Disclaimer:

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TABLES

Table 1
Summary of Construction Information for Exisiting Wells
Bremo Power Station

Well Number	Northing	Easting	Top of Casing Elevation (feet AMSL)	Ground Surface Elevation (feet AMSL)	Well Construction	Well Depth (feet below top of casing)	Boring Depth (feet below ground surface)	Screened Interval (feet below ground surface)	Management Unit	Well Hydraulic Position	Date Constructed
MW-1	3,783,032.88	11,542,749.05	221.76	219.0	2" PVC with 10-foot screen interval	24.4	21.5	11 to 21	West Ash Pond	Upgradient	12/4/2012
MW-11	3,783,128.03	11,546,850.62	330.52	327.7	2" PVC with 15-foot screen interval	51.78	49.0	34 to 49	Stormwater Management Basin, East Ash Pond, North Ash Pond	Upgradient	11/28/2012
MW-12	3,782,305.04	11,542,587.17	219.13	216.5	2" PVC with 8-foot screen interval	35.41	33.0	25 to 33	West Ash Pond (deep well)***	Downgradient	12/4/2012
MW-13	3,782,386.53	11,542,133.80	218.84	216.6	2" PVC with 10-foot screen interval	22.5	22.5	11 to 21	Metals Pond	Downgradient	11/29/2012
MW-19	3,781,076.28	11,545,271.66	235.14	232.2	2" PVC with 10-foot screen interval	55.60	52.0	42 to 52	East Ash Pond	Downgradient	9/19/2017
MW-20S	3,780,720.23	11,545,625.00	228.00	225.0	2" PVC with 10-foot screen interval	47.53	45.0	34 to 44	East Ash Pond	Downgradient	9/21/2017
MW-20D	3,780,725.18	11,545,617.00	228.21	225.4	2" PVC with 10-foot screen interval	88.80	90.0	77 to 87	East Ash Pond	Downgradient	9/20/2017
MW-21	3,780,558.08	11,546,020.58	239.16	236.1	2" PVC with 10-foot screen interval	58.30	55.0	44 to 54	East Ash Pond	Downgradient	9/23/2017
MW-22	3,780,358.10	11,546,471.50	238.72	235.7	2" PVC with 10-foot screen interval	57.98	55.0	44 to 54	East Ash Pond	Downgradient	9/22/2017
MW-23	3,780,114.49	11,546,871.64	236.80	233.8	2" PVC with 10-foot screen interval	56.23	55.0	42 to 52	East Ash Pond	Downgradient	9/21/2017
MW-24	3,780,807.34	11,547,158.73	346.04	343.5	2" PVC with 20-foot screen interval	155.6	154.0	133 to 153	North Ash Pond	Downgradient	9/7/2016
MW-25S	3,781,289.45	11,547,937.10	361.36	358.1	2" PVC with 10-foot screen interval	97.3	95.3	84 to 94	North Ash Pond	Downgradient	10/13/2016
MW-25D	3,781,287.15	11,547,933.61	361.41	358.1	2" PVC with 10-foot screen interval	157.31	158.0	144 to 154	North Ash Pond	Downgradient	11/2/2016
MW-26S	3,781,781.03	11,548,679.74	394.82	392.5	2" PVC with 10-foot screen interval	110.3	108.0	98 to 108	North Ash Pond	Downgradient	9/24/2016
MW-26D	3,781,789.70	11,548,685.31	394.28	391.5	2" PVC with 10-foot screen interval	140.8	138.0	128 to 138	North Ash Pond	Downgradient	9/23/2016
MW-27S	3,782,267.83	11,546,752.84	330.88	328.3	2" PVC with 10-foot screen interval	90.6	88.0	78 to 88	North Ash Pond	Downgradient	9/15/2013
MW-27D	3,782,253.20	11,546,755.36	329.22	326.7	2" PVC with 10-foot screen interval	200.6	198.0	188.5 to 198.5	North Ash Pond	Downgradient	9/13/2016
MW-28	3,782,659.57	11,546,966.51	329.87	326.6	2" PVC with 10-foot screen interval	70.3	67.0	57 to 67	North Ash Pond	Downgradient	9/22/2016
MW-29S	3,782,998.91	11,548,622.35	387.32	390.5	2" PVC with 10-foot screen interval	74.7	71.5	61.5 to 71.5	North Ash Pond	Upgradient	10/6/2016
MW-29D	3,783,005.27	11,548,618.92	390.43	387.3	2" PVC with 10-foot screen interval	161.2	158.0	146 to 156	North Ash Pond	Upgradient	10/4/2016
MW-31	3,782,152.90	11,543,414.47	218.87	216.9	2" PVC with 10-foot screen interval	35.90	33.5	23 to 33	West Ash Pond	Downgradient	9/23/2017
MW-32S	3,782,886.43	11,542,303.29	221.94	219.5	2" PVC with 5-foot screen interval	22.13	19.0	14 to 19	West Ash Pond	Upgradient	11/9/2016
MW-32D	3,782,886.87	11,542,307.88	221.61	219.3	2" PVC with 10-foot screen interval	108.23	113.0	95 to 105	West Ash Pond	Upgradient	11/11/2016

Table 1
Summary of Construction Information for Exisiting Wells
Bremo Power Station

Well Number	Northing	Easting	Top of Casing Elevation (feet AMSL)	Ground Surface Elevation (feet AMSL)	Well Construction	Well Depth (feet below top of casing)	Boring Depth (feet below ground surface)	Screened Interval (feet below ground surface)	Management Unit	Well Hydraulic Position	Date Constructed
MW-33	3,781,521.96	11,546,369.11	336.50	334.0	2" PVC with 10-foot screen interval	133.53	131.0	121.5 to 131.5	North Ash Pond	Downgradient	10/21/2016
MW-34	3,781,273.59	11,546,547.29	338.18	335.2	2" PVC with 10-foot screen interval	154.02	151.0	141 to 151	North Ash Pond	Downgradient	10/20/2016
MW-35	3,780,897.63	11,546,792.20	335.65	332.7	2" PVC with 10-foot screen interval	136.47	133.5	123 to 133	North Ash Pond	Downgradient	9/8/2016
MW-36	--	--	--	220+/-	2" PVC with 10-foot screen interval	~40	~40	~30-40	East Ash Pond	Downgradient	To Be Determined
MW-37	--	--	--	217+/-	2" PVC with 10-foot screen interval	~40	~40	~30-40	West Ash Pond	Downgradient	To Be Determined
MW-38	--	--	--	217+/-	2" PVC with 10-foot screen interval	~40	~40	~30-40	West Ash Pond	Downgradient	To Be Determined
MW-39S	--	--	--	217+/-	2" PVC with 10-foot screen interval	~40	~40	~30-40	West Ash Pond	Downgradient	To Be Determined
MW-39D	--	--	--	217+/-	2" PVC with 10-foot screen interval	~80	~80	~70-80	West Ash Pond	Downgradient	To Be Determined

Notes:
AMSL = Above Mean Sea Level
-- = Not Applicable.

