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July 18, 2018

Sent Via Federal Express

Susan Bull, Eastern Region Supervisor
Maryland Department of the Environment
Oil Control Program – Remediation Division
1800 Washington Blvd., Suite 620
Baltimore, MD 21230-1720

Re: Bel Air Station, Harford County, Maryland
MDE Case No. 18-0459HA
Subsurface Investigation Report Amendment

Ms. Bull:

Colonial Pipeline Company (Colonial) previously submitted a Subsurface Investigation Report (SIR) on June 12, 2018 that summarizes activities conducted at the Colonial Bel Air Station (the Site), as requested by the Maryland Department of Environment (MDE) in a Report of Observation dated March 12, 2018, and in a letter dated May 15, 2018. As noted in that report, soil excavation activities remain ongoing at the Site in association with the pumping loop coating inspection and maintenance work and the alternate discharge line piping removal completed during the week of June 25, 2018.

On behalf of Colonial, TRC Environmental Corporation (TRC) has prepared this SIR Amendment to provide: (a) the results of additional post-excavation soil sampling and delineation completed at select yard drain and access well locations where exceedances of the reference standards were noted in the SIR; (b) an access well apparent product thickness map as you requested in a phone call with Colonial on June 26, 2018; and (c) the May through July 2018 monitoring well gauging data and potentiometric maps.

Yard Drain Post-Excavation Samples – Response to Exceedances

As noted in Section 4.2, **Table 1**, and **Figure 6** of the SIR, exceedances of the MDE Non-Residential Clean-up Standard (NRCS) for Total Petroleum Hydrocarbons Diesel Range Organics (TPH-DRO) of 620 milligrams per kilogram (mg/kg) were noted at PX-YD-16 (3,200 mg/kg) and PX-YD-18 (700 mg/kg).

In response, additional soil was excavated in the vicinity of these post-excavation sample locations during pumping loop inspection and maintenance activities. On June 14, 2018, TRC collected post-excavation soil samples at the PX-YD-16 and PX-YD-18 locations from a depth of 5 to 5.5 feet below ground surface (bgs). As shown in **Revised Table 1**, the soil samples were non-detect for VOCs and



TPH-DRO. The PX-YD-18 soil sample contained 0.3 mg/kg of TPH Gasoline Range Organic (TPH-GRO), which is below the MDE Residential Clean-up Standard (RCS) of 230 mg/kg. With consideration of the recent PX-YD-16(5-5.5') and PX-YD-18(5-5.5') results, the only yard drain post-excavation soil sample locations requiring further excavation are located to the west of the pumping loop and will be addressed during the pending HA-3 area investigation and remediation. A **Revised Figure 6** and **Revised Table 1** from the SIR are attached.

Access Well Post-Excavation Samples – Response to Exceedances

As noted in Section 4.3, **Table 2**, and **Figure 7** of the SIR, exceedances of the MDE NRCS for TPH-DRO and/or TPH-GRO were noted at AW-02 (PX-AW-08), AW-03 (PX-AW-09), AW-05 (PX-AW-05), AW-12 (PX-AW-12), and AW-14 (PX-AW-14) (see Figure 7 of SIR).¹

In response, the AW-2, AW-3, and AW-14 locations were over-excavated from the 3.5 feet bgs post-excavation soil sample interval to depth below the pipeline as part of the Line 03 inspection and recoat activities. Line 03 post-excavation sample locations PX-L03-02 and PX-L03-03 were collected in the approximate locations of AW-2 (PX-AW-08) and AW-3 (PX-AW-09), and soil samples PX-L03-04 and PX-L03-06 were collected from the approximate respective locations of AW-14 (PX-AW-14) and AW-12 (PX-AW-12) (see **Figures 7 and 9**). The PX-L03-02, -03, -04, and -06 sample results were below the MDE RCS used for comparison.

In further response, and as part of the pumping loop inspection and maintenance activities, additional soil was excavated near the AW-5 and AW-12 locations. On June 14, 2018, TRC collected additional post-excavation soil samples at the PX-AW-05 and PX-AW-12 locations from depths of 8 to 8.5 feet bgs and 5 to 5.5 feet bgs, respectively, relative to the initial sample depths of 3 to 3.5 feet bgs. As shown on **Revised Table 2**, the soil samples were non-detect for VOCs and TPH-GRO. The soil samples contained TPH-DRO concentrations at 37 mg/kg [(PX-AW-05(8-8.5'))] and 29 mg/kg [(PX-AW-12(5-5.5'))], which are below the MDE RCS reference values. A **Revised Figure 7** and **Revised Table 2** from the SIR are attached.

Alternate Suction Line Post-Excavation Samples – No Exceedances

As part of the pumping loop maintenance activities, soil around the alternate suction line, where the release occurred, was excavated for removal of the alternate suction line. On July 11, 2018, TRC collected two post-excavation samples below the former location of the alternate suction line (PX-ASL-01 and PX-ASL-02) from 8 to 8.5 feet bgs. As shown on **Addendum Table 3**, soil analytical results reported volatile organic compounds (VOC), TPH-DRO, and TPH-GRO below MDE RCS for both samples. Soil sample locations are shown on the attached **Revised Figure 9** from the SIR and **Addendum Table 3**.

Sample Collection Methods and Laboratory Analysis

TRC used decontaminated sample tools to collect post-excavation soil samples at select locations. Samples were promptly transferred into pre-preserved, laboratory provided bottle ware, and placed in a cooler on ice. Appropriate chain of custody documentation accompanied the chilled soil samples submitted to Caliber Analytical Services, LLC (Caliber) of Townson, Maryland for analysis of VOCs, naphthalene, and fuel oxygenates by Environmental Protection Agency (EPA) Method 8260 and TPH-GRO and TPH-DRO by EPA Method 8015. Soil samples collected for VOC analysis were retrieved in accordance with EPA Method 5035.

¹ There were two typographical errors in Section 4.3 of the SIR. The corrected version of the third paragraph of Section 4.3 follows, with the corrections underlined in *italics*: “On March 19, 2018 post-excavation soil samples collected in access wells AW-05 (PX-AW-05), AW-02 (PX-AW-08), AW-03 (PX-AW-09), AW-12 (PX-AW-12), and AW-14 (PX-AW-14) exceeded the NRCS criteria for TPH-DRO (620 mg/kg) and/or TPH-GRO (620 mg/kg).”



Access Well Apparent Product Thickness Figure

As you requested in a phone call with Colonial on June 26, 2018, attached is a figure showing the apparent product thickness in valve access wells measured during the initial emergency response on March 7, 2018 (see **Figure 1**). As noted in the SIR, the light non-aqueous phase liquid (LNAPL) that was discharged from the alternate suction discharge line, migrated to the yard drain system, and preferentially flowed to the oil water separator (OWS), valve access wells, and secondary containment pond. The LNAPL released was contained to these engineered structures and was recovered by vac truck within the first 24 to 48 hours of discovery. The majority of the valve access wells in which LNAPL was measured are located near the leak point and along Line 03. No LNAPL was discharged from the secondary containment pond. As part of the leak investigation and repair activities, the bulk of the LNAPL-saturated soil was also removed during the initial response period and LNAPL has not been detected in the monitoring well network during April, May, June, or July 2018 gauging events.

Monitoring Well Gauging Results

In the MDE “Request for Additional Monitoring and Half-Mile Well Survey” letter dated May 15, 2018, the MDE requested monthly gauging and quarterly sampling of the on-Site monitoring wells. Water-level gauging events were accordingly completed on May 30, June 28, and July 11, 2018. As shown in **Figures 2, 3, and 4**, the potentiometric lines and apparent groundwater flow directions are consistent with the April 2018 gauging event (**Figure 11 of SIR**). As shown in **Addendum Table 4**, the groundwater levels in the site monitoring wells rose over three feet between April and June 2018 in response to the intense rainfall events that have occurred in the vicinity of the Site, even with the capture and off-site disposal of over 200,000 gallons of rain water from the Site excavations. The water levels have dropped slightly through July 11 but remain an average 2.3’ higher than April.

Notably, LNAPL is not present in the monitoring wells, which is consistent with the rapid recovery of LNAPL during the first 24 to 48 hours of the emergency response and the extensive soil excavation activities, which are, in part, described above.²

If you have questions regarding the SIR amendment, please contact Stan Carpenter at 856-381-4683 or me at 609-238-5886.

Sincerely,



David J. Carlson







Attachments

cc: S. Carpenter – Colonial Pipeline Company
R. Shenk – Colonial Pipeline Company

² The well log for MW-5 was omitted from the Appendix F of the SIR. A copy of that well log is attached.

