

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	USEPA Aquatic_FreshWater_Ac ute_2024	USEPA RSLs THQ 0.1_MCLs_Nov2024	410-213877-2 QM-A3718-20250325			410-213877-3 QM-A4209-20250325
								Result	Units	Qualifier	Result
											Units
8260D_LL	71-55-6	Water	1,1,1-Trichloroethane	Total	200		200	<0.080	ug/L		<0.080
8260D_LL	79-34-5	Water	1,1,2,2-Tetrachloroethane	Total	0.076			<0.10	ug/L		<0.10
8260D_LL	79-00-5	Water	1,1,2-Trichloroethane	Total	5		5	<0.080	ug/L		<0.080
8260D_LL	76-13-1	Water	1,1,2-Trichlorotrifluoroethane	Total				<0.080	ug/L		<0.080
8260D_LL	75-34-3	Water	1,1-Dichloroethane	Total	2.8			<0.10	ug/L		<0.10
8260D_LL	75-35-4	Water	1,1-Dichloroethene	Total	7		7	<0.10	ug/L		<0.10
8260D_LL	120-82-1	Water	1,2,4-Trichlorobenzene	Total	70		70	<0.070	ug/L		<0.070
8260D_LL	96-12-8	Water	1,2-Dibromo-3-Chloropropane	Total	0.2		0.2	<0.10	ug/L		<0.10
8260D_LL	106-93-4	Water	1,2-Dibromoethane	Total	0.05		0.05	<0.080	ug/L		<0.080
8260D_LL	95-50-1	Water	1,2-Dichlorobenzene	Total	600		600	<0.070	ug/L		<0.070
8260D_LL	107-06-2	Water	1,2-Dichloroethane	Total	5		5	<0.070	ug/L		<0.070
8260D_LL	78-87-5	Water	1,2-Dichloropropane	Total	5		5	<0.10	ug/L		<0.10
8260D_LL	541-73-1	Water	1,3-Dichlorobenzene	Total				<0.070	ug/L		<0.070
8260D_LL	106-46-7	Water	1,4-Dichlorobenzene	Total	75		75	<0.070	ug/L		<0.070
8260D_LL	78-93-3	Water	2-Butanone	Total	560			<1.0	ug/L		<1.0
8260D_LL	591-78-6	Water	2-Hexanone	Total				<2.0	ug/L		<2.0
8260D_LL	108-10-1	Water	4-Methyl-2-pentanone	Total	630			<1.0	ug/L		<1.0
8270D_SIM	83-32-9	Water	Acenaphthene	Total	53			<0.010	ug/L		<0.011
8270D_SIM	208-96-8	Water	Acenaphthylene	Total				<0.010	ug/L		<0.011
8260D_LL	67-64-1	Water	Acetone	Total	1400			<1.5	ug/L		1.7
6020B	7429-90-5	Water	Aluminum	Total Recoverable	2000	1100		22	ug/L	J	94
8270D_SIM	120-12-7	Water	Anthracene	Total	180			<0.010	ug/L		<0.011
6020B	7440-36-0	Water	Antimony	Total Recoverable	6		6	<0.20	ug/L		<0.20
6020B	7440-38-2	Water	Arsenic	Total Recoverable	10	340	10	<0.68	ug/L		<0.68
6020B	7440-39-3	Water	Barium	Total Recoverable	2000		2000	42	ug/L		35
8260D_LL	71-43-2	Water	Benzene	Total	5		5	<0.10	ug/L		<0.10
8270D_SIM	56-55-3	Water	Benzo[a]anthracene	Total	0.03			<0.010	ug/L		<0.011
8270D_SIM	50-32-8	Water	Benzo[a]pyrene	Total	0.2		0.2	<0.010	ug/L		<0.011
8270D_SIM	205-99-2	Water	Benzo[b]fluoranthene	Total	0.25			<0.049	ug/L		<0.051
8270D_SIM	191-24-2	Water	Benzo[g,h,i]perylene	Total				<0.010	ug/L		<0.011
8270D_SIM	207-08-9	Water	Benzo[k]fluoranthene	Total	2.5			<0.010	ug/L		<0.011
6020B	7440-41-7	Water	Beryllium	Total Recoverable	4		4	<0.12	ug/L		<0.12
8260D_LL	75-27-4	Water	Bromodichloromethane	Total	80		80	<0.080	ug/L		0.13
8260D_LL	75-25-2	Water	Bromoform	Total	80		80	<0.30	ug/L		<0.30
8260D_LL	74-83-9	Water	Bromomethane	Total	0.75			<0.10	ug/L		<0.10
6020B	7440-43-9	Water	Cadmium	Total Recoverable	5	1.8	5	<0.15	ug/L		<0.15
6020B	7440-70-2	Water	Calcium	Total Recoverable				87000	ug/L		72000
8260D_LL	75-15-0	Water	Carbon disulfide	Total	81			<0.10	ug/L		<0.10
8260D_LL	56-23-5	Water	Carbon tetrachloride	Total	5		5	<0.10	ug/L		<0.10
8260D_LL	108-90-7	Water	Chlorobenzene	Total	100		100	<0.070	ug/L		<0.070
8260D_LL	75-00-3	Water	Chloroethane	Total	2100			<0.10	ug/L		<0.10
8260D_LL	67-66-3	Water	Chloroform	Total	80		80	<0.090	ug/L		0.51
8260D_LL	74-87-3	Water	Chloromethane	Total	19			<0.10	ug/L		<0.10
6020B	7440-47-3	Water	Chromium	Total Recoverable	100		100	<0.55	ug/L		0.61
8270D_SIM	218-01-9	Water	Chrysene	Total	25			<0.026	ug/L		<0.027
8260D_LL	156-59-2	Water	cis-1,2-Dichloroethene	Total	70		70	<0.080	ug/L		<0.080
8260D_LL	10061-01-5	Water	cis-1,3-Dichloropropene	Total				<0.10	ug/L		<0.10
6020B	7440-48-4	Water	Cobalt	Total Recoverable				0.38	ug/L	J	0.56
6020B	7440-50-8	Water	Copper	Total Recoverable	1300		1300	0.70	ug/L	J	1.1
9040C	N/A	Water	Corrosivity	Total				no	NONE	HF	no
1677_Free	N/A	Water	Cyanide, Free	Total		0.2	0.022	0.2	<0.0050	mg/L	<0.0050
8260D_LL	110-82-7	Water	Cyclohexane	Total				<0.10	ug/L		<0.10
8270D_SIM	53-70-3	Water	Dibenz(a,h)anthracene	Total	0.025			<0.021	ug/L		<0.022
8260D_LL	124-48-1	Water	Dibromochloromethane	Total	80		80	<0.080	ug/L		0.11
8260D_LL	75-71-8	Water	Dichlorodifluoromethane	Total				<0.10	ug/L		<0.10
8015D_DRO	N/A	Water	DRO (C10-C28)	Total	47			<47	ug/L		<49
8260D_LL	100-41-4	Water	Ethylbenzene	Total	700		700	<0.080	ug/L		<0.080
8011	106-93-4	Water	Ethylene Dibromide	Total	0.05		0.05	<0.0094	ug/L		<0.0095
8270D_SIM	206-44-0	Water	Fluoranthene	Total	80			<0.024	ug/L		<0.025
8270D_SIM	86-73-7	Water	Fluorene	Total	29			<0.010	ug/L		<0.011
300_ORGFM_28D	16984-48-8	Water	Fluoride	Total			4	0.26	mg/L		0.44
8015D_GRO	N/A	Water	GRO	Total	47			<23	ug/L		<23
8270D_SIM	193-39-5	Water	Indeno[1,2,3-cd]pyrene	Total	0.25			<0.021	ug/L		<0.022
6020B	7439-89-6	Water	Iron	Total Recoverable	1400	See Reg		41	ug/L	J	79
8260D_LL	98-82-8	Water	Isopropylbenzene	Total	45			<0.080	ug/L		<0.080
6020B	7439-92-1	Water	Lead	Total Recoverable	15	65	10	<0.12	ug/L		<0.12
6020B	7439-95-4	Water	Magnesium	Total Recoverable				9600	ug/L		8700
6020B	7439-96-5	Water	Manganes	Total Recoverable	43			52	ug/L		19
7470A	7439-97-6	Water	Mercury	Total	2	1.4	2	<0.079	ug/L	++	<0.079
8260D_LL	79-20-9	Water	Methyl acetate	Total				<0.20	ug/L		<0.20
8260D_LL	1634-04-4	Water	Methyl tertiary butyl ether	Total	20			<0.080	ug/L		<0.080
8260D_LL	108-87-2	Water	Methylcyclohexane	Total				<0.10	ug/L		<0.10
8260D_LL	75-09-2	Water	Methylene Chloride	Total	5		5	<0.20	ug/L		<0.20
8270D_SIM	91-20-3	Water	Naphthalene	Total	0.17			<0.071	ug/L		<0.074
6020B	7440-02-0	Water	Nickel	Total Recoverable	39	470		1.1	ug/L		0.68
8082A_LL	12674-11-2	Water	PCB-1016	Total	0.14	0.014*	0.5**	<0.0081	ug/L		<0.0079
8082A_LL	11104-28-2	Water	PCB-1221	Total	0.0047	0.014*	0.5**	<0.0081	ug/L		<0.0079
8082A_LL	11141-16-5	Water	PCB-1232	Total	0.0047	0.014*	0.5**	<0.0081	ug/L		<0.0079
8082A_LL	53469-21-9	Water	PCB-1242	Total	0.0078	0.014*	0.5**	<0.0081	ug/L		<0.0079
8082A_LL	12672-29-6	Water	PCB-1248	Total	0.0078	0.014*	0.5**	<0.0081	ug/L		<0.0079
8082A_LL	11097-69-1	Water	PCB-1254	Total	0.0078	0.014*	0.5**	<0.0050	ug/L		<0.0049
8082A_LL	11096-82-5	Water	PCB-1260	Total	0.0078	0.014*	0.5**	<0.0050	ug/L		<0.0049
9040C	N/A	Water	pH	Total		6.5-8.5		7.9	S.U.	HF	7.5
8270D_SIM	85-01-8	Water	Phenanthrene	Total	12			<0.031	ug/L		<0.033
Total_PCB	1336-36-3	Water	Polychlorinated biphenyls, Total	Total	0.5		0.5	<0.0081	ug/L		<0.0079
6020B	7440-09-7	Water	Potassium	Total Recoverable				3300	ug/L		2900
8270D_SIM	129-00-0	Water	Pyrene	Total	12			<0.022	ug/L		<0.023
6020B	7782-49-2	Water	Selenium	Total Recoverable	50	See Reg	50	<0.28	ug/L		0.30
6020B	7440-22-4	Water	Silver	Total Recoverable	9.4	3.2		<0.10	ug/L		<0.10
6020B	7440-23-5	Water	Sodium	Total Recoverable				8800	ug/L		13000
8260D_LL	100-42-5	Water	Styrene	Total	100		100	<0.070	ug/L		<0.070
9040C	N/A	Water	Temperature	Total				21.3	Degrees C	HF	21.3
8260D_LL	127-18-4	Water	Tetrachloroethene	Total	5		5	<0.20	ug/L		<0.20
6020B	7440-28-0	Water	Thallium	Total Recoverable	2		2	<0.13	ug/L		0.25
8260D_LL	108-88-3	Water	Toluene	Total	1000		1000	<0.080	ug/L		<0.080
8260D_LL	156-60-5	Water	trans-1,2-Dichloroethene	Total	100		100	<0.10	ug/L		<0.10
8260D_LL	10061-02-6	Water	trans-1,3-Dichloropropene	Total				<0.080	ug/L		<0.080
8260D_LL	79-01-6	Water	Trichloroethene	Total	5		5	<0.080	ug/L		<0.080
8260D_LL	75-69-4	Water	Trichlorofluoromethane	Total				<0.10	ug/L		<0.10
6020B	7440-62-2	Water	Vanadium	Total Recoverable	8.6			<0.79	ug/L		<0.79
8260D_LL	75-01-4	Water	Vinyl chloride	Total	2		2	<0.10	ug/L		<0.10
8260D_LL	1330-20-7	Water	Xylenes, Total	Total	10000		10000	<0.070	ug/L		<0.070
6020B	7440-66-6	Water	Zinc	Total Recoverable	600	120		<4.0	ug/L		<4.0

