APPENDIX D WELL BORING LOGS AND WELL CONSTRUCTION LOGS §257.103(F)(1)(IV)(B)(2)(II)

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,167.7 E 2,106,734.9**

GROUND ELEVATION **568.1** SYSTEM

Water Level, ft			
TIME			
DATE			

BORING NO. **BAC-01** DATE **7/7/16** SHEET **1** OF **3**

BORING START **12/8/15** BORING FINISH **12/9/15**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND **2.349** DIA **6**

DEPTH TO TOP OF WELL SCREEN **34.4** BOTTOM **44.0**

WELL DEVELOPMENT **YES** BACKFILL **GROUT**

FIELD PARTY **MWJ / TAS** RIG **D-50**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	0.0	1.5	16-50/3	.5					BOTTOM ASH ROAD BED MATERIAL		
2	SS	1.5	3.0	33-50/2	1.2							
3	SS	3.0	4.5	15-36-50/4	1.0							
4	SS	4.5	6.0	14-16-33	1.3		5			HARD MEDIUM DARK GRAY N4 BOTTOM ASH w/some clay		
5	SS	6.0	7.5	13-14-7	1.1					VERY STIFF MEDIUM GRAY N5 CLAY w/some bottom ash		
6	SS	7.5	9.0	5-2-3	1.2					MEDIUM STIFF PALE YELLOWISH BROWN 10YR 6/2 CLAY w/some bottom ash fragments		
7	SS	9.0	10.5	3-4-6	.9		10					
8	SS	10.5	12.0	3-2-6	1.4							
9	SS	12.0	13.5	3-5-6	1.5					STIFF PALE YELLOWISH BROWN 10YR 6/2 CLAY w/some fine sand		
10	SS	13.5	15.0	3-5-7	1.5							
11	SS	15.0	16.5	2-5-5	1.5		15					
12	SS	16.5	18.0	3-5-6	1.5							
13	SS	18.0	19.5	2-3-5	1.5							
14	SS	19.5	21.0	2-3-4	1.5					STIFF PALE YELLOWISH BROWN 10YR 6/2		

TYPE OF CASING USED

	NQ-2 ROCK CORE	
	6" x 3.25 HSA	
	9" x 6.25 HSA	
	HW CASING ADVANCER	4"
	NW CASING	3"
	SW CASING	6"
	AIR HAMMER	8"

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PIEZOMETER TYPE: PT = OPEN TUBE POROUS TIP, SS = OPEN TUBE SLOTTED SCREEN, G = GEONOR, P = PNEUMATIC

WELL TYPE: OW = OPEN TUBE SLOTTED SCREEN, GM = GEOMON

RECORDER

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-01** DATE **7/7/16** SHEET **2** OF **3**

PROJECT **GV BAC CCR Compliance** BORING START **12/8/15** BORING FINISH **12/9/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										CLAY w/silt and fine sand		
15	SS	21.0	22.5	2-2-3	1.5					MEDIUM STIFF PALE YELLOWISH BROWN 10YR 6/2 SILTY SANDY CLAY		
16	SS	22.5	24.0	WOR-2-2	1.2					SOFT STIFF PALE YELLOWISH BROWN 10YR 6/2 SILTY SANDY CLAY		
17	SS	24.0	25.5	2-2-2	1.5		25			SOFT PALE YELLOWISH BROWN 10YR 6/2 SILTY SANDY CLAY wet		
18	SS	25.5	27.0	WOR-2-1	1.5							
19	SS	27.0	28.5	WOR-WOR-2	1.5					VERY SOFT PALE YELLOWISH BROWN 10YR 6/2 SANDY SILTY CLAY wet		
20	SS	28.5	30.0	WOR-WOR-4	1.5					VERY SOFT PALE YELLOWISH BROWN 10YR 6/2 SANDY SILTY CLAY w/some sand and gravel, wet		
21	SS	30.0	31.5	6-11-10	.9		30			MEDIUM DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL		
22	SS	31.5	33.0	3-6-6	1.3					MEDIUM DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL		
23	SS	34.0	35.5	4-10-11	1.4		35			MEDIUM DENSE PALE BROWN 5YR 5/2 SAND AND GRAVEL		
24	SS	36.5	38.0	7-8-11	1.0					MEDIUM DENSE PALE BROWN 5YR 5/2 SAND AND GRAVEL 1.4 recovery and .4 heavage		
25	SS	39.0	40.5	8-12-17	1.2		40			MEDIUM DENSE PALE BROWN 5YR 5/2 SAND AND GRAVEL 1.5 recovery and .5 heavage		
26	SS	41.5	43.0	11-15-15	1.5					MEDIUM TO DENSE PALE BROWN 5YR 5/2 SAND AND GRAVEL		
27	SS	44.0	45.5	10-14-16	1.5							

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-01** DATE **7/7/16** SHEET **3** OF **3**

PROJECT **GV BAC CCR Compliance** BORING START **12/8/15** BORING FINISH **12/9/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
28	SS	46.5	48.0	9-12-18	1.5							

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,902.8 E 2,108,487.2**

GROUND ELEVATION **600.0** SYSTEM

Water Level, ft			
TIME			
DATE			

BORING NO. **BAC-02** DATE **7/7/16** SHEET **1** OF **4**

BORING START **12/17/15** BORING FINISH **12/17/15**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND **2.258** DIA **6**

DEPTH TO TOP OF WELL SCREEN **68.4** BOTTOM **78.0**

WELL DEVELOPMENT **YES** BACKFILL **GROUT**

FIELD PARTY **MWJ / TAS** RIG **D-50**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SPT	0.0	1.5	10-11-12	1.1					VERY STIFF LIGHT BROWN 5YR 5/6 GRAVEL AND CLAY 4.0 tsf		
2	SPT	1.5	3.0	12-12-13	1.3							
3	SPT	3.0	4.5	5-7-9	1.4							
4	SPT	4.5	6.0	5-7-9	1.4		5					
5	SPT	6.0	7.5	4-7-9	1.3							
6	SPT	7.5	9.0	3-4-6	1.5					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 3.0 tsf		
7	SPT	9.0	10.5	3-4-5	1.4							
8	SPT	10.5	12.0	3-3-6	1.5		10					
9	SPT	12.0	13.5	5-5-6	1.5					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 2.5 tsf		
10	SPT	13.5	15.0	3-4-6	1.5							
11	SPT	15.0	16.5	3-4-7	1.5		15			STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 2.0 tsf		
12	SPT	16.5	18.0	3-4-5	1.5					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 2.5 tsf		
13	SPT	18.0	19.5	3-4-5	1.4							
14	SPT	19.5	21.0	3-5-7	1.3					STIFF LIGHT BROWN 5YR 5/6 SILT AND		

TYPE OF CASING USED

	NQ-2 ROCK CORE	
	6" x 3.25 HSA	
	9" x 6.25 HSA	
	HW CASING ADVANCER	4"
	NW CASING	3"
	SW CASING	6"
	AIR HAMMER	8"

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PIEZOMETER TYPE: PT = OPEN TUBE POROUS TIP, SS = OPEN TUBE SLOTTED SCREEN, G = GEONOR, P = PNEUMATIC

WELL TYPE: OW = OPEN TUBE SLOTTED SCREEN, GM = GEOMON

RECORDER

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-02** DATE **7/7/16** SHEET **2** OF **4**

PROJECT **GV BAC CCR Compliance** BORING START **12/17/15** BORING FINISH **12/17/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
15	SPT	21.0	22.5	4-4-6	1.4					CLAY 2.0 tsf		
16	SPT	22.5	24.0	3-4-6	1.3					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 2.5 tsf		
17	SPT	24.0	25.5	3-4-7	1.4		25					
18	SPT	25.5	27.0	3-6-8	1.5					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 3.0 tsf		
19	SPT	27.0	28.5	3-6-8	1.5					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 3.5 tsf		
20	SPT	28.5	30.0	6-8-10	1.5					VERY STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 4.0 tsf		
21	SPT	30.0	31.5	4-5-9	1.3		30			STIFF MODERATE BROWN 5YR 4/4 SILT AND CLAY 3.5 tsf		
22	SPT	31.5	33.0	6-8-12	1.5							
23	SPT	33.0	34.5	6-10-15	1.4					VERY STIFF MODERATE BROWN 5YR 4/4 SILT AND CLAY 4.0 tsf		
24	SPT	34.5	36.0	8-12-16	1.4		35					
25	SPT	36.0	37.5	4-5-9	1.5					STIFF MODERATE BROWN 5YR 4/4 SILT AND CLAY 3.0 tsf		
26	SPT	37.5	39.0	5-8-11	1.5					VERY STIFF DARK YELLOWISH ORANGE 10YR 6/6 SILT AND CLAY 4.0 tsf		
27	SPT	39.0	40.5	4-5-7	1.4					STIFF MODERATE BROWN 5YR 4/4 CLAY 4.0 tsf		
28	SPT	40.5	42.0	5-5-9	1.5		40			STIFF MODERATE BROWN 5YR 4/4 CLAY 3.5 tsf		
29	ST	42.0	44.0							STIFF MODERATE BROWN 5YR 4/4 CLAY		
30	SPT	45.0	46.5	4-7-10			45			VERY STIFF MODERATE BROWN 5YR 4/4 CLAY		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GV BAC CCR Compliance**

BORING NO. **BAC-02** DATE **7/7/16** SHEET **3** OF **4**

BORING START **12/17/15** BORING FINISH **12/17/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										2.5 tsf		
31	SPT	46.5	48.0	4-6-10						VERY STIFF LIGHT BROWN 5YR 6/4 CLAY AND SAND 1.5 tsf		
32	ST	48.0	50.0							STIFF LIGHT BROWN 5YR 6/4 CLAY LITTLE SAND PSI 500 / SEC 9 / PUSH 2.0 GRAVEL 0% SAND 14.9% FINES 85.1% TESTED SAMPLE #32		
							50					
33	SPT	51.0	52.5	4-4-6	1.4					STIFF LIGHT BROWN 5YR 6/4 CLAY AND SAND MC 25.5% LL 35.3% PI 13.5% TESTED SAMPLES #33 AND #34		
34	SPT	52.5	54.0	3-5-7	1.4							
35	SPT	54.0	55.5	3-6-6	1.5					MEDIUM DENSE LIGHT BROWN 5YR 6/4 SANDY SILTY CLAY MC 26.4% LL 24.6% PI 3.6% SAND 45.9% FINES 54.1% TESTED SAMPLES #36 AND #37		
							55					
36	SPT	55.5	57.0	4-6-8	1.5							
37	SPT	57.0	58.5	2-2-4	1.4					LOOSE LIGHT BROWN 5YR 6/4 SAND AND CLAY		
38	SPT	58.5	60.0	2-2-3	1.3							
							60					
39	SPT	60.0	61.5	3-3-5	1.5					LOOSE MEDIUM LIGHT GRAY N6 SAND AND CLAY		
40	SPT	61.5	63.0	4-12-18	1.5							
41	SPT	63.0	64.5	6-12-14	1.5					MEDIUM DENSE BROWN 5YR 5/6 SAND AND GRAVEL MEDIUM DENSE BROWN COARSE SAND AND GRAVEL wet		
							65					
42	SPT	65.5	67.0	8-11-11	1.4							
43	SPT	68.0	69.5	8-20-27	1.4					DENSE DARK YELLOWISH ORANGE 10YR 6/6 COARSE SAND AND GRAVEL		
							70					
44	SPT	70.5	72.0	13-26-27	1.5					DENSE BROWN 5YR 5/6 COARSE SAND AND GRAVEL wet		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-02** DATE **7/7/16** SHEET **4** OF **4**