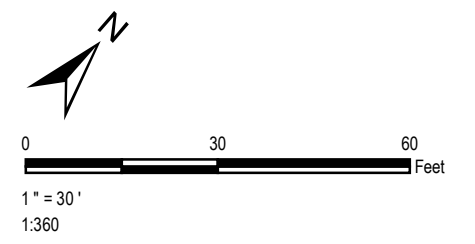
FIGURES


LEGEND

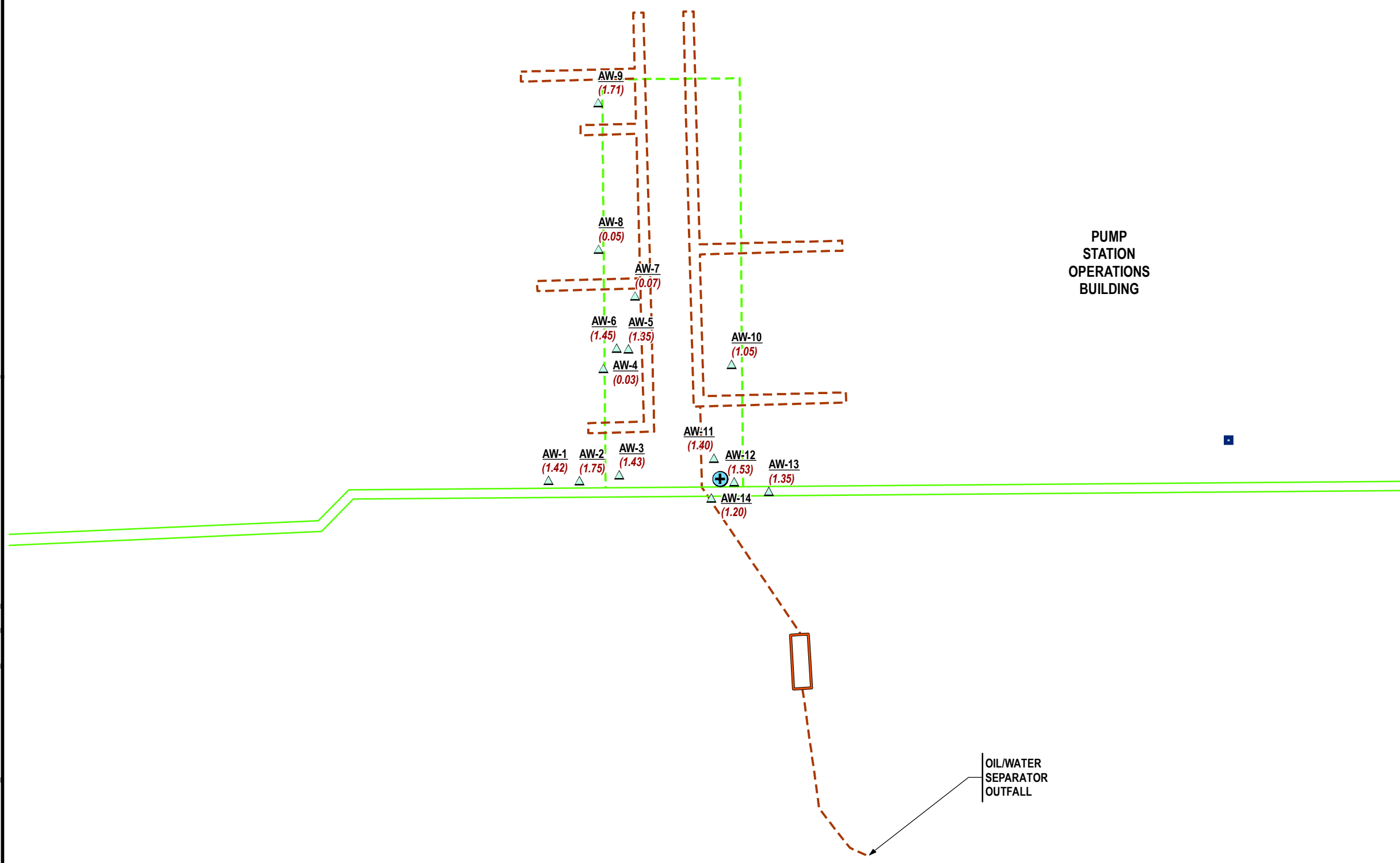
-  FACILITY POTABLE WELL
-  APPROXIMATE LEAK LOCATION
-  VALVE ACCESS WELL
- (1.75) PRODUCT THICKNESS (FT.) MARCH 7, 2018
-  PETROLEUM PIPELINE
-  PRODUCT PIPING LOOP (APPROXIMATE LOCATION)
-  YARD DRAIN (APPROXIMATE LOCATION)

NOTES

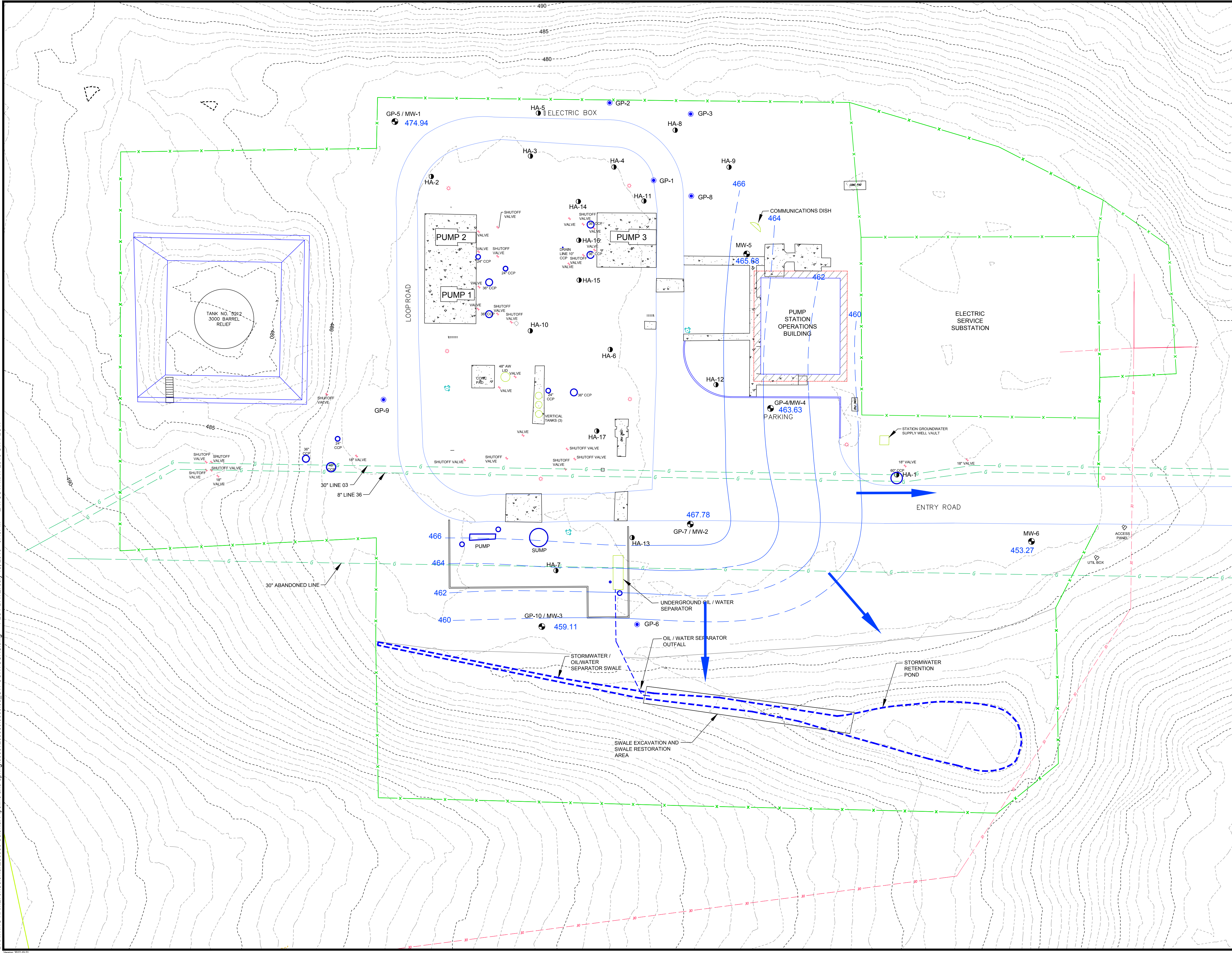
1. BASE MAP IMAGERY FROM MARYLAND IMAP WEB SERVICE LAYER, 2016/2017.
2. UTILITY LINE LOCATIONS ARE APPROXIMATE BASED ON SURFACE MARKINGS AND SITE OBSERVATIONS.
3. LOCATIONS OF SIMPLIFIED PRODUCT LOOP, YARD DRAIN, AND OIL/WATER SEPARATOR OUTFALL PIPING ARE APPROXIMATE.
4. MEASURED PRODUCT WAS REMOVED BY VACUUM TRUCK DURING INITIAL RESPONSE WITH ONLY SURFICIAL SKIMMING REQUIRED THEREAFTER.



COLONIAL PIPELINE COMPANY BEL AIR PUMP STATION FALLSTON, HARFORD COUNTY, MARYLAND	
ACCESS WELL APPARENT PRODUCT THICKNESS ON MARCH 7, 2018	
DRAWN BY: S. MAJOR	PROJ. NO.: 299980.0000
CHECKED BY: D. KUDLA	FIGURE 1
APPROVED BY: D. KUDLA	
DATE: JULY 2018	
 1601 Market Street, Suite 2555 Philadelphia, PA 19103 Phone: 215.563.2122	
299980-0000-005.mxd	



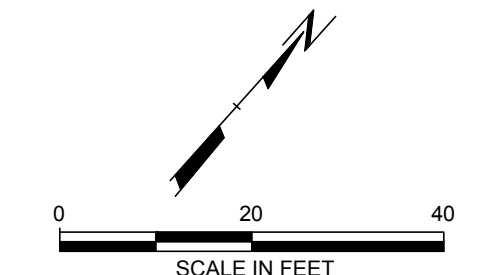
2034 ... USER: DSIEWERT ... ATTACHED REFS: ... ATTACHED IMAGES: ...
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LEGEND

