Consulting
Engineers and
Scientists

September 3, 2024 (Revision 1, September 6, 2024)
Project 2304769

Via Email: kate.ansalvish1@maryland.gov; anuradha.mohanty@maryland.gov

Ms. Kate Ansalvish
Maryland Department of Environment
Water and Science Administration
1800 Washington Blvd
Baltimore, Maryland 21230

Ms. Anuradha Mohanty
Project Manager
Maryland Department of the Environment
Land and Materials Administration
1800 Washington Boulevard, Suite: 625
Baltimore, Maryland 21230

Re: Basin DA-2 and DA-11 Water Management Plan
Quantum Maryland
Former Alcoa Eastalco Property
Frederick, Maryland

Dear Ms. Ansalvish and Ms. Mohanty:

GEI Consultants, Inc. (GEI) and Quantum Maryland, LLC are requesting your approval of the water management plan described herein for the dewatering of stormwater basins DA-2 and DA-11 as part of the Quantum Place (QPS) Improvement Plan. As you are aware, completion of construction of these stormwater basins is the first major step in the construction sequence of QPS. QPS construction is part of the scope of work described within Environmental Management Plan 2 (EMP-2 Rev 2, dated May 20, 2024). It is also the subject of MDE construction stormwater permit Notices of Intent (NOIs) 20CPK08SX (QL) and 20CPK08SY (STO) which completed public notice August 27, 2024 and are pending issuance by MDE. The locations of basins DA-2 and DA-11 are shown on **Figure 1**.

An LMA-approved management procedure for containerization, testing, and use of construction water for dust control is described in Appendix G of EMP-2.[1] On the WSA side, a July 15, 2024

[1] Appendix G of EMP's 1A, 2, 3, 4 contained substantially similar water testing and management procedures. Based on discussion with MDE after approval of EMP-2 Rev 2, testing procedures and standards in EMP-1A Appendix G were revised and approved. The same revisions were submitted as a draft modification to EMP-2 as DRAFT EMP-2 Rev 3 (August 13, 2024); however that revision was returned by MDE for reasons unrelated to Appendix G procedures. This letter presumes that approval of the revised EMP-2 Appendix G will be administratively addressed, and references herein to EMP-2 Appendix G refer to the terms of the submitted revision.

letter and procedure describe WSA requirements for testing of containerized water and the approval process for use for dust control.

The combined LMA (Appendix G) and WSA (July 15 letter) procedures have been applied to evaluate and approve seven frac tanks full of water removed from Basin DA-11 in March 2024 and that water is slated for use for site dust control.

The reason for this letter is to describe the procedure that will be used for removal and management of the entire volume of water present in basins DA-2 and DA-11 as well as for maintaining dry conditions during the remainder of the basin construction and lining process. The method described in Appendix G to EMP-2 Rev 2 is not practical for management of the entire volume of water present in DA-2 and DA-11.

The proposed water management plan for basins DA-2 and DA-11 will:

- Effectively dewater both basins at a rate necessary to empty the basins and keep them dry during basin construction/lining;
- Provide additional capacity to address precipitation inflow (primarily observed in DA-11) and groundwater seepage (more likely in DA-11 based on basin depth relative to groundwater but also possible in DA-11);
- Ensure the same water quality goals as presently required; and
- Reduce truck traffic to the site (for frac tanks and/or water shipments).

As described below the DA-11 volume has fluctuated between approximately 500,000 and 3,000,000 gallons and is now approximately 1,100,000 gallons.

The proposed plan involves testing of basin water (in the basins) followed by surface water discharge of as much of the water as possible without affecting basin water quality (such as by turbidity or groundwater influence as the bottom of the basins is approached). Testing and discharge concepts have been discussed with both WSA and LMA since March 2024 and were most recently discussed in detail with WSA on August 14, 2024. LMA was invited to the August 14 meeting but ultimately was not available to attend. Therefore, a few elements in this letter are underlined to point out a limited number of issues raised by LMA prior to the August 14 meeting which we believe are addressed in this workplan. These items are described further in the text of this plan and include:

- QL requests LMA and WSA concurrence that the chronic fresh water standard of 0.0052 mg/l is not a directly applicable discharge standard for the short-term discharge of the DA-11 water as most recently tested (with individual concentrations reported up to 0.0060 mg/l and an average less than 0.0053 mg/l) and that discharge to ground surface of this water, which meets the drinking water MCL and the acute surface water criterion, is acceptable.
- QL requests LMA and WSA concurrence that short-term discharge of DA-2 water to ground surface is acceptable. The most recent samples were all non-detect for DRO except for one sample at 54 ug/l (J-flag estimated value). There is no MCL or surface water criterion for DRO and the groundwater cleanup standard is 47 ug/l.

- QL requests LMA concurrence that the proposed DA-11 discharge location to the ground surface in a well-vegetated area of the SMA is acceptable.

We believe that if agreement is reached on these three items, the remainder of the plan should be approvable as written, subject to appropriate technical review.

Stormwater Basins Recent Actions and Data

Rain events during the early spring of 2024 filled stormwater Basin DA-11 to beyond capacity (top of berm). Completion of basin construction including the spillway and liner has not yet been completed. Construction is authorized under EMP-2 and the 20-CP construction stormwater permit has completed public notice and is expected to be issued within the week.

GEI requested and received approval from the Maryland Department of the Environment (MDE) to dewater the basin and place the water into on-site frac tanks per the water management procedure of EMP-1A at the same time that procedure was being written into EMP-2 (which includes Quantum Place South and the basins).

Approximately 200,000 gallons of water was pumped from Basin DA-11 into 10 on-site frac tanks. The dewatering was conducted from April 5 through April 11, 2024 and resulted in lowering the basin water level by approximately 6 inches. Analytical samples were collected from each frac tank (in addition to the initial basin water sample) and sent for laboratory analysis.

The basin water sample and 7 of the 10 tank samples met MDE drinking water standards for all parameters tested (including fluoride, cyanide, pH, DRO, GRO, metals, VOCs, PAHs, PCBs, pesticides). Water in the three tanks which did not pass (tanks A652, N48966, and A1930) was disposed off-site; however, we suspect this was due to cleanliness of the tanks themselves as the basin water sample met MDE drinking water standards. The remaining 7 tanks (A4712, N48962, A2636, A1173, A4209, A3718, A4832) remain on-site and have been approved by LMA and WSA for dust control use.

Basin Water Sampling and Results

Eight water samples were collected by Tetra Tech from Basin DA-11 on June 4, 2024 in accordance with an LMA-approved sampling plan. Four samples were collected from one foot below the water surface and another four samples were collected at prescribed depths. The water samples were analyzed for the following parameters: pH, fluoride, free cyanide, priority pollutant metals (dissolved), volatile organic compounds, polycyclic aromatic hydrocarbons, polychlorinated biphenyls, and total petroleum hydrocarbons (diesel range organics/gasoline range organics). Additionally, field turbidity readings were collected at one-foot depth increments from the surface to base of the basin at the time of the sampling.

On June 5, 2024 six samples were collected from the smaller Basin DA-2 (three shallow and three at varying depth) and tested for the same parameters.

Sample results for each basin are tabulated and compared to MDE standards and attached to this letter (**Tables 1 and 2**). The WSA July 15 procedure requires data comparison to MCLs and acute fresh surface water criteria. Based on the LMA Appendix G procedure, samples are compared to MCLs, and where an MCL does not exist compared to MDE groundwater cleanup standards. Per the footnote on the tables, the Environmental Covenant (EC) additionally refers to the chronic surface water criteria of 0.0052 mg/l for free cyanide, but does not specify the chronic free cyanide criterion as a cleanup standard nor discharge standard under the EC/SMP. Combining LMA and WSA requirements, the tables flag (highlight) any exceedance of acute surface water criteria, any exceedance of MCLs, and any exceedance of a groundwater standard where an MCL does not exist. As shown in the tables, there were no exceedances of these standards (MCL, acute surface water standard, and GWCS where an MCL does not exist). The chronic free cyanide criteria is discussed separately below.

Basin DA-11 Results

- All eight samples from DA-11 met all applicable requirements for all parameters tested.
- For free cyanide:
  - Standards are:
    - The drinking water MCL is 0.2 mg/l. This is the cleanup standard specified in the former Alcoa ACO.
    - The acute fresh water standard is 0.022 mg/l
    - The chronic fresh water standard is 0.0052 mg/l. This value is referenced in the Groundwater and Surface Water Monitoring Plan (Tetra Tech, 2011; Exhibit F of the EC), but is not specified as a cleanup standard nor discharge standard under the EC/SMP.
    - The laboratory reporting limit is 0.0050 mg/l.
  - The eight sample results include 5 samples <0.0050 mg/l, one sample at 0.0055 mg/l, and two samples at 0.0060 mg/l (average of <0.0053 mg/l). These individual values and the basin average are all below the drinking water MCL and the acute fresh water standard.
  - QL requests LMA and WSA concurrence that the chronic fresh water standard of 0.0052 mg/l is not a directly applicable discharge standard for the short-term discharge of the DA-11 water as most recently tested (with individual concentrations reported up to 0.0060 mg/l and an average less than 0.0053 mg/l).

Basin DA-2 Results

- Aside from diesel range organics (DRO [C10-C28]), all six samples from DA-2 met all applicable requirements for all parameters tested (including chronic free cyanide).
- For DRO:
  - Standards are:
    - There is no drinking water MCL
    - There is no acute fresh water standard
    - The groundwater cleanup standard is 47 ug/l
    - The laboratory reporting limit varies per sample between 45 ug/l and 47 ug/l

- The six sample results include 5 non-detect samples and one sample at 54 ug/l (J-flag estimated value).
- QL requests LMA and WSA concurrence that short-term discharge of DA-2 water to ground surface is acceptable and that the single estimated DRO value of 54 ug/l does not prohibit discharge of the DA-2 water as most recently tested.

Sampling and Discharge Plan – DA-11

DA-11 Volume

Basin DA-11 is approximately 11 feet deep from top of existing berm to base of the sediment trap. Timmons Group has surveyed and provided elevations for Basin DA-11 and placed two water monitoring posts in the basin to determine water volumes (one near the west edge useful for higher water elevations and one in the center capable of reading lower water elevations). A table was developed that correlates the elevation of the water with cubic feet of water in the basin (**Attachment 1**). **Attachment 1** also includes an elevation contour map of DA-11 as it presently exists.