Table 2
Summary Hydraulic Conductivity Testing Results
Bremo Power Station

Well Identification	Formation	Lithology	Solution Method	Evaluation Method	Hydraulic Conductivity		
					(cm/sec)	(ft/sec)	(ft/day)
MW-19	Bedrock	Schist	KGS Model	Slug, Rising Head	1.84E-03	6.03E-05	5.21E+00
				Slug, Falling Head	1.53E-03	5.00E-05	4.32E+00
MW-20S	Bedrock	Schist	KGS Skin Model	Slug, Rising Head	2.36E-03	7.73E-05	6.68E+00
				Slug, Falling Head	2.32E-03	7.61E-05	6.58E+00
MW-20D	Bedrock	Gneiss	KGS Skin Model	Slug, Rising Head	1.78E-05	5.85E-07	5.05E-02
				Slug, Falling Head	3.09E-05	1.01E-06	8.76E-02
MW-21	Bedrock	Gneiss	KGS Model	Slug, Rising Head	3.11E-04	1.02E-05	8.81E-01
				Slug, Falling Head	2.47E-04	8.09E-06	6.99E-01
MW-22	Bedrock	Gneiss	KGS Model	Slug, Rising Head	1.14E-04	3.75E-06	3.24E-01
				Slug, Falling Head	1.57E-04	5.15E-06	4.45E-01
MW-23	Bedrock	Gneiss	KGS Model	Slug, Rising Head	4.28E-05	1.40E-06	1.21E-01
				Slug, Falling Head	4.58E-05	1.50E-06	1.30E-01
MW-31	Bedrock	Gneiss	KGS Model	Slug, Rising Head	1.97E-04	6.46E-06	5.58E-01
				Slug, Falling Head	1.66E-04	5.45E-06	4.71E-01
Alluvium-Bedrock Aquifer Geometric Mean					**2.23E-04**	**7.31E-06**	**6.32E-01**
MW-3	Overburden	Alluvium/Clay	Bower-Rice	Slug, Rising Head	1.87E-05	6.14E-07	5.30E-02
				Slug, Falling Head	2.09E-05	6.85E-07	5.92E-02
MW-5	Overburden	Alluvium/Clay	Bower-Rice	Slug, Rising Head	4.26E-04	1.40E-05	1.21E+00
				Slug, Falling Head	3.83E-04	1.26E-05	1.09E+00
MW-7	Overburden	Fill	Bower-Rice	Slug, Rising Head	2.10E-04	6.90E-06	5.96E-01
				Slug, Falling Head	2.54E-04	8.32E-06	7.19E-01
MW-32S	Overburden	Alluvium/Gravel	KGS Model	Slug, Rising Head	1.78E-03	5.83E-05	5.04E+00
				Slug, Falling Head	4.45E-04	1.46E-05	1.26E+00
Overburden Aquifer Geometric Mean:					**2.01E-04**	**6.60E-06**	**5.70E-01**
MW-24	Bedrock	Schist	KGS Model	Slug, Rising Head	1.77E-05	5.82E-07	5.03E-02
				Slug, Falling Head	1.84E-05	6.04E-07	5.22E-02
MW-11	Overburden	Saprolite	Bower-Rice	Slug, Rising Head	1.82E-04	5.98E-06	5.17E-01
				Slug, Falling Head	5.36E-05	1.76E-06	1.52E-01
MW-25D	Bedrock	Schist	C-B-P	Slug, Rising Head	4.27E-04	1.40E-05	1.21E+00
				Slug, Falling Head	4.75E-04	1.56E-05	1.35E+00
MW-25S	Bedrock	Schist	KGS Skin Model	Slug, Rising Head	--	--	--
				Slug, Falling Head	4.04E-06	1.32E-07	1.14E-02
MW-26D	Bedrock	Schist	KGS Model	Slug, Rising Head	3.08E-04	1.01E-05	8.73E-01
				Slug, Falling Head	3.08E-04	1.01E-05	8.73E-01
MW-29S	Bedrock	Schist	KGS Skin Model	Slug, Rising Head	5.97E-04	1.96E-05	1.69E+00
				Slug, Falling Head	6.55E-04	2.15E-05	1.86E+00
MW-29D	Bedrock	Gneiss	KGS Model	Slug, Rising Head	--	--	--
				Slug, Falling Head	1.89E-07	6.19E-09	5.35E-04
MW-32D	Bedrock	Slate	KGS Model	Slug, Rising Head	3.38E-05	1.11E-06	9.59E-02
				Slug, Falling Head	3.99E-05	1.31E-06	1.13E-01
MW-33	Bedrock	Slate	KGS Model	Slug, Rising Head	--	--	--
				Slug, Falling Head	1.08E-06	3.54E-08	3.06E-03
MW-34	Bedrock	Slate	KGS Model	Slug, Rising Head	2.45E-03	8.03E-05	6.94E+00
				Slug, Falling Head	8.53E-04	2.80E-05	2.42E+00
Saprolite-Bedrock Aquifer Geometric Mean					**7.37E-05**	**2.42E-06**	**2.09E-01**

Notes: cm/sec = centimeter per second
ft/sec = foot per second
ft/day = foot (feet) per day
KGS = Hyder et al. (1994)

TABLE 3

Summary of Modified Detection Monitoring Program Constituents and Parameters

Bremo Power Station

PARAMETER	CLASS	CAS RN	TYPICAL METHOD	TYPICAL LOQ/PQL (ug/L)
CCR Appendix III to Part 257				
Boron	metal	7440-42-8	6010C/6020B	50
Calcium	metal	7440-70-2	6010C/6020B	5,000
Chloride	anion	16887-00-6	300.0	1,000
Fluoride	anion	16984-48-8	300.0	100
pH	field parameter	NA	9040C	NA
Sulfate	anion	18785-72-3	300.0	1,000
Total Dissolved Solids (TDS)	dissolved cations and anions	Total	SM2540C	50,000
Virginia Solid Waste Management Regulation Table 3.1 Column A Constituents				
Antimony	metal	Total	6010C/6020B	5
Arsenic	metal	Total	6010C/6020B	1
Barium	metal	Total	6010C/6020B	5
Beryllium	metal	Total	6010C/6020B	1
Cadmium	metal	Total	6010C/6020B	1
Chromium	metal	Total	6010C/6020B	5
Cobalt	metal	Total	6010C/6020B	1
Copper	metal	Total	6010C/6020B	5
Lead	metal	Total	6010C/6020B	1
Nickel	metal	Total	6010C/6020B	5
Selenium	metal	Total	6010C/6020B	5
Silver	metal	Total	6010C/6020B	5
Thallium	metal	Total	6010C/6020B	1
Vanadium	metal	Total	6010C/6020B	5
Zinc	metal	Total	6010C/6020B	20

Notes:

- Class: General type of compound
- CAS RN: Chemical Abstracts Service Registry Number. Where 'Total' is entered, all species that contain the element are included.
- Method: Analytical Method from EPA SW-846 Methods for Evaluating Solid Waste will be used for Appendix IV constituents. Samples will be analyzed using the version of each method that is current at the time of sampling.
- LOQ: Limit of Quantitation.
- PQL: Practical Quantitation Limit.
- Acceptable alternatives to the analytical methods listed above include current SW-846 Methods and other EPA-approved laboratory methods.