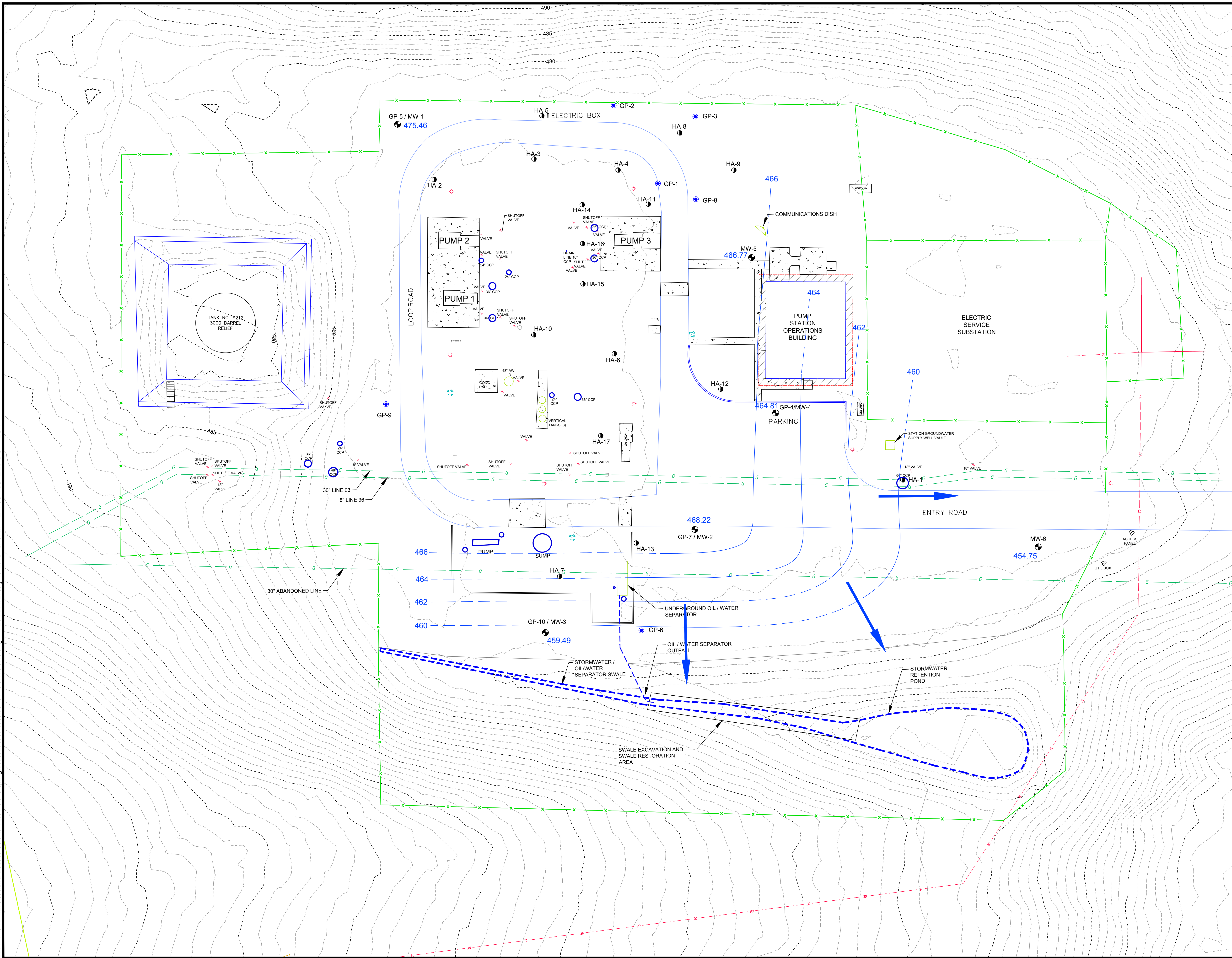
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	MW-5	MONITORING WELL
	HA-9	HAND AUGER BORING
		LIGHT POST
		HYDRANT
		FENCE
		OVERHEAD ELECTRIC LINE
		UNDERGROUND GAS LINE
		GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
		INFERRED GROUNDWATER FLOW DIRECTION

- NOTES:**
1. LOCATION OF STORMWATER SWALE AND STORMWATER RETENTION POND ARE APPROXIMATE.
 2. VALVE AND SHUTOFF VALVE LOCATIONS ARE SURVEYED GENERAL POINTS OF REFERENCE FOR PUMP STATION CONTROL POINTS AND PROCESS CONTROL FEATURES.
 3. MONITORING WELL ELEVATIONS WERE MEASURED MAY 30, 2018.



PROJECT:		COLONIAL PIPELINE COMPANY BEL AIR PUMP STATION FALLSTON, HARFORD COUNTY, MARYLAND	
TITLE:		GROUNDWATER POTENTIOMETRIC MAP MAY 30, 2018	
DRAWN BY:	D. SIEWERT/O. DE LEON	PROJ. NO.:	299980.0000.0000
CHECKED BY:	B. HECKER	FIGURE 2	
APPROVED BY:	D. CARLSON		
DATE:	JULY 2018	1601 Market Street Suite 2555 Philadelphia, PA 19103 Phone: 215.563.2122	
FILE NO.:	299980.0000.03.dwg		

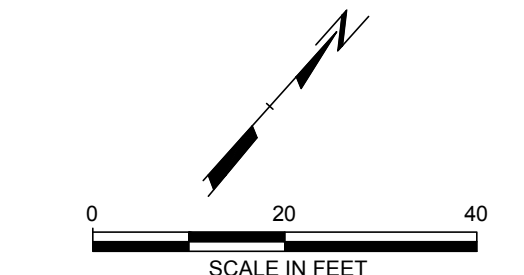
2034 -- USER: DSIEWERT -- ATTACHED REFS: -- ATTACHED IMAGES: --
 DRAWING NAME: J:\Colonial\299980\0000\03_GW CONTOURS.dwg --- PLOT DATE: July 18, 2018 - 3:40PM --- LAYOUT: JUNE 2018 GW FLOW



LEGEND

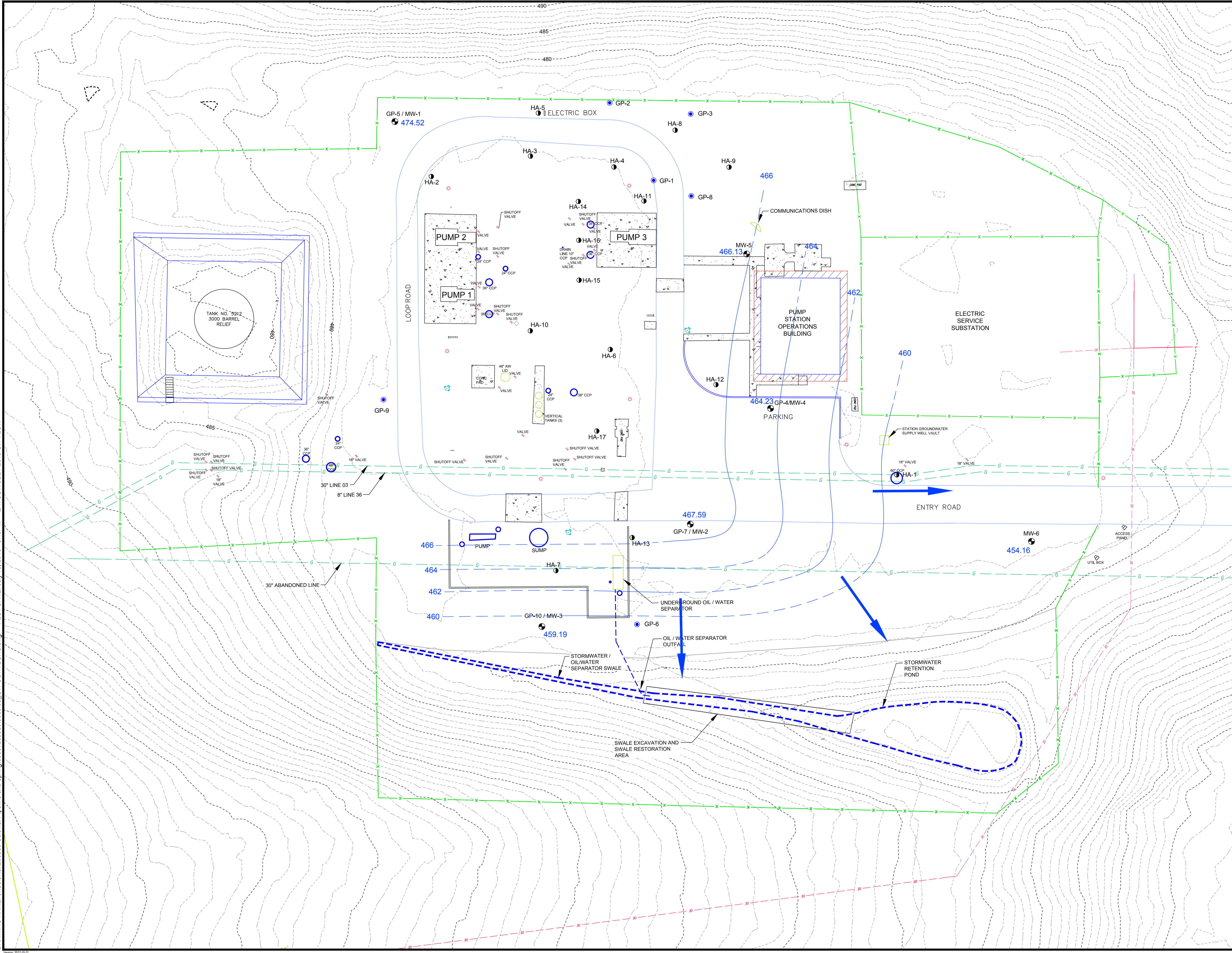
● GP-8	GEOPROBE BORING
● MW-5	MONITORING WELL
● HA-9	HAND AUGER BORING
★	LIGHT POST
⊕	HYDRANT
— x —	FENCE
— - - -	OVERHEAD ELECTRIC LINE
— - - -	UNDERGROUND GAS LINE
- - - -	GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
←	INFERRED GROUNDWATER FLOW DIRECTION

- NOTES:**
1. LOCATION OF STORMWATER SWALE AND STORMWATER RETENTION POND ARE APPROXIMATE.
 2. VALVE AND SHUTOFF VALVE LOCATIONS ARE SURVEYED GENERAL POINTS OF REFERENCE FOR PUMP STATION CONTROL POINTS AND PROCESS CONTROL FEATURES.
 3. MONITORING WELL ELEVATIONS WERE MEASURED JUNE 28, 2018.