The highest recorded measurement (early April of 2024) was 322.38 (full capacity) or approximately 2,700,000 gallons of water. After removal of approximately 200,000 gallons to tanks, the water level continued to decrease during summer months reaching a low of approximately 550,000 gallons. The approximate 5-inch rainfall on/around August 8 then increased the basin water volume to approximately 1,300,000 gallons. The current water level is approximately at elevation 318 or approximately 1,250,000 gallons based on the Timmons table.

DA-11 De-Watering

GEI evaluated locations adjacent to Basin DA-11 and determined that a swale located to the southwest of Basin DA-11 would be the preferred location to direct discharge the water (**Figure 2**) for several reasons. First, the channel at this location has fully mature vegetative (grass) cover, a broad cross-section, and minimum longitudinal slope which will minimize potential soil erosion. Second, this swale has no water during dry periods and it regularly conveys many times more water than proposed in this plan during storm events. Third, this is the same swale that will convey discharge from DA-11 when fully constructed and operational (again, at a higher rate than the proposed discharge). Therefore, discharging water from Basin DA-11 into the swale is not expected to result in any impacts to the unnamed tributary to Tuscarora Creek. In initial telephone discussion, LMA has pointed out that the swale is located within the SMA as well as (in part) adjacent to the South Landfill and expressed concerns about discharges within the SMA. For the reasons already described, the swale adjacent to Basin DA-11 remains the location recommended by GEI. If MDE has a preferred discharge location we can extend a discharge hose to such location.

A floating inlet located (tethered) at the deepest part of the basin (the western half of the basin where the base elevation is approximately 310.3) would be used to pump water from the basin to minimize sediment disturbance and lessen the amount of sediment in the discharge. The depth to which we can dewater sediment-free will be verified in advance by turbidity sampling in the basin, with a goal of removing approximately 80-90% of the water. For reference, dewatering to a pool elevation of 313.0 would leave 2 feet remaining at the pump location while exposing approximately 1/2 of the basin base and leaving 154,000 gallons in the basin (88% removal).

The actual point of cessation would be based on the testing procedure below rather than a specific depth. The goal of the testing procedure is primarily to identify influence of groundwater inflow (which could contribute fluoride) or sediment. Both of these parameters can be measured in real time with field instruments.

Turbidity will be monitored at the point of discharge using an Apera-TN420 instrument or similar to confirm that effluent discharge turbidity levels are less than 150 Nephelometric Turbidity Units (NTU). Turbidity monitoring will be conducted every 4 hours during initial discharge. If turbidity monitoring indicates elevated readings (approaching the 150 NTU limit), pumping rates will be slowed to meet appropriate discharge parameters.

Fluoride will be measured on the same frequency using an ExTech FL700 Field Fluoride Meter or similar for comparison to the 4 mg/l limit.

GEI discussed with WSA the possibility of collecting periodic laboratory samples for other potential groundwater contaminants. However, based on available groundwater data in the vicinity of DA-11, we recommend that the proposed fluoride field sampling is adequate to this task.

As specified by WSA, water must be discharged in a manner with a linear velocity of less than 4 linear feet per second. A sediment filter bag would be used at the point of discharge to provide gentle flow under 4 feet per second as well as to provide an additional control of sediment discharge.

When water can no longer be directly discharged as evidenced by a sustained rise in turbidity or fluoride, remaining water would be pumped to tank(s) for testing and subsequent dust control use or discharge (either of which would be based on testing and approval by WSA and LMA).

In order to provide adequate tank capacity for the bottom portion of the basin (still up to 154,000 gallons in the example above) and to provide for maintenance pumping during basin construction and lining, QL may elect to use larger rental tanks such as 100,000 to 200,000-gallon bladder tanks or field assembled rental tank(s) of 1,000,000 to 2,500,000 gallon capacity.

DA-11 Pumping Rates and Timeframe

QL proposes to use a 4-inch portable pump with a nominal flow rate of 1,200 gallons per minute for approximately 8 hours per day or approximately 576,000 gallons per day. This rate is adequate to discharge the present basin volume in approximately 3 working days.

The proposed basin discharge flow rate of 1200 gallons per minute (based on typical discharge of a 4-inch pump) is equal to approximately 2.67 cubic feet per second (cfs). We have compared this flow rate to the calculated/modeled stream flow rates presented in the *Hydrologic and Hydraulic (*H&H*) Study* (Rodgers Consulting, updated October 20, 2022) as presented in Attachment 5 to the *Joint Federal/State Application Comment Response Package for the Alteration of any Floodplain, Waterway, Tidal or Non-Tidal Wetland in Maryland* (Rodgers Consulting, October 25, 2022).

The H&H Study presents stream flow rate and velocity at sections along the main branch of Tuscarora Creek (relevant to discharge from DA-2), along Tributary 25 (the "unnamed tributary" to the west), and then at four particular floodway impact locations, two of which (Impact 38 and Impact 31) are along the smaller tributary running directly past DA-11 (the proposed DA-11 discharge location). The Impacts Overview Exhibit (JPA Attachment 3) is provided as **Figure 4** of this discharge plan. The H&H Study (JPA Attachment 5) Appendix B Floodplain Section Map showing the locations of Creek stationing is provided as **Figure 5** of this discharge plan.

- Impact 38 is a culvert located in the small tributary immediately northwest of Basin DA-11. The calculated storm flow at that location (per the H&H Study) for a 2-year storm is 93.8 cfs (179 cfs for the 10-year storm and 351 cfs for a 100-year storm). Therefore, the 2.67 cfs discharge rate is only 2.8% of the 2-year storm flow in this channel.

- A bit downstream from there, Impact 31 is a culvert in the grassy field (along the proposed DA-11 discharge path) southwest of the South Landfill. The calculated 2-year storm flow at that location is 105 cfs (198 cfs for the 10-year storm and 385 cfs for a 100-year storm). Therefore, the 2.67 cfs discharge rate is only 2.5% of the 2-year storm flow in this channel.

- This small tributary then meets "Tributary 25" (commonly called the unnamed tributary to Tuscarora Creek) near the location of "Impact 29". The modeled 2-year flow at station 33+39 is 209 cfs with a velocity of 3.84 feet per second (fps). The proposed discharge rate is only 1.3% of this value.

Based on the above values, the proposed discharge rate represents a very small fraction (1.3% to 2.8%) of the modeled 2-year stream flows per the H&H Study and will have a negligible effect on stream flow rate or velocity, whether discharged during a storm event or during dry weather.

Sampling and Discharge Plan – DA-2

DA-2 Volume

Basin DA-2 is approximately 13 feet deep from top of existing berm to base of the sediment trap. While this is deeper than DA-11, DA-2 has steeper sides and a lower typical water pool. Timmons Group has surveyed and provided elevations for Basin DA-2. A table was developed that correlates the elevation of the water with cubic feet of water in the basin (**Attachment 2**). **Attachment 2** also includes an elevation contour map of DA-2 as it presently exists.

The current water level is approximately at elevation 316 or approximately 799,000 gallons based on the Timmons table.

DA-2 De-Watering

GEI evaluated locations adjacent to Basin DA-2 and determined that a level area southeast of basin DA-2 adjacent to Tuscarora Creek (outside the SMA fence) would be the preferred location for water discharge (**Figure 3**). If MDE has a preferred discharge location we can extend discharge hose to such location.

A floating inlet located (tethered) at the deepest part of the basin (the eastern side of the basin where the base elevation is approximately 309) would be used to pump water from the basin to minimize sediment disturbance and lessen the amount of sediment in the discharge. The depth to which we can dewater sediment-free will be verified in advance by turbidity sampling in the basin, with a goal of removing approximately 80-90% of the water. For reference, dewatering to a pool elevation of 312.0 would leave 3 feet remaining at the pump location while exposing approximately 2/3 of the basin base and leaving 100,000 gallons in the basin (88% removal).

The actual point of cessation would be based on the same field testing procedure described for basin DA-11 rather than a specific depth.

Similar to DA-11, when water can no longer be directly discharged as evidenced by a sustained rise in turbidity or fluoride, remaining water would be pumped to tank(s) for testing and subsequent dust control use or discharge (either of which would be based on testing and approval by WSA and LMA).

In order to provide adequate tank capacity for the bottom portion of the basin (still up to 100,000 gallons in the example above) and to provide for maintenance pumping during basin construction and lining, QL may elect to use larger rental tanks such as 100,000 to 200,000-gallon bladder tanks or field assembled rental tank(s) of up to 1,000,000 to 2,500,000 gallon capacity.

DA-2 Pumping Rates and Timeframe

QL proposes to use a 4-inch portable pump with a nominal flow rate of 1,200 gallons per minute for approximately 8 hours per day or approximately 576,000 gallons per day. This rate is adequate to discharge the present basin volume in approximately 2 working days.

As described above for Basin DA-11, the H&H Study presents stream flow rate and velocity at sections along the main branch of Tuscarora Creek (relevant to discharge from DA-2).

- On the east side of the site, the main branch of Tuscarora Creek passes the Basin DA-2 discharge point. The 2-year storm flow rate at Tuscarora Creek station 497+38 just south of Basin DA-2 is modeled at 205 cfs with a velocity of 2.06 fps. Therefore, the 2.67 cfs discharge rate is only 1.3% of the 2-year storm flow in this channel.

Based on the above values, the proposed discharge rate represents a very small fraction (1.3%) of the modeled 2-year stream flow per the H&H Study and will have a negligible effect on stream flow rate or velocity, whether discharged during a storm event or during dry weather.

Closing

GEI and Quantum Maryland appreciate MDE's review of this request. Please let us know if you have any questions or would like to schedule a review meeting or discharge location inspection.