PROJECT **GV BAC CCR Compliance** BORING START **12/17/15** BORING FINISH **12/17/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
45	SPT	73.0	74.5	10-11-6	1.3					MEDIUM DENSE BROWN 5YR 5/6 COARSE SAND AND GRAVEL wet		
							75					
46	SPT	75.5	77.0	8-5-9	1.4					MEDIUM DENSE BROWN 5YR 5/6 FINE SAND AND GRAVEL wet		
47	SPT	78.0	79.5	13-12-10	1.4					MEDIUM DENSE BROWN 5YR 5/6 COARSE TO FINE GRAIN SAND AND GRAVEL wet		

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,839.3 E 2,109,080.6**

GROUND ELEVATION **573.8** SYSTEM

Water Level, ft			
TIME			
DATE			

BORING NO. **BAC-03** DATE **7/7/16** SHEET **1** OF **3**

BORING START **12/11/15** BORING FINISH **12/15/15**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND **2.433** DIA **6**

DEPTH TO TOP OF WELL SCREEN **45.1** BOTTOM **54.7**

WELL DEVELOPMENT **YES** BACKFILL **GROUT**

FIELD PARTY **MWJ / TAS** RIG **D-50**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	0.0	1.5	4-6-4	1.5					LOOSE GRAYISH BROWN 5YR 3/2 SAND AND GRAVEL		
2	SS	1.5	3.0	2-4-7	1.5					STIFF MEDIUM BROWN 5YR 3/4 CLAY 2.0 tsf, w/gravels		
3	SS	3.0	4.5	5-6-4	1.5					STIFF GRAYISH BROWN 5YR 3/2 CLAY AND ASH w/gravels		
4	SS	4.5	6.0	3-3-4	1.5		5			MEDIUM STIFF PALE BROWN 5YR 5/2 CLAY AND SAND 2.5 tsf		
5	SS	6.0	7.5	3-8-20	1.5					MEDIUM DENSE LIGHT GRAY N7 SAND/GRAVELS/LIMESTONE		
6	SS	7.5	9.0	9-8-8	.8					VERY STIFF MODERATE BROWN 5YR 3/4 CLAY SILT SAND AND LIMESTONE 3.5 tsf		
7	SS	9.0	10.5	4-3-4	.7		10			LOOSE LIGHT BROWN 5YR 5/6 SILTY GRAVEL LITTLE SAND 1.0 tsf, dry		
8	SS	10.5	12.0	2-2-3	1.5					MC 19.9% GRAVEL 29.3% SAND 21.7% FINES 49.0% TESTED SAMPLE #7		
9	SS	12.0	13.5	3-1-2	1.5					MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY SAND SILT 0.5 tsf, moist		
10	SS	13.5	15.0	2-1-2	1.5					SOFT LIGHT BROWN 5YR 5/6 CLAY SOME SAND 0.5 tsf, wet MC 24.5% LL 29.5% PI 10.4% SAND 33.5% FINES 66.5% TESTED SAMPLE #9		
11	SS	15.0	16.5	3-1-2	.9		15			SOFT LIGHT BROWN 5YR 5/6 CLAY 2.0 tsf, moist		
12	ST	16.5	18.0							SOFT LIGHT BROWN 5YR 5/6 CLAY 1.0 tsf, moist		
13	ST	18.0	19.5							SOFT LIGHT BROWN 5YR 5/6 CLAY moist PSI 250 / SEC 10 / REC / DEPTH 17 - 19		
14	SS	19.5	21.0	1-1-2	.9					SOFT LIGHT BROWN 5YR 5/6 CLAY		

TYPE OF CASING USED

	NQ-2 ROCK CORE	
	6" x 3.25 HSA	
	9" x 6.25 HSA	
	HW CASING ADVANCER	4"
	NW CASING	3"
	SW CASING	6"
	AIR HAMMER	8"

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PIEZOMETER TYPE: PT = OPEN TUBE POROUS TIP, SS = OPEN TUBE SLOTTED SCREEN, G = GEONOR, P = PNEUMATIC

WELL TYPE: OW = OPEN TUBE SLOTTED SCREEN, GM = GEOMON

RECORDER

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-03** DATE **7/7/16** SHEET **2** OF **3**

PROJECT **GV BAC CCR Compliance** BORING START **12/11/15** BORING FINISH **12/15/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										1.5 tsf, moist		
15	SS	21.0	22.5	4-5-4	.3					MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY 0.5 tsf, moist		
16	SS	22.5	24.0	4-5-3	1.5					MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY 1.5 tsf, moist MC 24.1% LL 39.8% PI 19.9% SAND 3.4% FINES 96.6% TESTED SAMPLE #16		
17	SS	24.0	25.5	3-4-4	1.5					MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY 1.0 tsf, moist		
							25					
18	SS	25.5	27.0	2-3-4	1.5					MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY 1.0 tsf, moist		
19	SS	27.0	28.5	2-2-3	1.5					MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY 1.0 tsf, moist		
20	SS	28.5	30.0	2-2-2	1.5							
							30					
21	SS	30.0	31.5	WOR-2-2	1.5					SOFT LIGHT BROWN 5YR 5/6 SILT CLAY w/sand fine, moist		
22	SS	31.5	33.0	WOR-2-2	1.5							
23	SS	33.0	34.5	WOR-2-2	1.5					SOFT MODERATE BROWN 5YR 4/4 SAND FINE moist		
24	SS	34.5	36.0	2-2-2	1.5					SOFT MODERATE BROWN 5YR 4/4 SILT CLAY w/sand fine, moist		
							35					
25	SS	36.0	37.5	WOR-2-3	1.5							
26	SS	37.5	39.0	1-3-4	1.5					MEDIUM STIFF MODERATE BROWN 5YR 4/4 SILT CLAY 0.5 tsf, w/sand fine, moist		
27	SS	39.0	40.5	7-14-9	1.5					MEDIUM DENSE LIGHT BROWN 5YR 5/6 SAND COARSE wet		
							40					
28	SS	40.5	42.0	7-10-12	1.5							
29	SS	41.5	43.0	5-7-11	1.3							
30	SS	44.0	45.5	9-11-16	1.5							
							45					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-03** DATE **7/7/16** SHEET **3** OF **3**

PROJECT **GV BAC CCR Compliance** BORING START **12/11/15** BORING FINISH **12/15/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
31	SS	46.5	48.0	10-8-10	1.5							
32	SS	49.0	50.5	11-11-14	1.5							
							50					
33	SS	51.1	52.6	6-12-14	1.5							
34	SS	54.0	55.5	9-15-14	1.5							
35	SS	56.5	58.0	10-12-16	1.5							

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,206.5 E 2,108,938.6**

GROUND ELEVATION **582.5** SYSTEM

Water Level, ft			
TIME			
DATE			

BORING NO. **BAC-04** DATE **7/7/16** SHEET **1** OF **3**

BORING START **12/16/15** BORING FINISH **12/22/15**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND **2.188** DIA **6**

DEPTH TO TOP OF WELL SCREEN **55.8** BOTTOM **65.4**

WELL DEVELOPMENT **YES** BACKFILL **GROUT**

FIELD PARTY **MWJ / TAS** RIG **D-50**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	0.0	1.5	6-5-6	.1					MEDIUM DENSE LIMESTONE ROAD BED		
2	SS	1.5	3.0	2-5-6	1.0					STIFF GRAYISH BROWN 5YR 3/2 CLAY		
3	SS	3.0	4.5	4-5-9	1.3					STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/trace of bottom ash		
4	SS	4.5	6.0	6-4-6	1.2		5			STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY trace of bottom ash and river gravel		
5	SS	6.0	7.5	4-6-5	1.5							
6	SS	7.5	9.0	3-6-6	1.5					STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/trace of river gravel		
7	SS	9.0	10.5	3-5-7	1.5		10			STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/trace of bottom ash		
8	SS	10.5	12.0	3-4-7	1.5					STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/trace bottom and river gravel		
9	SS	12.0	13.5	4-7-11	1.5					VERY STIFF DUSKY BROWN 5YR 2/2 CLAY w/trace of sand fine		
10	SS	13.5	15.0	4-7-9	0					NO RECOVERY limestone cobble stuck in end of spoon		
11	SS	15.0	16.5	6-5-6	1.1		15			STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY SILT SAND MC 15.7% LL 23.9% PI 5.1% TESTED SAMPLES #11 AND #13 COMBINED		
12	SS	16.5	18.0	3-6-9	0					NO RECOVERY limestone cobble stuck in end of spoon		
13	SS	18.0	19.5	2-3-3	1.4					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 FINE CLAY SILT SAND SAND 52.9% FINES 47.1%		
14	SS	19.5	21.0	2-3-3	1.4					MEDIUM STIFF MODERATE YELLOWISH		

TYPE OF CASING USED

	NQ-2 ROCK CORE	
	6" x 3.25 HSA	
	9" x 6.25 HSA	
	HW CASING ADVANCER	4"
	NW CASING	3"
	SW CASING	6"
	AIR HAMMER	8"