*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 ug/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.

Yellow highlight exceeds one or more criteria

Gray shaded cells indicate non-detections where the laboratory reporting limit is greater than the MDGW standard where the MDGW standard is the only standard available.

MDGW - Maryland Groundwater Cleanup Standards

MCL - Maryland state (or federal) maximum contaminat level (MCL) for drinking water

NC- no criteria available for the given analyte.

U - not detected at a concentration above laboratory detection limits.

HF - sample was analyzed outside of holding time at contractor's request.

J - estimated concentration; concentration is greater than the MDL but less than the RL.

B - possible laboratory blank bias; analye found in the laboratory blank and in the sample.

for the noted analytes were recovered above the upper control limit. This affected the non-detect results.

*1 - LCS/LCSD exceeds allowable Relative percent difference

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Lab: Eurofins Lancaster								
Specific Method	CAS#	Matrix	Analyte	Results Basis	MD LRP Cleanup Stds_Tbl 1_GWs Aquifers_Oct2018	USEPA Aquatic_FreshWater_Ac ute_2024	USEPA RSLs THQ 0.1_MCLs_Nov2024	Qualifier
8260D_LL	71-55-6	Water	1,1,1-Trichloroethane	Total	200		200	
8260D_LL	79-34-5	Water	1,1,2,2-Tetrachloroethane	Total	0.076			
8260D_LL	79-00-5	Water	1,1,2-Trichloroethane	Total	5		5	
8260D_LL	76-13-1	Water	1,1,2-Trichlorotrifluoroethane	Total				
8260D_LL	75-34-3	Water	1,1-Dichloroethane	Total	2.8			
8260D_LL	75-35-4	Water	1,1-Dichloroethene	Total	7		7	
8260D_LL	120-82-1	Water	1,2,4-Trichlorobenzene	Total	70		70	
8260D_LL	96-12-8	Water	1,2-Dibromo-3-Chloropropane	Total	0.2		0.2	
8260D_LL	106-93-4	Water	1,2-Dibromoethane	Total	0.05		0.05	
8260D_LL	95-50-1	Water	1,2-Dichlorobenzene	Total	600		600	
8260D_LL	107-06-2	Water	1,2-Dichloroethane	Total	5		5	
8260D_LL	78-87-5	Water	1,2-Dichloropropane	Total	5		5	
8260D_LL	541-73-1	Water	1,3-Dichlorobenzene	Total				
8260D_LL	106-46-7	Water	1,4-Dichlorobenzene	Total	75		75	
8260D_LL	78-93-3	Water	2-Butanone	Total	560			
8260D_LL	591-78-6	Water	2-Hexanone	Total				
8260D_LL	108-10-1	Water	4-Methyl-2-pentanone	Total	630			
8270D_SIM	83-32-9	Water	Acenaphthene	Total	53			
8270D_SIM	208-96-8	Water	Acenaphthylene	Total				
8260D_LL	67-64-1	Water	Acetone	Total	1400			J
6020B	7429-90-5	Water	Aluminum	Total Recoverable	2000	1100		
8270D_SIM	120-12-7	Water	Anthracene	Total	180			
6020B	7440-36-0	Water	Antimony	Total Recoverable	6		6	
6020B	7440-38-2	Water	Arsenic	Total Recoverable	10	340	10	
6020B	7440-39-3	Water	Barium	Total Recoverable	2000		2000	
8260D_LL	71-43-2	Water	Benzene	Total	5		5	
8270D_SIM	56-55-3	Water	Benzo[a]anthracene	Total	0.03			
8270D_SIM	50-32-8	Water	Benzo[a]pyrene	Total	0.2		0.2	
8270D_SIM	205-99-2	Water	Benzo[b]fluoranthene	Total	0.25			
8270D_SIM	191-24-2	Water	Benzo[g,h,i]perylene	Total				
8270D_SIM	207-08-9	Water	Benzo[k]fluoranthene	Total	2.5			
6020B	7440-41-7	Water	Beryllium	Total Recoverable	4		4	
8260D_LL	75-27-4	Water	Bromodichloromethane	Total	80		80	J
8260D_LL	75-25-2	Water	Bromoform	Total	80		80	
8260D_LL	74-83-9	Water	Bromomethane	Total	0.75			
6020B	7440-43-9	Water	Cadmium	Total Recoverable	5	1.8	5	
6020B	7440-70-2	Water	Calcium	Total Recoverable				
8260D_LL	75-15-0	Water	Carbon disulfide	Total	81			
8260D_LL	56-23-5	Water	Carbon tetrachloride	Total	5		5	
8260D_LL	108-90-7	Water	Chlorobenzene	Total	100		100	
8260D_LL	75-00-3	Water	Chloroethane	Total	2100			
8260D_LL	67-66-3	Water	Chloroform	Total	80		80	
8260D_LL	74-87-3	Water	Chloromethane	Total	19			
6020B	7440-47-3	Water	Chromium	Total Recoverable	100		100	J
8270D_SIM	218-01-9	Water	Chrysene	Total	25			
8260D_LL	156-59-2	Water	cis-1,2-Dichloroethene	Total	70		70	
8260D_LL	10061-01-5	Water	cis-1,3-Dichloropropene	Total				
6020B	7440-48-4	Water	Cobalt	Total Recoverable				
6020B	7440-50-8	Water	Copper	Total Recoverable	1300		1300	
9040C	N/A	Water	Corrosivity	Total				HF
1677_Free	N/A	Water	Cyanide, Free	Total	0.2	0.022	0.2	
8260D_LL	110-82-7	Water	Cyclohexane	Total				
8270D_SIM	53-70-3	Water	Dibenz(a,h)anthracene	Total	0.025			
8260D_LL	124-48-1	Water	Dibromochloromethane	Total	80		80	J
8260D_LL	75-71-8	Water	Dichlorodifluoromethane	Total				
8015D_DRO	N/A	Water	DRO (C10-C28)	Total	47			
8260D_LL	100-41-4	Water	Ethylbenzene	Total	700		700	
8011	106-93-4	Water	Ethylene Dibromide	Total	0.05		0.05	
8270D_SIM	206-44-0	Water	Fluoranthene	Total	80			
8270D_SIM	86-73-7	Water	Fluorene	Total	29			
300_ORGFM_28D	16984-48-8	Water	Fluoride	Total			4	
8015D_GRO	N/A	Water	GRO	Total	47			
8270D_SIM	193-39-5	Water	Indeno[1,2,3-cd]pyrene	Total	0.25			
6020B	7439-89-6	Water	Iron	Total Recoverable	1400	See Reg		
8260D_LL	98-82-8	Water	Isopropylbenzene	Total	45			
6020B	7439-92-1	Water	Lead	Total Recoverable	15	65	10	
6020B	7439-95-4	Water	Magnesium	Total Recoverable				
6020B	7439-96-5	Water	Manganese	Total Recoverable	43			
7470A	7439-97-6	Water	Mercury	Total	2	1.4	2	++
8260D_LL	79-20-9	Water	Methyl acetate	Total				
8260D_LL	1634-04-4	Water	Methyl tertiary butyl ether	Total	20			
8260D_LL	108-87-2	Water	Methylcyclohexane	Total				
8260D_LL	75-09-2	Water	Methylene Chloride	Total	5		5	
8270D_SIM	91-20-3	Water	Naphthalene	Total	0.17			
6020B	7440-02-0	Water	Nickel	Total Recoverable	39	470		J
8082A_LL	12674-11-2	Water	PCB-1016	Total	0.14	0.014*	0.5**	
8082A_LL	11104-28-2	Water	PCB-1221	Total	0.0047	0.014*	0.5**	
8082A_LL	11141-16-5	Water	PCB-1232	Total	0.0047	0.014*	0.5**	
8082A_LL	53469-21-9	Water	PCB-1242	Total	0.0078	0.014*	0.5**	
8082A_LL	12672-29-6	Water	PCB-1248	Total	0.0078	0.014*	0.5**	
8082A_LL	11097-69-1	Water	PCB-1254	Total	0.0078	0.014*	0.5**	
8082A_LL	11096-82-5	Water	PCB-1260	Total	0.0078	0.014*	0.5**	
9040C	N/A	Water	pH	Total		6.5-8.5		HF
8270D_SIM	85-01-8	Water	Phenanthrene	Total	12			
Total_PCB	1336-36-3	Water	Polychlorinated biphenyls, Total	Total	0.5		0.5	
6020B	7440-09-7	Water	Potassium	Total Recoverable				
8270D_SIM	129-00-0	Water	Pyrene	Total	12			
6020B	7782-49-2	Water	Selenium	Total Recoverable	50	See Reg	50	J
6020B	7440-22-4	Water	Silver	Total Recoverable	9.4	3.2		
6020B	7440-23-5	Water	Sodium	Total Recoverable				
8260D_LL	100-42-5	Water	Styrene	Total	100		100	
9040C	N/A	Water	Temperature	Total				HF
8260D_LL	127-18-4	Water	Tetrachloroethene	Total	5		5	
6020B	7440-28-0	Water	Thallium	Total Recoverable	2		2	J
8260D_LL	108-88-3	Water	Toluene	Total	1000		1000	
8260D_LL	156-60-5	Water	trans-1,2-Dichloroethene	Total	100		100	
8260D_LL	10061-02-6	Water	trans-1,3-Dichloropropene	Total				
8260D_LL	79-01-6	Water	Trichloroethene	Total	5		5	
8260D_LL	75-69-4	Water	Trichlorofluoromethane	Total				
6020B	7440-62-2	Water	Vanadium	Total Recoverable	8.6			
8260D_LL	75-01-4	Water	Vinyl chloride	Total	2		2	
8260D_LL	1330-20-7	Water	Xylenes, Total	Total	10000		10000	
6020B	7440-66-6	Water	Zinc	Total Recoverable	600	120		