Sincerely,

Russell S. Greatorex, CHMM
Senior Scientist

William Silverstein, P.E.
Senior Consultant

cc: Brian Dietz – MDE LMA
Barbara Krupiarz – MDE LMA
Tyler Abbott – MDE LMA
Paul Hlavinka – MDE WSA
Brad Metzger – MDE WSA
Lee Curry – MDE WSA
AD Robison – QL
Josh Mullis – Tetra Tech

Attachments:
Table 1 - Basin DA-11 Water Data – June 4, 2024
Table 2 - Basin DA-2 Water Data – June 5, 2024
Figure 1 - Site Plan
Figure 2 - Discharge Flow from Basin DA-11 Dewatering
Figure 3 - Discharge Flow from Basin DA-2 Dewatering
Figure 4 – Impacts Overview Exhibit (JPA Attachment 3)
Figure 5 - H&H Study (JPA Attachment 5) Appendix B Floodplain Section Map
Attachment 1. Basin DA-11 Storage Capacity and Elevation Survey
Attachment 2. Basin DA-2 Storage Capacity and Elevation Survey

Tables

Appendix B6.1

Basin DA-11 Water Sample Results. June 4, 2024

Client Name: Tetra Tech Inc - Germantown
Lab: Eurofins Lancaster

Specific Method	CAS#	Matrix	Analyte	Results Basis	MD LRP Cleanup Stds_Tbl 1_GWs Aquifers_Oct2018	AWQCFA	MCL	410-174386-2 QL-DA11-SW1-1-060424			410-174386-3 QL-DA11-SW1-5-060424			410-174386-4 QL-DA11-SW2-1-060424			410-174386-5 QL-DA11-SW2-5-060424			410-174386-6 QL-DA11-SW3-1-060424			410-174386-7 QL-DA11-SW3-4-060424			410-174386-8 QL-DA11-SW4-1-060424			410-174386-9 QL-DA11-SW4-3-060424		
								Result	Units	Qualifier	Result	Units	Qualifier	Result	Units	Qualifier	Result	Units	Qualifier	Result	Units	Qualifier	Result	Units	Qualifier	Result	Units	Qualifier	Result	Units	Qualifier
8260D_LL	71-55-6	Water	1,1,1-Trichloroethane	Total	200	NC	200	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	79-34-5	Water	1,1,2,2-Tetrachloroethane	Total	0.076	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	79-00-5	Water	1,1,2-Trichloroethane	Total	5	NC	5	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	75-34-3	Water	1,1-Dichloroethane	Total	2.8	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	75-35-4	Water	1,1-Dichloroethene	Total	7	NC	7	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	120-82-1	Water	1,2,4-Trichlorobenzene	Total	70	NC	70	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	96-12-8	Water	1,2-Dibromo-3-Chloropropane	Total	0.2	NC	0.2	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	95-50-1	Water	1,2-Dichlorobenzene	Total	600	NC	600	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	107-06-2	Water	1,2-Dichloroethane	Total	5	NC	5	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	78-87-5	Water	1,2-Dichloropropane	Total	5	NC	5	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	541-73-1	Water	1,3-Dichlorobenzene	Total	NC	NC	NC	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	106-46-7	Water	1,4-Dichlorobenzene	Total	75	NC	75	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	78-93-3	Water	2-Butanone	Total	560	NC	NC	<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L	
8260D_LL	591-78-6	Water	2-Hexanone	Total	NC	NC	NC	<2.0	ug/L		<2.0	ug/L		<2.0	ug/L		<2.0	ug/L		<2.0	ug/L		<2.0	ug/L		<2.0	ug/L		<2.0	ug/L	
8260D_LL	108-10-1	Water	4-Methyl-2-pentanone	Total	630	NC	NC	<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L	
8270D_SIM	83-32-9	Water	Acenaphthene	Total	53	NC	NC	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	208-96-8	Water	Acenaphthylene	Total	NC	NC	NC	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8260D_LL	67-64-1	Water	Acetone	Total	1400	NC	NC	<1.5	ug/L		<1.5	ug/L		<1.5	ug/L		<1.5	ug/L		<1.5	ug/L		<1.5	ug/L		<1.5	ug/L		<1.5	ug/L	
6020B	7429-90-5	Water	Aluminum	Dissolved	2000	1100	NC	**15**	ug/L	J	**19**	ug/L	J	**14**	ug/L	J	**38**	ug/L		**18**	ug/L	J	**31**	ug/L		**17**	ug/L	J	**16**	ug/L	J
8270D_SIM	120-12-7	Water	Anthracene	Total	180	NC	NC	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
6020B	7440-36-0	Water	Antimony	Dissolved	6	NC	6	<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L	
6020B	7440-38-2	Water	Arsenic	Dissolved	10	340	10	<0.68	ug/L		**0.74**	ug/L	J	**0.90**	ug/L	J	<0.68	ug/L		**0.79**	ug/L	J	**0.69**	ug/L	J	**0.71**	ug/L	J	<0.68	ug/L	
6020B	7440-39-3	Water	Barium	Dissolved	2000	NC	2000	**9.4**	ug/L		**9.2**	ug/L		**9.4**	ug/L		**9.6**	ug/L		**9.5**	ug/L		**9.8**	ug/L		**8.5**	ug/L		**8.7**	ug/L	
8260D_LL	71-43-2	Water	Benzene	Total	5	NC	5	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8270D_SIM	56-55-3	Water	Benzo[a]anthracene	Total	0.03	NC	0.1	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	50-32-8	Water	Benzo[a]pyrene	Total	0.2	NC	0.2	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	205-99-2	Water	Benzo[b]fluoranthene	Total	0.25	NC	0.2	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	191-24-2	Water	Benzo[g,h,i]perylene	Total	NC	NC	NC	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	207-08-9	Water	Benzo[k]fluoranthene	Total	2.5	NC	0.2	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
6020B	7440-41-7	Water	Beryllium	Dissolved	4	NC	4	<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L	
8260D_LL	75-27-4	Water	Bromodichloromethane	Total	80	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	75-25-2	Water	Bromoform	Total	80	NC	NC	<0.30	ug/L		<0.30	ug/L		<0.30	ug/L		<0.30	ug/L		<0.30	ug/L		<0.30	ug/L		<0.30	ug/L		<0.30	ug/L	
8260D_LL	74-83-9	Water	Bromomethane	Total	0.75	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
6020B	7440-43-9	Water	Cadmium	Dissolved	5	1.8	5	<0.15	ug/L		<0.15	ug/L		<0.15	ug/L		<0.15	ug/L		<0.15	ug/L		<0.15	ug/L		<0.15	ug/L		<0.15	ug/L	
6020B	7440-70-2	Water	Calcium	Dissolved	NC	NC	NC	**23000**	ug/L		**23000**	ug/L		**23000**	ug/L		**23000**	ug/L		**23000**	ug/L		**22000**	ug/L		**22000**	ug/L		**23000**	ug/L	
8260D_LL	75-15-0	Water	Carbon disulfide	Total	81	NC	NC	<0.10	ug/L		**0.20**	ug/L	J	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	56-23-5	Water	Carbon tetrachloride	Total	5	NC	5	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	108-90-7	Water	Chlorobenzene	Total	100	NC	100	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	75-00-3	Water	Chloroethane	Total	2100	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	67-66-3	Water	Chloroform	Total	80	NC	NC	<0.090	ug/L		<0.090	ug/L		<0.090	ug/L		<0.090	ug/L		<0.090	ug/L		<0.090	ug/L		<0.090	ug/L		<0.090	ug/L	
8260D_LL	74-87-3	Water	Chloromethane	Total	19	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
6020B	7440-47-3	Water	Chromium	Dissolved	100	16	100	<0.55	ug/L		<0.55	ug/L		<0.55	ug/L		<0.55	ug/L		<0.55	ug/L		<0.55	ug/L		<0.55	ug/L		<0.55	ug/L	
8270D_SIM	218-01-9	Water	Chrysene	Total	25	NC	0.2	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8260D_LL	156-59-2	Water	cis-1,2-Dichloroethene	Total	70	NC	70	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	10061-01-5	Water	cis-1,3-Dichloropropene	Total	NC	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
6020B	7440-48-4	Water	Cobalt	Dissolved	NC	NC	NC	<0.16	ug/L		<0.16	ug/L		**0.23**	ug/L	J	<0.16	ug/L		<0.16	ug/L		**0.18**	ug/L	J	<0.16	ug/L		<0.16	ug/L	
6020B	7440-50-8	Water	Copper	Dissolved	1300	13	1300	**2.6**	ug/L		**2.6**	ug/L		**2.5**	ug/L		**2.9**	ug/L		**2.9**	ug/L		**2.6**	ug/L		**2.5**	ug/L		**2.5**	ug/L	
9040C	N/A	Water	Corrosivity	Total	NC	NC	NC	**no**	NONE	HF	**no**	NONE	HF	**no**	NONE	HF	**no**	NONE	HF	**no**	NONE	HF	**no**	NONE	HF	**no**	NONE	HF	**no**	NONE	HF
1677_Free	N/A	Water	Cyanide, Free	Total	0.2	0.022	0.2	<0.0050	mg/L		**0.0060**	mg/L		**0.0055**	mg/L	J	<0.0050	mg/L		<0.0050	mg/L		<0.0050	mg/L		**0.0060**	mg/L		<0.0050	mg/L	
8260D_LL	110-82-7	Water	Cyclohexane	Total	NC	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8270D_SIM	53-70-3	Water	Dibenz(a,h)anthracene	Total	0.025	NC	0.3	<0.020	ug/L		<0.020	ug/L		<0.020	ug/L		<0.021	ug/L		<0.020	ug/L		<0.020	ug/L		<0.020	ug/L		<0.020	ug/L	
8260D_LL	124-48-1	Water	Dibromochloromethane	Total	80	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	75-71-8	Water	Dichlorodifluoromethane	Total	NC	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8015D_DRO	N/A	Water	DRO (C10-C28)	Total	47	NC	NC	<47	ug/L		<46	ug/L		<46	ug/L		<46	ug/L		<45	ug/L		<46	ug/L		<45	ug/L		<46	ug/L	
8260D_LL	100-41-4	Water	Ethylbenzene	Total	700	NC	700	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8011	106-93-4	Water	Ethylene Dibromide (1,2-dibromomethane)	Total	0.05	NC	0.05	<0.0095	ug/L		<0.0096	ug/L		<0.0096	ug/L		<0.0096	ug/L		<0.0095	ug/L		<0.0097	ug/L		<0.0095	ug/L		<0.0096	ug/L	
8270D_SIM	206-44-0	Water	Fluoranthene	Total	80	NC	NC	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	86-73-7	Water	Fluorene	Total	29	NC	NC	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
300_ORGFM_28D	16984-48-8	Water	Fluoride	Total	NC	NC	4	**1.1**	mg/L		**1.1**	mg/L		**0.98**	mg/L		**1.0**	mg/L		**1.0**	mg/L		**1.0**	mg/L		**1.0**	mg/L		**0.98**	mg/L	
8260D_LL	76-13-1	Water	Freon 113	Total	NC	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8015D_GRO	N/A	Water	GRO	Total	47	NC	NC	<23	ug/L		<23	ug/L		<23	ug/L		<23	ug/L		<23	ug/L		<23	ug/L		<23	ug/L		<23	ug/L	
8270D_SIM	193-39-5	Water	Indeno[1,2,3-cd]pyrene	Total	0.25	NC	0.4	<0.020	ug/L		<0.020	ug/L		<0.020	ug/L		<0.021	ug/L		<0.020	ug/L		<0.020	ug/L		<0.020	ug/L		<0.020	ug/L	
6020B	7439-89-6	Water	Iron	Dissolved	1400	NC	NC	**36**	ug/L	J	**38**	ug/L	J	**32**	ug/L	J	**35**	ug/L	J	**36**	ug/L	J	**62**	ug/L		**38**	ug/L	J	**38**	ug/L	J
8260D_LL	98-82-8	Water	Isopropylbenzene	Total	45	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
6020B	7439-92-1	Water	Lead	Dissolved	15	65	15	<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L	
6020B	7439-95-4	Water	Magnesium	Dissolved	NC	NC	NC	**2400**	ug/L		**2500**	ug/L		**2400**	ug/L		**2500**	ug/L		**2400**	ug/L		**2300**	ug/L		**2300**	ug/L		**2400**	ug/L	
6020B	7439-96-5	Water	Manganese	Dissolved	43	NC	NC	**3.3**	ug/L		**1.4**	ug/L	J	**4.3**	ug/L		**1.3**	ug/L	J	**6.9**	ug/L	J	**29**	ug/L		**2.9**	ug/L		**2.1**	ug/L	
7470A	7439-97-6	Water	Mercury	Dissolved	2	1.4	2	<0.079	ug/L		**0.088**	ug/L	J	**0.085**	ug/L	J	<0.079	ug/L		<0.079	ug/L		<0.079	ug/L		**0.089**	ug/L	J	<0.079	ug/L	
8260D_LL	79-20-9	Water	Methyl acetate	Total	NC	NC	NC	<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L	
8260D_LL	1634-04-4	Water	Methyl tertiary butyl ether	Total	20	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	108-87-2	Water	Methylcyclohexane	Total	NC	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	75-09-2	Water	Methylene Chloride	Total	5	NC	5	<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L	
8270D_SIM	91-20-3	Water	Naphthalene	Total	0.17	NC	NC	<0.031	ug/L		<0.030	ug/L		<0.030	ug/L		<0.031	ug/L		<0.030	ug/L		<0.030	ug/L		<0.030	ug/L		<0.030	ug/L	
6020B	7440-02-0	Water	Nickel	Dissolved	39	470	NC	**0.54**	ug/L	J	**0.43**	ug/L	J	**0.47**	ug/L	J	<0.40	ug/L		**0.44**	ug/L	J	**0.52**	ug/L	J	**0.42**	ug/L	J	<0.40	ug/L	
8082A_LL	12674-11-2	Water	PCB-1016	Total	0.14	0.014*	0.5**	<0.0077	ug/L		<0.0092	ug/L		<0.0090	ug/L		<0.0086	ug/L		<0.0087	ug/L		<0.0087	ug/L		<0.0086	ug/L		<0.0090	ug/L	
8082A_LL	11104-28-2	Water	PCB-1221	Total	0.0047	0.014*	0.5**	<0.0077	ug/L		<0.0092	ug/L		<0.0090	ug/L		<0.0086	ug/L		<0.0087	ug/L		<0.0087	ug/L		<0.0086	ug/L		<0.0090	ug/L	
8082A_LL	11141-16-5	Water	PCB-1232	Total	0.0047	0.014*	0.5**	<0.0077	ug/L		<0.0092	ug/L		<0.0090	ug/L		<0.0086	ug/L		<0.0087	ug/L		<0.0087	ug/L		<0.0086	ug/L		<0.0090	ug/L	
8082A_LL	53469-21-9	Water	PCB-1242	Total	0.0078	0.014*	0.5**	<0.0077	ug/L		<0.0092	ug/L		<0.0090	ug/L		<0.0086	ug/L		<0.0087	ug/L		<0.0087	ug/L		<0.0086	ug/L		<0.0090	ug/L	
8082A_LL	12672-29-6	Water	PCB-1248	Total	0.0078	0.014*	0.5**	<0.0077	ug/L		<0.0092	ug/L		<0.0090	ug/L		<0.0086	ug/L		<0.0087	ug/L		<0.0087	ug/L		<0.0086	ug/L		<0.0090	ug/L	
8082A_LL	11097-69-1	Water	PCB-1254	Total	0.0078	0.014*	0.5**	<0.0048	ug/L		<0.0058	ug/L		<0.0056	ug/L		<0.0054	ug/L		<0.0054	ug/L		<0.0054	ug/L		<0.0054	ug/L		<0.0056	ug/L	