Continued Next Page

PIEZOMETER TYPE: PT = OPEN TUBE POROUS TIP, SS = OPEN TUBE SLOTTED SCREEN, G = GEONOR, P = PNEUMATIC

WELL TYPE: OW = OPEN TUBE SLOTTED SCREEN, GM = GEOMON

RECORDER

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GV BAC CCR Compliance**

BORING NO. **BAC-04** DATE **7/7/16** SHEET **2** OF **3**

BORING START **12/16/15** BORING FINISH **12/22/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										BROWN 10YR 5/4 CLAY AND SILT w/little sand		
15	SS	21.0	22.5	2-3-4	1.5					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/some silt		
16	SS	22.5	24.0	2-4-5	1.5							
17	SS	24.0	25.5	3-2-4	.8					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY AND SILT w/little sand fine		
							25					
18	SS	25.5	27.0	2-2-3	1.5					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 SILT AND CLAY		
19	SS	27.0	28.5	2-3-3	1.5							
20	SS	28.5	30.0	2-2-2	1.5							
							30					
1	ST	30.5	33.0							SOFT MODERATE YELLOWISH BROWN 10YR 5/4 SILT AND CLAY PSI 700 / SEC 10 / REC 1.5		
21	SS	33.0	34.5	2-1-2	.9					SOFT MODERATE YELLOWISH BROWN 10YR 5/4 SANDY SILTY CLAY		
22	SS	34.5	36.0	1-2-2	1.5							
							35			SOFT MODERATE YELLOWISH BROWN 10YR 5/4 SANDY SILTY CLAY MC 22.5% LL 24.4% PI 5.8% GRAVEL 1.0% SAND 37.6% FINES 61.4% TESTED SAMPLES #21, #22, AND #23		
23	SS	36.0	37.5	2-2-3	1.5							
24	SS	37.5	39.0	1-1-1	1.5					VERY SOFT MODERATE YELLOWISH BROWN 10YR 5/4 SANDY CLAYEY SILT w/some silt, wet MC 27% LL 24.7% PI 4.5% SAND 31.5% FINES 68.5% TESTED SAMPLE #26		
25	SS	39.0	40.5	WOR-2-2	1.5							
							40					
26	SS	40.5	42.0	1-1-1	1.5							
27	SS	42.0	43.5	1-1-1	1.5							
28	SS	43.5	45.0	3-2-3	1.5					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 SILT AND CLAY w/some sand fine		
29	SS	45.0	46.5	1-3-2	1.5		45					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-04** DATE **7/7/16** SHEET **3** OF **3**

PROJECT **GV BAC CCR Compliance** BORING START **12/16/15** BORING FINISH **12/22/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
30	SS	46.5	48.0	2-2-2	1.5					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 SILT AND CLAY w/some sand fine		
31	SS	48.0	49.5	2-2-4	1.5					MEDIUM STIFF MEDIUM LIGHT GRAY N6 SILT AND CLAY w/some sand fine		
32	SS	49.5	51.0	3-5-7	1.5		50			MEDIUM STIFF MEDIUM LIGHT GRAY N6 SILT AND CLAY w/some sand fine		
33	SS	51.0	52.5	4-6-10	1.5					MEDIUM DENSE LIGHT BROWN 5YR 5/6 SAND FINE w/little silt		
34	SS	52.5	54.0	5-8-13	1.5					MEDIUM DENSE LIGHT BROWN 5YR 5/6 SAND FINE AND GRAVEL		
35	SS	54.0	55.5	9-8-10	1.5		55			MEDIUM DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL		
36	SS	55.5	57.0	7-13-15	1.0							
37	SS	58.0	59.5	6--7-13	1.0		60					
38	SS	60.5	62.0	9-11-13	.9							
39	SS	63.0	64.5	22-20-29	1.2		65			DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL		
40	SS	65.5	67.0	11-12-12	1.0					MEDIUM DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL		
41	SS	68.0	69.5	12-18-20	1.2							

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 338,638.9 E 2,108,667.3**

GROUND ELEVATION **590.3** SYSTEM

Water Level, ft			
TIME			
DATE			

BORING NO. **BAC-05** DATE **7/7/16** SHEET **1** OF **4**

BORING START **12/29/15** BORING FINISH **12/30/15**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND **1.73** DIA **6**

DEPTH TO TOP OF WELL SCREEN **64.5** BOTTOM **74.1**

WELL DEVELOPMENT **YES** BACKFILL **GROUT**

FIELD PARTY **MWJ / TAS** RIG **D-50**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	0.0	1.5	1-2-3	.9					STIFF BROWNISH GRAY 5YR 4/1 BOTTOM ASH 1.5 tsf, w/some soil, dry		
2	SS	1.5	3.0	14-10-15	.6					MEDIUM DENSE LIGHT BROWNISH GRAY 5YR 6/1 GRAVELS w/bottom ash, dry		
3	SS	3.0	4.5	5-5-4	1.3					STIFF MODERATE BROWN 5YR 4/4 CLAY 2.5 tsf, w/gravels, dry		
4	SS	4.5	6.0				5			NO RECOVERY limestone cobble in end of spoon		
5	SS	6.0	7.5	4-3-5	1.5					STIFF LIGHT BROWN 5YR 5/6 CLAY dry		
6	SS	7.5	9.0	3-3-4	1.5					MEDIUM STIFF PALE BROWN 5YR 5/2 CLAY dry		
7	SS	9.0	10.5	4-3-4			10			MEDIUM STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
8	SS	10.5	12.0	3-4-7	1.5					STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
9	SS	12.0	13.5	3-3-7	1.5					STIFF PALE YELLOWISH BROWN 10YR 6/2 CLAY dry		
10	SS	13.5	15.0	3-4-7	1.5					STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
11	SS	15.0	16.5	3-4-5	1.5		15					
12	SS	16.5	18.0	3-3-5	1.5					STIFF MODERATE BROWN 5YR 4/4 CLAY w/sand fine		
13	SS	18.0	19.5	3-3-5	1.5					STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
14	SS	19.5	21.0	4-4-6	1.3							

TYPE OF CASING USED

NQ-2 ROCK CORE	
6" x 3.25 HSA	
9" x 6.25 HSA	
HW CASING ADVANCER	4"
NW CASING	3"
SW CASING	6"
AIR HAMMER	8"

Continued Next Page

PIEZOMETER TYPE: PT = OPEN TUBE POROUS TIP, SS = OPEN TUBE SLOTTED SCREEN, G = GEONOR, P = PNEUMATIC

WELL TYPE: OW = OPEN TUBE SLOTTED SCREEN, GM = GEOMON

RECORDER

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-05** DATE **7/7/16** SHEET **2** OF **4**

PROJECT **GV BAC CCR Compliance** BORING START **12/29/15** BORING FINISH **12/30/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
15	SS	21.0	22.5	5-4-5	1.5							
16	SS	22.5	24.0	3-4-7	1.3					STIFF MODERATE BROWN 5YR 4/4 CLAY w/sand fine		
17	SS	24.0	25.5	4-5-6	1.5		25			STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
18	SS	25.5	27.0	3-4-5	1.5					STIFF MODERATE BROWN 5YR 4/4 SAND FINE w/silty clay		
19	SS	27.0	28.5	3-3-4	1.5					MEDIUM STIFF MODERATE BROWN 5YR 4/4 CLAY		
20	SS	28.5	30.0	3-4-6	1.5					STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
21	SS	30.0	31.5	3-4-6	1.5		30					
22	SS	31.5	33.0	2-4-5	1.5							
23	ST	33.5	35.5							STIFF MODERATE BROWN 5YR 4/4 CLAY dry PSI 400 / SEC 10 / REC		
							35					
24	SS	36.0	37.5	2-3-4	1.5					MEDIUM STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
25	SS	37.5	39.0	2-3-4	1.5							
26	SS	39.0	40.5	WOH-WOH-3	1.5					SOFT MODERATE BROWN 5YR 4/4 CLAY 0.5 tsf, w/sands fine, moist		
							40					
27	SS	40.5	42.5	WOH-2-2	1.5					SOFT MODERATE BROWN 5YR 4/4 CLAY AND SILT 1.0 tsf, w/sands fine, moist		
28	SS	42.5	44.0	WOH-WOH-2	1.5					VERY SOFT MODERATE BROWN 5YR 4/4 CLAY AND SILT w/sands fine, moist		
29	SS	44.0	45.5	WOH-2-1	1.5							
							45					
30	SS	45.5	47.0	WOH-1-2	1.5					SOFT MODERATE BROWN 5YR 4/4 CLAY		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-05** DATE **7/7/16** SHEET **3** OF **4**

PROJECT **GV BAC CCR Compliance** BORING START **12/29/15** BORING FINISH **12/30/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										AND SILT w/sands fine, wet		
31	SS	47.0	48.5	WOH-1-2	1.5							
32	SS	48.5	50.0	1-1-3	1.5							
							50					
33	SS	50.0	51.5	1-2-3	1.5					MEDIUM STIFF MODERATE BROWN 5YR 4/4 CLAY AND SILT w/sands fine, moist		
34	SS	51.5	53.0	1-3-5	1.5					LOOSE MODERATE BROWN 5YR 4/4 SAND FINE wet		
35	SS	53.0	54.5	6-3-3	1.5							
36	SS	54.5	56.0	5-5-4	1.5							
							55					
37	SS	56.0	57.5	1-3-4	1.5					LOOSE MEDIUM LIGHT GRAY N5 SAND FINE wet		
38	SS	57.5	59.0	3-3-5	1.5					STIFF MEDIUM LIGHT GRAY N5 CLAY AND SILT 1.0 tsf, moist		
39	SS	59.0	60.5	4-3-7	1.4					STIFF MEDIUM LIGHT GRAY N5 CLAY AND SILT moist		
							60					
40	SS	60.5	62.0	7-24-20	1.5					DENSE MODERATE BROWN 5YR 3/4 SAND COARSE wet		
41	SS	62.0	63.5	12-21-28	1.5							
42	SS	64.5	66.0	13-23-38	1.3					VERY DENSE MODERATE BROWN 5YR 3/4 SAND COARSE wet		
							65					
43	SS	67.0	68.5	12-25-40	1.2							
44	SS	69.5	71.0	14-22-38	1.2							
							70					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-05** DATE **7/7/16** SHEET **4** OF **4**

PROJECT **GV BAC CCR Compliance** BORING START **12/29/15** BORING FINISH **12/30/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
45	SS	73.0	74.5	14-19-35	1.3							
							75					
46	SS	75.5	77.0	17-14-30	1.0							
47	SS	78.0	79.5	13-23-19	.9							

PROJECT NO: 313579
BORING NO: MW-1
PROJECT NAME: AEP GAVIN PLANT
DATE BEGAN: 7-15-93
DATE FINISHED: 7-19-93
FIELD ENGINEER: M. HARDNER
DRILLER: C. ROUSH/R. YATES
N: 6900.00'
E: 8950.00'
GROUND SURFACE ELEV.: 567.86'
GWL DATE/TIME: NA
GWL DEPTH: NA
DRILLING METHOD: 3.25" ID HOLLOW STEM AUGER
EQUIPMENT: B-K 81 RIG
CONTRACTOR: AEP ENVIRONMENTAL
CHECKED BY: S. HANNAH