*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 ug/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.

Yellow highlight exceeds one or more criteria

Gray shaded cells indicate non-detections where the laboratory reporting limit is greater than the MDGW standard where the MDGW standard is the only standard available.

MDGW - Maryland Groundwater Cleanup Standards

MCL - Maryland state (or federal) maximum contaminat level (MCL) for drinking water

NC- no criteria available for the given analyte.

U - not detected at a concentration above laboratory detection limits.

HF - sample was analyzed outside of holding time at contractor's request.

J - estimated concentration; concentration is greater than the MDL but less than the RL.

B - possible laboratory blank bias; analye found in the laboratory blank and in the sample.

for the noted analytes were recovered above the upper control limit. This affected the non-detect results.

*1 - LCS/LCSD exceeds allowable Relative percent difference

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	USEPA Aquatic_FreshWater_Ac ute_2024	USEPA RSLs THQ 0.1_MCLs_Nov2024	410-214329-2 QM-A878TO-20250327			410-214329-3 QM-A1010-20250327	
								Result	Units	Qualifier	Result	Units
8260D_LL	71-55-6	Water	1,1,1-Trichloroethane	Total	200		200	<0.080	ug/L		<0.080	ug/L
8260D_LL	79-34-5	Water	1,1,2,2-Tetrachloroethane	Total	0.076			<0.10	ug/L		<0.10	ug/L
8260D_LL	79-00-5	Water	1,1,2-Trichloroethane	Total	5		5	<0.080	ug/L		<0.080	ug/L
8260D_LL	76-13-1	Water	1,1,2-Trichlorotrifluoroethane	Total				<0.080	ug/L		<0.080	ug/L
8260D_LL	75-34-3	Water	1,1-Dichloroethane	Total	2.8			<0.10	ug/L		<0.10	ug/L
8260D_LL	75-35-4	Water	1,1-Dichloroethene	Total	7		7	<0.10	ug/L		<0.10	ug/L
8260D_LL	120-82-1	Water	1,2,4-Trichlorobenzene	Total	70		70	<0.070	ug/L		<0.070	ug/L
8260D_LL	96-12-8	Water	1,2-Dibromo-3-Chloropropane	Total	0.2		0.2	<0.10	ug/L		<0.10	ug/L
8260D_LL	106-93-4	Water	1,2-Dibromoethane	Total	0.05		0.05	<0.080	ug/L		<0.080	ug/L
8260D_LL	95-50-1	Water	1,2-Dichlorobenzene	Total	600		600	<0.070	ug/L		<0.070	ug/L
8260D_LL	107-06-2	Water	1,2-Dichloroethane	Total	5		5	<0.070	ug/L		<0.070	ug/L
8260D_LL	78-87-5	Water	1,2-Dichloropropane	Total	5		5	<0.10	ug/L		<0.10	ug/L
8260D_LL	541-73-1	Water	1,3-Dichlorobenzene	Total				<0.070	ug/L		<0.070	ug/L
8260D_LL	106-46-7	Water	1,4-Dichlorobenzene	Total	75		75	<0.070	ug/L		<0.070	ug/L
8260D_LL	78-93-3	Water	2-Butanone	Total	560			<1.0	ug/L		<1.0	ug/L
8260D_LL	591-78-6	Water	2-Hexanone	Total				<2.0	ug/L		<2.0	ug/L
8260D_LL	108-10-1	Water	4-Methyl-2-pentanone	Total	630			<1.0	ug/L		<1.0	ug/L
8270D_SIM	83-32-9	Water	Acenaphthene	Total	53			<0.011	ug/L		<0.010	ug/L
8270D_SIM	208-96-8	Water	Acenaphthylene	Total				<0.011	ug/L		<0.010	ug/L
8260D_LL	67-64-1	Water	Acetone	Total	1400			<1.5	ug/L		<1.5	ug/L
6020B	7429-90-5	Water	Aluminum	Total Recoverable	2000	1100		120	ug/L		110	ug/L
8270D_SIM	120-12-7	Water	Anthracene	Total	180			<0.011	ug/L		<0.010	ug/L
6020B	7440-36-0	Water	Antimony	Total Recoverable	6		6	<0.20	ug/L		0.30	ug/L
6020B	7440-38-2	Water	Arsenic	Total Recoverable	10	340	10	<0.68	ug/L		0.71	ug/L
6020B	7440-39-3	Water	Barium	Total Recoverable	2000		2000	38	ug/L		40	ug/L
8260D_LL	71-43-2	Water	Benzene	Total	5		5	<0.10	ug/L		<0.10	ug/L
8270D_SIM	56-55-3	Water	Benzo[a]anthracene	Total	0.03			<0.011	ug/L		<0.010	ug/L
8270D_SIM	50-32-8	Water	Benzo[a]pyrene	Total	0.2		0.2	<0.011	ug/L		<0.010	ug/L
8270D_SIM	205-99-2	Water	Benzo[b]fluoranthene	Total	0.25			<0.050	ug/L		<0.048	ug/L
8270D_SIM	191-24-2	Water	Benzo[g,h,i]perylene	Total				<0.011	ug/L		<0.010	ug/L
8270D_SIM	207-08-9	Water	Benzo[k]fluoranthene	Total	2.5			<0.011	ug/L		<0.010	ug/L
6020B	7440-41-7	Water	Beryllium	Total Recoverable	4		4	<0.12	ug/L		<0.12	ug/L
8260D_LL	75-27-4	Water	Bromodichloromethane	Total	80		80	<0.080	ug/L		<0.080	ug/L
8260D_LL	75-25-2	Water	Bromoform	Total	80		80	<0.30	ug/L		<0.30	ug/L
8260D_LL	74-83-9	Water	Bromomethane	Total	0.75			<0.10	ug/L		<0.10	ug/L
6020B	7440-43-9	Water	Cadmium	Total Recoverable	5	1.8	5	<0.15	ug/L		<0.15	ug/L
6020B	7440-70-2	Water	Calcium	Total Recoverable				85000	ug/L		85000	ug/L
8260D_LL	75-15-0	Water	Carbon disulfide	Total	81			<0.10	ug/L		<0.10	ug/L
8260D_LL	56-23-5	Water	Carbon tetrachloride	Total	5		5	<0.10	ug/L		<0.10	ug/L
8260D_LL	108-90-7	Water	Chlorobenzene	Total	100		100	<0.070	ug/L		<0.070	ug/L
8260D_LL	75-00-3	Water	Chloroethane	Total	2100			<0.10	ug/L		<0.10	ug/L
8260D_LL	67-66-3	Water	Chloroform	Total	80		80	<0.090	ug/L		<0.090	ug/L
8260D_LL	74-87-3	Water	Chloromethane	Total	19			<0.10	ug/L		<0.10	ug/L
6020B	7440-47-3	Water	Chromium	Total Recoverable	100		100	<0.55	ug/L		<0.55	ug/L
8270D_SIM	218-01-9	Water	Chrysene	Total	25			<0.027	ug/L		<0.026	ug/L
8260D_LL	156-59-2	Water	cis-1,2-Dichloroethene	Total	70		70	<0.080	ug/L		<0.080	ug/L
8260D_LL	10061-01-5	Water	cis-1,3-Dichloropropene	Total				<0.10	ug/L		<0.10	ug/L
6020B	7440-48-4	Water	Cobalt	Total Recoverable				0.59	ug/L		0.58	ug/L
6020B	7440-50-8	Water	Copper	Total Recoverable	1300		1300	<0.36	ug/L		<0.36	ug/L