Appendix B6.1
Basin DA-11 Water Sample Results. June 4, 2024

8082A_LL	11096-82-5	Water	PCB-1260	Total	0.0078	0.014*	0.5**	<0.0048	ug/L		<0.0058	ug/L		<0.0056	ug/L		<0.0054	ug/L		<0.0054	ug/L		<0.0054	ug/L		<0.0054	ug/L		<0.0056	ug/L	
9040C	N/A	Water	pH	Total	NC	6.5-8.5	NC	**7.2**	S.U.	HF	**7.1**	S.U.	HF	**7.2**	S.U.	HF	**7.2**	S.U.	HF	**7.2**	S.U.	HF	**7.1**	S.U.	HF	**7.0**	S.U.	HF	**7.1**	S.U.	HF
8270D_SIM	85-01-8	Water	Phenanthrene	Total	12	NC	NC	<0.031	ug/L		<0.030	ug/L		<0.030	ug/L		<0.031	ug/L		<0.030	ug/L		<0.030	ug/L		<0.030	ug/L		<0.030	ug/L	
6020B	7440-09-7	Water	Potassium	Dissolved	NC	NC	NC	**2100**	ug/L		**2100**	ug/L		**2100**	ug/L		**2100**	ug/L		**2100**	ug/L		**2000**	ug/L		**2000**	ug/L		**2000**	ug/L	
8270D_SIM	129-00-0	Water	Pyrene	Total	12	NC	NC	<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
6020B	7782-49-2	Water	Selenium	Dissolved	50	NC	50	<0.28	ug/L		<0.28	ug/L		<0.28	ug/L		<0.28	ug/L		<0.28	ug/L		<0.28	ug/L		<0.28	ug/L		<0.28	ug/L	
6020B	7440-22-4	Water	Silver	Dissolved	9.4	3.2	9.4	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
6020B	7440-23-5	Water	Sodium	Dissolved	NC	NC	NC	**3500**	ug/L		**3800**	ug/L		**3700**	ug/L		**3800**	ug/L		**3900**	ug/L		**3600**	ug/L		**3700**	ug/L		**3700**	ug/L	
8260D_LL	100-42-5	Water	Styrene	Total	100	NC	NC	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
9040C	N/A	Water	Temperature	Total	NC	NC	NC	**20.1**	Degrees C	HF	**20.1**	Degrees C	HF	**20.2**	Degrees C	HF	**20.2**	Degrees C	HF	**20.1**	Degrees C	HF	**20.0**	Degrees C	HF	**20.0**	Degrees C	HF	**20.0**	Degrees C	HF
8260D_LL	127-18-4	Water	Tetrachloroethene	Total	5	NC	5	<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L	
6020B	7440-28-0	Water	Thallium	Dissolved	2	NC	2	<0.13	ug/L		<0.13	ug/L		**0.20**	ug/L	J	<0.13	ug/L		<0.13	ug/L		<0.13	ug/L		<0.13	ug/L		<0.13	ug/L	
8260D_LL	108-88-3	Water	Toluene	Total	1000	NC	1000	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	156-60-5	Water	trans-1,2-Dichloroethene	Total	100	NC	100	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	10061-02-6	Water	trans-1,3-Dichloropropene	Total	NC	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	79-01-6	Water	Trichloroethene	Total	5	NC	5	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	75-69-4	Water	Trichlorofluoromethane	Total	NC	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
6020B	7440-62-2	Water	Vanadium	Dissolved	8.6	NC	NC	<0.79	ug/L		<0.79	ug/L		<0.79	ug/L		<0.79	ug/L		<0.79	ug/L		<0.79	ug/L		<0.79	ug/L		<0.79	ug/L	
8260D_LL	75-01-4	Water	Vinyl chloride	Total	2	NC	3	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	1330-20-7	Water	Xylenes, Total	Total	10000	NC	2	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
6020B	7440-66-6	Water	Zinc	Dissolved	600	120	NC	<4.0	ug/L		<4.0	ug/L		<4.0	ug/L		<4.0	ug/L		<4.0	ug/L		<4.0	ug/L		<4.0	ug/L		<4.0	ug/L	

*0.014 ug/L is the aquatic life - chronic criteria for Total PCBs
**0.5 ug/L is the drinking water MCL for Total PCBs.
Results first compared to MCLs, then AWQCFA and MD LRP Cleanup Criteria if MCLs are not available.
Per the soil management plan, free cyanide would also be compared to the chronic AWQ criteria of 0.0052 mg/L, if discharging directly to surface water.
This table presents combined standards as specified by both MDE LMA and WSA. For LMA, results are compared to MCL and where there is no MCL to GWCS. For WSA, results are compared to lower of MCL and acute FW
Bold values indicate the analyte was detected
Qualifier Definitions
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
HF - Parameter with a holding time of 15 minutes. Test performed by the laboratory at client's request. Sample was analyzed outside of hold time.
*1 - LCS/LCSD RPD Exceeds Control Limits