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	SPT BLOWS PER (0.5')	REC (FT)	PROFILE	DESCRIPTION	USCS	OVA (PPM)	REMARKS
	0.00	S 1	12-12-11-13	1.17		Loose, dark brown, topsoil, over hard, medium to dark brown, silty CLAY, trace pebbles, 10% coal (small pieces), dry		3.0	PID READINGS 1045 hrs. HNU - 0 ppm LEL - 0%
565.0	-5.00								
560.0		S 2	5-5-7-12	1.33		Hard, medium brown, mottled gray silty CLAY, trace coal pieces, slightly to non-plastic, dry		3.5	1100 hrs. HNU - 0 ppm LEL - 0%
	-10.00								
555.0		S 3	5-5-7-8	1.58		Hard, medium brown, silty CLAY, slight-medium plasticity, dry	cl	2.5	1115 HNU - 0 ppm LEL - 0%
	-15.00								
550.0		S 4	2-3-5-8	1.25		Hard, medium brown, silty CLAY, slightly plastic, dry		2.5	1120 hrs. HNU - 0 ppm LEL - 0%
	-20.00								
545.0		S 5	2-3-4-4	1.67		Hard, medium brown, silty CLAY, medium plasticity, moist 27.0'		2.25	1128 hrs. HNU - 0 ppm LEL - 0%
	-25.00								
540.0		S 6	2-3-5-9	1.75		Soft, gray brown clayey SILT, medium plasticity, moist 32.0'	ml	0.5	1132 hrs. HNU - 0 ppm LEL - 0%
	-30.00								
535.0		S 7	2-3-7-8	1.25		Loose GRAVEL, pebble size, 2" thick, over brown fine to coarse grained SAND with gravel, pebble size, wet 37.0'	gp/sw		1140 hrs. HNU - 0 ppm LEL - 0%
	-35.00								END 07/15/93 BEGIN 07/16/93
530.0		S 8	8-8-9-12	1.0		Medium dense, medium brown, some orange and dark brown SAND, medium to coarse grained, with 10% pebble gravel, wet	sw		0905 hrs. HNU - 0 ppm LEL - 0%
	-40.00								

PROJECT NO: 313579
BORING NO: MW-1
PROJECT NAME: AEP GAVIN PLANT
DATE BEGAN: 7-15-93
DATE FINISHED: 7-19-93
FIELD ENGINEER: M. HARDNER
DRILLER: C. ROUSH/R. YATES
N: 6900.00'
E: 6950.00'
GROUND SURFACE ELEV.: 567.86'
GWL DATE/TIME: NA
GWL DEPTH: NA
DRILLING METHOD: 3.25" ID HOLLOW STEM AUGER
EQUIPMENT: B-K 81 RIG
CONTRACTOR: AEP ENVIRONMENTAL
CHECKED BY: S. HANNAH

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	SPT BLOWS PER (0.5')	REC (FT)	PROFILE	DESCRIPTION	USCS	(OVA)	REMARKS
	40.00					42.0'	sw		
525.0		S 9	8-9-9-10	1.25		Medium dense, medium brown, pebble GRAVEL, some fine to coarse SAND (20%), wet	sw		0825 hrs. HNU - 0 ppm LEL - 0%
	45.00					47.0'			
520.0		S 10	10-8-6-6	1.58		Medium dense, medium brown SAND, fine to coarse grained with 5" of medium brown pebble to cobble GRAVEL at 8" above 49.0'	sp/gp		0840 hrs. HNU - 0 ppm LEL - 0%
515.0	50.00					54.0'			
	55.00	S 11	5-4-4-9-	1.42		Loose, medium brown SAND, fine to medium grained, wet			0850 hrs. HNU - 0 ppm LEL - 0%
510.0									
	60.00	S 12	9-10-11-14	1.33		Medium dense, medium brown SAND, wet	sp		0900 hrs. HNU - 0 ppm LEL - 0% CUTTINGS VERY WET
505.0						64.0'			
	65.00	S 13	11-12-13-17	1.17		Medium dense, light brown to medium brown SAND, medium grained, some fine grained, trace pebble to cobble gravel, wet	sw		0930 hrs. HNU - 0 ppm LEL - 0%
500.0									
	70.00	S 14	8-50/3"	1.33		Light brown SAND as above with medium to dark brown, some black, pebble to cobble gravel at 69.0', wet	NA		0945 hrs. HNU = 0 ppm LEL = 0%
495.0						BOTTOM OF BORING AT 70.0'			NOTE: HNU OF BACKGROUND = 0.1 ppm 7/15/93 = 0.6 ppm 7/19/93
	75.00					BEDROCK AT 69.5' BEDROCK IS GREEN-GRAY FISSILE SHALE			
490.0									
	80.00								

PROJECT NO: 313579
BORING NO: MW-6
PROJECT NAME: AEP GAVIN PLANT
DATE BEGAN: 7-20-93
DATE FINISHED: 7-20-93
FIELD ENGINEER: M. HARDNER
DRILLER: C. ROUSH/R. YATES
N: 8277.67'
E: 9491.54'
GROUND SURFACE ELEV.: 569.82'
GWL DATE/TIME: NA
GWL DEPTH: NA
DRILLING METHOD: 3.25" ID HOLLOW STEM AUGER
EQUIPMENT: B-K 81 RIG
CONTRACTOR: AEP ENVIRONMENTAL
CHECKED BY: S. HANNAH

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	SPT BLOWS PER (0.5')	REC (FT)	PROFILE	DESCRIPTION	USCS	VOZ/PID (PPM)	REMARKS
	0.00	S 1*	NA	NA		FILL, (loose, dark brown, black, silty clay, trace pebbles, dry) 2.0'	NA	NA	PID READINGS 1300 HNU - 0 ppm LEL - 0%
565.0	5.00					Hard, yellow brown, mottled tan, silty CLAY, low plasticity, dry			
		S 2	27-12-12-14	1.17		Hard, yellow brown, mottled tan, silty CLAY, low plasticity, dry		4.0	1345 HNU - 0 ppm LEL - 0%
560.0	10.00								
		S 3*	7-9-10-12	1.83		Hard, orange brown, some mottled red brown, silty CLAY, low plasticity, dry	cl	3.5	1350 HNU - 0 ppm LEL - 0%
555.0	15.00								
		S 4	2-3-6-5	1.5		Firm, light brown, silty CLAY, medium plasticity, moist, light brown, silty sand, wet (at 18.0'-18.5')		1.0	1400 HNU - 0 ppm LEL - 0%
550.0	20.00					22.0'			
		S 5*	3-6-6-7	1.5		Medium dense, light brown fine grained SAND, moist, light brown, silty CLAY, medium plasticity, moist to wet		NA	1405 HNU - 0 ppm LEL - 0%
545.0	25.00					27.0'	sp/cl		
		S 6	9-10-11-14	1.33		Medium dense, light brown SAND and GRAVEL, sand medium to coarse grained with 30% pebble gravel, moist		NA	1410 HNU - 0 ppm LEL - 0%
540.0	30.00					32.0'	sw		
		S 7*	6-7-7-9	1.42		Medium dense, medium brown SAND and GRAVEL, (sand 90%) sand fine to coarse grained, pebble gravel wet		NA	1410 HNU - 0 ppm LEL - 0%
535.0	35.00					37.0'	gp		
		S 8	16-17-18-19	1.33		Dense, light brown SAND and pebble GRAVEL, sand fine to coarse grained, wet	sw	NA	1455 HNU - 0 ppm LEL - 0%
530.0	40.00								

PROJECT NO: 313579
BORING NO: MW-6
PROJECT NAME: AEP GAVIN PLANT
DATE BEGAN: 7-20-93
DATE FINISHED: 7-20-93
FIELD ENGINEER: M. HARDNER
DRILLER: C. ROUSH/R. YATES
N: 8277.67'
E: 9491.54'
GROUND SURFACE ELEV.: 569.82'
GWL DATE/TIME: NA
GWL DEPTH: NA
DRILLING METHOD: 3.25" ID HOLLOW STEM AUGER
EQUIPMENT: B-K 81 RIG
CONTRACTOR: AEP ENVIRONMENTAL
CHECKED BY: S. HANNAH

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	SPT BLOWS PER (0.5')	REC (FT)	PROFILE	DESCRIPTION	U.S.C.S.	TOTAL HNU	REMARKS
	40.00					42.0'	sw		
525.0	45.00	S 9	5-26-29-42	1.33		Very dense, light brown, medium grained SAND, over dark brown gravel, medium to coarse grained sand and pebble (gravel 40%)	sp	NA	1510 HNU - 0 ppm LEL - 0%
520.0	50.00	S 10	26-15-15-19	1.75		Medium dense, light brown, medium grained SAND, over dark brown SAND and pebble gravel (30%), wet Gravel at 48.0'		NA	1525 HNU - 0 ppm LEL - 0%
						54.0'	sw	NA	
515.0	55.00	S 11	6-6-7-9	1.0		Medium dense, light brown medium grained SAND with a little pebble gravel over light greenish-gray, coarse grained sand and pebble gravel (40%) at 53.5', wet			1535 HNU - 0 ppm LEL - 0%
						59.0'	gw/sp	NA	
510.0	60.00	S 12	10-12-15-16	1.58		Medium dense, medium to coarse grained SAND and GRAVEL (60%), over light brown, medium grained sand, wet			1625 HNU - 0 ppm LEL - 0%
						64.0'			
505.0	65.00	S 13	8-12-15-19	1.67		Medium dense, light brown, fine to medium grained SAND, trace pebbles/cobbles, wet	sp	NA	1642 HNU - 0 ppm LEL - 0%
						69.0'			
500.0	70.00	S 14	24-28-27-26	1.67		Very dense, medium brown, GRAVEL, pebble to cobble size, trace coarse sand, wet	gw		1700 HNU - 0 ppm LEL - 0%
							NA		
495.0	75.00	S 15	50/2"	0.3		NO SAMPLE, AUGER REFUSAL AT 73.1' BOTTOM OF BORING AT 73.1'		NA	NOTE: (1) HNU READINGS ABOVE BACKGROUND OF 0.6 ppm (2) * = LAB SAMPLE (3) LOCATED 10.0' SE OF MW5 (BORING FOR SPLIT SPOON SAMPLES)
490.0	80.00								