9040C	N/A	Water	Corrosivity	Total				no	NONE	HF	no	NONE
1677_Free	N/A	Water	Cyanide, Free	Total		0.2	0.2	<0.0050	mg/L		<0.0050	mg/L
8260D_LL	110-82-7	Water	Cyclohexane	Total				<0.10	ug/L		<0.10	ug/L
8270D_SIM	53-70-3	Water	Dibenz(a,h)anthracene	Total	0.025			<0.021	ug/L		<0.021	ug/L
8260D_LL	124-48-1	Water	Dibromochloromethane	Total	80		80	<0.080	ug/L		<0.080	ug/L
8260D_LL	75-71-8	Water	Dichlorodifluoromethane	Total				<0.10	ug/L		<0.10	ug/L
8015D_DRO	N/A	Water	DRO (C10-C28)	Total	47			<46	ug/L	*1	<48	ug/L
8260D_LL	100-41-4	Water	Ethylbenzene	Total	700		700	<0.080	ug/L		<0.080	ug/L
8011	106-93-4	Water	Ethylene Dibromide	Total	0.05		0.05	<0.0093	ug/L		<0.0095	ug/L
8270D_SIM	206-44-0	Water	Fluoranthene	Total	80			<0.025	ug/L		<0.024	ug/L
8270D_SIM	86-73-7	Water	Fluorene	Total	29			<0.011	ug/L		<0.010	ug/L
300_ORGFM_28D	16984-48-8	Water	Fluoride	Total			4	0.24	mg/L		0.28	mg/L
8015D_GRO	N/A	Water	GRO	Total	47			<23	ug/L		<23	ug/L
8270D_SIM	193-39-5	Water	Indeno[1,2,3-cd]pyrene	Total	0.25			<0.021	ug/L		<0.021	ug/L
6020B	7439-89-6	Water	Iron	Total Recoverable	1400	See Reg		130	ug/L		130	ug/L
8260D_LL	98-82-8	Water	Isopropylbenzene	Total	45			<0.080	ug/L		<0.080	ug/L
6020B	7439-92-1	Water	Lead	Total Recoverable	15	65	10	<0.12	ug/L		<0.12	ug/L
6020B	7439-95-4	Water	Magnesium	Total Recoverable				9400	ug/L		9500	ug/L
6020B	7439-96-5	Water	Manganesee	Total Recoverable	43			66	ug/L		100	ug/L
7470A	7439-97-6	Water	Mercury	Total	2	1.4	2	<0.079	ug/L		<0.079	ug/L
8260D_LL	79-20-9	Water	Methyl acetate	Total				<0.20	ug/L		<0.20	ug/L
8260D_LL	1634-04-4	Water	Methyl tertiary butyl ether	Total	20			<0.080	ug/L		<0.080	ug/L
8260D_LL	108-87-2	Water	Methylcyclohexane	Total				<0.10	ug/L		<0.10	ug/L
8260D_LL	75-09-2	Water	Methylene Chloride	Total	5		5	<0.20	ug/L		<0.20	ug/L
8270D_SIM	91-20-3	Water	Naphthalene	Total	0.17			<0.073	ug/L		<0.070	ug/L
6020B	7440-02-0	Water	Nickel	Total Recoverable	39	470		<0.40	ug/L		<0.40	ug/L
8082A_LL	12674-11-2	Water	PCB-1016	Total	0.14	0.014*	0.5**	<0.0076	ug/L		<0.0079	ug/L
8082A_LL	11104-28-2	Water	PCB-1221	Total	0.0047	0.014*	0.5**	<0.0076	ug/L		<0.0079	ug/L
8082A_LL	11141-16-5	Water	PCB-1232	Total	0.0047	0.014*	0.5**	<0.0076	ug/L		<0.0079	ug/L
8082A_LL	53469-21-9	Water	PCB-1242	Total	0.0078	0.014*	0.5**	<0.0076	ug/L		<0.0079	ug/L
8082A_LL	12672-29-6	Water	PCB-1248	Total	0.0078	0.014*	0.5**	<0.0076	ug/L		<0.0079	ug/L
8082A_LL	11097-69-1	Water	PCB-1254	Total	0.0078	0.014*	0.5**	<0.0048	ug/L		<0.0049	ug/L
8082A_LL	11096-82-5	Water	PCB-1260	Total	0.0078	0.014*	0.5**	<0.0048	ug/L		<0.0049	ug/L
9040C	N/A	Water	pH	Total		6.5-8.5		7.6	S.U.	HF	7.4	S.U.
8270D_SIM	85-01-8	Water	Phenanthrene	Total	12			<0.032	ug/L		<0.031	ug/L
Total_PCB	1336-36-3	Water	Polychlorinated biphenyls, Total	Total	0.5		0.5	<0.0076	ug/L		<0.0079	ug/L
6020B	7440-09-7	Water	Potassium	Total Recoverable				2000	ug/L		1900	ug/L
8270D_SIM	129-00-0	Water	Pyrene	Total	12			<0.023	ug/L		<0.022	ug/L
6020B	7782-49-2	Water	Selenium	Total Recoverable	50	See Reg	50	0.30	ug/L	J	0.70	ug/L
6020B	7440-22-4	Water	Silver	Total Recoverable	9.4	3.2		<0.10	ug/L		<0.10	ug/L
6020B	7440-23-5	Water	Sodium	Total Recoverable				9100	ug/L		9200	ug/L
8260D_LL	100-42-5	Water	Styrene	Total	100		100	<0.070	ug/L		<0.070	ug/L
9040C	N/A	Water	Temperature	Total				21.3	Degrees C	HF	21.4	Degrees C
8260D_LL	127-18-4	Water	Tetrachloroethene	Total	5		5	<0.20	ug/L		<0.20	ug/L
6020B	7440-28-0	Water	Thallium	Total Recoverable	2		2	<0.13	ug/L		<0.13	ug/L
8260D_LL	108-88-3	Water	Toluene	Total	1000		1000	<0.080	ug/L		<0.080	ug/L
8260D_LL	156-60-5	Water	trans-1,2-Dichloroethene	Total	100		100	<0.10	ug/L		<0.10	ug/L
8260D_LL	10061-02-6	Water	trans-1,3-Dichloropropene	Total				<0.080	ug/L		<0.080	ug/L
8260D_LL	79-01-6	Water	Trichloroethene	Total	5		5	<0.080	ug/L		<0.080	ug/L
8260D_LL	75-69-4	Water	Trichlorofluoromethane	Total				<0.10	ug/L		<0.10	ug/L
6020B	7440-62-2	Water	Vanadium	Total Recoverable	8.6			<0.79	ug/L		<0.79	ug/L
8260D_LL	75-01-4	Water	Vinyl chloride	Total	2		2	<0.10	ug/L		<0.10	ug/L
8260D_LL	1330-20-7	Water	Xylenes, Total	Total	10000		10000	<0.070	ug/L		<0.070	ug/L
6020B	7440-66-6	Water	Zinc	Total Recoverable	600	120		<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 ug/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.

Yellow highlight exceeds one or more criteria

Gray shaded cells indicate non-detections where the laboratory reporting limit is greater than the MDGW standard where the MDGW standard is the only standard available.

MDGW - Maryland Groundwater Cleanup Standards

MCL - Maryland state (or federal) maximum contaminat level (MCL) for drinking water

NC- no criteria available for the given analyte.

U - not detected at a concentration above laboratory detection limits.

HF - sample was analyzed outside of holding time at contractor's request.

J - estimated concentration; concentration is greater than the MDL but less than the RL.

B - possible laboratory blank bias; analye found in the laboratory blank and in the sample.

for the noted analytes were recovered above the upper control limit. This affected the non-detect results.