TABLE 4

Summary of Modified Assessment Monitoring Program Constituents and Parameters

Bremo Power Station

PARAMETER	CLASS	CAS RN	TYPICAL METHOD	TYPICAL LOQ/PQL (ug/L)
CCR Appendix III to Part 257				
Boron	metal	7440-42-8	6010C/6020B	50
Calcium	metal	7440-70-2	6010C/6020B	5,000
Chloride	anion	16887-00-6	300	1,000
Fluoride	anion	16984-48-8	300	100
pH	field parameter	NA	9040C	NA
Sulfate	anion	18785-72-3	300	1,000
Total Dissolved Solids (TDS)	dissolved cations and anions	Total	SM2540C	50,000
CCR Appendix IV to Part 257				
Antimony	metal	Total	6010C/6020B	5
Arsenic	metal	Total	6010C/6020B	1
Barium	metal	Total	6010C/6020B	5
Beryllium	metal	Total	6010C/6020B	1
Cadmium	metal	Total	6010C/6020B	1
Chromium	metal	Total	6010C/6020B	5
Cobalt	metal	Total	6010C/6020B	1
Fluoride	metal	Total	9056	300
Lead	metal	Total	6010C/6020B	1
Lithium	metal	Total	6010C/6020B	50
Mercury	metal	Total	7470	2
Molybdenum	metal	Total	6010C/6020B	10
Selenium	metal	Total	6010C/6020B	10
Thallium	metal	Total	6010C/6020B	1
Radium 226 and 228 combined	radionuclide	(226) - 13982-63-3 (228) - 15262-20-1	9315/9320 of other EPA-approved methods	1.00 pCi/L

TABLE 4

Summary of Modified Assessment Monitoring Program Constituents and Parameters

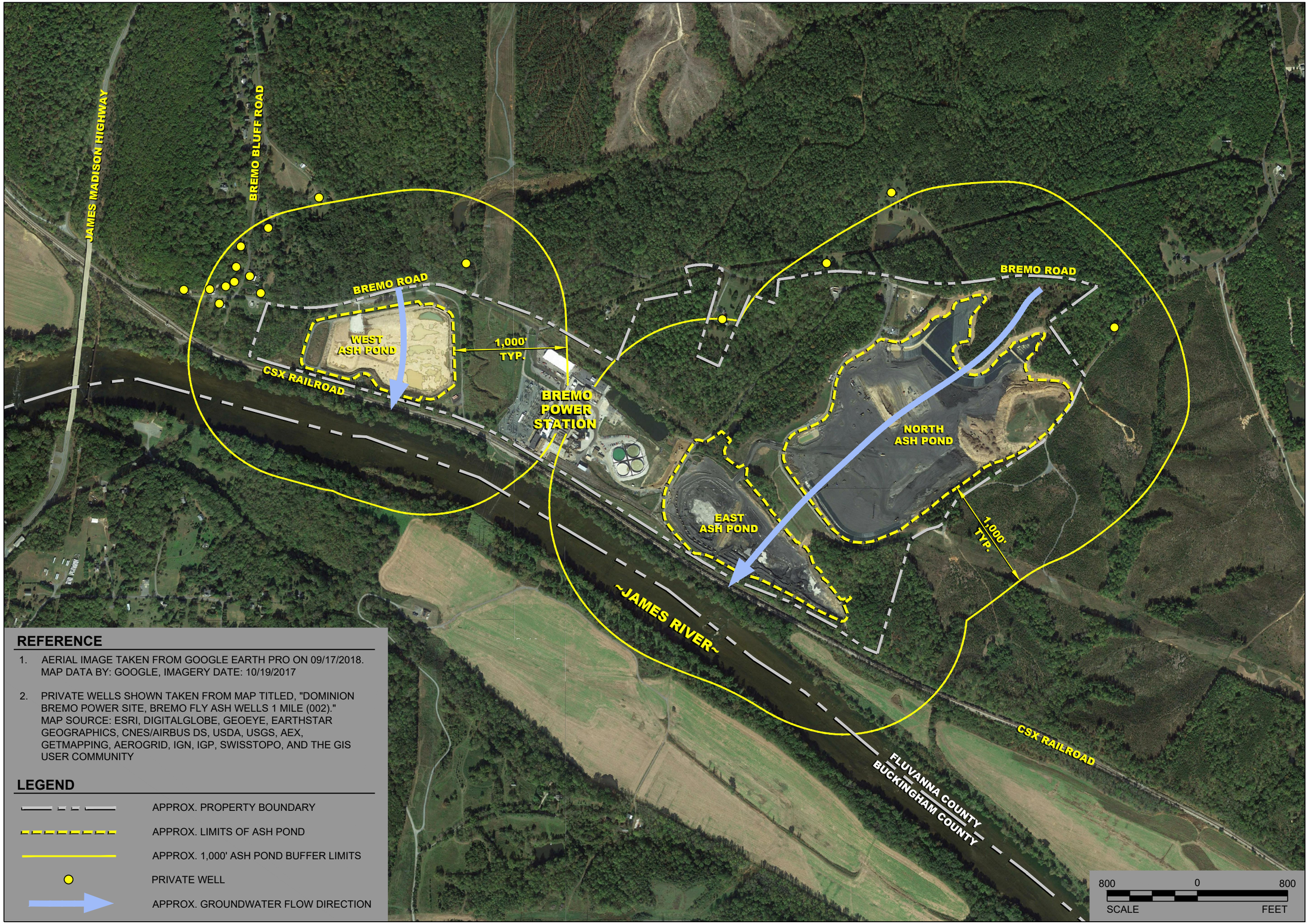
Bremo Power Station

PARAMETER	CLASS	CAS RN	TYPICAL METHOD	TYPICAL LOQ/PQL (ug/L)
Pertinent Virginia Solid Waste Management Regulation Table 3.1 Column B Constituents				
Copper	metal	Total	6010C/6020B	5
Nickel	metal	Total	6010C/6020B	10
Silver	metal	Total	6010C/6020B	5
Tin	metal	Total	6010C/6020B	10
Vanadium	metal	Total	6010C/6020B	5
Zinc	metal	Total	6010C/6020B	20
Sulfide	anion	18496-25-8	9030	100
Cyanide	water quality	57-12-5	9010B	5

Notes:

- Class: General type of compound
- CAS RN: Chemical Abstracts Service Registry Number. Where 'Total' is entered, all species that contain the element are included.
- Method: Analytical Method from EPA SW-846 Methods for Evaluating Solid Waste will be used for Appendix IV constituents. Samples will be analyzed using the version of each method that is current at the time of sampling.
- LOQ: Limit of Quantitation
- PQL: Practical Quantitation Limit
- ug/L: micrograms per liter
- NA: Not Available
- pCi/L: picocuries per liter
- Acceptable alternatives to the analytical methods listed above include current SW-846 Methods and other EPA-approved laboratory methods.