PROJECT:		COLONIAL PIPELINE COMPANY BEL AIR PUMP STATION FALLSTON, HARFORD COUNTY, MARYLAND	
TITLE:		GROUNDWATER POTENTIOMETRIC MAP JUNE 28, 2018	
DRAWN BY:	D. SIEWERT/O. DE LEON	PROJ. NO.:	299980.0000.0000
CHECKED BY:	B. HECKER	FIGURE 3	
APPROVED BY:	D. CARLSON		
DATE:	JULY 2018	1601 Market Street Suite 2555 Philadelphia, PA 19103 Phone: 215.563.2122	
FILE NO.:	299980.0000.03_GW CONTOURS.dwg		

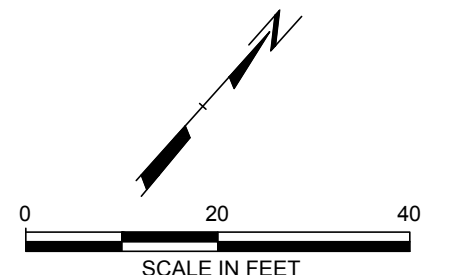
2034 -- USER: DSIEWERT -- ATTACHED REFS: -- ATTACHED IMAGES: --
 DRAWING NAME: J:\Colonial\299980 Colonial Pipeline and Spring\0000_03_GW CONTOURS.dwg -- PLOT DATE: July 18, 2018 - 3:40PM -- LAYOUT: JULY 2018 GW FLOW
 Version: 2017.02



LEGEND

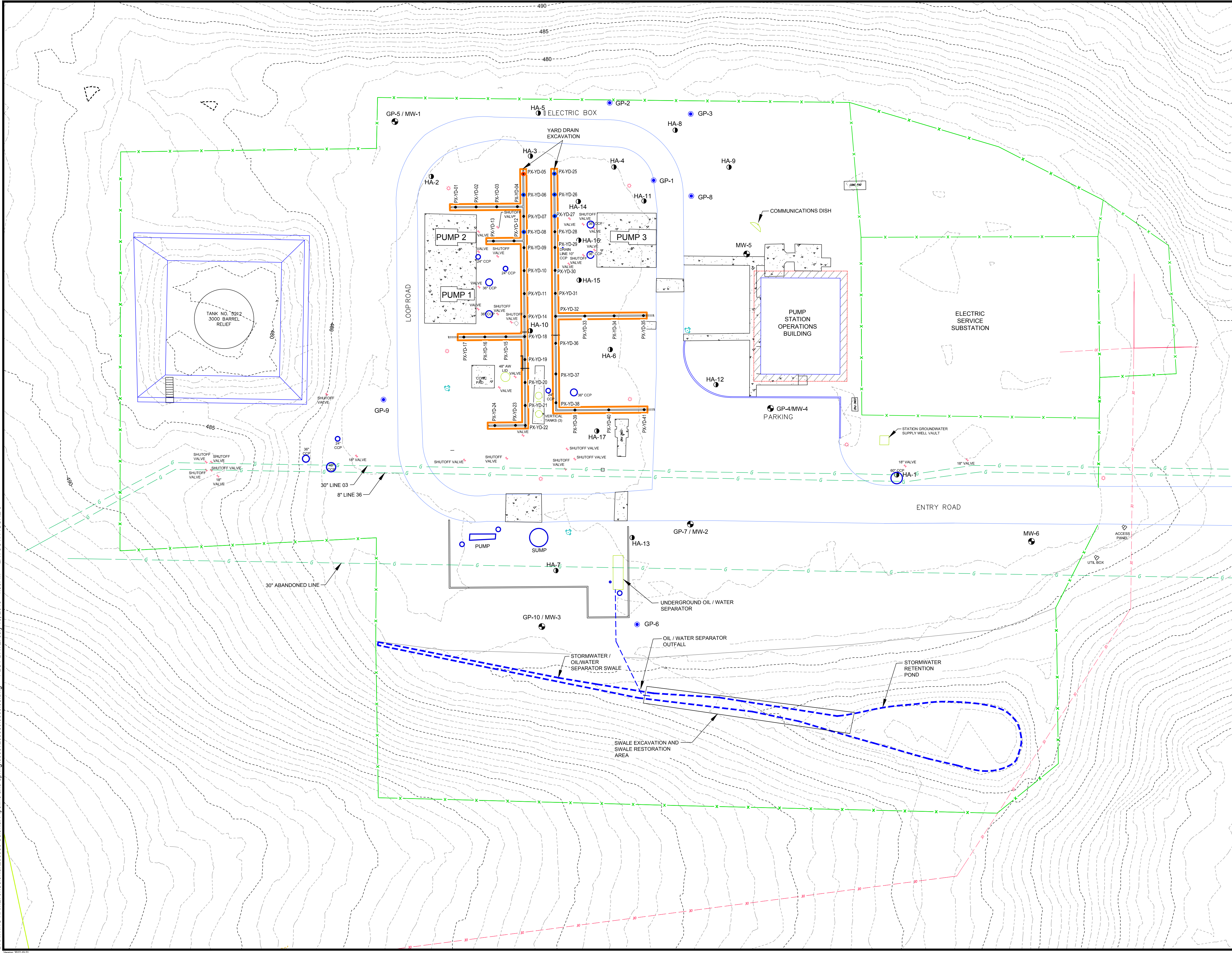
	GP-8	GEOPROBE BORING
	MW-5	MONITORING WELL
	HA-9	HAND AUGER BORING
		LIGHT POST
		HYDRANT
		FENCE
		OVERHEAD ELECTRIC LINE
		UNDERGROUND GAS LINE
		GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
		INFERRED GROUNDWATER FLOW DIRECTION

- NOTES:**
1. LOCATION OF STORMWATER SWALE AND STORMWATER RETENTION POND ARE APPROXIMATE.
 2. VALVE AND SHUTOFF VALVE LOCATIONS ARE SURVEYED GENERAL POINTS OF REFERENCE FOR PUMP STATION CONTROL POINTS AND PROCESS CONTROL FEATURES.
 3. MONITORING WELL ELEVATIONS WERE MEASURED JULY 11, 2018.



PROJECT:		COLONIAL PIPELINE COMPANY BEL AIR PUMP STATION FALLSTON, HARFORD COUNTY, MARYLAND	
TITLE:		GROUNDWATER POTENTIOMETRIC MAP JULY 11, 2018	
DRAWN BY:	D. SIEWERT/O. DE LEON	PROJ. NO.:	299980.0000.0000
CHECKED BY:	B. HECKER	FIGURE 4	
APPROVED BY:	D. CARLSON		
DATE:	JULY 2018	1601 Market Street Suite 2555 Philadelphia, PA 19103 Phone: 215.563.2122	
FILE NO.:	299980.0000.03_GW CONTOURS.dwg		

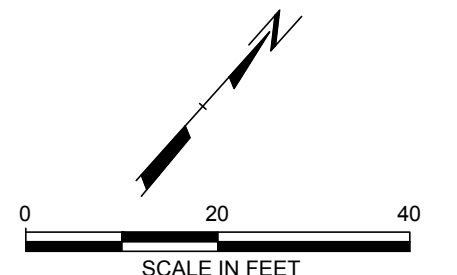
2034 -- USER: DSIEWERT -- ATTACHED REFS: -- ATTACHED IMAGES: --
 DRAWING NAME: J:\Colonial\299980 Colonial Pipeline and Spring\0000_299980_0000_03.dwg -- PLOT DATE: July 18, 2018 - 4:06PM -- LAYOUT: FIGURE 6




LEGEND

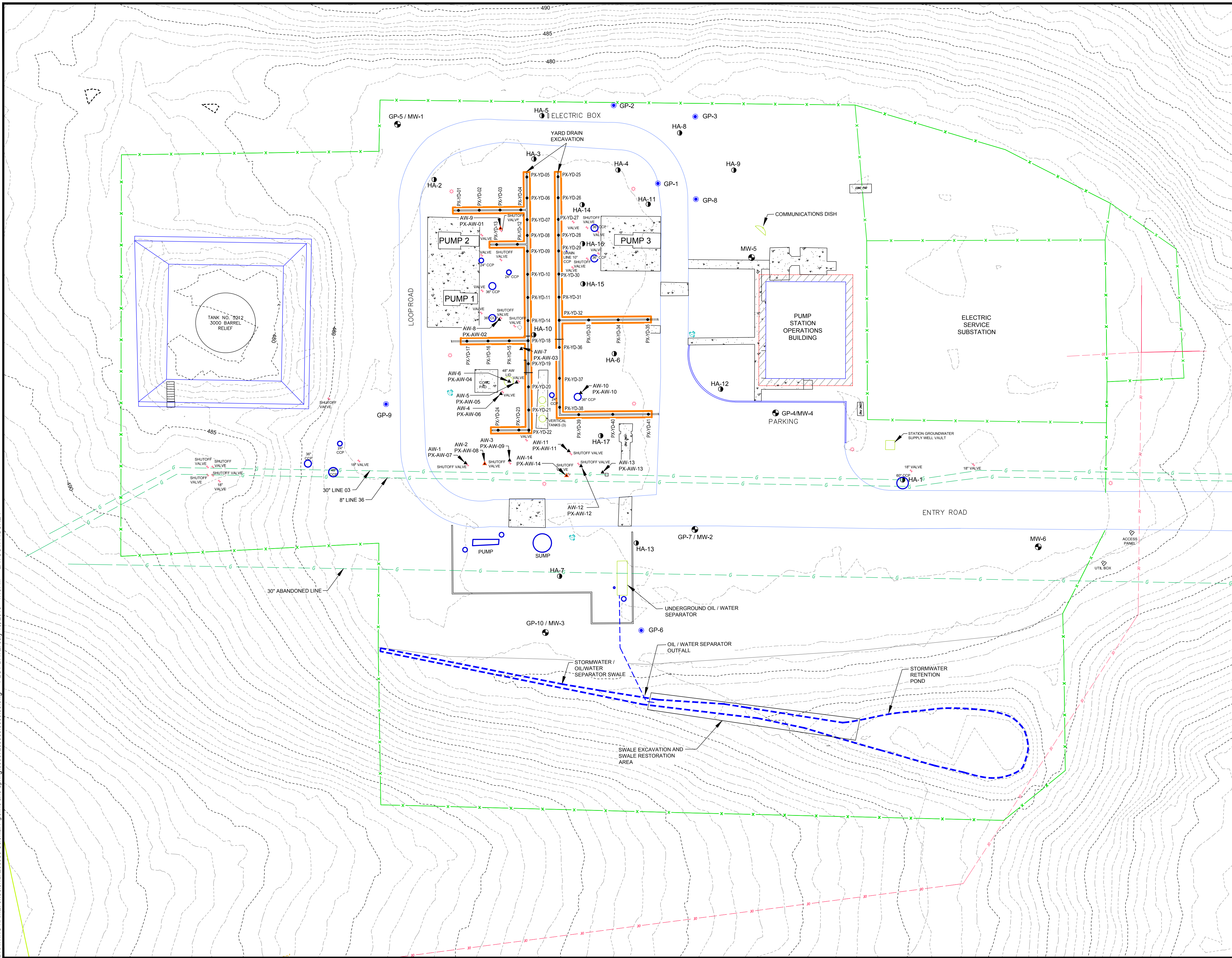
● GP-8	GEOPROBE BORING
● MW-5	MONITORING WELL
● HA-9	HAND AUGER BORING
● PX-YD-27	YARD DRAIN EXCAVATION SAMPLE
○ (blue)	SOIL TPH-DRO/TPH-GRO EXCEEDANCE
○ (red)	SOIL VOC & TPH-DRO/TPH-GRO EXCEEDANCE
✱	LIGHT POST
⊕	HYDRANT
— x —	FENCE
— - - - -	OVERHEAD ELECTRIC LINE
— - - - -	UNDERGROUND GAS LINE