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER

COMPANY

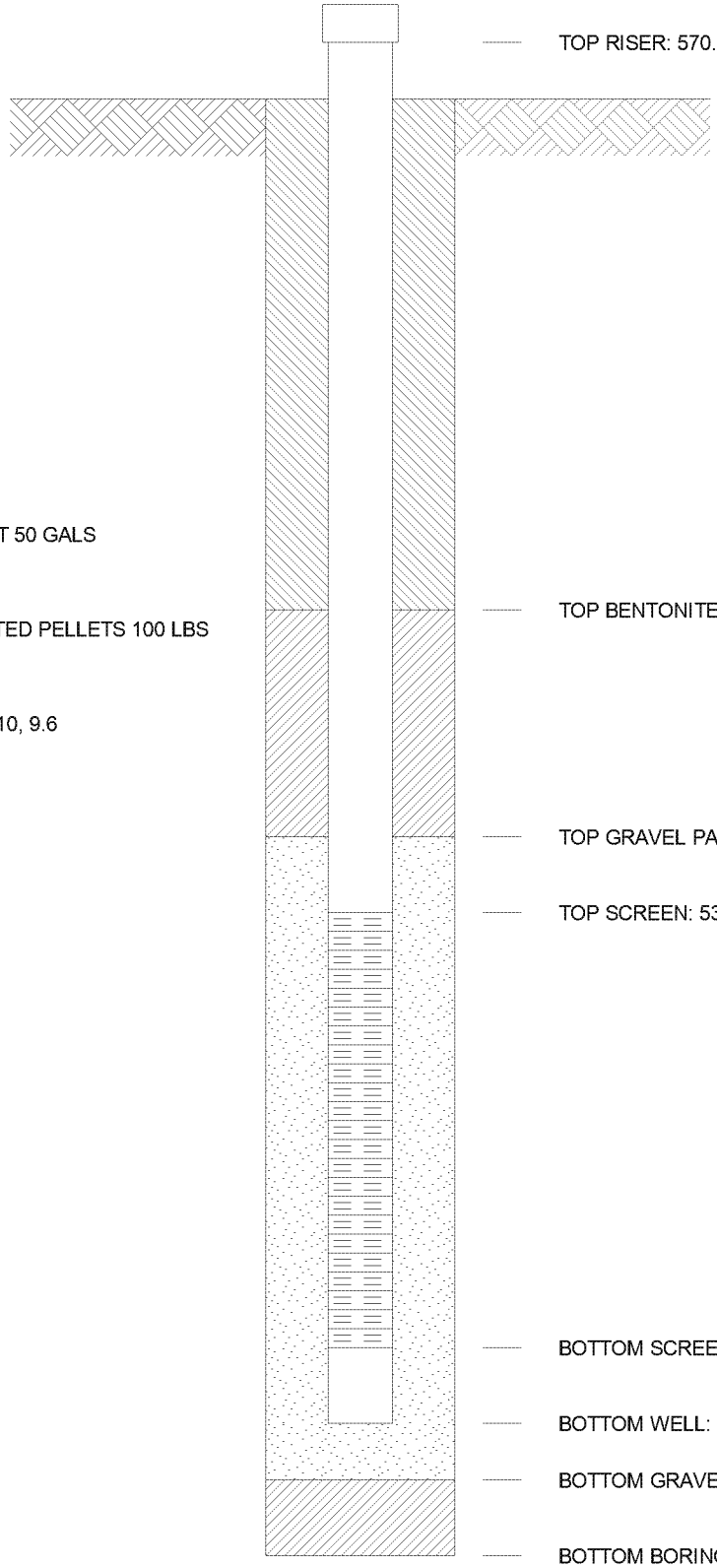
WELL No. **BAC-01** BORING No. **BAC-01** INSTALLED **12/9/15**

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,167.7 E 2,106,734.9**

SYSTEM

GROUND ELEVATION 568.10 FT.



TOP RISER: 570.45 FT.

TOP BENTONITE SEAL: 542.10 FT.

TOP GRAVEL PACK: 535.70 FT.

TOP SCREEN: 533.70 FT.

BOTTOM SCREEN: 524.10 FT.

BOTTOM WELL: 523.70 FT.

BOTTOM GRAVEL PACK: 521.60 FT.

BOTTOM BORING: 524.10 FT.

GROUT SEAL: QUICK GROUT 50 GALS

BENTONITE SEAL: 3/8" COATED PELLETS 100 LBS

SCREEN: 2 dia., SLOTTED .010, 9.6

GRAVEL PACK: #5 100 LBS

RISER PIPE: 2.0, dia., PVC

SPACERS, DEPTH:

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER

COMPANY

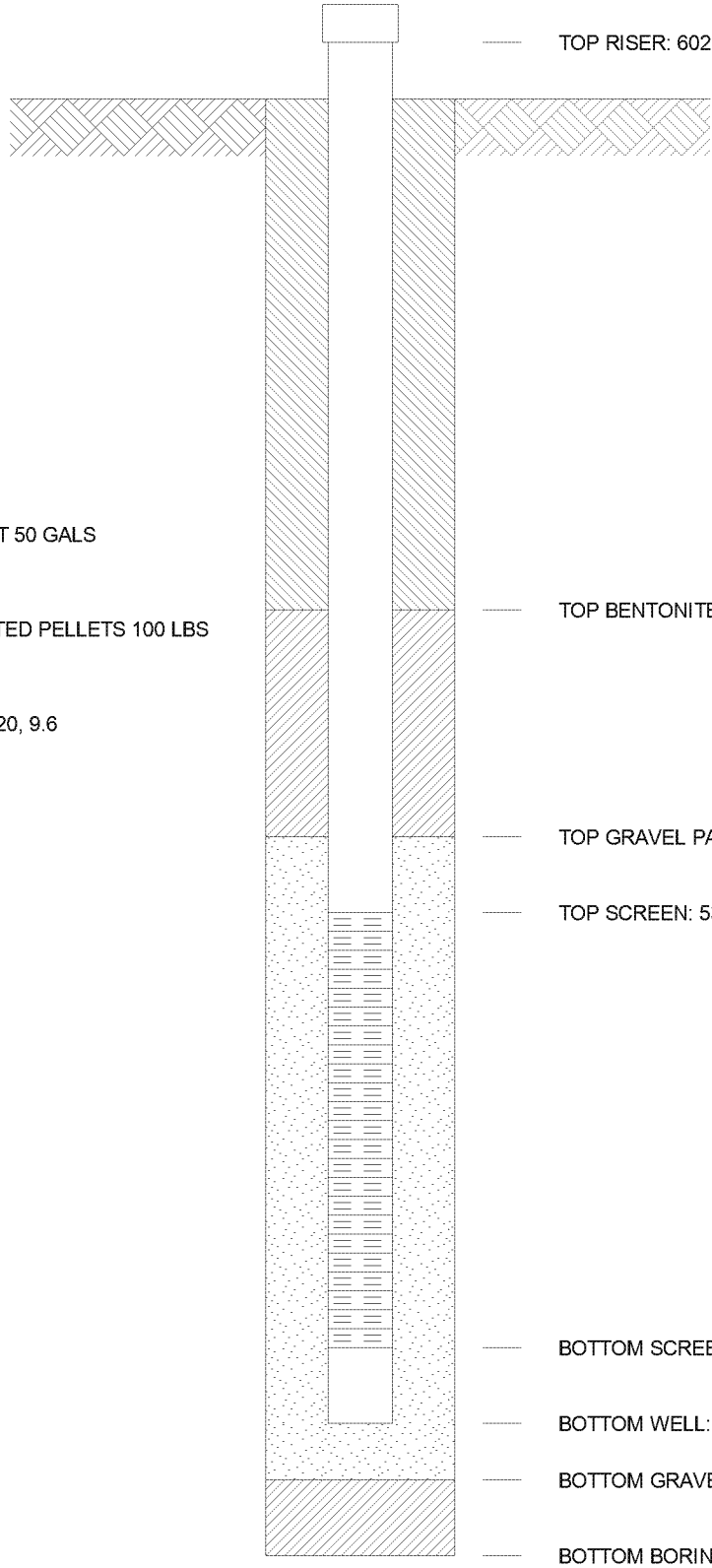
WELL No. **BAC-02** BORING No. **BAC-02** INSTALLED **12/17/15**

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,902.8 E 2,108,487.2**

SYSTEM

GROUND ELEVATION 599.98 FT.



TOP RISER: 602.24 FT.

TOP BENTONITE SEAL: 540.98 FT.

TOP GRAVEL PACK: 533.98 FT.

TOP SCREEN: 531.58 FT.

BOTTOM SCREEN: 521.98 FT.

BOTTOM WELL: 521.58 FT.

BOTTOM GRAVEL PACK: 520.98 FT.

BOTTOM BORING: 520.48 FT.

GROUT SEAL: QUICK GROUT 50 GALS

BENTONITE SEAL: 3/8" COATED PELLETS 100 LBS

SCREEN: 2 dia., SLOTTED .020, 9.6

GRAVEL PACK: #5 250 LBS

RISER PIPE: 2.0, dia., PVC

SPACERS, DEPTH:

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER

COMPANY

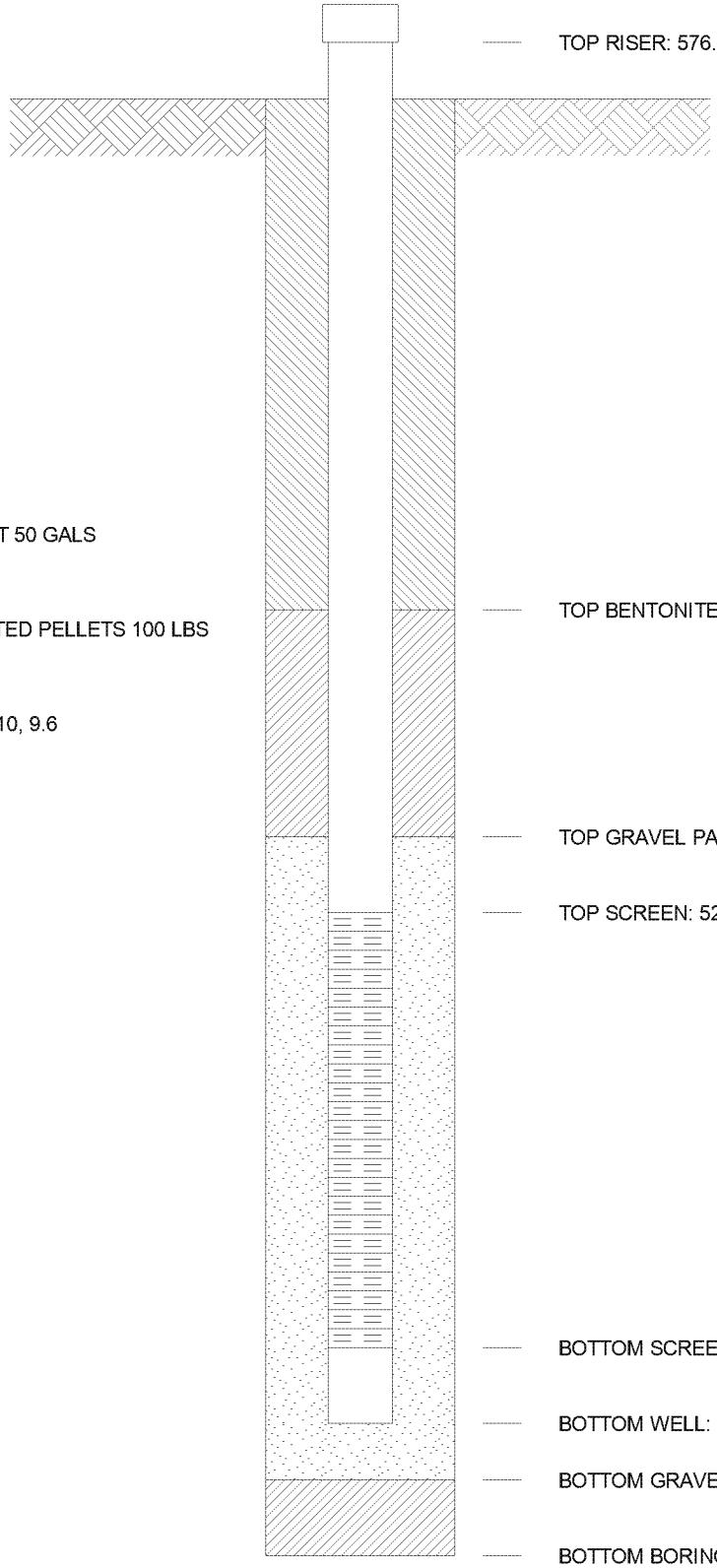
WELL No. **BAC-03** BORING No. **BAC-03** INSTALLED **12/15/15**

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,839.3 E 2,109,080.6**

SYSTEM

GROUND ELEVATION 573.78 FT.