Appendix B6.2

Basin DA-2 Water Sample Results. June 5, 2024

Client Name: Tetra Tech Inc - Germantown
Lab: Eurofins Lancaster

Specific Method	CAS#	Matrix	Analyte	Results Basis	MD LRP Cleanup Stds_Tbl 1_GWs Aquifers_Oct2018	AWQCFA	MCL	410-174614-2 QL-DA2-SW1-1-060524			410-174614-3 QL-DA2-SW1-3-060524			410-174614-4 QL-DA2-SW2-1-060524			410-174614-5 QL-DA2-SW2-4-060524			410-174614-6 QL-DA2-SW3-1-060524			410-174614-7 QL-DA2-SW3-3-060524		
								Result	Units	Qualifier	Result	Units	Qualifier	Result	Units	Qualifier	Result	Units	Qualifier	Result	Units	Qualifier	Result	Units	Qualifier
8260D_LL	71-55-6	Water	1,1,1-Trichloroethane	Total	200	NC	200	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	79-34-5	Water	1,1,2,2-Tetrachloroethane	Total	0.076	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	79-00-5	Water	1,1,2-Trichloroethane	Total	5	NC	5	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	75-34-3	Water	1,1-Dichloroethane	Total	2.8	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	75-35-4	Water	1,1-Dichloroethene	Total	7	NC	7	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	120-82-1	Water	1,2,4-Trichlorobenzene	Total	70	NC	NC	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	96-12-8	Water	1,2-Dibromo-3-Chloropropane	Total	0.2	NC	0.2	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	95-50-1	Water	1,2-Dichlorobenzene	Total	600	NC	600	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	107-06-2	Water	1,2-Dichloroethane	Total	5	NC	5	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	78-87-5	Water	1,2-Dichloropropane	Total	5	NC	5	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	541-73-1	Water	1,3-Dichlorobenzene	Total	NC	NC	NC	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	106-46-7	Water	1,4-Dichlorobenzene	Total	75	NC	75	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	78-93-3	Water	2-Butanone	Total	560	NC	NC	<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L	
8260D_LL	591-78-6	Water	2-Hexanone	Total	NC	NC	NC	<2.0	ug/L		<2.0	ug/L		<2.0	ug/L		<2.0	ug/L		<2.0	ug/L		<2.0	ug/L	
8260D_LL	108-10-1	Water	4-Methyl-2-pentanone	Total	630	NC	NC	<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L		<1.0	ug/L	
8270D_SIM	83-32-9	Water	Acenaphthene	Total	53	NC	NC	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	208-96-8	Water	Acenaphthylene	Total	NC	NC	NC	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8260D_LL	67-64-1	Water	Acetone	Total	1400	NC	NC	<1.5	ug/L		**2.5**	ug/L	J	<1.5	ug/L		<1.5	ug/L		<1.5	ug/L		<1.5	ug/L	
6020B	7429-90-5	Water	Aluminum	Dissolved	2000	1100	NC	<12	ug/L		<12	ug/L		<12	ug/L		<12	ug/L		<12	ug/L		<12	ug/L	
8270D_SIM	120-12-7	Water	Anthracene	Total	180	NC	NC	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
6020B	7440-36-0	Water	Antimony	Dissolved	6	NC	6	<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		**0.33**	ug/L	J
6020B	7440-38-2	Water	Arsenic	Dissolved	10	340	6	**0.72**	ug/L	J	**0.85**	ug/L	J	**0.95**	ug/L	J	**0.78**	ug/L	J	**0.76**	ug/L	J	**1.9**	ug/L	J
6020B	7440-39-3	Water	Barium	Dissolved	2000	NC	2000	**22**	ug/L		**23**	ug/L		**23**	ug/L		**23**	ug/L		**23**	ug/L		**24**	ug/L	
8260D_LL	71-43-2	Water	Benzene	Total	5	NC	5	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8270D_SIM	56-55-3	Water	Benzo[a]anthracene	Total	0.03	NC	0.1	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	50-32-8	Water	Benzo[a]pyrene	Total	0.2	NC	0.2	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	205-99-2	Water	Benzo[b]fluoranthene	Total	0.25	NC	0.2	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	191-24-2	Water	Benzo[g,h,i]perylene	Total	NC	NC	NC	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	207-08-9	Water	Benzo[k]fluoranthene	Total	2.5	NC	0.2	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
6020B	7440-41-7	Water	Beryllium	Dissolved	4	NC	4	<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L	
8260D_LL	75-27-4	Water	Bromodichloromethane	Total	80	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	75-25-2	Water	Bromoform	Total	80	NC	NC	<0.30	ug/L		<0.30	ug/L		<0.30	ug/L		<0.30	ug/L		<0.30	ug/L		<0.30	ug/L	
8260D_LL	74-83-9	Water	Bromomethane	Total	0.75	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
6020B	7440-43-9	Water	Cadmium	Dissolved	5	1.8	5	<0.15	ug/L		<0.15	ug/L		<0.15	ug/L		<0.15	ug/L		<0.15	ug/L		<0.15	ug/L	
6020B	7440-70-2	Water	Calcium	Dissolved	NC	NC	NC	**35000**	ug/L		**36000**	ug/L		**35000**	ug/L		**36000**	ug/L		**36000**	ug/L		**35000**	ug/L	
8260D_LL	75-15-0	Water	Carbon disulfide	Total	81	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	56-23-5	Water	Carbon tetrachloride	Total	5	NC	5	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	108-90-7	Water	Chlorobenzene	Total	100	NC	100	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
8260D_LL	75-00-3	Water	Chloroethane	Total	2100	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	67-66-3	Water	Chloroform	Total	80	NC	NC	<0.090	ug/L		<0.090	ug/L		<0.090	ug/L		<0.090	ug/L		<0.090	ug/L		<0.090	ug/L	
8260D_LL	74-87-3	Water	Chloromethane	Total	19	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
6020B	7440-47-3	Water	Chromium	Dissolved	100	16	100	<0.55	ug/L		<0.55	ug/L		<0.55	ug/L		<0.55	ug/L		<0.55	ug/L		<0.55	ug/L	
8270D_SIM	218-01-9	Water	Chrysene	Total	25	NC	0.2	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8260D_LL	156-59-2	Water	cis-1,2-Dichloroethene	Total	70	NC	70	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	10061-01-5	Water	cis-1,3-Dichloropropene	Total	NC	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
6020B	7440-48-4	Water	Cobalt	Dissolved	NC	NC	NC	<0.16	ug/L		<0.16	ug/L		<0.16	ug/L		<0.16	ug/L		<0.16	ug/L		**0.16**	ug/L	J
6020B	7440-50-8	Water	Copper	Dissolved	1300	13	1300	**2.7**	ug/L		**1.1**	ug/L		**2.4**	ug/L		**2.9**	ug/L		**2.7**	ug/L		**2.8**	ug/L	
9040C	N/A	Water	Corrosivity	Total	NC	NC	NC	**no**	NONE	HF	**no**	NONE	HF	**no**	NONE	HF	**no**	NONE	HF	**no**	NONE	HF	**no**	NONE	HF
1677_Free	N/A	Water	Cyanide, Free	Total	0.2	0.022	0.2	<0.0050	mg/L	F1 F2	<0.0050	mg/L		<0.0050	mg/L		<0.0050	mg/L		<0.0050	mg/L		<0.0050	mg/L	
8260D_LL	110-82-7	Water	Cyclohexane	Total	NC	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8270D_SIM	53-70-3	Water	Dibenz(a,h)anthracene	Total	0.025	NC	0.3	<0.020	ug/L		<0.021	ug/L		<0.020	ug/L		<0.020	ug/L		<0.020	ug/L		<0.020	ug/L	
8260D_LL	124-48-1	Water	Dibromochloromethane	Total	80	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	75-71-8	Water	Dichlorodifluoromethane	Total	NC	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8015D_DRO	N/A	Water	**DRO (C10-C28)**	Total	**47**	NC	NC	<46	ug/L		<47	ug/L		<46	ug/L		<45	ug/L		<47	ug/L		**54**	ug/L	J
8260D_LL	100-41-4	Water	Ethylbenzene	Total	700	NC	700	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8011	106-93-4	Water	Ethylene Dibromide (1,2-dibromomethane)	Total	0.05	NC	0.5	<0.0095	ug/L		<0.0093	ug/L		<0.0094	ug/L		<0.0094	ug/L		<0.0094	ug/L		<0.0094	ug/L	
8270D_SIM	206-44-0	Water	Fluoranthene	Total	80	NC	NC	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
8270D_SIM	86-73-7	Water	Fluorene	Total	29	NC	NC	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
300_ORGFM_28D	16984-48-8	Water	Fluoride	Total	NC	NC	4	**0.73**	mg/L		**0.73**	mg/L		**0.67**	mg/L		**0.66**	mg/L		**0.66**	mg/L		**0.77**	mg/L	
8260D_LL	76-13-1	Water	Freon 113	Total	NC	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8015D_GRO	N/A	Water	GRO	Total	47	NC	NC	<23	ug/L		<23	ug/L		<23	ug/L		<23	ug/L		<23	ug/L		<23	ug/L	
8270D_SIM	193-39-5	Water	Indeno[1,2,3-cd]pyrene	Total	0.25	NC	0.4	<0.020	ug/L		<0.021	ug/L		<0.020	ug/L		<0.020	ug/L		<0.020	ug/L		<0.020	ug/L	
6020B	7439-89-6	Water	Iron	Dissolved	1400	NC	NC	**24**	ug/L	J	<20	ug/L		**28**	ug/L	J	**32**	ug/L	J	**34**	ug/L	J	**46**	ug/L	J
8260D_LL	98-82-8	Water	Isopropylbenzene	Total	45	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
6020B	7439-92-1	Water	Lead	Dissolved	15	65	15	<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L		<0.12	ug/L	
6020B	7439-95-4	Water	Magnesium	Dissolved	NC	NC	NC	**6900**	ug/L		**7100**	ug/L		**6900**	ug/L		**6900**	ug/L		**6900**	ug/L		**6900**	ug/L	
6020B	7439-96-5	Water	Manganese	Dissolved	43	NC	NC	**3.6**	ug/L		**6.2**	ug/L		**5.5**	ug/L		**7.7**	ug/L		**19**	ug/L		**35**	ug/L	
7470A	7439-97-6	Water	Mercury	Dissolved	2	1.4	2	<0.079	ug/L		<0.079	ug/L		<0.079	ug/L		<0.079	ug/L		<0.079	ug/L		<0.079	ug/L	
8260D_LL	79-20-9	Water	Methyl acetate	Total	NC	NC	NC	<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L	
8260D_LL	1634-04-4	Water	Methyl tertiary butyl ether	Total	20	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	