*1 - LCS/LCSD exceeds allowable Relative percent difference

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	USEPA Aquatic_FreshWater_Ac ute_2024	USEPA RSLs THQ 0.1_MCLs_Nov2024	Qualifier
8260D_LL	71-55-6	Water	1,1,1-Trichloroethane	Total	200		200	
8260D_LL	79-34-5	Water	1,1,2,2-Tetrachloroethane	Total	0.076			
8260D_LL	79-00-5	Water	1,1,2-Trichloroethane	Total	5		5	
8260D_LL	76-13-1	Water	1,1,2-Trichlorotrifluoroethane	Total				
8260D_LL	75-34-3	Water	1,1-Dichloroethane	Total	2.8			
8260D_LL	75-35-4	Water	1,1-Dichloroethene	Total	7		7	
8260D_LL	120-82-1	Water	1,2,4-Trichlorobenzene	Total	70		70	
8260D_LL	96-12-8	Water	1,2-Dibromo-3-Chloropropane	Total	0.2		0.2	
8260D_LL	106-93-4	Water	1,2-Dibromoethane	Total	0.05		0.05	
8260D_LL	95-50-1	Water	1,2-Dichlorobenzene	Total	600		600	
8260D_LL	107-06-2	Water	1,2-Dichloroethane	Total	5		5	
8260D_LL	78-87-5	Water	1,2-Dichloropropane	Total	5		5	
8260D_LL	541-73-1	Water	1,3-Dichlorobenzene	Total				
8260D_LL	106-46-7	Water	1,4-Dichlorobenzene	Total	75		75	
8260D_LL	78-93-3	Water	2-Butanone	Total	560			
8260D_LL	591-78-6	Water	2-Hexanone	Total				
8260D_LL	108-10-1	Water	4-Methyl-2-pentanone	Total	630			
8270D_SIM	83-32-9	Water	Acenaphthene	Total	53			
8270D_SIM	208-96-8	Water	Acenaphthylene	Total				
8260D_LL	67-64-1	Water	Acetone	Total	1400			
6020B	7429-90-5	Water	Aluminum	Total Recoverable	2000	1100		
8270D_SIM	120-12-7	Water	Anthracene	Total	180			
6020B	7440-36-0	Water	Antimony	Total Recoverable	6		6	J
6020B	7440-38-2	Water	Arsenic	Total Recoverable	10	340	10	J
6020B	7440-39-3	Water	Barium	Total Recoverable	2000		2000	
8260D_LL	71-43-2	Water	Benzene	Total	5		5	
8270D_SIM	56-55-3	Water	Benzo[a]anthracene	Total	0.03			
8270D_SIM	50-32-8	Water	Benzo[a]pyrene	Total	0.2		0.2	
8270D_SIM	205-99-2	Water	Benzo[b]fluoranthene	Total	0.25			
8270D_SIM	191-24-2	Water	Benzo[g,h,i]perylene	Total				
8270D_SIM	207-08-9	Water	Benzo[k]fluoranthene	Total	2.5			
6020B	7440-41-7	Water	Beryllium	Total Recoverable	4		4	
8260D_LL	75-27-4	Water	Bromodichloromethane	Total	80		80	
8260D_LL	75-25-2	Water	Bromoform	Total	80		80	
8260D_LL	74-83-9	Water	Bromomethane	Total	0.75			
6020B	7440-43-9	Water	Cadmium	Total Recoverable	5	1.8	5	
6020B	7440-70-2	Water	Calcium	Total Recoverable				
8260D_LL	75-15-0	Water	Carbon disulfide	Total	81			
8260D_LL	56-23-5	Water	Carbon tetrachloride	Total	5		5	
8260D_LL	108-90-7	Water	Chlorobenzene	Total	100		100	
8260D_LL	75-00-3	Water	Chloroethane	Total	2100			
8260D_LL	67-66-3	Water	Chloroform	Total	80		80	
8260D_LL	74-87-3	Water	Chloromethane	Total	19			
6020B	7440-47-3	Water	Chromium	Total Recoverable	100		100	
8270D_SIM	218-01-9	Water	Chrysene	Total	25			
8260D_LL	156-59-2	Water	cis-1,2-Dichloroethene	Total	70		70	
8260D_LL	10061-01-5	Water	cis-1,3-Dichloropropene	Total				
6020B	7440-48-4	Water	Cobalt	Total Recoverable				
6020B	7440-50-8	Water	Copper	Total Recoverable	1300		1300	
9040C	N/A	Water	Corrosivity	Total				HF
1677_Free	N/A	Water	Cyanide, Free	Total	0.2	0.022	0.2	
8260D_LL	110-82-7	Water	Cyclohexane	Total				
8270D_SIM	53-70-3	Water	Dibenz(a,h)anthracene	Total	0.025			
8260D_LL	124-48-1	Water	Dibromochloromethane	Total	80		80	
8260D_LL	75-71-8	Water	Dichlorodifluoromethane	Total				
8015D_DRO	N/A	Water	DRO (C10-C28)	Total	47			*1
8260D_LL	100-41-4	Water	Ethylbenzene	Total	700		700	
8011	106-93-4	Water	Ethylene Dibromide	Total	0.05		0.05	
8270D_SIM	206-44-0	Water	Fluoranthene	Total	80			
8270D_SIM	86-73-7	Water	Fluorene	Total	29			
300_ORGFM_28D	16984-48-8	Water	Fluoride	Total			4	
8015D_GRO	N/A	Water	GRO	Total	47			
8270D_SIM	193-39-5	Water	Indeno[1,2,3-cd]pyrene	Total	0.25			
6020B	7439-89-6	Water	Iron	Total Recoverable	1400	See Reg		
8260D_LL	98-82-8	Water	Isopropylbenzene	Total	45			
6020B	7439-92-1	Water	Lead	Total Recoverable	15	65	10	
6020B	7439-95-4	Water	Magnesium	Total Recoverable				
6020B	7439-96-5	Water	Manganese	Total Recoverable	43			
7470A	7439-97-6	Water	Mercury	Total	2	1.4	2	
8260D_LL	79-20-9	Water	Methyl acetate	Total				
8260D_LL	1634-04-4	Water	Methyl tertiary butyl ether	Total	20			
8260D_LL	108-87-2	Water	Methylcyclohexane	Total				
8260D_LL	75-09-2	Water	Methylene Chloride	Total	5		5	
8270D_SIM	91-20-3	Water	Naphthalene	Total	0.17			
6020B	7440-02-0	Water	Nickel	Total Recoverable	39	470		
8082A_LL	12674-11-2	Water	PCB-1016	Total	0.14	0.014*	0.5**	
8082A_LL	11104-28-2	Water	PCB-1221	Total	0.0047	0.014*	0.5**	
8082A_LL	11141-16-5	Water	PCB-1232	Total	0.0047	0.014*	0.5**	
8082A_LL	53469-21-9	Water	PCB-1242	Total	0.0078	0.014*	0.5**	
8082A_LL	12672-29-6	Water	PCB-1248	Total	0.0078	0.014*	0.5**	
8082A_LL	11097-69-1	Water	PCB-1254	Total	0.0078	0.014*	0.5**	
8082A_LL	11096-82-5	Water	PCB-1260	Total	0.0078	0.014*	0.5**	
9040C	N/A	Water	pH	Total		6.5-8.5		HF
8270D_SIM	85-01-8	Water	Phenanthrene	Total	12			
Total_PCB	1336-36-3	Water	Polychlorinated biphenyls, Total	Total	0.5		0.5	
6020B	7440-09-7	Water	Potassium	Total Recoverable				
8270D_SIM	129-00-0	Water	Pyrene	Total	12			
6020B	7782-49-2	Water	Selenium	Total Recoverable	50	See Reg	50	J
6020B	7440-22-4	Water	Silver	Total Recoverable	9.4	3.2		
6020B	7440-23-5	Water	Sodium	Total Recoverable				
8260D_LL	100-42-5	Water	Styrene	Total	100		100	
9040C	N/A	Water	Temperature	Total				HF
8260D_LL	127-18-4	Water	Tetrachloroethene	Total	5		5	
6020B	7440-28-0	Water	Thallium	Total Recoverable	2		2	
8260D_LL	108-88-3	Water	Toluene	Total	1000		1000	
8260D_LL	156-60-5	Water	trans-1,2-Dichloroethene	Total	100		100	
8260D_LL	10061-02-6	Water	trans-1,3-Dichloropropene	Total				
8260D_LL	79-01-6	Water	Trichloroethene	Total	5		5	
8260D_LL	75-69-4	Water	Trichlorofluoromethane	Total				
6020B	7440-62-2	Water	Vanadium	Total Recoverable	8.6			
8260D_LL	75-01-4	Water	Vinyl chloride	Total	2		2	
8260D_LL	1330-20-7	Water	Xylenes, Total	Total	10000		10000	
6020B	7440-66-6	Water	Zinc	Total Recoverable	600	120		

*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 ug/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.

Yellow highlight exceeds one or more criteria

Gray shaded cells indicate non-detections where the laboratory reporting limit is greater than the MDGW standard where the MDGW standard is the only standard available.

MDGW - Maryland Groundwater Cleanup Standards

MCL - Maryland state (or federal) maximum contaminat level (MCL) for drinking water

NC- no criteria available for the given analyte.

U - not detected at a concentration above laboratory detection limits.