DRAWINGS



REFERENCE

1. AERIAL IMAGE TAKEN FROM GOOGLE EARTH PRO ON 09/17/2018. MAP DATA BY: GOOGLE, IMAGERY DATE: 10/19/2017
2. PRIVATE WELLS SHOWN TAKEN FROM MAP TITLED, "DOMINION BREMO POWER SITE, BREMO FLY ASH WELLS 1 MILE (002)." MAP SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

LEGEND

- APPROX. PROPERTY BOUNDARY
- APPROX. LIMITS OF ASH POND
- APPROX. 1,000' ASH POND BUFFER LIMITS
- PRIVATE WELL
- APPROX. GROUNDWATER FLOW DIRECTION

CLIENT
DOMINION ENERGY

CONSULTANT
GOLDER

YYYY-MM-DD	2018-09-17
DESIGNED	-
PREPARED	BPG
REVIEWED	ATN
APPROVED	JRD

PROJECT
BREMO POWER STATION
FLUVANNA COUNTY, VIRGINIA

TITLE
SITE LOCATION MAP

PROJECT NO.
15-20347

REV.
1

DRAWING
1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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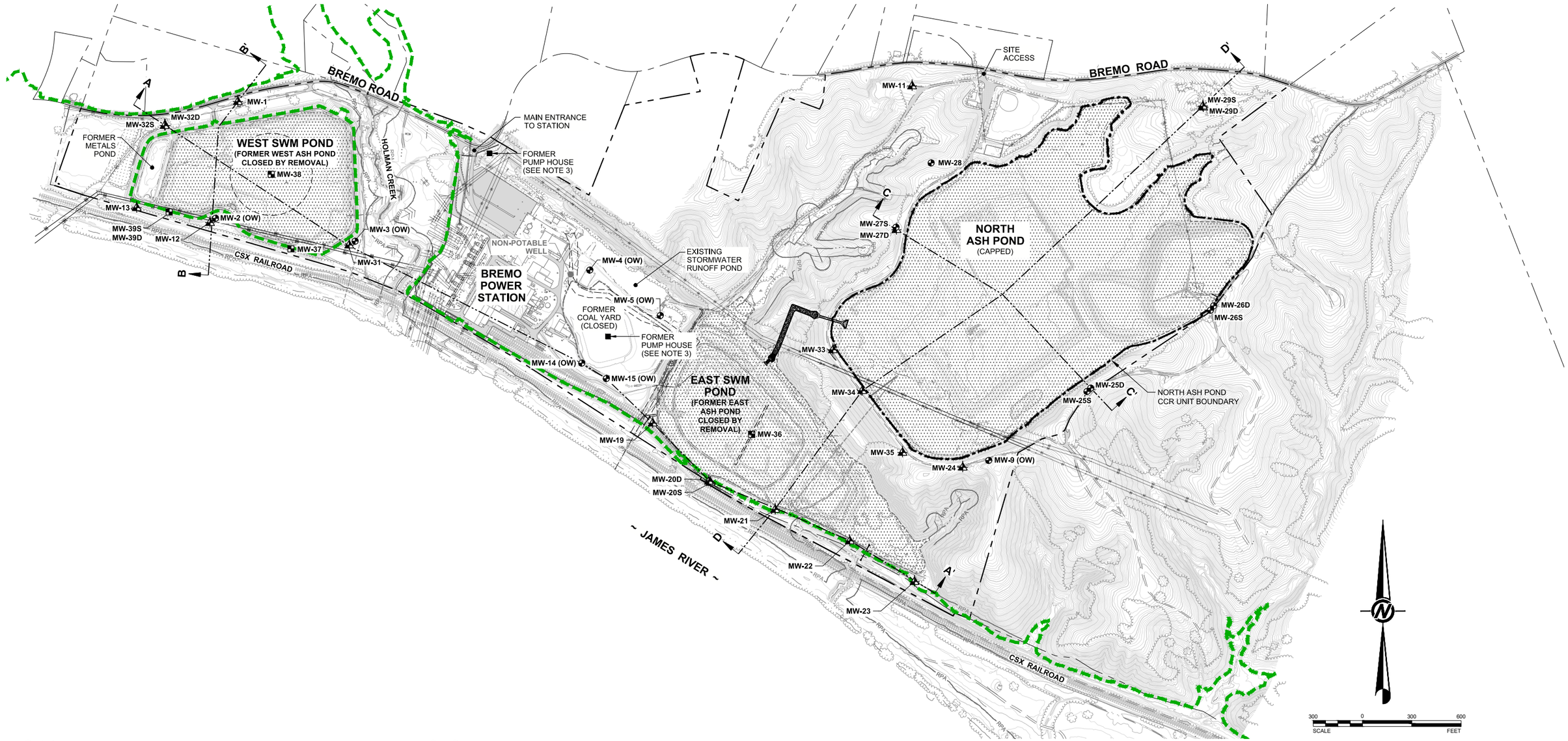

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- EXISTING TOPOGRAPHIC CONTOURS (2' INTERVALS) (FROM AERIAL SURVEY - SEE NOTE 2)
- WETLANDS
- SURFACE WATER BOUNDARY
- APPROXIMATE LIMITS OF EXISTING ASH PONDS
- PROPOSED LIMITS OF FINAL COVER SYSTEM (ANCHOR TRENCH)
- LIMITS OF 100-YR FLOOD PLAIN
- MW-29D — FEDERAL CCR RULE COMPLIANCE WELL LOCATION AND IDENTIFICATION
- MW-26S — STATE GROUNDWATER COMPLIANCE WELL LOCATION AND IDENTIFICATION
- MW-5 (OW) — GROUNDWATER OBSERVATION WELL LOCATION AND IDENTIFICATION
- MW-37 — PROPOSED MONITORING WELL LOCATION AND IDENTIFICATION

NOTES

1. TOPOGRAPHIC CONTOUR INTERVAL = 2 FEET
2. BASEMAP INFORMATION (e.g., EXISTING TOPOGRAPHY, ROADS, TREE LINES, FENCE LINES, ETC.) TAKEN FROM AERIAL SURVEY PREPARED BY McKENZIE SNYDER. DATE OF AERIAL PHOTOGRAPHY: JANUARY 16, 2015.
3. FORMER PUMP HOUSE APPROXIMATE LOCATIONS FROM STONE & WEBSTER ENGINEERING CORPORATION 1949 DRAWINGS.
4. SEE DRAWING 5 FOR GEOLOGIC CROSS SECTIONS.