Appendix B6.2

Basin DA-2 Water Sample Results. June 5, 2024

8260D_LL	108-87-2	Water	Methylcyclohexane	Total	NC	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	75-09-2	Water	Methylene Chloride	Total	5	NC	5	<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L	
8270D_SIM	91-20-3	Water	Naphthalene	Total	0.17	NC	NC	<0.030	ug/L		<0.032	ug/L		<0.030	ug/L		<0.031	ug/L		<0.030	ug/L		<0.030	ug/L	
6020B	7440-02-0	Water	Nickel	Dissolved	39	470	NC	**0.48**	ug/L	J	<0.40	ug/L		<0.40	ug/L		<0.40	ug/L		**0.44**	ug/L	J	**0.60**	ug/L	J
8082A_LL	12674-11-2	Water	PCB-1016	Total	0.14	0.014*	0.5**	<0.011	ug/L		<0.0091	ug/L		<0.0089	ug/L		<0.0096	ug/L		<0.0091	ug/L		<0.0093	ug/L	
8082A_LL	11104-28-2	Water	PCB-1221	Total	0.0047	0.014*	0.5**	<0.011	ug/L		<0.0091	ug/L		<0.0089	ug/L		<0.0096	ug/L		<0.0091	ug/L		<0.0093	ug/L	
8082A_LL	11141-16-5	Water	PCB-1232	Total	0.0047	0.014*	0.5**	<0.011	ug/L		<0.0091	ug/L		<0.0089	ug/L		<0.0096	ug/L		<0.0091	ug/L		<0.0093	ug/L	
8082A_LL	53469-21-9	Water	PCB-1242	Total	0.0078	0.014*	0.5**	<0.011	ug/L		<0.0091	ug/L		<0.0089	ug/L		<0.0096	ug/L		<0.0091	ug/L		<0.0093	ug/L	
8082A_LL	12672-29-6	Water	PCB-1248	Total	0.0078	0.014*	0.5**	<0.011	ug/L		<0.0091	ug/L		<0.0089	ug/L		<0.0096	ug/L		<0.0091	ug/L		<0.0093	ug/L	
8082A_LL	11097-69-1	Water	PCB-1254	Total	0.0078	0.014*	0.5**	<0.0070	ug/L		<0.0057	ug/L		<0.0056	ug/L		<0.0060	ug/L		<0.0057	ug/L		<0.0058	ug/L	
8082A_LL	11096-82-5	Water	PCB-1260	Total	0.0078	0.014*	0.5**	<0.0070	ug/L		**0.014**	ug/L		<0.0056	ug/L		<0.0060	ug/L		<0.0057	ug/L		<0.0058	ug/L	
9040C	N/A	Water	pH	Total	NC	6.5-8.5	NC	**7.0**	S.U.	HF	**7.1**	S.U.	HF	**7.4**	S.U.	HF	**7.3**	S.U.	HF	**7.3**	S.U.	HF	**7.2**	S.U.	HF
8270D_SIM	85-01-8	Water	Phenanthrene	Total	12	NC	NC	<0.030	ug/L		<0.032	ug/L		<0.030	ug/L		<0.031	ug/L		<0.030	ug/L		<0.030	ug/L	
6020B	7440-09-7	Water	Potassium	Dissolved	NC	NC	NC	**2300**	ug/L		**2300**	ug/L		**2400**	ug/L		**2400**	ug/L		**2400**	ug/L		**2500**	ug/L	
8270D_SIM	129-00-0	Water	Pyrene	Total	12	NC	NC	<0.010	ug/L		<0.011	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L		<0.010	ug/L	
6020B	7782-49-2	Water	Selenium	Dissolved	50	NC	50	<0.28	ug/L		<0.28	ug/L		<0.28	ug/L		<0.28	ug/L		<0.28	ug/L		<0.28	ug/L	
6020B	7440-22-4	Water	Silver	Dissolved	9.4	3.2	9.4	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		**0.11**	ug/L	J	**0.14**	ug/L	J	<0.10	ug/L	
6020B	7440-23-5	Water	Sodium	Dissolved	NC	NC	NC	**9900**	ug/L		**9900**	ug/L		**9900**	ug/L		**9900**	ug/L		**10000**	ug/L		**9900**	ug/L	
8260D_LL	100-42-5	Water	Styrene	Total	100	NC	NC	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
9040C	N/A	Water	Temperature	Total	NC	NC	NC	**20.3**	Degrees C	HF	**20.2**	Degrees C	HF	**20.2**	Degrees C	HF	**20.4**	Degrees C	HF	**20.3**	Degrees C	HF	**20.3**	Degrees C	HF
8260D_LL	127-18-4	Water	Tetrachloroethene	Total	5	NC	5	<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L		<0.20	ug/L	
6020B	7440-28-0	Water	Thallium	Dissolved	2	NC	2	<0.13	ug/L		<0.13	ug/L		<0.13	ug/L		<0.13	ug/L		<0.13	ug/L		<0.13	ug/L	
8260D_LL	108-88-3	Water	Toluene	Total	1000	NC	1000	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		**0.36**	ug/L	J
8260D_LL	156-60-5	Water	trans-1,2-Dichloroethene	Total	100	NC	100	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	10061-02-6	Water	trans-1,3-Dichloropropene	Total	NC	NC	NC	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	79-01-6	Water	Trichloroethene	Total	5	NC	5	<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L		<0.080	ug/L	
8260D_LL	75-69-4	Water	Trichlorofluoromethane	Total	NC	NC	NC	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
6020B	7440-62-2	Water	Vanadium	Dissolved	8.6	NC	NC	<0.79	ug/L		<0.79	ug/L		<0.79	ug/L		<0.79	ug/L		<0.79	ug/L		<0.79	ug/L	
8260D_LL	75-01-4	Water	Vinyl chloride	Total	2	NC	2	<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L		<0.10	ug/L	
8260D_LL	1330-20-7	Water	Xylenes, Total	Total	10000	NC	10000	<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L		<0.070	ug/L	
6020B	7440-66-6	Water	Zinc	Dissolved	600	120	600	<4.0	ug/L		<4.0	ug/L		<4.0	ug/L		<4.0	ug/L		<4.0	ug/L		<4.0	ug/L	

*0.014 ug/L is the aquatic life - chronic criteria for Total PCBs

**0.5 ug/L is the drinking water MCL for Total PCBs.

Results first compared to MCLs, then AWQCFA and MD LRP Cleanup Criteria if MCLs are not available.

Per the soil management plan, free cyanide would also be compared to the chronic AWQ criteria of 0.0052 mg/L, if discharging directly to surface water.

This table presents combined standards as specified by both MDE LMA and WSA. For LMA, results are compared to MCL and where there is no MCL to GWCS. For WSA, results are compared to lower of MCL and acute FW.

Bold values indicate the analyte was detected

Qualifier Definitions

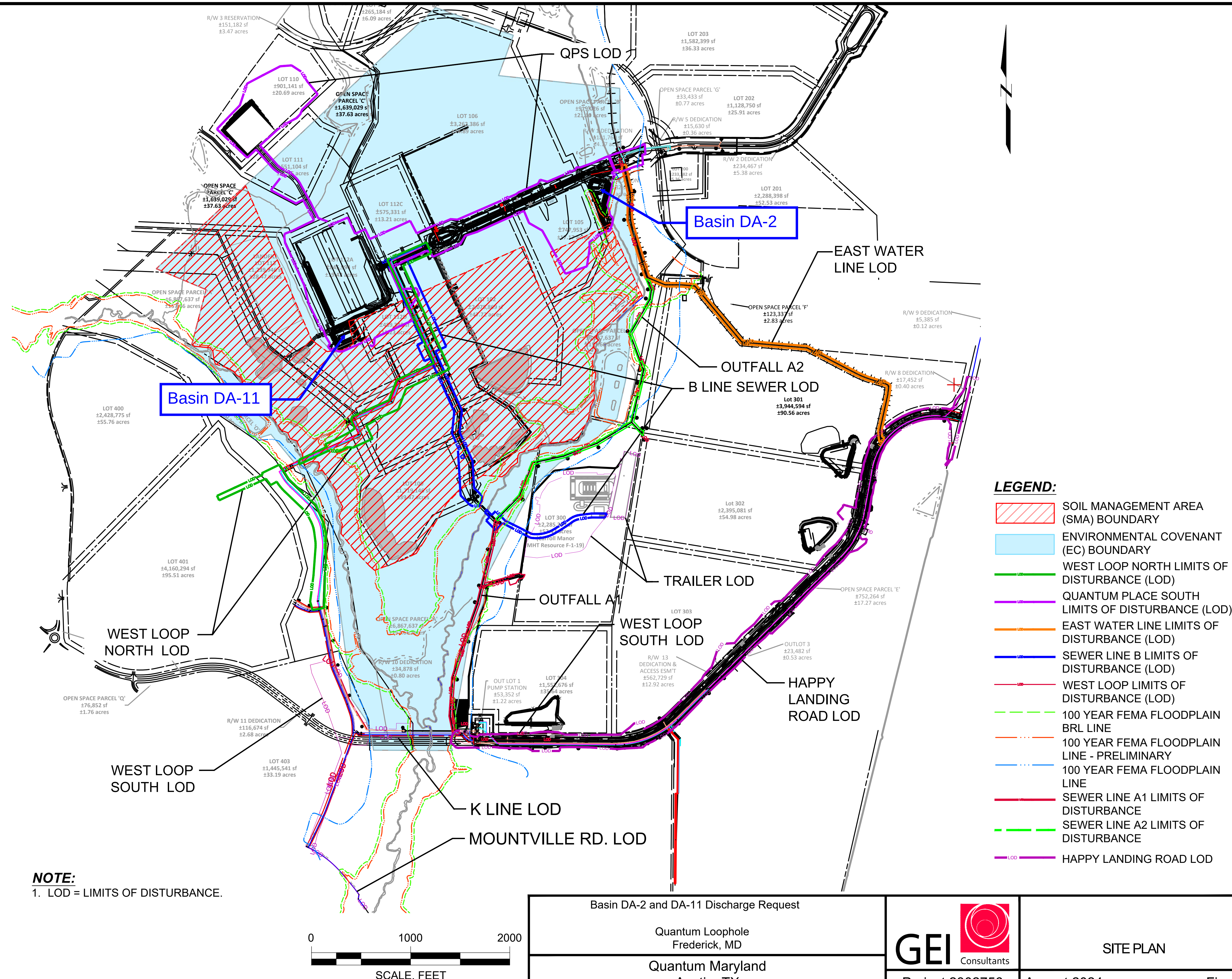
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

HF - Parameter with a holding time of 15 minutes. Test performed by the laboratory at client's request. Sample was analyzed outside of hold time.

*1 - LCS/LCSD RPD Exceeds Control Limits

Figures

1. **Site Plan**
2. **Discharge Flow from Basin DA-11 De-Watering**
3. **Discharge Flow from Basin DA-2 De-Watering**
4. **Impacts Overview Exhibit (JPA Attachment 3)**
5. **H&H Study (JPA Attachment 5) Appendix B Floodplain Section Map**



NOTE:
1. LOD = LIMITS OF DISTURBANCE.