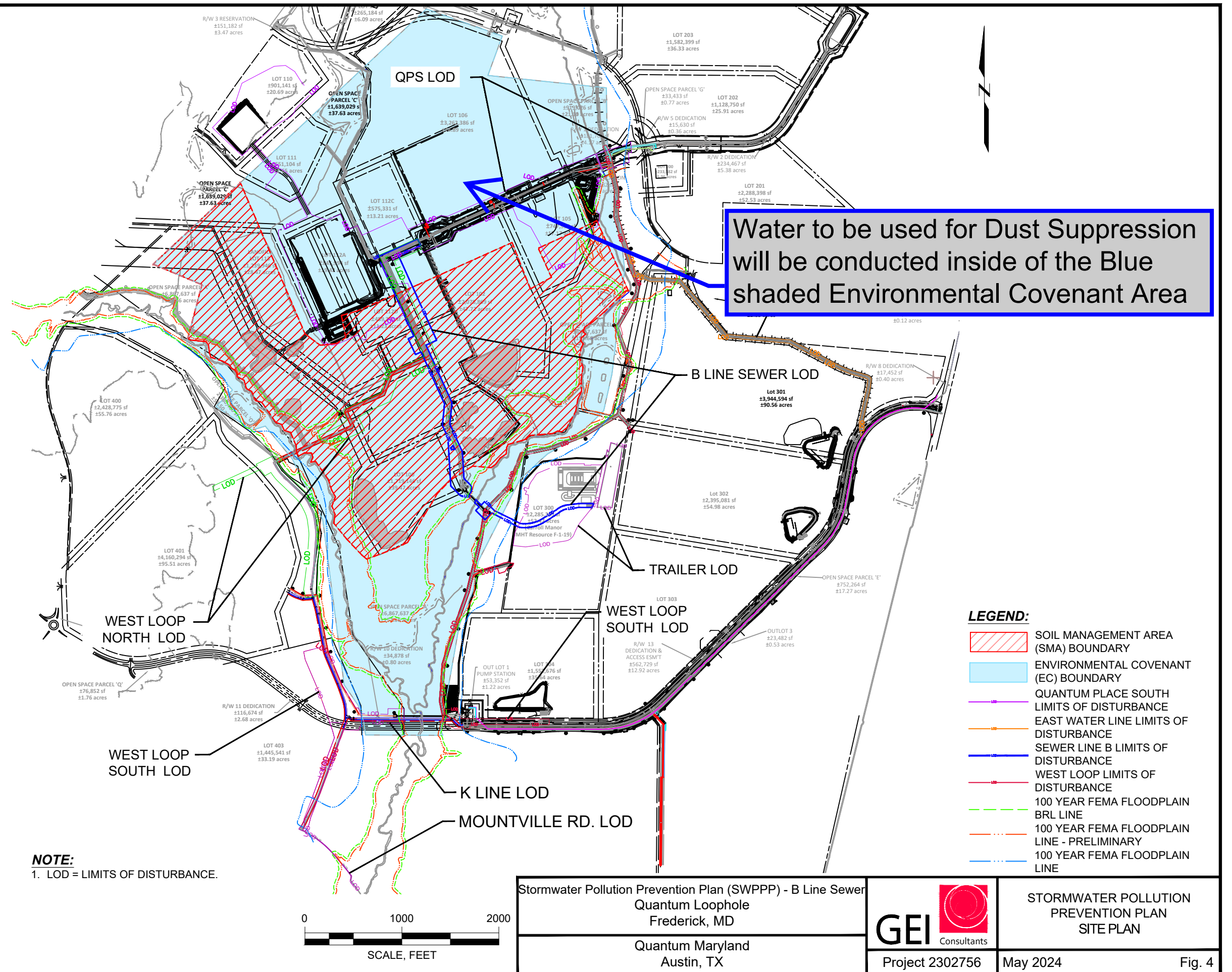
HF - sample was analyzed outside of holding time at contractor's request.

J - estimated concentration; concentration is greater than the MDL but less than the RL.

B - possible laboratory blank bias; analye found in the laboratory blank and in the sample.

for the noted analytes were recovered above the upper control limit. This affected the non-detect results.

*1 - LCS/LCSD exceeds allowable Relative percent difference



EPA Identification Number		NPDES Permit Number	Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026
Form 2C NPDES			U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURE OPERATIONS		
SECTION 1. OUTFALL LOCATION (40 CFR 122.21(G)(1))					
Outfall Location	<u>1.1</u>	Provide information on each of the facility's outfalls in the table below.			
		Outfall Number	Receiving Water Name	Latitude	Longitude
		QL-A878TO	Ground surface in EC	Multiple - see map	Multiple - see map
SECTION 2. LINE DRAWING (40 CFR 122.21(G)(2))					
Line Drawing	<u>2.1</u>	Have you attached a line drawing to this application that shows the water flow through your facility with a water balance? (See instructions for drawing requirements. See Exhibit 2C-1 at end of instructions for example.) ☐ Yes			
SECTION 3. AVERAGE FLOWS AND TREATMENT (40 CFR 122.21(G)(3))					
Average Flows and Treatment	<u>3.1</u>	For each outfall identified under Item 1.1, provide average flow and treatment information. Add additional sheets if necessary.			
		Outfall Number <u>QL-A878TO-</u>			
		Operations Contributing to Flow			
		Operation	Average Flow		
		Outfall A dewatering	mgd		
			mgd		
			mgd		
			mgd		
		Treatment Units			
		Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Exhibit 2C-2	Final Disposal of Solid or Liquid Wastes Other Than by Discharge	

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026			
Average Flows and Treatment Continued	3.1 cont.	**Outfall Number** _____							
		Operations Contributing to Flow							
		Operation			Average Flow				
					mgd				
					mgd				
					mgd				
					mgd				
		Treatment Units							
		Description (include size, flow rate through each treatment unit, retention time, etc.)			Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge		
		Outfall Number _____							
		Operations Contributing to Flow							
		Operation			Average Flow				
					mgd				
					mgd				
					mgd				
					mgd				
		Treatment Units							
		Description (include size, flow rate through each treatment unit, retention time, etc.)			Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge		
		System Users	3.2	Are you applying for an NPDES permit to operate a privately owned treatment works? ☐ Yes ☒ No → SKIP to Section 4.					
			3.3	Have you attached a list that identifies each user of the treatment works? ☐ Yes					

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SECTION 4. INTERMITTENT FLOWS (40 CFR 122.21(G)(4))								
Intermittent Flows	4.1	Except for storm runoff, leaks, or spills, are any discharges described in Sections 1 and 3 intermittent or seasonal? ☐ Yes ☒ No → SKIP to Section 5.						
	4.2	Provide information on intermittent or seasonal flows for each applicable outfall. Attach additional pages, if necessary.						
		Outfall Number	Operation (list)	Frequency		Flow Rate		Duration
				Average Days/Week	Average Months/Year	Long-Term Average	Maximum Daily	
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
SECTION 5. PRODUCTION (40 CFR 122.21(G)(5))								
Applicable ELGs	5.1	Do any effluent limitation guidelines (ELGs) promulgated by EPA under Section 304 of the CWA apply to your facility? ☐ Yes ☒ No → SKIP to Section 6.						
	5.2	Provide the following information on applicable ELGs.						
		ELG Category	ELG Subcategory				Regulatory Citation	
Production-Based Limitations	5.3	Are any of the applicable ELGs expressed in terms of production (or other measure of operation)? ☐ Yes ☒ No → SKIP to Section 6.						
	5.4	Provide an actual measure of daily production expressed in terms and units of applicable ELGs.						
		Outfall Number	Operation, Product, or Material			Quantity per Day	Unit of Measure	

EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick	OMB No. 2040-0004 Expires 07/31/2026	
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	5.5	Are you requesting alternative limits based on an anticipated increase in the actual production during the next permit term? (Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)
		☐ Yes ☐ No

SECTION 6. IMPROVEMENTS (40 CFR 122.21(G)(6))

Upgrades and Improvements	6.1	Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?																									
		☐ Yes ☒ No → SKIP to Item 6.3.																									
	6.2	Briefly identify each applicable project in the table below.																									
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 45%;">Brief Identification and Description of Project</th> <th style="width: 15%;">Affected Outfalls (list outfall number)</th> <th style="width: 20%;">Source(s) of Discharge</th> <th colspan="2" style="width: 20%;">Final Compliance Dates</th> </tr> <tr> <th></th> <th></th> <th></th> <th style="width: 10%;">Required</th> <th style="width: 10%;">Projected</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		Brief Identification and Description of Project	Affected Outfalls (list outfall number)	Source(s) of Discharge	Final Compliance Dates					Required	Projected															
	Brief Identification and Description of Project	Affected Outfalls (list outfall number)	Source(s) of Discharge	Final Compliance Dates																							
			Required	Projected																							
6.3	Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? (<i>optional item</i>)																										
	☐ Yes ☐ No ☒ Not applicable																										

SECTION 7. EFFLUENT AND INTAKE CHARACTERISTICS (40 CFR 122.21(G)(7))

Effluent and Intake Characteristics	See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.	
	Table A. Conventional and Non-Conventional Pollutants	
	7.1	Are you requesting a waiver from your NPDES permitting authority for any Table A pollutants for any of your outfalls?
		☐ Yes ☒ No → SKIP to Item 7.3.
	7.2	If yes, indicate the applicable outfalls below or check the appropriate box to indicate that you are requesting a waiver for all outfalls. Attach waiver request and other required information to the application.
		Outfall number _____ Outfall number _____ Outfall number _____
		☐ I am requesting a waiver for some pollutants at all outfalls. ☐ I am requesting a waiver for all pollutants at all outfalls → SKIP to Item 7.4.
	7.3	Have you completed monitoring for all Table A pollutants at each of your outfalls for which a waiver has not been requested and attached the results to this application package?
	☐ Yes	
Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants		
7.4	Do any of the facility's processes that contribute wastewater fall into one or more of the primary industry categories listed in Exhibit 2C-3? (See end of instructions for exhibit.)	
	☐ Yes ☒ No → SKIP to Item 7.8.	
7.5	Have you checked "Testing Required" for all toxic metals, cyanide, and total phenols in Section 1 of Table B?	
	☐ Yes	