- NOTES:**
1. LOCATION OF YARD DRAIN EXCAVATION, STORMWATER SWALE, STORMWATER RETENTION POND, HAND AUGER SOIL BORINGS, AND POST EXCAVATION SOIL SAMPLES ARE APPROXIMATE.
 2. VALVE AND SHUTOFF VALVE LOCATIONS ARE SURVEYED GENERAL POINTS OF REFERENCE FOR PUMP STATION CONTROL POINTS AND PROCESS CONTROL FEATURES.
 3. POST EXCAVATION SOIL SAMPLES WERE EVALUATED AGAINST THE MARYLAND DEPARTMENT OF ENVIRONMENT (MDE) SOIL RESIDENTIAL CLEAN-UP STANDARD (RCS) FOR VOLATILE ORGANIC COMPOUNDS (VOCs), AND NON-RESIDENTIAL CLEAN-UP STANDARD FOR TOTAL PETROLEUM HYDROCARBON DIESEL RANGE ORGANICS (TPH-DRO) AND TOTAL PETROLEUM HYDROCARBON GASOLINE RANGE ORGANICS (TPH-GRO).
 5. PX-YD-06, -08, -25, -26, AND -28 LOCATIONS WILL BE ADDRESSED IN ASSOCIATION WITH PENDING HA-3 AREA INVESTIGATION AND REMEDIATION.



PROJECT:		COLONIAL PIPELINE COMPANY BEL AIR PUMP STATION FALLSTON, HARFORD COUNTY, MARYLAND	
TITLE:		YARD DRAIN POST-EXCAVATION SAMPLE LOCATIONS	
DRAWN BY:	D. SIEWERT/O. DE LEON	PROJ. NO.:	299980.0000.0000
CHECKED BY:	B. HECKER	REVISED FIGURE 6	
APPROVED BY:	D. CARLSON		
DATE:	JUNE 2018	 1601 Market Street Suite 2555 Philadelphia, PA 19103 Phone: 215.563.2122	
FILE NO.:	299980.0000.03.dwg		

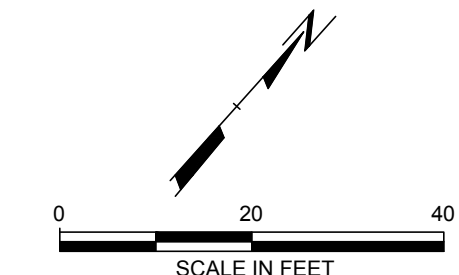
2034 -- USER: DSIEWERT -- ATTACHED REFS: -- ATTACHED IMAGES: -- DRAWING NAME: J:\Colonial\299980 Colonial Pipeline and Spring\0000_299980.0000.03.dwg -- PLOT DATE: July 18, 2018 - 4:18PM -- LAYOUT: FIGURE 7



LEGEND

● GP-8	GEOPROBE BORING
● MW-5	MONITORING WELL
● HA-9	HAND AUGER BORING
● PX-YAD-27	YARD DRAIN EXCAVATION SAMPLE
▲ PW-AW-13	PX-ACCESS WELL SAMPLE LOCATION
▲	SOIL TPH-DRO/TPH-GRO EXCEEDANCE
○	LIGHT POST
○	HYDRANT
— x —	FENCE
— — —	OVERHEAD ELECTRIC LINE
— — —	UNDERGROUND GAS LINE

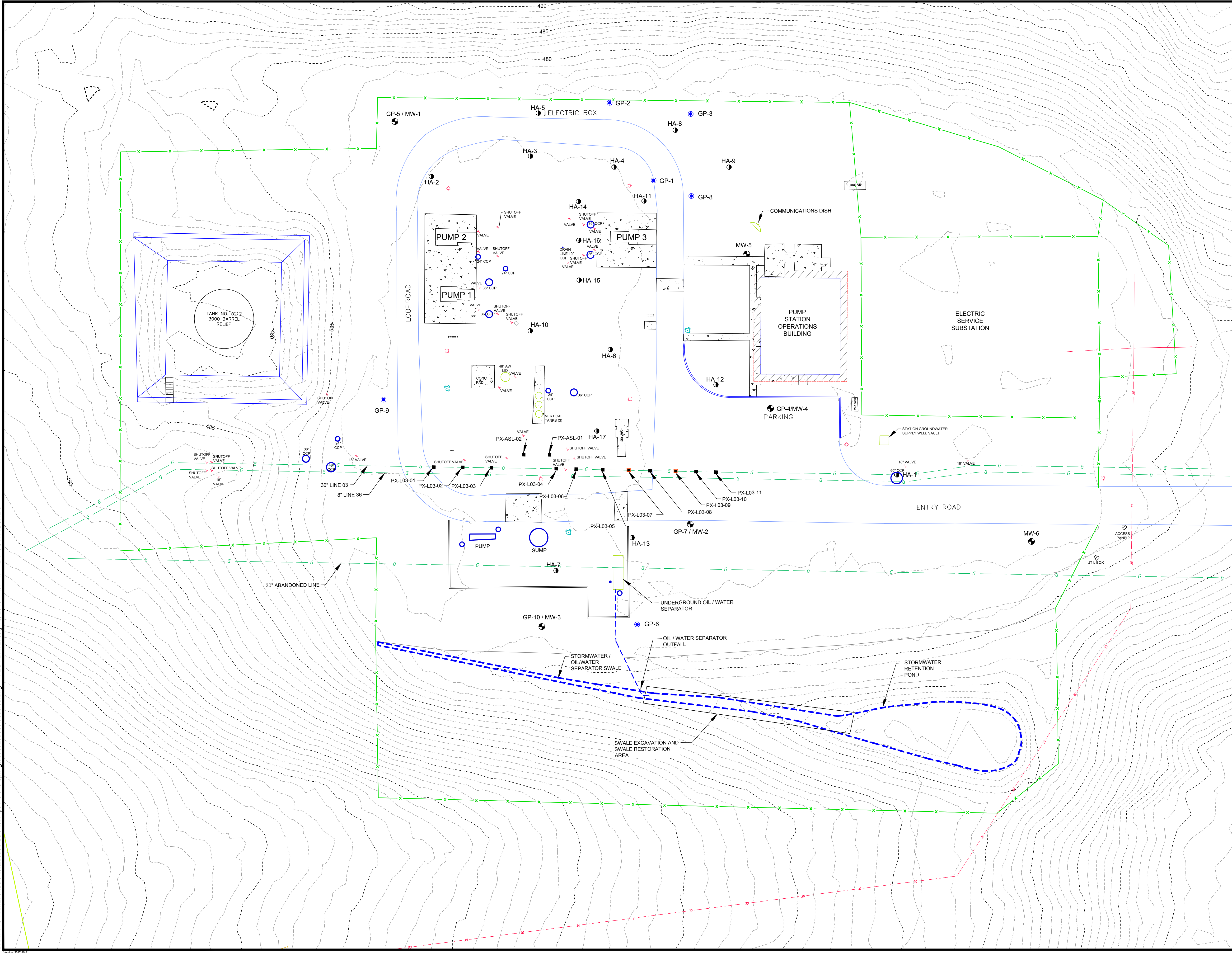
- NOTES:**
1. LOCATION OF YARD DRAIN EXCAVATION, STORMWATER SWALE, STORMWATER RETENTION POND, HAND AUGER SOIL BORINGS, AND POST EXCAVATION SOIL SAMPLES ARE APPROXIMATE.
 2. VALVE AND SHUTOFF VALVE LOCATIONS ARE SURVEYED GENERAL POINTS OF REFERENCE FOR PUMP STATION CONTROL POINTS AND PROCESS CONTROL FEATURES.
 3. AN ACCESS WELL IS AN OBSERVATION PORT TO SHALLOW SUBSURFACE VALVES AND CONTROL POINTS.
 4. POST EXCAVATION SOIL SAMPLES WERE EVALUATED AGAINST THE MARYLAND DEPARTMENT OF ENVIRONMENT (MDE) SOIL RESIDENTIAL CLEAN-UP STANDARD (RCS) FOR VOLATILE ORGANIC COMPOUNDS (VOCs), AND NON-RESIDENTIAL CLEAN-UP STANDARD FOR TOTAL PETROLEUM HYDROCARBON DIESEL RANGE ORGANICS (TPH-DRO) AND TOTAL PETROLEUM HYDROCARBON GASOLINE RANGE ORGANICS (TPH-GRO).
 5. THE AW-2, -3, AND -14 SAMPLE LOCATIONS WERE EXCAVATED FOR OFF-SITE DISPOSAL IN ASSOCIATION WITH PIPELINE LINE 03 RECOATING WORK.