Basin DA-2 and DA-11 Discharge Request

Quantum Loophole
Frederick, MD

Quantum Maryland
Austin, TX

GEI Consultants

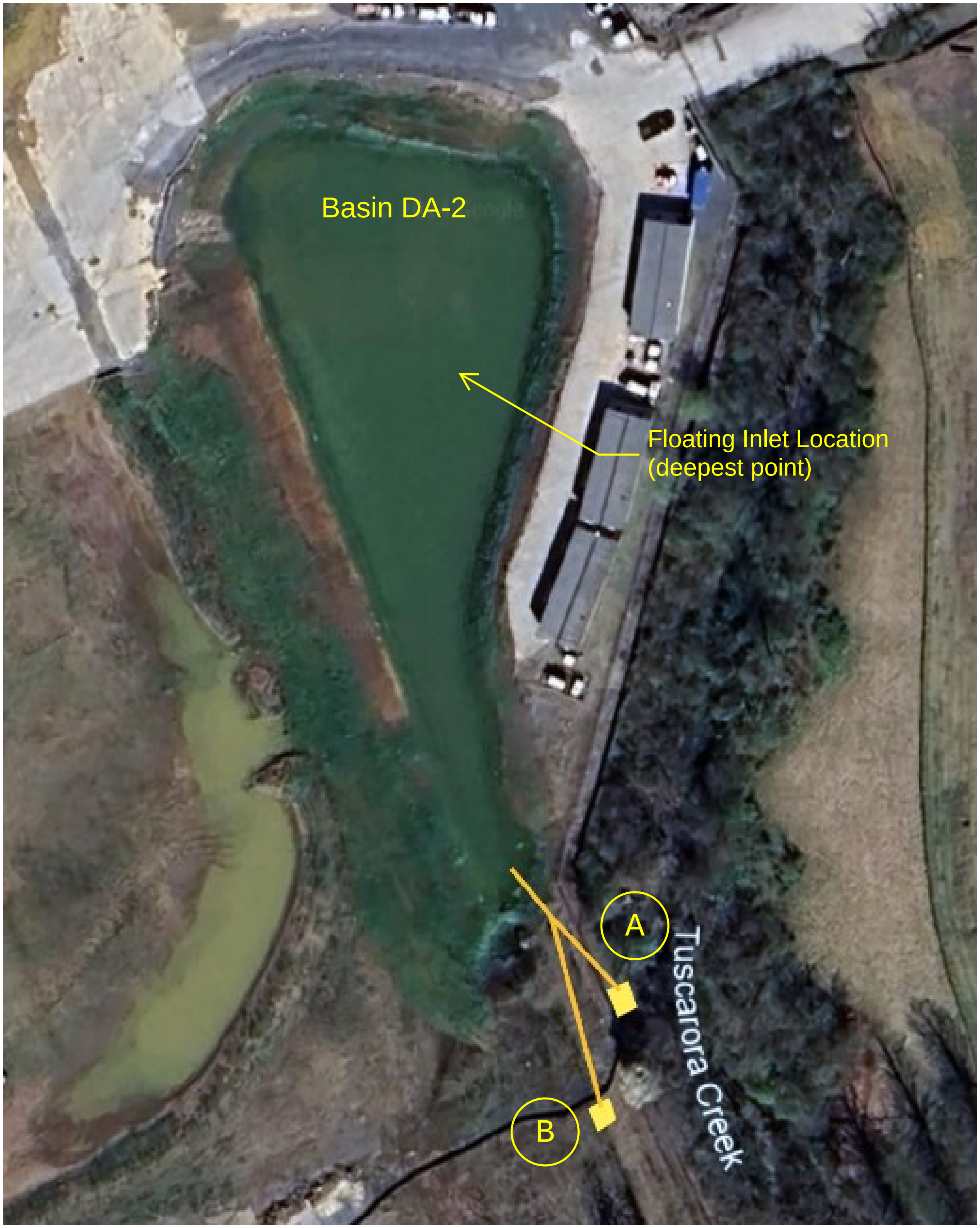
SITE PLAN

Project 2302756 | August 2024 | Fig. 1

CHECHURIN, DMITRY B:\Working\STRUCTURE TONE\2302756 STO Mission Critical - Frederick\00_CAD\Figures\Stormwater Pollution Prevention Plan - SWPPP\B Line Sewer - SWPPP\Figures for Dean Pinson\Fig 4_SWPPP -West Loop North_B Line Sewer_QPS_East Water Line.dwg - 8/13/2024

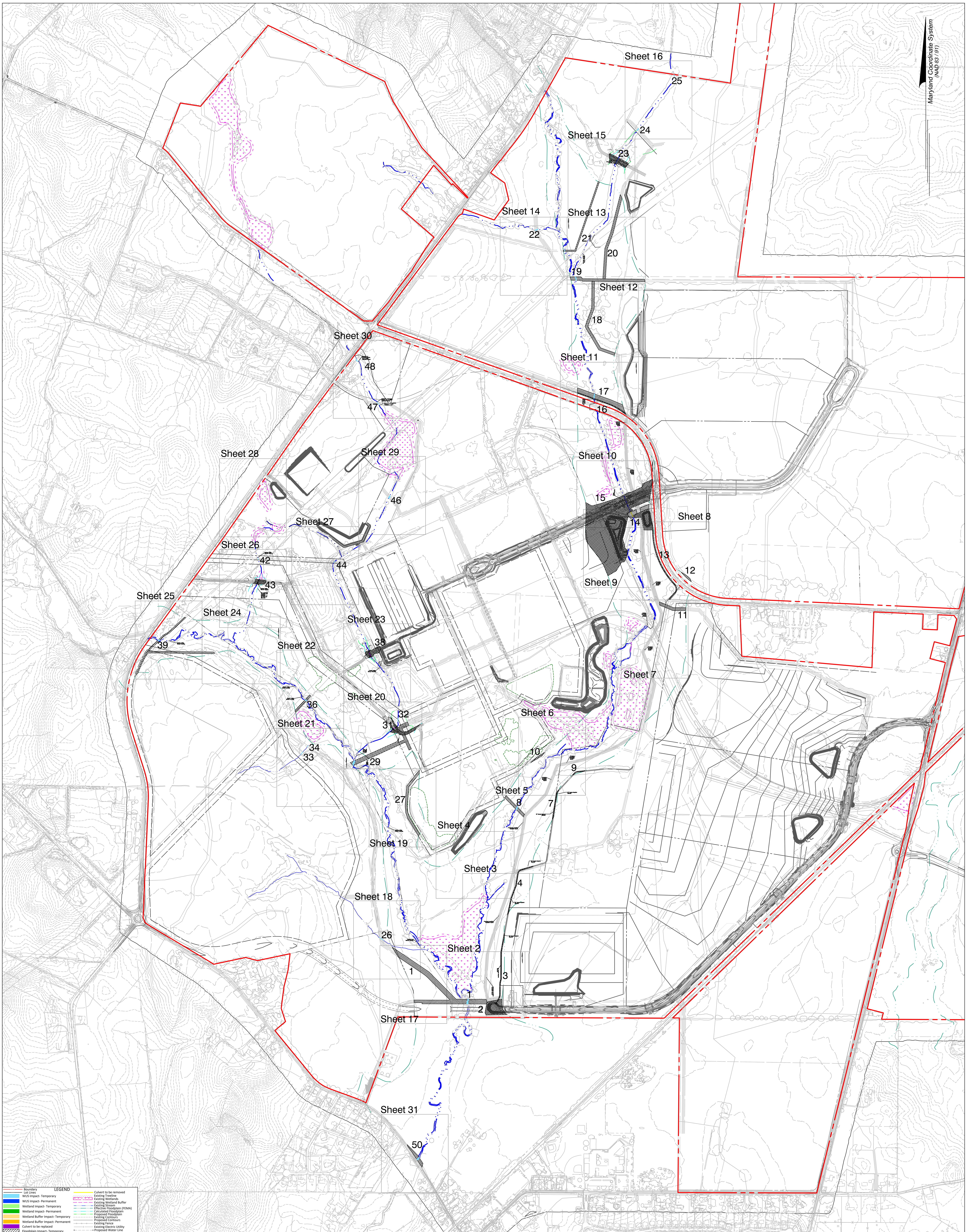
Potential discharge locations A, B, C shown

DA-2 and DA-11 Discharge Request	GEI Consultants	Discharge Flow Basin DA-11 Dewatering
Quantum Maryland Frederick, MD	Project 2302756	August 2024 Fig. 2



Potential discharge locations A, B shown

DA-2 and DA-11 Discharge Request	GEI Consultants	Discharge Flow Basin DA-2 Dewatering
Quantum Maryland Frederick, MD	Project 2302756	August 2024 Fig. 3