4	09/14/18	RESPONSE TO DEQ COMMENTS	MGW	ATN	ATN	MGW
3	10/10/17	FINAL UPDATE FOR NEW WELLS	MGW	SIB	ATN	MGW
2	01/13/17	RESPONSE TO COMMENTS	MGW	BPG	ATN	MGW
1	02/15/16	RESPONSE TO COMMENTS	MGW	BPG	MGW	MGW
0	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW

CLIENT
DOMINION ENERGY
BREMO POWER STATION
FLUVANNA COUNTY, VIRGINIA

PROJECT
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN

TITLE
GROUNDWATER MONITORING PLAN

CONSULTANT
GOLDER

YYYY-MM-DD	2016-01-06
DESIGNED	JRD
PREPARED	BPG
REVIEWED	MGW
APPROVED	JRD

PROJECT NO. 15-20347 REV. 4 DRAWING 2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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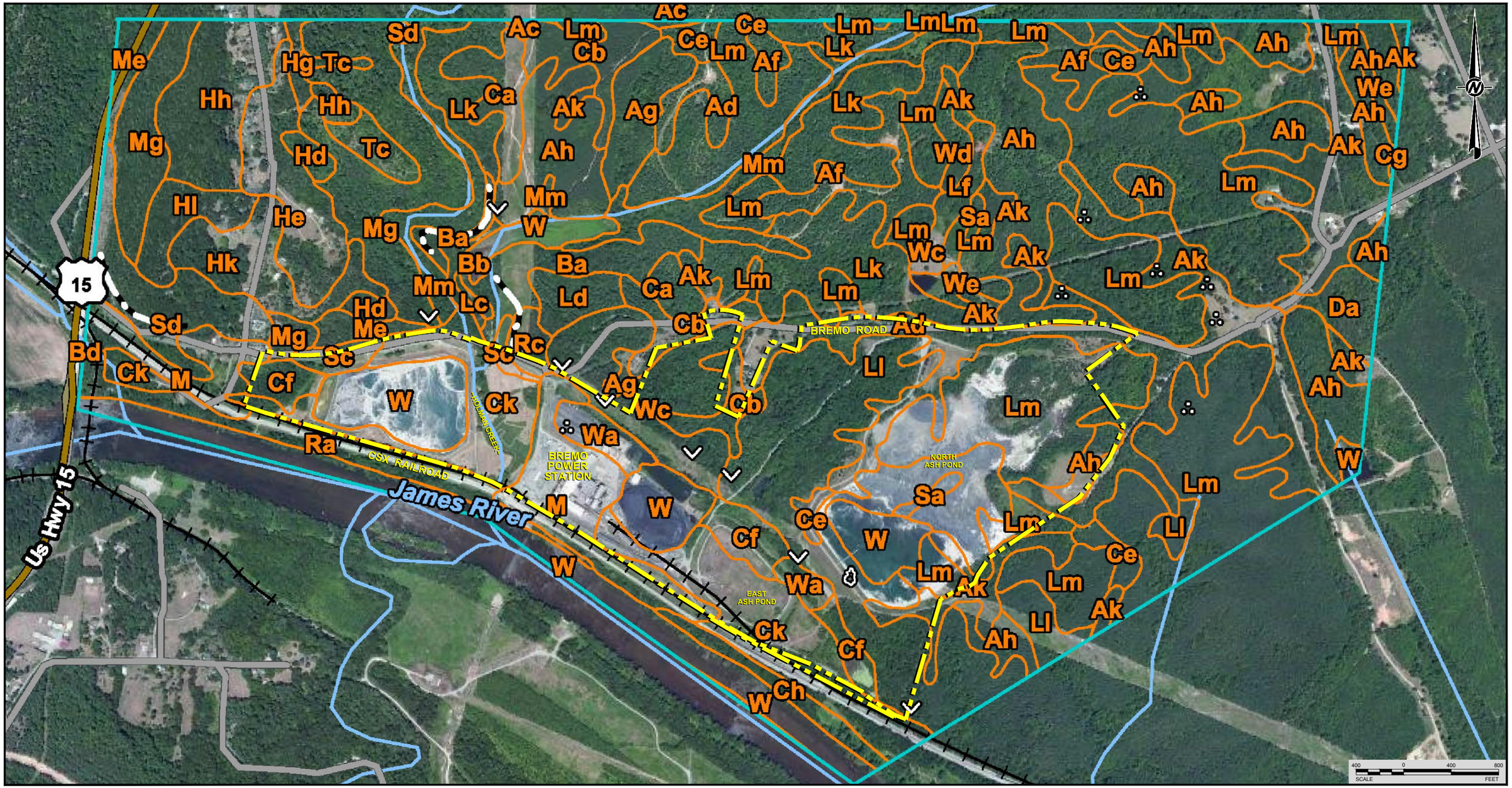

REFERENCE

1. MAP SOURCE: NATURAL RESOURCES CONSERVATION SERVICE
2. SOILS MAP IS GENERATED FROM THE USDA-NRCS CERTIFIED DATA AS OF THE VERSION DATES LISTED BELOW:
   SOIL SURVEY AREA: BUCKINGHAM CO., VA, VERSION 2, DEC. 11, 2013
   SOIL SURVEY AREA: FLUVANNA CO., VA, VERSION 11, DEC. 11, 2013
3. AERIAL IMAGERY SHOWN WAS PHOTOGRAPHED MAY 10, 2010 - JULY 4, 2010.

LEGEND

Ac	Appling fine sandy loam, rolling phase	He	Hiwassee clay loam, eroded undulating phase	Sc	Starr loam
Ad	Appling fine sandy loam, undulating phase	Hg	Hiwassee fine sandy loam, rolling light-colored phase	Sd	Stony land
Af	Appling gritty fine sandy loam, undulating phase	Hh	Hiwassee fine sandy loam, undulating light-colored phase	Tc	Tatum silt loam, undulating phase
Ag	Appling sandy loam, eroded rolling phase	Hk	Hiwassee silt loam, rolling phase	W	Water
Ah	Appling sandy loam, rolling phase	Hl	Hiwassee silt loam, undulating phase	Wa	Wehadkee silt loam
Ak	Appling sandy loam, undulating phase	Lc	Lloyd silt loam, rolling phase	Wc	Wilkes sandy loam, hilly and steep phases
Ba	Bremo silt loam, hilly phase	Ld	Lloyd silt loam, undulating phase	Wd	Wilkes sandy loam, rolling phase
Bb	Bremo silt loam, rolling phase	Lf	Lloyd silty clay loam, eroded undulating phase	We	Worsham sandy loam
Bd	Buncombe loamy fine sandy	Lk	Louisburg sandy loam, eroded rolling and hilly phases		
Ca	Cecil clay loam, eroded rolling phase	Ll	Louisburg sandy loam, eroded steep phase		
Cb	Cecil clay loam, eroded undulating phase	Lm	Louisburg sandy loam, rolling and hilly phases		
Ce	Cecil sandy loam, undulating phase	M	Made land		
Cf	Chewacla silt loam	Me	Manteo silt loam, hilly phase		
Cg	Colfax sandy loam	Mg	Manteo silt loam, steep phase		
Ch	Congaree fine sandy loam	Mm	Mixed alluvial land, well drained		
Ck	Congaree silt loam	Ra	Riverwash		
Da	Durham fine sandy loam, undulating phase	Rc	Rough gullied land		
Hd	Hiwassee clay loam, eroded rolling phase	Sa	Seneca fine sandy loam		