TOP RISER: 576.21 FT.

TOP BENTONITE SEAL: 536.78 FT.

TOP GRAVEL PACK: 531.18 FT.

TOP SCREEN: 528.68 FT.

BOTTOM SCREEN: 519.08 FT.

BOTTOM WELL: 518.28 FT.

BOTTOM GRAVEL PACK: 518.08 FT.

BOTTOM BORING: 519.78 FT.

GROUT SEAL: QUICK GROUT 50 GALS

BENTONITE SEAL: 3/8" COATED PELLETS 100 LBS

SCREEN: 2 dia., SLOTTED .010, 9.6

GRAVEL PACK: #5 150 LBS

RISER PIPE: 2.0, dia., PVC

SPACERS, DEPTH:

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER

COMPANY

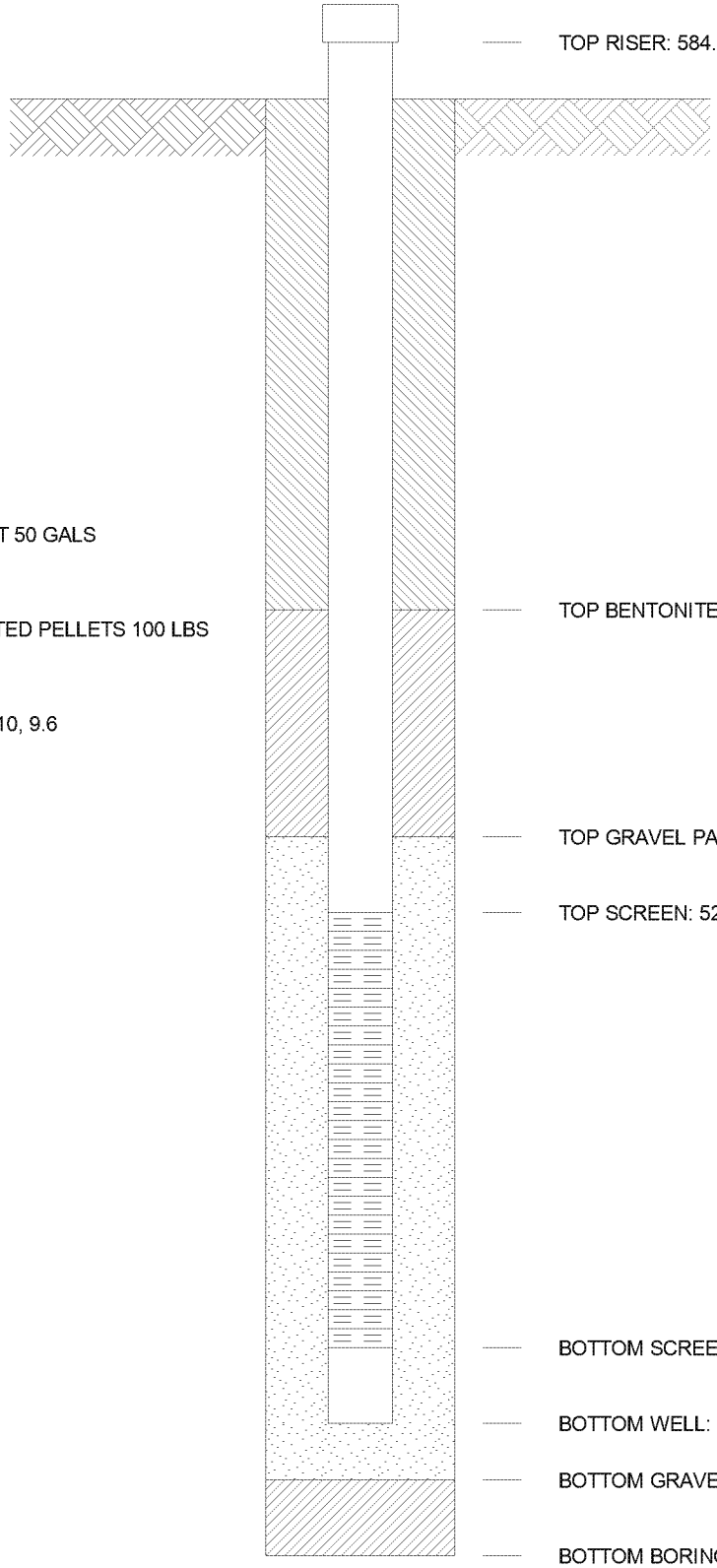
WELL No. **BAC-04** BORING No. **BAC-04** INSTALLED **12/22/15**

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,206.5 E 2,108,938.6**

SYSTEM

GROUND ELEVATION 582.46 FT.



TOP RISER: 584.65 FT.

TOP BENTONITE SEAL: 533.66 FT.

TOP GRAVEL PACK: 528.66 FT.

TOP SCREEN: 526.66 FT.

BOTTOM SCREEN: 517.06 FT.

BOTTOM WELL: 516.66 FT.

BOTTOM GRAVEL PACK: 514.16 FT.

BOTTOM BORING: 514.46 FT.

GROUT SEAL: QUICK GROUT 50 GALS

BENTONITE SEAL: 3/8" COATED PELLETS 100 LBS

SCREEN: 2 dia., SLOTTED .010, 9.6

GRAVEL PACK: #5 400 LBS

RISER PIPE: 2.0, dia., PVC

SPACERS, DEPTH:

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER

COMPANY

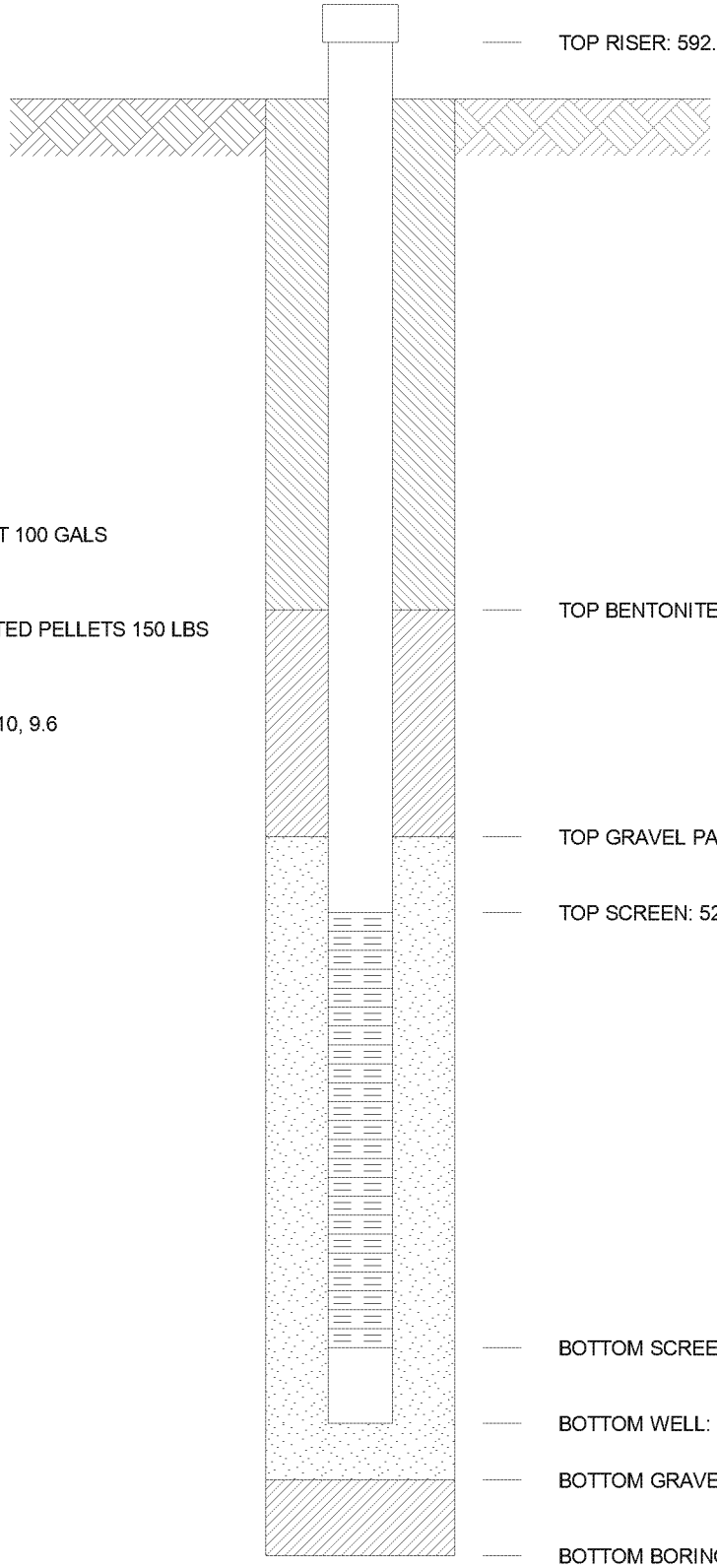
WELL No. **BAC-05** BORING No. **BAC-05** INSTALLED **12/30/15**

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 338,638.9 E 2,108,667.3**

SYSTEM

GROUND ELEVATION 590.28 FT.



TOP RISER: 592.01 FT.

TOP BENTONITE SEAL: 536.78 FT.

TOP GRAVEL PACK: 527.78 FT.

TOP SCREEN: 525.78 FT.

BOTTOM SCREEN: 516.18 FT.

BOTTOM WELL: 515.78 FT.

BOTTOM GRAVEL PACK: 515.18 FT.

BOTTOM BORING: 510.78 FT.