RODGERS CONSULTING

19847 Century Boulevard, Suite 200, Germantown, Maryland 20874
Ph: 301.948.4700 www.rodgers.com

Quantum Frederick

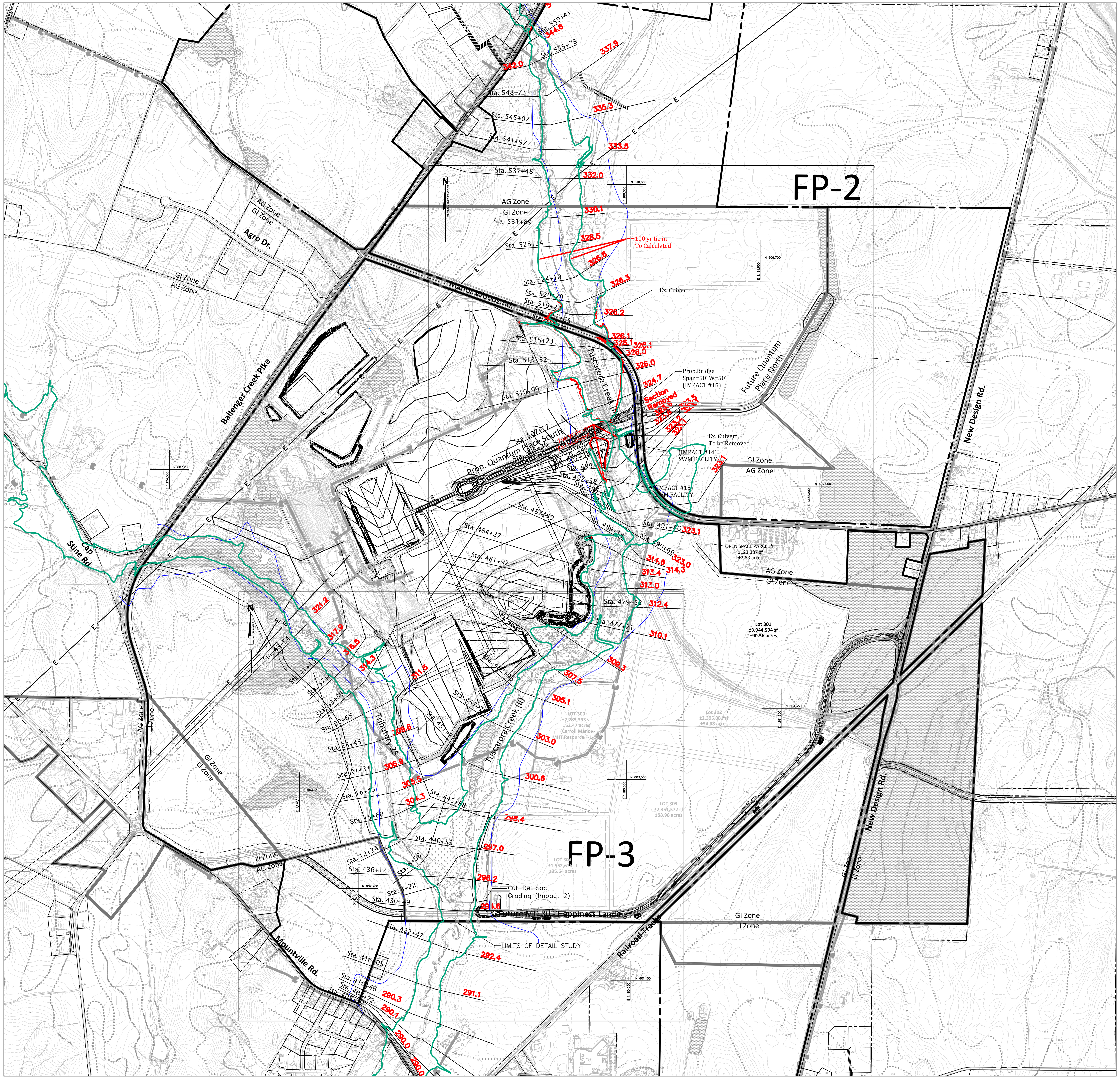
Impacts Overview Exhibit

4/26/2022

GRAPHIC SCALE

400' 0 200' 400' 800' 1,600'

1 INCH = 400 FT



LEGEND

(blue line)	CURRENT EFFECTIVE 100 YR FLOODPLAIN
(green line)	PRELIMINARY 100 YR FLOODPLAIN
(red line)	PROPOSED 100 YR FLOODPLAIN
Sta. 100YR BFEL	CROSS SECTIONS

HORIZONTAL DATUM: NAD83-MARYLAND
VERTICAL DATUM NAVD88

PROFESSIONAL CERTIFICATION
"I hereby certify that these documents were prepared or approved by me that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 54293 , Expiration Date: 05/12/2023 ".

7/28/2022

REVISION	DATE	REVISION	DATE	REVISION	DATE

DEVELOPER/OWNER:
QUANTUM MARYLAND, LLC
500 E 4TH STREET SUITE 333
AUSTIN, TX 78701
CONTACT: AD ROBISON
PHONE: 530-417-7496

Appendix B
Floodplain Section Map

RODGERS CONSULTING
19847 Century Boulevard, Suite 200, Germantown, Maryland 20874
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA		
DESIGNED		
DRAWN		
REVIEWED		

RODGERS CONTACT:
RELEASE FOR
BY: DATE:

Floodplain Section Reference
Quantum Frederick
Liber 2534 Folio 347,
Election District No. 1
Frederick County, Maryland

SCALE: 1"=200'
JOB No. 1339A2
DATE: October 2022
FP-1
SHEET No. 1 OF 3

N:\MD-Frederick\Alcoa\autocad\Plot Plans\Floodplain\Floodplain Section Map MDE Sub.dwg 4/23/2021

Attachment 1

Basin DA-11 Storage Capacity and Elevation Survey

Project : **Quantum Frederick**

Computed By: ACS
Date: 04/05/24

BASIN DA-11

ELEVATION - STORAGE TABLE

Basin As-Built 2/05/24

ELEV. FT.	AREA S.F.	AVG. AREA S.F.	ELEV. INTERVAL FT.	INTERVAL STORAGE C.F.	ACCUM. STORAGE C.F.
311	4,695				0
		7,702	1	7,702	
312	10,709				7,702
		12,853	1	12,853	
313	14,996				20,554
		17,658	1	17,658	
314	20,320				38,212
		23,482	1	23,482	
315	26,645				61,694
		29,537	1	29,537	
316	32,429				91,231
		35,281	1	35,281	
317	38,134				126,512
		40,071	1	40,071	
318	42,009				166,584
		44,011	1	44,011	
319	46,012				210,594
		47,478	1	47,478	
320	48,944				258,072
		50,337	1	50,337	
321	51,730				308,409
		53,130	1	53,130	
322	54,530				361,539

AS-BUILT OF DA-11
SCALE: 1"=40'

Attachment 2

Basin DA-2 Storage Capacity and Elevation Survey

Project : **Quantum Frederick**

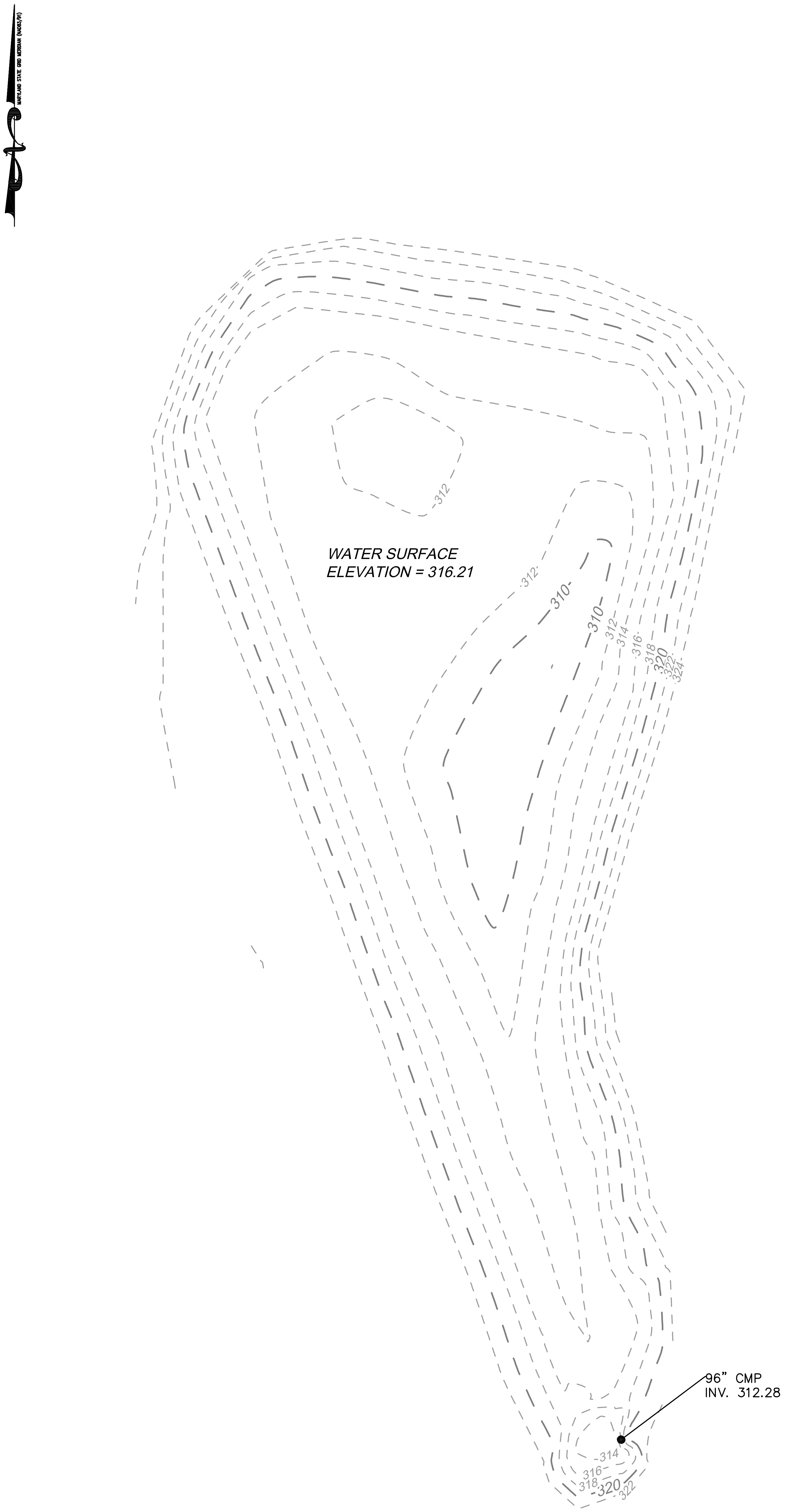
Computed By: ACS
Date: 04/05/24

BASIN DA-2

ELEVATION - STORAGE TABLE

Basin As-Built 2/05/24

ELEV. FT.	AREA S.F.	AVG. AREA S.F.	ELEV. INTERVAL FT.	INTERVAL STORAGE C.F.	ACCUM. STORAGE C.F.
309	1,568				0
		2,434	1	2,434	
310	3,299				2,434
		4,324	1	4,324	
311	5,349				6,758
		6,579	1	6,579	
312	7,808				13,337
		12,782	1	12,782	
313	17,755				26,118
		20,918	1	20,918	
314	24,080				47,036
		26,967	1	26,967	
315	29,853				74,003
		32,815	1	32,815	
316	35,776				106,818
		37,589	1	37,589	
317	39,402				144,407
		40,766	1	40,766	
318	42,131				185,173
		43,491	1	43,491	
319	44,850				228,663
		46,217	1	46,217	
320	47,583				274,880
		48,954	1	48,954	
321	50,326				323,834
		51,736	1	51,736	
322	53,147				375,570



AS-BUILT OF DA-2
SCALE: 1"=40'