PROPERTY LINE

SOIL SURVEY BOUNDARY

REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
2	06/08/16	PARCEL ADDITION	MGW	BPG	MGW	MGW
1	04/15/16	UPDATE NOTATION	-	BPG	ATN	JRD

PROJECT

DOMINION
BREMO POWER STATION
FLUVANNA COUNTY, VIRGINIA

TITLE

SOILS MAP

GOLDER

PROJECT No.		15-20347	FILE No.	1520347E05
DESIGN	CJL	06/25/15	SCALE	AS SHOWN
CADD	BPG	08/18/15	DRAWING 3	
CHECK	CJL	12/03/15		
REVIEW	JRD	12/03/15		

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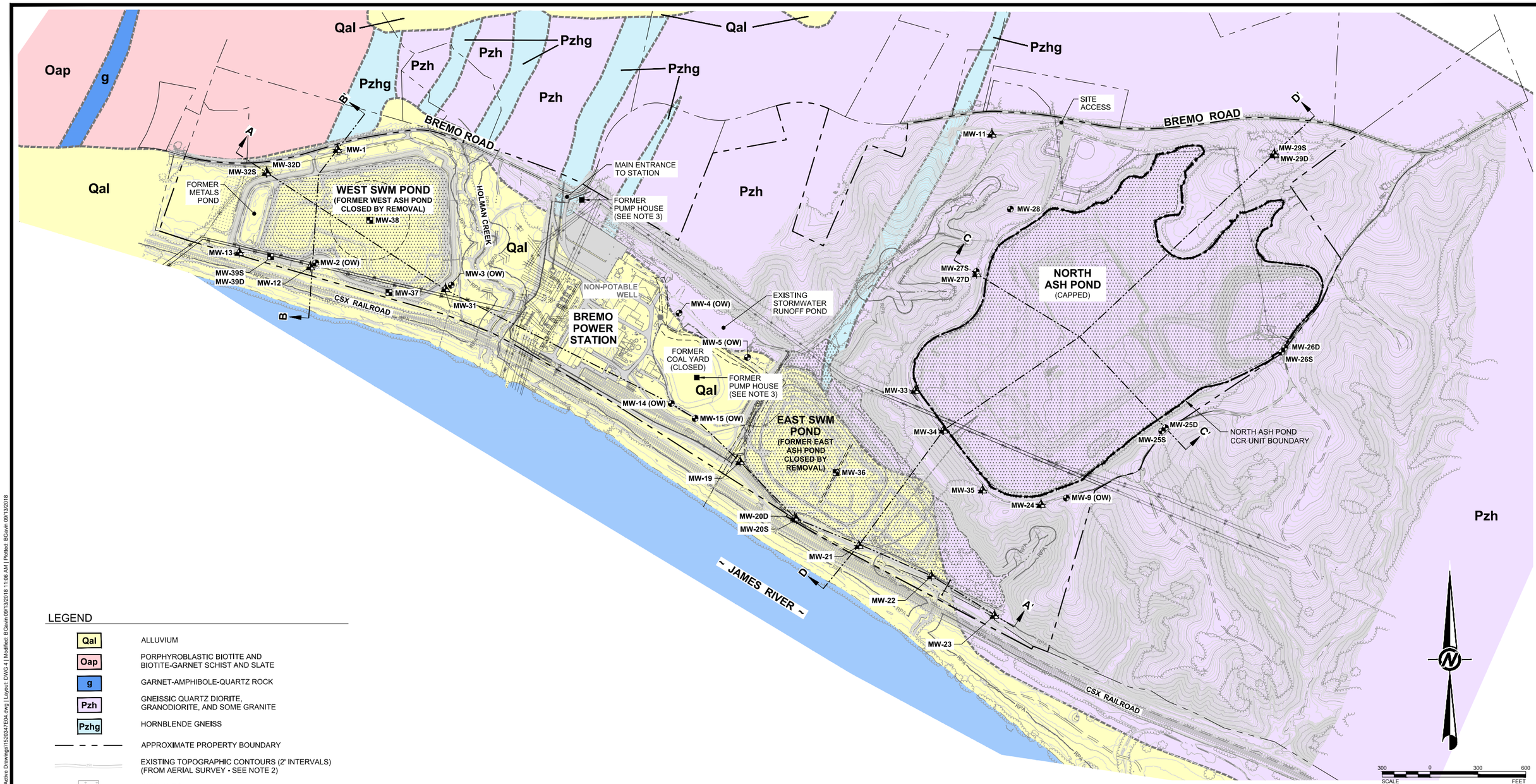

LEGEND

Qal	ALLUVIUM
Oap	PORPHYROBLASTIC BIOTITE AND BIOTITE-GARNET SCHIST AND SLATE
g	GARNET-AMPHIBOLE-QUARTZ ROCK
Pzh	GNEISSIC QUARTZ DIORITE, GRANODIORITE, AND SOME GRANITE
Pzhg	HORNBLENDE GNEISS
	APPROXIMATE PROPERTY BOUNDARY
	EXISTING TOPOGRAPHIC CONTOURS (2' INTERVALS) (FROM AERIAL SURVEY - SEE NOTE 2)
	WETLANDS
	SURFACE WATER BOUNDARY
	APPROXIMATE LIMITS OF EXISTING ASH PONDS
	PROPOSED LIMITS OF FINAL COVER SYSTEM (ANCHOR TRENCH)
	LIMITS OF 100-YR FLOOD PLAIN
MW-29D	FEDERAL CCR RULE COMPLIANCE WELL LOCATION AND IDENTIFICATION
MW-26S	STATE GROUNDWATER COMPLIANCE WELL LOCATION AND IDENTIFICATION
MW-5 (OW)	GROUNDWATER OBSERVATION WELL LOCATION AND IDENTIFICATION
MW-37	PROPOSED MONITORING WELL LOCATION AND IDENTIFICATION

REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
3	09/14/18	RESPONSE TO DEQ COMMENTS	MGW	BPG	ATN	MGW
2	01/13/17	RESPONSE TO COMMENTS	MGW	BPG	ATN	MGW
1	02/15/16	RESPONSE TO COMMENTS	MGW	BPG	MGW	MGW

PROJECT

DOMINION
BREMO POWER STATION
FLUVANNA COUNTY, VIRGINIA

TITLE

GEOLOGIC MAP

GOLDER

PROJECT No.		15-20347	FILE No.	1520347E04
DESIGN	CJL	12/03/15	SCALE	AS SHOWN
CADD	BPG	01/06/16		
CHECK	MGW	01/06/16	DRAWING 4	
REVIEW	JRD	01/06/16		