GROUT SEAL: QUICK GROUT 100 GALS

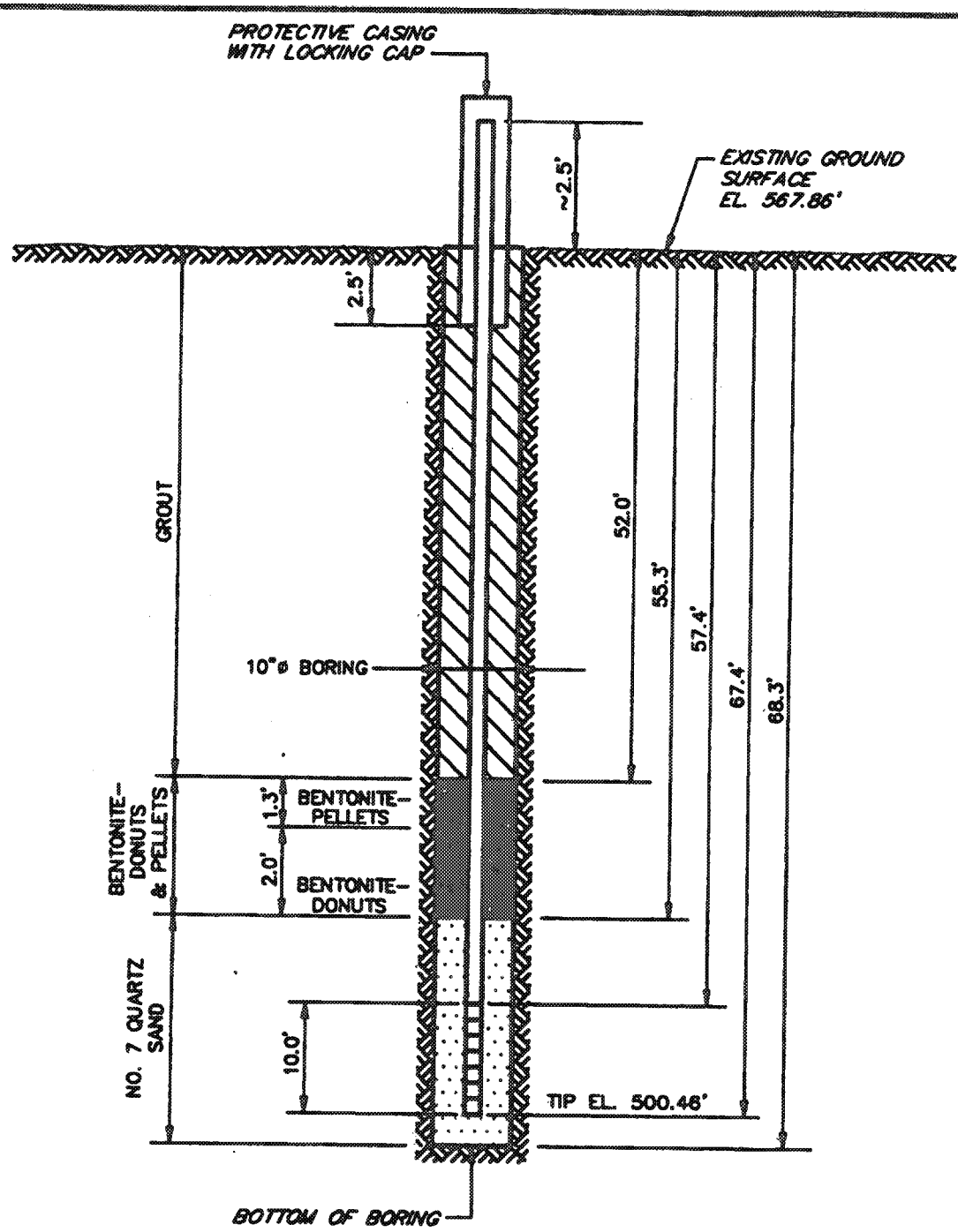
BENTONITE SEAL: 3/8" COATED PELLETS 150 LBS

SCREEN: 2 dia., SLOTTED .010, 9.6

GRAVEL PACK: #5 200 LBS

RISER PIPE: 2.0, dia., PVC

SPACERS, DEPTH:



NOTES:

1. RISER PIPE IS 2 IN. I.D. SCHEDULE 40 PVC PIPE, THREADED, FLUSH-JOINTED.
2. SCREEN IS 2 IN. I.D. SCHEDULE 40 PVC PIPE, CONTINUOUS SLOT SCREEN (0.010 IN. SLOT SIZE).
3. LOWER END OF SCREEN IS CAPPED.
4. DATE OF COMPLETION 08/10/93.

INSTALLATION DIAGRAM
MONITORING WELL MW-1

PREPARED FOR

AEP GAVIN PLANT
CHESHIRE, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWING NUMBER 313579-A1

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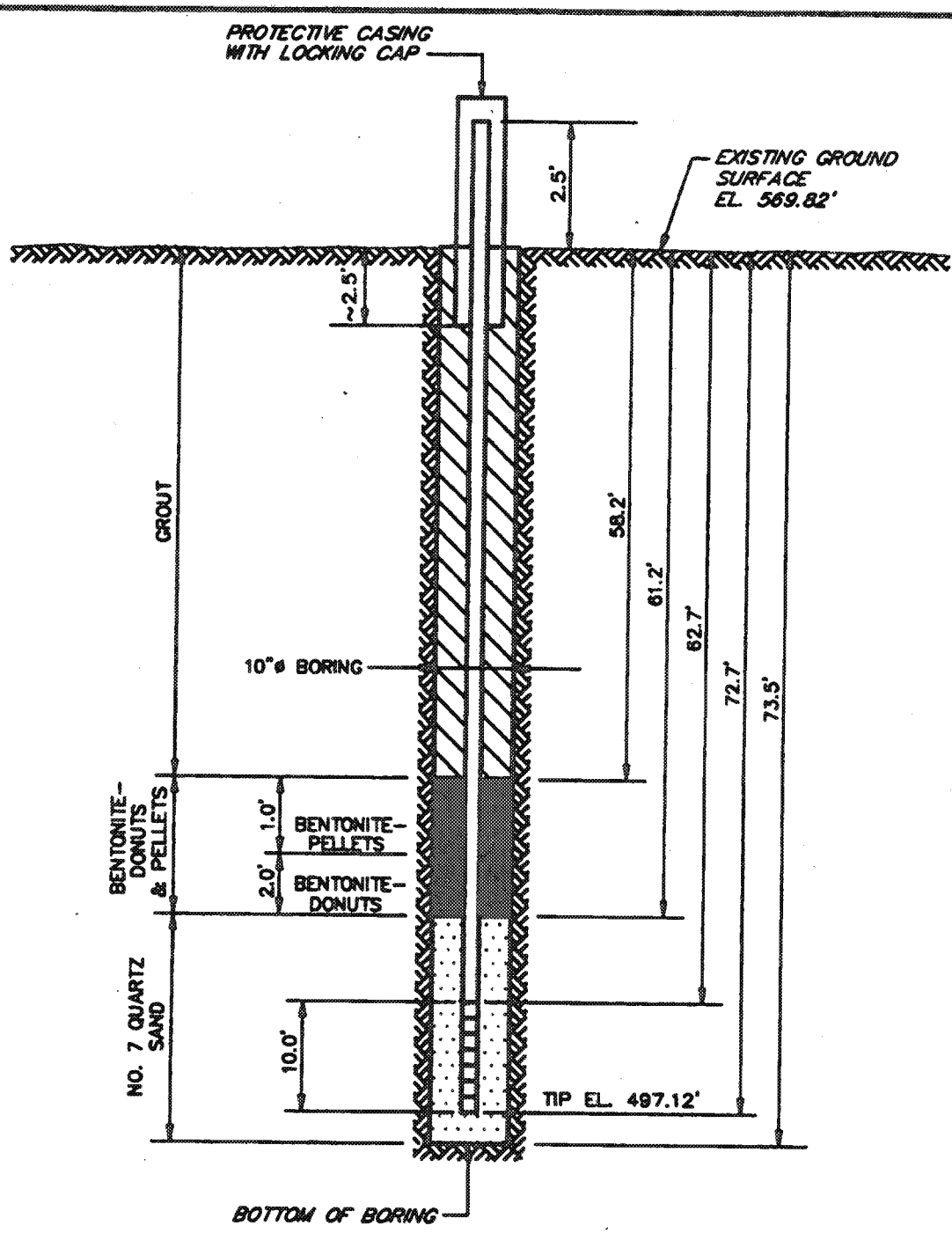

NOTES:

1. RISER PIPE IS 2 IN. I.D. SCHEDULE 40 PVC PIPE, THREADED, FLUSH-JOINTED.
2. SCREEN IS 2 IN. I.D. SCHEDULE 40 PVC PIPE, CONTINUOUS SLOT SCREEN (0.010 IN. SLOT SIZE).
3. LOWER END OF SCREEN IS CAPPED.
4. DATE OF COMPLETION 08/24/93.

INSTALLATION DIAGRAM
MONITORING WELL MW-6

PREPARED FOR

AEP GAVIN PLANT
CHESHIRE, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWN BY	NAM	CHECKED BY	SBJ	12/02/93	DRAWING NUMBER 313579-A6
	2852P193	APPROVED BY	CAP	12-2-93	

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BAC-06 and BAC-07

ERM
1 Beacon Street; 5th Floor
Boston, Massachusetts 02108
Telephone: +1 (617) 646-7800

WELL BAC-06

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0488799
Project Location: Cheshire, OH

DATE STARTED: 6/10/2020
DATE COMPLETED: 6/11/2020
DRILLING CONTRACTOR: Enviroprobe Service, Inc.
DRILLING METHODS: Sonic Drilling
LOGGED BY: P. Gebhard
CHECKED BY: H. Usle

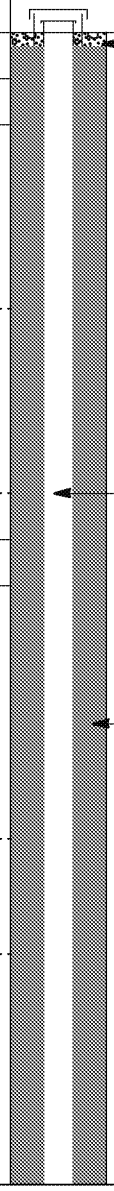
TOTAL DEPTH: 90 ft bgs
DIAMETER: 5-6 inches
GROUND ELEVATION: 599.64 ft amsl (approx.)
PVC ELEVATION: 602.54 ft amsl
NORTHING: 338477.383
EASTING: 2076549.323

WELL DEVELOPMENT
METHOD(S): Air Lift
DATE STARTED: 8/5/2020
DATE ENDED: 8/5/2020
DTW AT START: 62.1 ft bgs
DTW AT END: 62.2 ft bgs
VOLUME PURGED: 17.5 gallons

NOTES: 6-inch steel casing advanced to 80 ft bgs; 5-inch casing to termination depth.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	MATERIAL DESCRIPTION
					GP	GRAVEL, road base material. (1.0)
						Black, ASH, loose, dry. (2.0)
5	595	SC	74		SC-SM	Dark Brown, SILTY CLAY, very stiff, dry. (6.0)
10	590					NO RECOVERY. (10.0)
					CL	Dark Brown, CLAY, very stiff, dry. (11.0)
					GP	Gray, FINE TO COARSE GRAVEL, loose, wet. (12.0)
15	585	SC	76		CL	Dark Brown, CLAY, very stiff, dry. (17.5)
20	580					NO RECOVERY. (20.0)
25	575				CL	Dark Brown, CLAY, 1-5% carboniferous material, dark gray mottling, very stiff, dry to moist, mottling. (25.0)

WELL DIAGRAM



SAMPLE TYPE

Sonic Drilling

GRAPHIC LOG LEGEND

GP Poorly-graded Gravel
ASH Ash
SC-SM Clayey and Silty Sand
CL Low Plasticity Clay
ML Silt
SM Silty Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
ft = feet
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride
U.S.C.S. = Unified Soil Classification System

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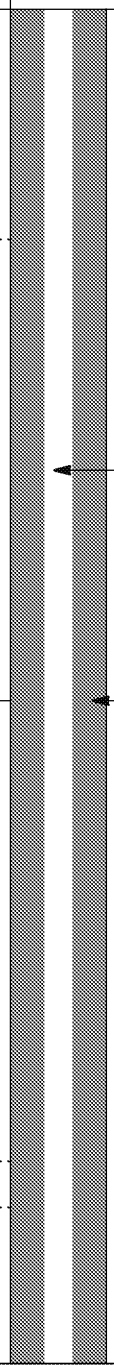
WELL BAC-06

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0488799
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
		SC	60				NO RECOVERY. *(continued)*
30	570						30.0
35	565	SC	120		CL		Dark Brown, CLAY, 1-5% carboniferous material, dark gray mottling, medium stiff, dry to moist.
40	560						40.0
45	555	SC	120		ML		Dark Brown, SILT, minor carboniferous material, dark gray mottling, medium stiff, moist, mottling.
50	550						50.0
							NO RECOVERY.
							51.0
					SC-SM		Medium Brown, SILTY FINE SAND, and clay, soft, moist to very moist.