PROJECT:		COLONIAL PIPELINE COMPANY BEL AIR PUMP STATION FALLSTON, HARFORD COUNTY, MARYLAND	
TITLE:		ACCESS WELL POST-EXCAVATION SAMPLE LOCATIONS	
DRAWN BY:	D. SIEWERTJO, DE LEON	PROJ. NO.:	299980.0000.0000
CHECKED BY:	B. HECKER	REVISED FIGURE 7	
APPROVED BY:	D. CARLSON		
DATE:	JUNE 2018		
FILE NO.:		299980.0000.03.dwg	

TRC 1601 Market Street Suite 2555 Philadelphia, PA 19103 Phone: 215.563.2122

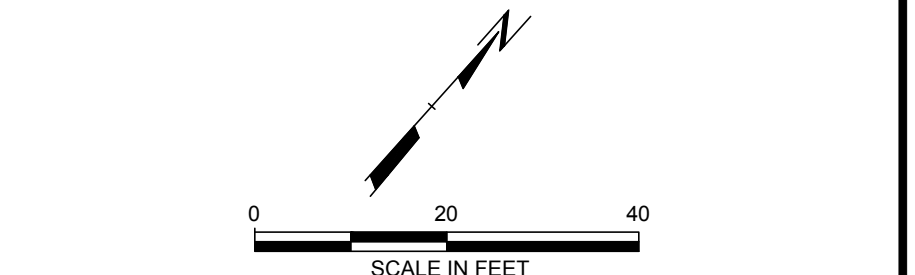
2034 -- USER: DSIEWERT -- ATTACHED REFS: -- ATTACHED IMAGES: --
 DRAWING NAME: J:\Colonial\299980 Colonial Pipeline and Spring\0000_299980.0000.03.dwg -- PLOT DATE: July 18, 2018 - 4:07PM -- LAYOUT: FIGURE 9



LEGEND

	GP-8	GEOPROBE BORING
	MW-5	MONITORING WELL
	HA-9	HAND AUGER BORING
	PX-L03-01	PX -LINE 03 POST EXCAVATION SAMPLE LOCATION
		SOIL TPH-DRO/TPH-GRO EXCEEDANCE
		LIGHT POST
		HYDRANT
		FENCE
		OVERHEAD ELECTRIC LINE
		UNDERGROUND GAS LINE

- NOTES:**
1. LOCATION OF YARD DRAIN EXCAVATION, STORMWATER SWALE, STORMWATER RETENTION POND, HAND AUGER SOIL BORINGS, AND POST EXCAVATION SOIL SAMPLES ARE APPROXIMATE.
 2. VALVE AND SHUTOFF VALVE LOCATIONS ARE SURVEYED GENERAL POINTS OF REFERENCE FOR PUMP STATION CONTROL POINTS AND PROCESS CONTROL FEATURES.
 3. POST EXCAVATION SOIL SAMPLES WERE EVALUATED AGAINST THE MARYLAND DEPARTMENT OF ENVIRONMENT (MDE) SOIL RESIDENTIAL CLEAN-UP STANDARD (RCS) FOR VOLATILE ORGANIC COMPOUNDS (VOCs), AND NON-RESIDENTIAL CLEAN-UP STANDARD FOR TOTAL PETROLEUM HYDROCARBON DIESEL RANGE ORGANICS (TPH-DRO) AND TOTAL PETROLEUM HYDROCARBON GASOLINE RANGE ORGANICS (TPH-GRO).
 4. ADDITIONAL SOIL SAMPLES WERE COLLECTED BELOW PX-L03-07 AND PX-L03-09 TO VERTICALLY DELINEATE SOIL QUALITY WHERE ADDITIONAL EXCAVATION WAS LIMITED DUE TO SAFETY AND STRUCTURAL CONSTRAINTS. THE DEEPER SOIL SAMPLES COLLECTED WERE BELOW THE APPLICABLE MDE SOIL STANDARDS.



PROJECT:		COLONIAL PIPELINE COMPANY BEL AIR PUMP STATION FALLSTON, HARFORD COUNTY, MARYLAND	
TITLE:		LINE 03 POST-EXCAVATION SAMPLE LOCATIONS	
DRAWN BY:	D. SIEWERT/O. DE LEON	PROJ. NO.:	299980.0000.0000
CHECKED BY:	B. HECKER	REVISED FIGURE 9	
APPROVED BY:	D. CARLSON		
DATE:	JUNE 2018		
		1601 Market Street Suite 2555 Philadelphia, PA 19103 Phone: 215.563.2122	
		FILE NO.:	299980.0000.03.dwg

TABLES



REVISED TABLE 1
Soil Analytical Data Summary - Yard Drain Post Excavation

Colonial Pipeline Company - Bel Air Pump Station
2942 Charles Street, Fallston, Harford County, Maryland

Sample No.:	PX-YD-1	PX-YD-2	PX-YD-3	PX-YD-4	PX-YD-5	PX-YD-6	PX-YD-7	PX-YD-8	PX-YD-9	PX-YD-10	PX-YD-11	PX-YD-11	PX-YD-12	PX-YD-13	PX-YD-13	PX-YD-14	PX-YD-15	PX-YD-16	PX-YD-16																							
Date Sampled:	3/13/2018	3/13/2018	3/13/2018	3/13/2018	3/13/2018	3/13/2018	3/13/2018	3/13/2018	3/13/2018	3/13/2018	3/13/2018	3/13/2018	3/14/2018	3/14/2018	4/4/2018	3/14/2018	3/14/2018	3/14/2018	6/14/2018																							
Lab Sample ID:	18031302-01	18031302-02	18031302-03	18031302-04	18031302-05	18031302-06	18031302-07	18031302-08	18031302-09	18031302-10	18031302-11	18031302-12	18031405-01	18031405-02	18040602-01	18031405-03	18031405-04	18031405-05	18061405-01																							
Lab:	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber																							
Parameter (mg/kg)	CAS No.	MD RCS																																								
Acetone	67-64-1	7000	0.051	U	0.046	U	0.065	U	0.057	U	43	U	36	U	5.4	U	6.2	U	0.058	U	0.048	U	0.051	U	0.051	U	0.27	U	56	U	NA	U	0.055	U	0.071	U	0.28	U	0.053	U		
Benzene	71-43-2	12	0.005	U	0.005	U	0.021	U	0.006	U	13	U	8.7	U	0.75	U	0.62	U	0.051	U	0.019	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
Bromodichloromethane	75-27-4	10	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
Bromoform	75-25-2	81	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
Bromomethane	74-83-9	11	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
2-Butanone (MEK)	78-93-3	4700	0.051	U	0.046	U	0.065	U	0.057	U	43	U	36	U	5.4	U	6.2	U	0.058	U	0.048	U	0.051	U	0.051	U	0.27	U	56	U	NA	U	0.055	U	0.071	U	0.28	U	0.053	U		
Carbon Disulfide	75-15-0	780	0.01	U	0.009	U	0.012	U	0.011	U	8.7	U	7.2	U	1.1	U	1.2	U	0.012	U	0.01	U	0.01	U	0.01	U	0.053	U	11	U	NA	U	0.011	U	0.014	U	0.057	U	0.011	U		
Carbon tetrachloride	56-23-5	4.9	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
Chlorobenzene	108-90-7	160	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
Chloroethane	75-00-3	220	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
Chloroform	67-66-3	78	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
Chloromethane	74-87-3	--	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
cis-1,2-Dichloroethene	156-59-2	78	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
cis-1,3-Dichloropropene	10061-01-5	6.4	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
Cyclohexane	110-82-7	--	0.005	U	0.005	U	0.007	U	0.006	U	9.6	U	6.1	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
1,2-Dibromo-3-chloropropane	96-12-8	0.2	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
Dibromochloromethane	124-48-1	7.6	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
1,2-Dibromoethane	106-93-4	0.32	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
1,2-Dichlorobenzene	95-50-1	700	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
1,3-Dichlorobenzene	541-73-1	23	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
1,4-Dichlorobenzene	106-46-7	27	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
Dichlorodifluoromethane	75-71-8	--	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
1,1-Dichloroethane	75-34-3	1600	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
1,2-Dichloroethane	107-06-2	7	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
1,1-Dichloroethene	75-35-4	390	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
1,2-Dichloropropane	78-87-5	9.4	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
1,3-Dichloropropene (total)	542-75-6	--	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Ethylbenzene	100-41-4	780	0.005	U	0.005	U	0.007	U	0.006	U	36	U	26	U	0.54	U	2.5	U	0.099	U	0.02	U	0.005	U	0.005	U	0.11	U	13	U	NA	U	0.005	U	0.007	U	0.47	U	0.005	U		
2-Hexanone	591-78-6	--	0.01	U	0.009	U	0.012	U	0.011	U	8.7	U	7.2	U	1.1	U	1.2	U	0.012	U	0.01	U	0.01	U	0.01	U	0.053	U	11	U	NA	U	0.011	U	0.014	U	0.057	U	0.011	U		
Isopropyl Ether	108-20-3	--	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.024	U	0.008	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
Isopropylbenzene	98-82-8	780	0.005	U	0.005	U	0.007	U	0.006	U	14	U	10	U	0.54	U	0.75	U	0.022	U	0.005	U	0.005	U	0.005	U	0.031	U	5.6	U	NA	U	0.005	U	0.007	U	0.11	U	0.005	U		
Methyl Acetate	79-20-9	--	0.026	U	0.023	U	0.033	U	0.028	U	22	U	18	U	2.7	U	3.1	U	0.029	U	0.024	U	0.026	U	0.025	U	0.13	U	28	U	NA	U	0.027	U	0.035	U	0.14	U	0.027	U		
Methyl Tert Butyl Ether (MTBE)	1634-04-4	160	0.005	U	0.005	U	0.007	U	0.006	U	4.3	U	3.6	U	0.54	U	0.62	U	0.006	U	0.005	U	0.005	U	0.005	U	0.027	U	5.6	U	NA	U	0.005	U	0.007	U	0.028	U	0.005	U		
4-methyl-2-pentanone (MIBK)	108-10-1	--	0.01	U	0.009	U	0.012	U	0.011	U	8.7	U	7.2	U	1.1	U	1.2	U	0.012	U	0.01	U	0.01	U	0.01	U	0.053	U	11	U	NA	U	0.011	U	0.014	U	0.057	U	0.011	U		
Methylcyclohexane</																																										