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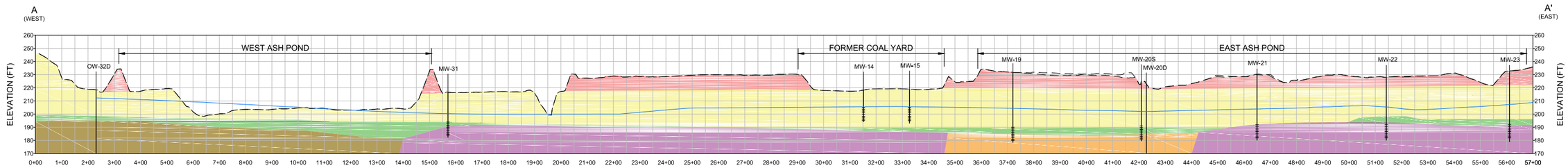

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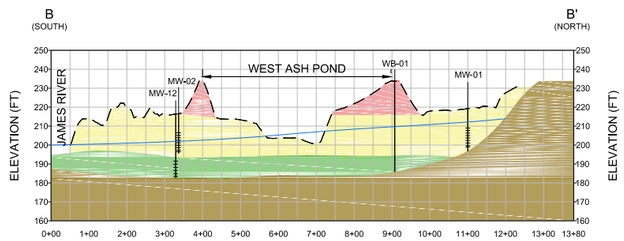

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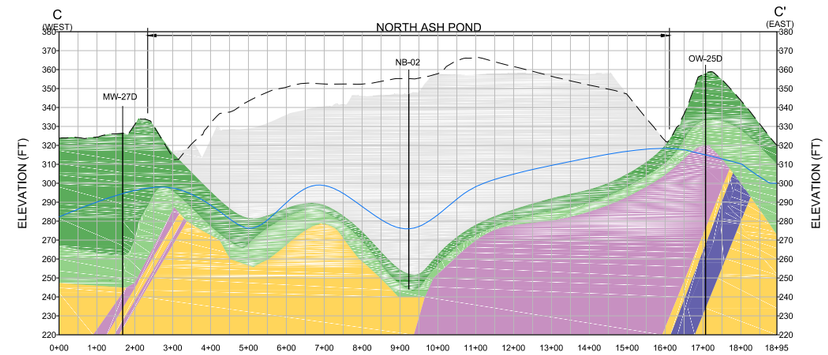

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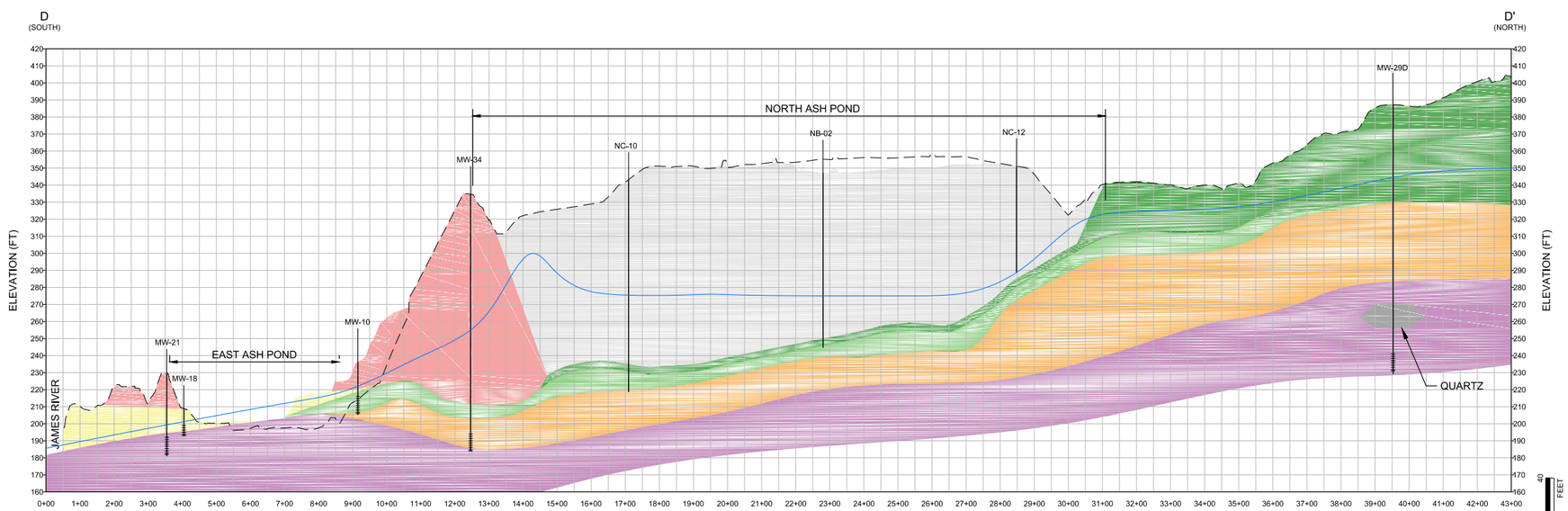

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NOTES

1. WATER TABLE SURFACE BASED ON LINEAR INTERPOLATION BETWEEN AND EXTRAPOLATION FROM KNOWN DATUM, TOPOGRAPHIC CONTOURS AND KNOWN FIELD CONDITIONS. THEREFORE, WATER TABLE SURFACE MAY NOT REFLECT ACTUAL GROUND WATER CONDITIONS.
2. THE WATER TABLE SURFACE IN THE VICINITY OF NORTH ASH POND WAS DEVELOPED USING GROUNDWATER ELEVATION DATA COLLECTED UNDER PUMPING CONDITIONS.

LEGEND

- EXISTING GROUND
- GROUND WATER
- ALLUVIUM
- COAL COMBUSTION RESIDUALS (CCR)
- PARTIALLY WEATHERED BEDROCK
- BERM MATERIAL
- SAPROLITE

BEDROCK

- PORPHYROBLASTIC BIOTITE AND BIOTITE-GARNET SCHIST
- GNEISSIC QUARTZ DIORITE, GRANODIORITE, AND SOME GRANITE
- SLATE
- AMPHIBOLITE