WELL DIAGRAM



SAMPLE TYPE

Sonic Drilling

GRAPHIC LOG LEGEND

GP Poorly-graded Gravel
ASH Ash
SC-SM Clayey and Silty Sand
CL Low Plasticity Clay
ML Silt
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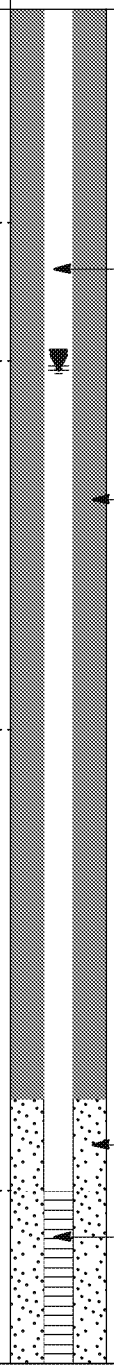
WELL BAC-06

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0488799
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
55	545	SC	108		SC-SM		Medium Brown, SILTY FINE SAND, and clay, soft, moist to very moist. *(continued)*
							59.0
60	540	SC	120		SC-SM		Dark Brown, FINE TO MEDIUM SILTY TO CLAYEY SAND, soft to medium stiff, moist.
							62.0
65	535				SC-SM		Dark Gray, FINE SILTY TO CLAYEY SAND, loose to medium dense, moist.
70	530	SC	NR				70.0
75	525						NO RECOVERY, Drilling refusal at 75 feet bgs; no soil logging from 70 to 75 feet bgs. Redrilled to 80 feet bgs.
80	520						80.0
							NO RECOVERY.

WELL DIAGRAM



SAMPLE TYPE

Sonic Drilling

GRAPHIC LOG LEGEND

GP Poorly-graded Gravel
ASH Ash
SC-SM Clayey and Silty Sand
CL Low Plasticity Clay
ML Silt
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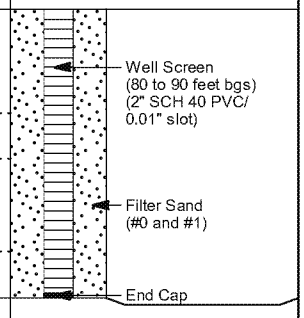
WELL BAC-06

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0488799
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
85	515	SC	48				NO RECOVERY. *(continued)*
							86.0
					SM		Dark Brown, MEDIUM SILTY SAND, well sorted, loose, wet.
							87.0
					SM		Dark Brown, COARSE SILTY SAND, trace well rounded gravel, (0.5" diameter), poorly sorted, loose, wet.
							89.0
90	510				SM		Dark Brown, COARSE SILTY SAND, and well rounded gravel, (0.5" diameter), possible close proximity to bedrock, poorly sorted.
							90.0
							Bottom of Boring @ 90.00 feet bgs
95	505						
100	500						
105	495						
110	490						

WELL DIAGRAM



SAMPLE TYPE

Sonic Drilling

GRAPHIC LOG LEGEND

GP Poorly-graded Gravel
ASH Ash
SC-SM Clayey and Silty Sand
CL Low Plasticity Clay
ML Silt
SM Silty Sand

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Boston, Massachusetts 02108
Telephone: +1 (617) 646-7800

WELL BAC-07

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0488799
Project Location: Cheshire, OH

DATE STARTED: 6/12/2020
DATE COMPLETED: 6/15/2020
DRILLING CONTRACTOR: Enviroprobe Service, Inc.
DRILLING METHODS: Sonic Drilling
LOGGED BY: P. Gebhard
CHECKED BY: H. Usle

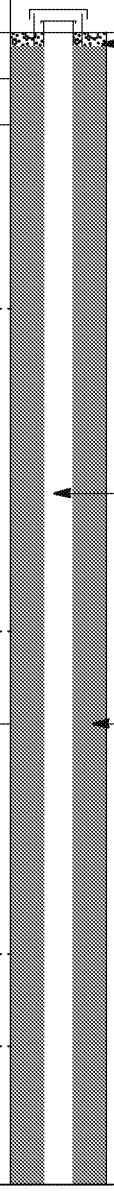
TOTAL DEPTH: 90 ft bgs
DIAMETER: 5-6 inches
GROUND ELEVATION: 599.71 ft amsl (approx.)
PVC ELEVATION: 602.76 ft amsl
NORTHING: 338526.105
EASTING: 2075728.652

WELL DEVELOPMENT
METHOD(S): Air Lift
DATE STARTED: 8/5/2020
DATE ENDED: 8/5/2020
DTW AT START: 61.4 ft bgs
DTW AT END: 61.4 ft bgs
VOLUME PURGED: 20 gallons

NOTES: 6-inch steel casing advanced to 80 ft bgs; 5-inch casing to termination depth.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
					GP		GRAVEL, road base material. (1.0)
							Black, ASH, loose, dry. (2.0)
					CL-ML		Dark Brown, SILTY CLAY, very stiff, dry. (6.0)
5	595	SC	76				
10	590						NO RECOVERY. (13.0)
					GP		COARSE GRAVEL, "fill-like" material. (15.0)
15	585	SC	84				
					CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, very stiff, dry. (20.0)
20	580						
							NO RECOVERY. (22.0)
					CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, minor mica, soft, very moist. (25.0)
25	575						

WELL DIAGRAM



SAMPLE TYPE

Sonic Drilling

GRAPHIC LOG LEGEND

GP Poorly-graded Gravel
ASH Ash
CL-ML Silty Clay
ML Silt
CL Low Plasticity Clay
SC-SM Clayey and Silty Sand

ACRONYM LEGEND

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WELL BAC-07

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0488799
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		SC	96		CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, minor carboniferous material, minor mica, very stiff, slightly moist. *(continued)*	
30	570						30.0	
					ML		Dark Gray, SILT, minor dark brown mottling, very soft to soft, very moist to wet.	
							33.0	
35	565	SC	NM		CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, minor carboniferous material, minor mica, very stiff, slightly moist.	Well Riser (to 80 feet bgs) (2" SCH 40 PVC)
40	560						40.0	Bentonite Seal (0.3 to 76 ft bgs)
							NO RECOVERY.	
							43.5	
45	555	SC	78		CL-ML		Dark Brown, SILTY CLAY, soft, wet.	
							46.0	
					CL-ML		Dark Gray, SILTY CLAY, thin laminations of dark brown clay, plant material on bedding plane, stiff to very stiff, dry to moist.	
							48.5	
50	550				CL		Dark Brown, CLAY, dark gray mottling, minor mica, very stiff, moist.	
							50.0	
					CL-ML		Dark Brown, SILTY CLAY, soft, wet.	
							53.0	
					CL		Dark Brown, CLAY, dark gray mottling, minor mica, minor roots, very stiff, moist.	

SAMPLE TYPE

Sonic Drilling

GRAPHIC LOG LEGEND

GP Poorly-graded Gravel
ASH Ash
CL-ML Silty Clay
ML Silt
CL Low Plasticity Clay
SC-SM Clayey and Silty Sand

ACRONYM LEGEND

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DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride
U.S.C.S. = Unified Soil Classification System

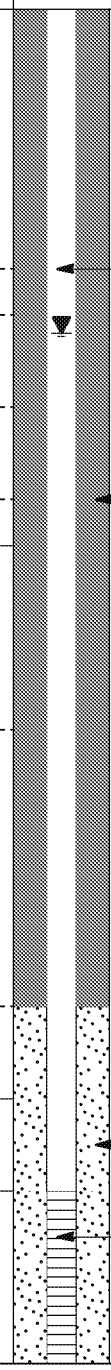
ERM
1 Beacon Street; 5th Floor
Boston, Massachusetts 02108
Telephone: +1 (617) 646-7800

WELL BAC-07

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0488799
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
55	545	SC	120		CL		Dark Brown, CLAY, dark gray mottling, minor mica, minor roots, very stiff, moist. *(continued)*
60	540						60.0
							NO RECOVERY.
							61.0
					CL-ML		Dark Brown, SILTY CLAY, very soft, wet.
							63.0
					CL-ML		Dark Gray, SILTY CLAY, dark brown mottling, soft to medium stiff, moist.
65	535	SC	108				65.0
					CL-ML		Dark Gray, SILTY CLAY, dark brown mottling, stiff, moist.
							66.0
					SC-SM		Dark Brown, FINE TO MEDIUM SILTY TO CLAYEY SAND, dense, moist.
70	530						70.0
							NO RECOVERY.
75	525	SC	48				
							76.0
					SC-SM		Light Brown, FINE TO MEDIUM SILTY TO CLAYEY SAND, poorly sorted, medium dense, wet.
							78.0
					SP		Light Brown, FINE SAND AND COBBLES, well rounded silty, poorly sorted, loose, dry.
80	520						80.0
					SM		Light Brown, MEDIUM TO COARSE SILTY SAND, very loose, very moist.

WELL DIAGRAM



SAMPLE TYPE

Sonic Drilling

GRAPHIC LOG LEGEND

GP Poorly-graded Gravel
ASH Ash
CL-ML Silty Clay
ML Silt
CL Low Plasticity Clay
SC-SM Clayey and Silty Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
ft = feet
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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
85	515	SC	120		SM		Light Brown, MEDIUM TO COARSE SILTY SAND, very loose, very moist. *(continued)*	Well Screen (80 to 90 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
							87.0	
					SM		Dark Brown, MEDIUM TO COARSE SILTY SAND, very loose, wet.	Filter Sand (#0 and #1)
90	510						90.0	End Cap
							Bottom of Boring @ 90.00 feet bgs	
95	505							
100	500							
105	495							
110	490							

SAMPLE TYPE

Sonic Drilling

GRAPHIC LOG LEGEND

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