010 - Abandon and off-set 10 ft south.
1320 - Begin HSA drilling with 10 5/8-inch bit.
1408 - HSA refusal @ 24.0 ft bgs. Use HSA as surface casing.
1436 - Begin AR drilling w/ 6-inch bit and 24.0 ft.
1644 - Stop AR drilling @ 86.0 ft bgs.
1715 - Construct Monitoring Well
1800 - Backfill original boring location with bentonite chips to the surface.

11/7/24
1415 - Pull HSA surface casing and backfill with bentonite chips from 0-23.0 ft bgs.