CLIENT
DOMINION ENERGY

PROJECT
BREMO POWER STATION
FLUVANNA COUNTY, VIRGINIA

TITLE
GEOLOGIC CROSS SECTIONS

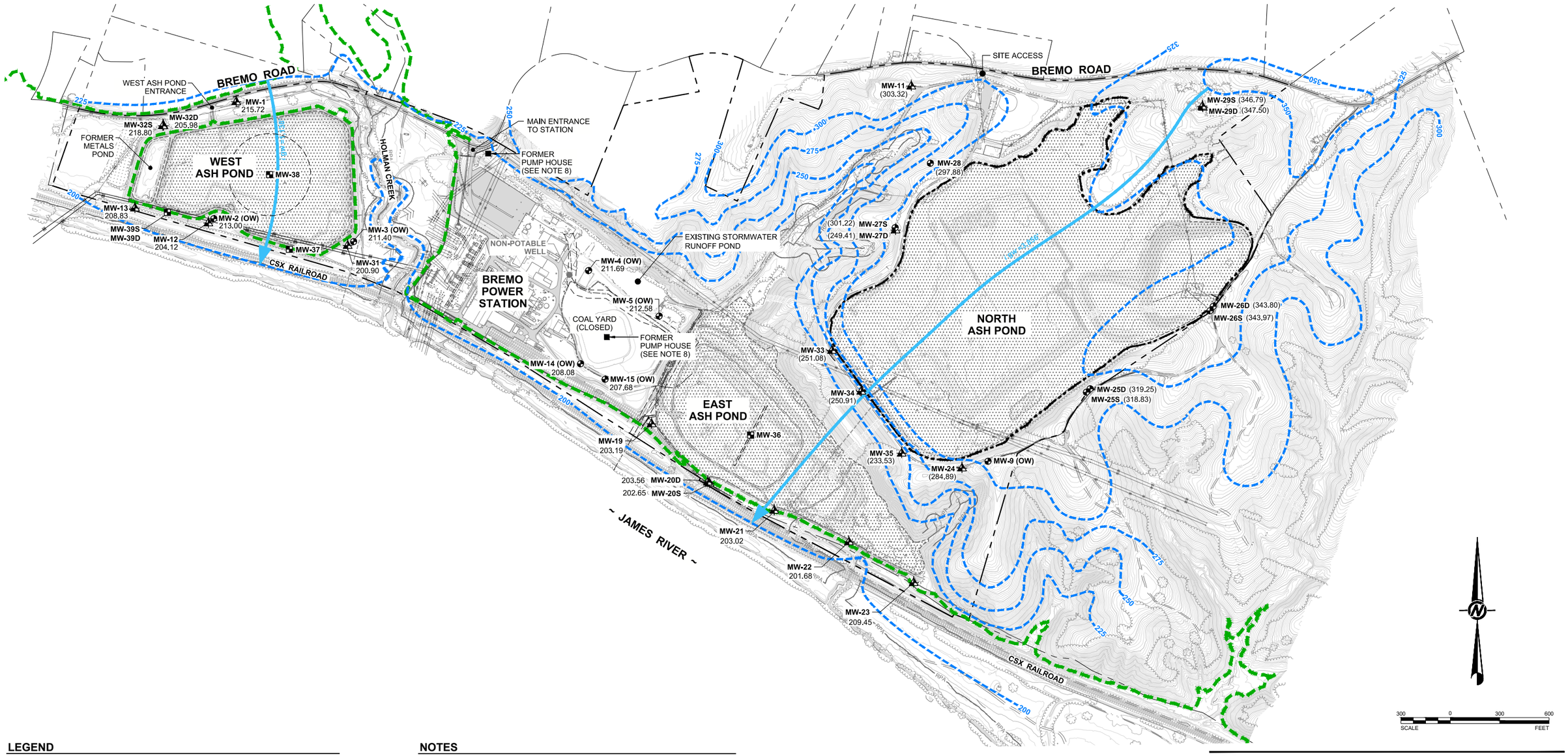
CONSULTANT
GOLDER

YYYY-MM-DD	2018-09-14
DESIGNED	MGW
PREPARED	SIB
REVIEWED	ATN
APPROVED	JRD

PROJECT NO. 15-20347 | REV. 0 | DRAWING 5

Path: G:\Plan Production Data Files\Drawing Data Files\15-20347\E - Bremo GW Monitoring Plan\Active Drawings\1520347E51.dwg

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- EXISTING TOPOGRAPHIC CONTOURS (2' INTERVALS) (FROM AERIAL SURVEY - SEE NOTE 6)
- GROUNDWATER CONTOURS
- WETLANDS
- SURFACE WATER BOUNDARY
- APPROXIMATE LIMITS OF EXISTING ASH PONDS
- PROPOSED LIMITS OF FINAL COVER SYSTEM (ANCHOR TRENCH)
- LIMITS OF 100-YR FLOOD PLAIN
- MW-29D — FEDERAL CCR RULE COMPLIANCE WELL LOCATION AND IDENTIFICATION
- MW-26S — STATE GROUNDWATER COMPLIANCE WELL LOCATION AND IDENTIFICATION
- MW-5 (OW) — GROUNDWATER OBSERVATION WELL LOCATION AND IDENTIFICATION
- MW-37 — PROPOSED MONITORING WELL LOCATION AND IDENTIFICATION

NOTES

1. TOPOGRAPHIC CONTOUR INTERVAL = 2 FEET
2. GROUNDWATER SURFACE CONTOUR INTERVAL = 25 FEET
3. STATIC WATER LEVELS MEASURED ON JUNE 20, 2017.
4. GROUNDWATER CONTOURS BASED ON LINEAR INTERPOLATION BETWEEN AND EXTRAPOLATION FROM KNOWN DATUM, TOPOGRAPHIC CONTOURS, AND KNOWN FIELD CONDITIONS. THEREFORE, GROUNDWATER CONTOURS MAY NOT REFLECT ACTUAL GROUNDWATER CONDITIONS.
5. GROUNDWATER CONTOUR LINES SHOW THE WATER TABLE SHAPE AND ELEVATION. THESE CONTOURS ARE INFERRED LINES FOLLOWING THE GROUNDWATER SURFACE AT A CONSTANT ELEVATION ABOVE SEA LEVEL. THE GROUNDWATER FLOW DIRECTION IS GENERALLY PERPENDICULAR TO THE GROUNDWATER SURFACE CONTOURS, SIMILAR TO THE RELATIONSHIP BETWEEN SURFACE WATER FLOW AND TOPOGRAPHIC CONTOURS.
6. BASEMAP INFORMATION (e.g., EXISTING TOPOGRAPHY, ROADS, TREE LINES, FENCE LINES, ETC.) TAKEN FROM AERIAL SURVEY PREPARED BY McKENZIE SNYDER. DATE OF AERIAL PHOTOGRAPHY: FEBRUARY 18, 2017.
7. NON-POTABLE WELL LOCATION IS TO BE CONSIDERED APPROXIMATE.
8. FORMER PUMP HOUSE APPROXIMATE LOCATIONS FROM STONE & WEBSTER ENGINEERING CORPORATION 1949 DRAWINGS.

1	09/14/18	RESPONSE TO COMMENTS	MGW	ATN	ATN	MGW
0	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW

CLIENT
DOMINION ENERGY
BREMO POWER STATION
FLUVANNA COUNTY, VIRGINIA

PROJECT
CCR SURFACE IMPOUNDMENT
CLOSURE PLAN

TITLE
POTENTIOMETRIC SURFACE MAP

CONSULTANT
GOLDER

YYYY-MM-DD	2018-09-14
DESIGNED	MGW
PREPARED	ATN
REVIEWED	MEO
APPROVED	MGW

PROJECT NO. 15-20347 REV. 1 DRAWING 6

Path: G:\Plan Production Data Files\Drawing Data Files\15-20347\E - Bremo GW Monitoring Plan\Active Drawings\1520347E17.dwg

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D