REVISED TABLE 1
Soil Analytical Data Summary - Yard Drain Post Excavation

Colonial Pipeline Company - Bel Air Pump Station
2942 Charles Street, Fallston, Harford County, Maryland

Sample No.:	PX-YD-31	PX-YD-32	PX-YD-33	PX-YD-33	PX-YD-34	PX-YD-35	PX-YD-35	PX-YD-36	PX-YD-37	PX-YD-38	PX-YD-38	PX-YD-39	PX-YD-39	PX-YD-40	PX-YD-41
Date Sampled:	3/26/2018	3/15/2018	3/15/2018	3/26/2018	3/15/2018	3/15/2018	3/26/2018	3/15/2018	3/15/2018	3/15/2018	3/26/2018	3/15/2018	3/26/2018	3/15/2018	3/15/2018
Sample Depth (ft):	3-3.5	2-2.5	2-2.5	2.75-3.25	2-2.5	2-2.5	3.75-4.25	2-2.5	2-2.5	2-2.5	3.25-3.75	2-2.5	3.25-3.75	2-2.5	2-2.5
Lab Sample ID:	18032601-03	18031507-08	18031507-09	18032601-02	18031507-10	18031507-11	18032601-01	18031507-12	18031507-13	18031507-14	18032601-05	18031507-15	18032601-06	18031507-16	18031507-17
Lab:	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber

Parameter (mg/kg)	CAS No.	MD RCS	NA	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U						
Acetone	67-64-1	7000	NA	0.068	U	0.067	U	NA	0.056	U	5.9	U	NA	0.062	U	0.3	U	0.12	NA	0.064	U	NA	0.061	U	0.06	U
Benzene	71-43-2	12	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.009	NA	0.006	U	NA	0.006	U	0.022	U
Bromodichloromethane	75-27-4	10	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Bromoform	75-25-2	81	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Bromomethane	74-83-9	11	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
2-Butanone (MEK)	78-93-3	4700	NA	0.068	U	0.067	U	NA	0.056	U	5.9	U	NA	0.062	U	0.3	U	0.1	NA	0.064	U	NA	0.061	U	0.064	U
Carbon Disulfide	75-15-0	780	NA	0.014	U	0.013	U	NA	0.011	U	1.2	U	NA	0.012	U	0.061	U	0.013	U	0.013	U	NA	0.012	U	0.012	U
Carbon tetrachloride	56-23-5	4.9	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Chlorobenzene	108-90-7	160	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Chloroethane	75-00-3	220	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Chloroform	67-66-3	78	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Chloromethane	74-87-3	--	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
cis-1,2-Dichloroethene	156-59-2	78	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
cis-1,3-Dichloropropene	10061-01-5	6.4	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Cyclohexane	110-82-7	--	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
1,2-Dibromo-3-chloropropane	96-12-8	0.2	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Dibromochloromethane	124-48-1	7.6	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
1,2-Dibromoethane	106-93-4	0.32	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
1,2-Dichlorobenzene	95-50-1	700	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
1,3-Dichlorobenzene	541-73-1	23	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
1,4-Dichlorobenzene	106-46-7	27	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Dichlorodifluoromethane	75-71-8	--	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
1,1-Dichloroethane	75-34-3	1600	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
1,2-Dichloroethane	107-06-2	7	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
1,1-Dichloroethene	75-35-4	390	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
1,2-Dichloropropane	78-87-5	9.4	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
1,3-Dichloropropene (total)	542-75-6	--	NA	ND		ND		NA	ND		ND		NA	ND		ND		ND		NA	ND		ND		ND	
Ethylbenzene	100-41-4	780	NA	0.007	U	0.007	U	NA	0.006	U	0.74	U	NA	0.006	U	0.065	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
2-Hexanone	591-78-6	--	NA	0.014	U	0.013	U	NA	0.011	U	1.2	U	NA	0.012	U	0.061	U	0.013	U	0.013	U	NA	0.012	U	0.012	U
Isopropyl Ether	108-20-3	--	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.044	U	0.044	U	NA	0.006	U	0.006	U
Isopropylbenzene	98-82-8	780	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.034	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Methyl Acetate	79-20-9	--	NA	0.034	U	0.034	U	NA	0.028	U	2.9	U	NA	0.031	U	0.15	U	0.031	U	0.032	U	NA	0.032	U	0.03	U
Methyl Tert Butyl Ether (MTBE)	1634-04-4	160	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.023	U	0.023	U	NA	0.006	U	0.006	U
4-methyl-2-pentanone (MIBK)	108-10-1	--	NA	0.014	U	0.013	U	NA	0.011	U	1.2	U	NA	0.012	U	0.061	U	0.013	U	0.013	U	NA	0.012	U	0.012	U
Methylcyclohexane	108-87-2	--	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Methylene chloride	75-09-2	85	NA	0.034	U	0.034	U	NA	0.028	U	2.9	U	NA	0.031	U	0.15	U	0.031	U	0.032	U	NA	0.032	U	0.03	U
Naphthalene	91-20-3	160	NA	0.014	U	0.014	U	NA	0.011	U	1.2	U	NA	0.012	U	0.24	U	0.013	U	0.013	U	NA	0.012	U	0.012	U
Styrene	100-42-5	1600	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
tert-Amyl Alcohol (TAA)	75-85-4	--	NA	0.034	U	0.034	U	NA	0.028	U	2.9	U	NA	0.031	U	0.15	U	0.031	U	0.032	U	NA	0.032	U	0.03	U
tert-Amyl Ethyl Ether (TAEE)	919-94-8	--	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
tert-Amyl Methyl Ether	994-05-8	--	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
tert-Butyl Alcohol	75-65-0	--	NA	0.034	U	0.034	U	NA	0.028	U	2.9	U	NA	0.031	U	0.15	U	0.031	U	0.032	U	NA	0.032	U	0.03	U
tert-Butyl Ethyl Ether	637-92-3	--	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
1,1,2,2-Tetrachloroethane	79-34-5	3.2	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U	NA	0.006	U	0.03	U	0.006	U	0.006	U	NA	0.006	U	0.006	U
Tetrachloroethene	127-18-4	1.2	NA	0.007	U	0.007	U	NA	0.006	U	0.59	U														

REVISED TABLE 2

Soil Analytical Data Summary - Access Well Post Excavation



Colonial Pipeline Company - Bel Air Pump Station
2942 Charles Street, Fallston, Harford County, Maryland

TRC No.:	AW-9	AW-8	AW-7	AW-6	AW-5	AW-5	AW-4	AW-1	AW-2	AW-3	AW-10	AW-11	AW-12	AW-12	AW-12	AW-13	AW-14																			
Sample No.:	PX-AW-01	PX-AW-02	PX-AW-03	PX-AW-04	PX-AW-05	PX-AW-05	PX-AW-06	PX-AW-07	PX-AW-08	PX-AW-08	PX-AW-09	PX-AW-10	PX-AW-11	PX-AW-12	PX-AW-12	PX-AW-13	PX-AW-14																			
Date Sampled:	3/19/2018	3/19/2018	3/19/2018	3/19/2018	3/19/2018	6/14/2018	3/19/2018	3/19/2018	3/19/2018	3/19/2018	3/19/2018	3/19/2018	3/19/2018	3/19/2018	3/26/2018	6/14/2018	3/19/2018																			
Sample Depth (ft):	3-3.5	3-3.5	3-3.5	3-3.5	3-3.5	8-8.5	3-3.5	3-3.5	3-3.5	3-3.5	3-3.5	3-3.5	3-3.5	3-3.5	4-4.5	5-5.5	3-3.5																			
Lab Sample ID:	18031904-13	18031904-14	18031904-15	18031904-16	18031904-17	18061405-04	18031904-18	18031904-19	18031904-20	18031904-21	18031904-22	18031904-23	18031904-24	18032601-07	18061405-03	18031904-25	18031904-26																			
Lab:	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber	Caliber																			
Parameter (mg/kg)	CAS No.	MD RCS																																		
Acetone	67-64-1	7000	0.051	U	0.048	U	0.05	U	0.057	U	0.18		0.058	U	0.058	U	0.16		0.51	U	7.2	U	0.056	U	0.047	U	0.077	U	NA		0.049	U	0.063	U	6.7	U
Benzene	71-43-2	12	0.005	U	0.005	U	0.23		0.006	U	0.071		0.005	U	0.13		0.04		0.051	U	0.72	U	0.006	U	0.018		0.008	U	NA		0.005	U	0.006	U	0.67	U
Bromodichloromethane	75-27-4	10	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
Bromoform	75-25-2	81	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
Bromomethane	74-83-9	11	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
2-Butanone (MEK)	78-93-3	4700	0.051	U	0.048	U	0.05	U	0.057	U	0.18		0.058	U	0.065		0.056		0.51	U	7.2	U	0.056	U	0.047	U	0.077	U	NA		0.049	U	0.063	U	6.7	U
Carbon Disulfide	75-15-0	780	0.01	U	0.01	U	0.01	U	0.011	U	0.012	U	0.012	U	0.012	U	0.01	U	0.1	U	1.4	U	0.011	U	0.009	U	0.015	U	NA		0.01	U	0.013	U	1.3	U
Carbon tetrachloride	56-23-5	4.9	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
Chlorobenzene	108-90-7	160	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
Chloroethane	75-00-3	220	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
Chloroform	67-66-3	78	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
Chloromethane	74-87-3	--	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
cis-1,2-Dichloroethene	156-59-2	78	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
cis-1,3-Dichloropropene	10061-01-5	6.4	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
Cyclohexane	110-82-7	--	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.009		0.009		0.051	U	0.72	U	0.006	U	0.014		0.008	U	NA		0.005	U	0.006	U	1.3	
1,2-Dibromo-3-chloropropane	96-12-8	0.2	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
Dibromochloromethane	124-48-1	7.6	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
1,2-Dibromoethane	106-93-4	0.32	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
1,2-Dichlorobenzene	95-50-1	700	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
1,3-Dichlorobenzene	541-73-1	23	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
1,4-Dichlorobenzene	106-46-7	27	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
Dichlorodifluoromethane	75-71-8	--	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
1,1-Dichloroethane	75-34-3	1600	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
1,2-Dichloroethane	107-06-2	7	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
1,1-Dichloroethene	75-35-4	390	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
1,2-Dichloropropane	78-87-5	9.4	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
1,3-Dichloropropene (total)	542-75-6	--	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		NA		ND		ND		ND			
Ethylbenzene	100-41-4	780	0.005	U	0.006		0.024		0.006	U	0.006	U	0.005	U	0.006	U	0.023		0.051	U	2.9		0.006	U	0.08		0.008	U	NA		0.005	U	0.006	U	6.4	
2-Hexanone	591-78-6	--	0.01	U	0.01	U	0.01	U	0.011	U	0.012	U	0.012	U	0.012	U	0.01	U	0.1	U	1.4	U	0.011	U	0.009	U	0.015	U	NA		0.01	U	0.013	U	1.3	U
Isopropyl Ether	108-20-3	--	0.005	U	0.005	U	0.15		0.006	U	0.046		0.005	U	0.18		0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.01		NA		0.005	U	0.006	U	0.67	U
Isopropylbenzene	98-82-8	780	0.005	U	0.005	U	0.005	U	0.006	U	0.006	U	0.005	U	0.006	U	0.005	U	0.14		2.7		0.006	U	0.036		0.015		NA		0.005	U	0.006	U	5.1	
Methyl Acetate	79-20-9	--	0.026	U	0.024	U	0.025	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.25	U	3.6	U	0.028	U	0.023	U	0.039	U	NA		0.026	U	0.032	U	3.3	U
Methyl Tert Butyl Ether (MTBE)	1634-04-4	160	0.005	U	0.005	U	0.029		0.006	U	0.023		0.005	U	0.073		0.005	U	0.051	U	0.72	U	0.006	U	0.005	U	0.008	U	NA		0.005	U	0.006	U	0.67	U
4-methyl-2-pentanone (MIBK)	108-10-1	--	0.01	U	0.01	U	0.01	U	0.011	U	0.012	U	0.012	U	0.012	U	0.01	U	0.1	U	1.4	U	0.011</													

ADDENDUM TABLE 3
Soil Analytical Data Summary - Alternate Suction Line



Colonial Pipeline Company - Bel Air Pump Station
 2942 Charles Street, Fallston, Harford, County, Maryland

Sample No.: PX-ASL-01 PX-ASL-02
 Date Sampled: 7/11/2018 7/11/2018
 Sample Depth (ft): 8-8.5 8-8.5
 Lab Sample ID: 18071105-01 18071105-02
 Lab: Caliber Caliber

Parameter (mg/kg)	CAS No.	MD RCS				
Acetone	67-64-1	7000	0.076	U	0.075	U
Benzene	71-43-2	12	0.005	U	0.005	U
Bromodichloromethane	75-27-4	10	0.005	U	0.005	U
Bromoform	75-25-2	81	0.005	U	0.005	U
Bromomethane	74-83-9	11	0.005	U	0.005	U
2-Butanone (MEK)	78-93-3	4700	0.051	U	0.050	U
Carbon Disulfide	75-15-0	780	0.010	U	0.010	U
Carbon tetrachloride	56-23-5	4.9	0.005	U	0.005	U
Chlorobenzene	108-90-7	160	0.005	U	0.005	U
Chloroethane	75-00-3	220	0.005	U	0.005	U
Chloroform	67-66-3	78	0.005	U	0.005	U
Chloromethane	74-87-3	--	0.005	U	0.005	U
cis-1,2-Dichloroethene	156-59-2	78	0.005	U	0.005	U
cis-1,3-Dichloropropene	10061-01-5	6.4	0.005	U	0.005	U
Cyclohexane	110-82-7	--	0.005	U	0.005	U
1,2-Dibromo-3-chloropropane	96-12-8	0.2	0.005	U	0.005	U
Dibromochloromethane	124-48-1	7.6	0.005	U	0.005	U
1,2-Dibromoethane	106-93-4	0.32	0.005	U	0.005	U
1,2-Dichlorobenzene	95-50-1	700	0.005	U	0.005	U
1,3-Dichlorobenzene	541-73-1	23	0.005	U	0.005	U
1,4-Dichlorobenzene	106-46-7	27	0.005	U	0.005	U
Dichlorodifluoromethane	75-71-8	--	0.005	U	0.005	U
1,1-Dichloroethane	75-34-3	1600	0.005	U	0.005	U
1,2-Dichloroethane	107-06-2	7	0.005	U	0.005	U
1,1-Dichloroethene	75-35-4	390	0.005	U	0.005	U
1,2-Dichloropropane	78-87-5	9.4	0.005	U	0.005	U
1,3-Dichloropropene (total)	542-75-6	--	NA		NA	
Ethylbenzene	100-41-4	780	0.005	U	0.005	U
2-Hexanone	591-78-6	--	0.010	U	0.010	U
Isopropyl Ether	108-20-3	--	NA		NA	
Isopropylbenzene	98-82-8	780	0.005	U	0.005	U
Methyl Acetate	79-20-9	--	0.025	U	0.025	U
Methyl Tert Butyl Ether (MTBE)	1634-04-4	160	0.005	U	0.005	U
4-methyl-2-pentanone (MIBK)	108-10-1	--	0.010	U	0.010	U
Methylcyclohexane	108-87-2	--	0.005	U	0.005	U
Methylene chloride	75-09-2	85	0.025	U	0.025	U
Naphthalene	91-20-3	160	0.010	U	0.010	U
Styrene	100-42-5	1600	0.005	U	0.005	U
tert-Amyl Alcohol (TAA)	75-85-4	--	0.025	U	0.025	U
tert-Amyl Ethyl Ether (TAEE)	919-94-8	--	0.005	U	0.005	U
tert-Amyl Methyl Ether	994-05-8	--	0.005	U	0.005	U
tert-Butyl Alcohol	75-65-0	--	0.025	U	0.025	U
tert-Butyl Ethyl Ether	637-92-3	--	NA		NA	
1,1,2,2-Tetrachloroethane	79-34-5	3.2	0.005	U	0.005	U
Tetrachloroethene	127-18-4	1.2	0.005	U	0.005	U
Toluene	108-88-3	630	0.005	U	0.005	U
trans-1,2-Dichloroethene	156-60-5	160	0.005	U	0.005	U
trans-1,3-Dichloropropene	10061-02-6	6.4	0.005	U	0.005	U
Freon 113	76-13-1	--	NA		NA	
1,1,1-Trichloroethane	71-55-6	16000	0.005	U	0.005	U
1,1,2-Trichloroethane	79-00-5	11	0.005	U	0.005	U
Trichloroethene	79-01-6	1.6	0.005	U	0.005	U
Trichlorofluoromethane	75-69-4	--	0.005	U	0.005	U
1,2,4-Trichlorobenzene	120-82-1	78	0.005	U	0.005	U
Vinyl Chloride	75-01-4	0.09	0.005	U	0.005	U
m,p-Xylene	179601-23-1	--	0.011	U	0.006	
o-Xylene	95-47-6	--	0.005	U	0.005	U
Xylenes (total)	1330-20-7	1600	NA		NA	
Parameter (mg/kg)	CAS No.	MD NRCS				
Diesel Range Organics (DRO)	68476-30-2	620	24	U	26	U
Gasoline Range Organics (GRO)	8006-61-9	620	0.22	U	0.24	U

Values are reported in milligrams per kilogram (mg/kg)
 RCS = MD's Residential Clean-up Standard
 NRCS = MD's Non-Residential Clean-up Standard
 Bold indicates concentrations above the MD RCS or NRCS
 ND = Not Detected
 U = Compound not detected above PQL
 Values in italics indicate PQL above applicable criterion.
 NA = Not Analyzed

**ADDENDUM TABLE 4
Monitoring Well Gauging Data**



Colonial Pipeline Company - Bel Air Pump Station
2942 Charles Street, Fallston, Harford, County, Maryland

Gauging Date	Top of Casing Elevation	Depth to Water	Depth to Product	Product Thickness	Groundwater Elevation
MW-1					
4/4/2018	480.73	8.28	--	--	472.45
5/30/2018	480.73	5.79	--	--	474.94
6/28/2018	480.73	5.27	--	--	475.46
7/11/2018	480.73	6.21			474.52
MW-2					
4/4/2018	478.20	12.98	--	--	465.22
5/30/2018	478.20	10.42	--	--	467.78
6/28/2018	478.20	9.98	--	--	468.22
7/11/2018	478.20	10.61			467.59
MW-3					
4/4/2018	476.86	19.17	--	--	457.69
5/30/2018	476.86	17.75	--	--	459.11
6/28/2018	476.86	17.37	--	--	459.49
7/11/2018	476.86	17.67			459.19
MW-4					
4/4/2018	477.15	15.51	--	--	461.64
5/30/2018	477.15	13.52	--	--	463.63
6/28/2018	477.15	12.34	--	--	464.81
7/11/2018	477.15	12.92			464.23
MW-5					
4/4/2018	477.44	14.01	--	--	463.43
5/30/2018	477.44	11.76	--	--	465.68
6/28/2018	477.44	10.67	--	--	466.77
7/11/2018	477.44	11.31			466.13
MW-6					
4/4/2018	480.62	29.04	--	--	451.58
5/30/2018	480.62	27.35	--	--	453.27
6/28/2018	480.62	25.87	--	--	454.75
7/11/2018	480.62	26.46			454.16
Top of casing (TOC) elevation in feet above mean sea level (amsl).					
Depth to water and depth to product in feet below TOC.					
Groundwater elevation in feet amsl.					
-- = product not present.					

ATTACHMENT 1
LABORATORY REPORTS

ATTACHMENT 2

MW-5 WELL LOG