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	7.6	List the applicable primary industry categories and check the boxes indicating the required GC/MS fraction(s) identified in Exhibit 2C-3.						
		Primary Industry Category			Required GC/MS Fraction(s) (check applicable boxes)			
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
Effluent and Intake Characteristics Continued	7.7	Have you checked "Testing Required" for all required pollutants in Sections 2 through 5 of Table B for each of the GC/MS fractions checked in Item 7.6? ☐ Yes						
	7.8	Have you checked "Believed Present" or "Believed Absent" for all pollutants listed in Sections 1 through 5 of Table B where testing is not required? ☐ Yes						
	7.9	Have you provided (1) quantitative data for those Section 1, Table B, pollutants for which you have indicated testing is required or (2) quantitative data or other required information for those Section 1, Table B, pollutants that you have indicated are "Believed Present" in your discharge? ☐ Yes						
	7.10	Does the applicant qualify for a small business exemption under the criteria specified in the instructions? ☐ Yes → Note that you qualify at the top of Table B, then SKIP to Item 7.12. ☒ No						
	7.11	Have you provided (1) quantitative data for those Sections 2 through 5, Table B, pollutants for which you have determined testing is required or (2) quantitative data or an explanation for those Sections 2 through 5, Table B, pollutants you have indicated are "Believed Present" in your discharge? ☒ Yes						
	Table C. Certain Conventional and Non-Conventional Pollutants							
	7.12	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table C for all outfalls? ☒ Yes						
	7.13	Have you completed Table C by providing quantitative data for those pollutants that are limited either directly or indirectly in an ELG? You must provide quantitative data even if the pollutant is "Believed Absent." ☐ Yes ☒ Not applicable						
	7.14	Have you completed Table C by providing quantitative data or an explanation for those pollutants for which you have indicated "Believed Present"? ☒ Yes						
	Table D. Certain Hazardous Substances and Asbestos							
	7.15	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table D for all outfalls? ☒ Yes						
	7.16	Have you completed Table D by (1) describing the reasons the applicable pollutants are expected to be discharged and (2) providing quantitative data, if available? ☒ Yes ☐ No						
	Table E. 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (2,3,7,8-TCDD)							
7.17	Does the facility use or manufacture one or more of the 2,3,7,8-TCDD congeners listed in the instructions, or do you know or have reason to believe that TCDD is or may be present in the effluent? ☐ Yes → Complete Table E. ☒ No → SKIP to Section 8.							
7.18	Have you completed Table E by reporting <i>qualitative</i> data for TCDD? ☐ Yes							

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SECTION 8. USED OR MANUFACTURED TOXICS (40 CFR 122.21(G)(9))

Used or Manufactured Toxics	8.1	Is any pollutant listed in Table B a substance or a component of a substance used or manufactured at your facility as an intermediate or final product or byproduct? ☐ Yes ☒ No → SKIP to Section 9.		
	8.2	List the pollutants below. Attach additional sheets, if necessary.		
	1.	4.	7.	
	2.	5.	8.	
	3.	6.	9.	

SECTION 9. BIOLOGICAL TOXICITY TESTS (40 CFR 122.21(G)(11))

Biological Toxicity Tests	9.1	Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made within the last three years on (1) any of your discharges or (2) a receiving water in relation to your discharge? ☐ Yes ☒ No → SKIP to Section 10.		
	9.2	Identify the tests and their purposes below.		
	Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	

SECTION 10. CONTRACT ANALYSES (40 CFR 122.21(G)(12))

Contract Analyses	10.1	Were any of the analyses reported in Section 7 performed by a contract laboratory or consulting firm? ☒ Yes ☐ No → SKIP to Section 11.		
	10.2	Provide information for each contract laboratory or consulting firm below.		
		Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
	Name of laboratory/firm	Eurofins Lancaster Laboratories Environment Testing, LLC		
	Laboratory address	2425 New Holland Pike, Lancaster, PA		
	Phone number	(412) 525-0071		
	Pollutant(s) analyzed	VOCs, SVOCs, GRO/DRO, PCBs, Anions, Metals/Mercury, pH, free cyanide		

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026	
SECTION 11. ADDITIONAL INFORMATION (40 CFR 122.21(G)(13))							
Additional Information	<u>11.1</u>	Has the NPDES permitting authority requested additional information? ☐ Yes ☒ No → SKIP to Section 12.					
	<u>11.2</u>	List the information requested and attach it to this application.					
		1.		4.			
		2.		5.			
		3.		6.			
SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(A) AND (D))							
Checklist and Certification Statement	<u>12.1</u>	In Column 1 below, mark the sections of Form 2C that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.					
		Column 1		Column 2			
		☒ Section 1: Outfall Location	☒ w/ attachments				
		☐ Section 2: Line Drawing	☐ w/ line drawing	☐ w/ additional attachments			
		☐ Section 3: Average Flows and Treatment	☐ w/ attachments	☐ w/ list of each user of privately owned treatment works			
		☐ Section 4: Intermittent Flows	☐ w/ attachments				
		☐ Section 5: Production	☐ w/ attachments				
		☐ Section 6: Improvements	☐ w/ attachments	☐ w/ optional additional sheets describing any additional pollution control plans			
		☒ Section 7: Effluent and Intake Characteristics	☒ w/ request for a waiver and supporting information	☐ w/ explanation for identical outfalls			
			☐ w/ small business exemption request	☐ w/ other attachments			
			☒ w/ Table A	☒ w/ Table B			
			☒ w/ Table C	☒ w/ Table D			
			☒ w/ Table E	☒ w/ analytical results as an attachment			
		☐ Section 8: Used or Manufactured Toxics	☐ w/ attachments				
		☐ Section 9: Biological Toxicity Tests	☐ w/ attachments				
	☒ Section 10: Contract Analyses	☐ w/ attachments					
	☐ Section 11: Additional Information	☐ w/ attachments					
	☒ Section 12: Checklist and Certification Statement	☐ w/ attachments					

EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick
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SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d)) (Continued)

Checklist and Certification Statement	12.2	Provide the following certification. (See instructions to determine the appropriate person to sign the application.)	
		Certification Statement <i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>	
		Name (print or type first and last name) Joshua Mullis	Official title Project Manager
		Signature 	Date signed 4/23/2025

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
		Quantum Frederick	QL-A878TO

TABLE A. CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(iii))¹

Pollutant	Waiver Requested (if applicable)	Units (specify)	Effluent				Intake (optional)	
			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☒ Check here if you have applied to your NPDES permitting authority for a waiver for all of the pollutants listed on this table for the noted outfall.								
1. Biochemical oxygen demand (BOD ₅)	☐	Concentration						
		Mass						
2. Chemical oxygen demand (COD)	☐	Concentration						
		Mass						
3. Total organic carbon (TOC)	☐	Concentration						
		Mass						
4. Total suspended solids (TSS)	☐	Concentration						
		Mass						
5. Ammonia (as N)	☐	Concentration						
		Mass						
6. Flow	☐	Rate						
7. Temperature (winter)	☐	°C						
Temperature (summer)	☒	°C	21.3					
pH (minimum)	☒	Standard units	7.6					
pH (maximum)	☒	Standard units	7.6					

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
☐ Check here if you qualify as a small business per the instructions to Form 2C and, therefore, do not need to submit quantitative data for any of the organic toxic pollutants in Sections 2 through 5 of this table. Note, however, that you must still indicate in the appropriate column of this table if you believe any of the pollutants listed are present in your discharge.										
Section 1. Toxic Metals, Cyanide, and Total Phenols										
1.1 Antimony, total (7440-36-0)	☒	☐	☒	Concentration Mass	ug/L < 0.2 U					
1.2 Arsenic, total (7440-38-2)	☐	☐	☒	Concentration Mass	ug/L < 0.68 U					
1.3 Beryllium, total (7440-41-7)	☐	☐	☒	Concentration Mass	ug/L < 0.12 U					
1.4 Cadmium, total (7440-43-9)	☒	☐	☒	Concentration Mass	ug/L < 0.15 U					
1.5 Chromium, total (7440-47-3)	☒	☐	☒	Concentration Mass	ug/L < 0.55 U					
1.6 Copper, total (7440-50-8)	☒	☐	☒	Concentration Mass	ug/L < 0.36 U					
1.7 Lead, total (7439-92-1)	☒	☐	☐	Concentration Mass	ug/L < 0.12 U					
1.8 Mercury, total (7439-97-6)	☐	☐	☒	Concentration Mass	ug/L < 0.079 U					
1.9 Nickel, total (7440-02-0)	☒	☐	☒	Concentration Mass	ug/L < 0.4 U					
1.10 Selenium, total (7782-49-2)	☐	☐	☒	Concentration Mass	ug/L 0.3 J					
1.11 Silver, total (7440-22-4)	☐	☐	☒	Concentration Mass	< 0.1 U					

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
1.12 Thallium, total (7440-28-0)	☐	☐	☒	Concentration ug/L	< 0.13 U					
1.13 Zinc, total (7440-66-6)	☐	☐	☐	Concentration ug/L	< 4.0 U					
1.14 Cyanide, total (57-12-5)	☒	☐	☐	Concentration mg/L	< 0.005 U	free cyanide				
1.15 Phenols, total	☐	☐	☒	Concentration Mass						
Section 2. Organic Toxic Pollutants (GC/MS Fraction—Volatile Compounds)										
2.1 Acrolein (107-02-8)	☐	☐	☒	Concentration Mass						
2.2 Acrylonitrile (107-13-1)	☐	☐	☒	Concentration Mass						
2.3 Benzene (71-43-2)	☐	☐	☒	Concentration ug/L	< 0.1 U					
2.4 Bromoform (75-25-2)	☐	☐	☒	Concentration Mass						
2.5 Carbon tetrachloride (56-23-5)	☐	☐	☒	Concentration ug/L	< 0.1 U					
2.6 Chlorobenzene (108-90-7)	☐	☐	☒	Concentration ug/L	< 0.07 U					
2.7 Chlorodibromomethane (124-48-1)	☐	☐	☒	Concentration Mass						
2.8 Chloroethane (75-00-3)	☐	☐	☒	Concentration ug/L	< 0.1 U					

EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick	Outfall Number QL-A878TO	OMB No. 2040-0004 Expires 07/31/2026
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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
2.9 2-chloroethylvinyl ether (110-75-8)	☐	☐	☒	Concentration Mass						
2.10 Chloroform (67-66-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.09 U				
2.11 Dichlorobromomethane (75-27-4)	☐	☐	☒	Concentration Mass						
2.12 1,1-dichloroethane (75-34-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
2.13 1,2-dichloroethane (107-06-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.07 U				
2.14 1,1-dichloroethylene (75-35-4)	☐	☐	☒	Concentration Mass						
2.15 1,2-dichloropropane (78-87-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
2.16 1,3-dichloropropylene (542-75-6)	☐	☐	☒	Concentration Mass						
2.17 Ethylbenzene (100-41-4)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.18 Methyl bromide (74-83-9)	☐	☐	☒	Concentration Mass						
2.19 Methyl chloride (74-87-3)	☐	☐	☒	Concentration Mass						
2.20 Methylene chloride (75-09-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.2 U				
2.21 1,1,2,2- tetrachloroethane (79-34-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
2.22 Tetrachloroethylene (127-18-4)	☒	☐	☒	Concentration Mass						
2.23 Toluene (108-88-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.24 1,2-trans-dichloroethylene (156-60-5)	☐	☐	☒	Concentration Mass						
2.25 1,1,1-trichloroethane (71-55-6)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.26 1,1,2-trichloroethane (79-00-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.27 Trichloroethylene (79-01-6)	☐	☐	☒	Concentration Mass						
2.28 Vinyl chloride (75-01-4)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				

Section 3. Organic Toxic Pollutants (GC/MS Fraction—Acid Compounds)

3.1 2-chlorophenol (95-57-8)	☐	☐	☒	Concentration Mass						
3.2 2,4-dichlorophenol (120-83-2)	☐	☐	☒	Concentration Mass						
3.3 2,4-dimethylphenol (105-67-9)	☐	☐	☒	Concentration Mass						
3.4 4,6-dinitro-o-cresol (534-52-1)	☐	☐	☒	Concentration Mass						
3.5 2,4-dinitrophenol (51-28-5)	☐	☐	☒	Concentration Mass						

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
3.6 2-nitrophenol (88-75-5)	☐	☐	☒	Concentration Mass						
3.7 4-nitrophenol (100-02-7)	☐	☐	☒	Concentration Mass						
3.8 p-chloro-m-cresol (59-50-7)	☐	☐	☒	Concentration Mass						
3.9 Pentachlorophenol (87-86-5)	☐	☐	☒	Concentration Mass						
3.10 Phenol (108-95-2)	☐	☐	☒	Concentration Mass						
3.11 2,4,6-trichlorophenol (88-05-2)	☐	☐	☒	Concentration Mass						

Section 4. Organic Toxic Pollutants (GC/MS Fraction—Base /Neutral Compounds)

4.1 Acenaphthene (83-32-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.2 Acenaphthylene (208-96-8)	☒	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.3 Anthracene (120-12-7)	☒	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.4 Benzidine (92-87-5)	☐	☐	☒	Concentration Mass						
4.5 Benzo (a) anthracene (56-55-3)	☒	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.6 Benzo (a) pyrene (50-32-8)	☒	☐	☒	Concentration Mass	ug/L	< 0.011 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.7 3,4-benzofluoranthene (205-99-2)	☐	☐	☒	Concentration Mass						
4.8 Benzo (ghi) perylene (191-24-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.9 Benzo (k) fluoranthene (207-08-9)	☐	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.10 Bis (2-chloroethoxy) methane (111-91-1)	☐	☐	☒	Concentration Mass						
4.11 Bis (2-chloroethyl) ether (111-44-4)	☐	☐	☒	Concentration Mass						
4.12 Bis (2-chloroisopropyl) ether (102-80-1)	☐	☐	☒	Concentration Mass						
4.13 Bis (2-ethylhexyl) phthalate (117-81-7)	☐	☐	☒	Concentration Mass						
4.14 4-bromophenyl phenyl ether (101-55-3)	☐	☐	☒	Concentration Mass						
4.15 Butyl benzyl phthalate (85-68-7)	☐	☐	☒	Concentration Mass						
4.16 2-chloronaphthalene (91-58-7)	☐	☐	☒	Concentration Mass						
4.17 4-chlorophenyl phenyl ether (7005-72-3)	☐	☐	☒	Concentration Mass						
4.18 Chrysene (218-01-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.027 U				
4.19 Dibenzo (a,h) anthracene (53-70-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.021 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent							
4.20 1,2-dichlorobenzene (95-50-1)	☐	☐	☒	Concentration ug/L	Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
				Mass	< 0.07 U					
4.21 1,3-dichlorobenzene (541-73-1)	☐	☐	☒	Concentration ug/L	< 0.07 U					
				Mass						
4.22 1,4-dichlorobenzene (106-46-7)	☐	☐	☒	Concentration ug/L	< 0.07 U					
				Mass						
4.23 3,3-dichlorobenzidine (91-94-1)	☐	☐	☒	Concentration						
				Mass						
4.24 Diethyl phthalate (84-66-2)	☐	☐	☒	Concentration						
				Mass						
4.25 Dimethyl phthalate (131-11-3)	☐	☐	☒	Concentration						
				Mass						
4.26 Di-n-butyl phthalate (84-74-2)	☐	☐	☒	Concentration						
				Mass						
4.27 2,4-dinitrotoluene (121-14-2)	☐	☐	☒	Concentration						
				Mass						
4.28 2,6-dinitrotoluene (606-20-2)	☐	☐	☒	Concentration						
				Mass						
4.29 Di-n-octyl phthalate (117-84-0)	☐	☐	☒	Concentration						
				Mass						
4.30 1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	☐	☐	☒	Concentration						
				Mass						
4.31 Fluoranthene (206-44-0)	☐	☐	☒	Concentration ug/L	< 0.025 U					
				Mass						
4.32 Fluorene (86-73-7)	☐	☐	☒	Concentration ug/L	< 0.011 U					
				Mass						

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.33 Hexachlorobenzene (118-74-1)	☐	☐	☒	Concentration Mass						
4.34 Hexachlorobutadiene (87-68-3)	☐	☐	☒	Concentration Mass						
4.35 Hexachlorocyclopentadiene (77-47-4)	☐	☐	☒	Concentration Mass						
4.36 Hexachloroethane (67-72-1)	☐	☐	☒	Concentration Mass						
4.37 Indeno (1,2,3-cd) pyrene (193-39-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.021 U				
4.38 Isophorone (78-59-1)	☐	☐	☒	Concentration Mass						
4.39 Naphthalene (91-20-3)	☒	☐	☒	Concentration Mass	ug/L	< 0.073 U				
4.40 Nitrobenzene (98-95-3)	☐	☐	☒	Concentration Mass						
4.41 N-nitrosodimethylamine (62-75-9)	☐	☐	☒	Concentration Mass						
4.42 N-nitrosodi-n-propylamine (621-64-7)	☐	☐	☒	Concentration Mass						
4.43 N-nitrosodiphenylamine (86-30-6)	☐	☐	☒	Concentration Mass						
4.44 Phenanthrene (85-01-8)	☐	☐	☒	Concentration Mass	ug/L	< 0.032 U				
4.45 Pyrene (129-00-0)	☐	☐	☒	Concentration Mass	ug/L	< 0.023 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.46 1,2,4-trichlorobenzene (120-82-1)	☐	☐	☒	Concentration ug/L	< 0.07 U					
Section 5. Organic Toxic Pollutants (GC/MS Fraction—Pesticides)										
5.1 Aldrin (309-00-2)	☐	☐	☒	Concentration Mass						
5.2 α -BHC (319-84-6)	☐	☐	☒	Concentration Mass						
5.3 β -BHC (319-85-7)	☐	☐	☒	Concentration Mass						
5.4 γ -BHC (58-89-9)	☐	☐	☒	Concentration Mass						
5.5 δ -BHC (319-86-8)	☐	☐	☒	Concentration Mass						
5.6 Chlordane (57-74-9)	☐	☐	☒	Concentration Mass						
5.7 4,4'-DDT (50-29-3)	☐	☐	☒	Concentration Mass						
5.8 4,4'-DDE (72-55-9)	☐	☐	☒	Concentration Mass						
5.9 4,4'-DDD (72-54-8)	☐	☐	☒	Concentration Mass						
5.10 Dieldrin (60-57-1)	☐	☐	☒	Concentration Mass						
5.11 α -endosulfan (115-29-7)	☐	☐	☒	Concentration Mass						

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
5.12 β-endosulfan (115-29-7)	☐	☐	☒	Concentration Mass						
5.13 Endosulfan sulfate (1031-07-8)	☐	☐	☒	Concentration Mass						
5.14 Endrin (72-20-8)	☐	☐	☒	Concentration Mass						
5.15 Endrin aldehyde (7421-93-4)	☐	☐	☒	Concentration Mass						
5.16 Heptachlor (76-44-8)	☐	☐	☒	Concentration Mass						
5.17 Heptachlor epoxide (1024-57-3)	☐	☐	☒	Concentration Mass						
5.18 PCB-1242 (53469-21-9)	☒	☐	☒	Concentration Mass	ug/L < 0.0076 U					
5.19 PCB-1254 (11097-69-1)	☒	☐	☒	Concentration Mass	ug/L < 0.0048 U					
5.20 PCB-1221 (11104-28-2)	☒	☐	☒	Concentration Mass	ug/L < 0.0076 U					
5.21 PCB-1232 (11141-16-5)	☒	☐	☒	Concentration Mass	ug/L < 0.0076 U					
5.22 PCB-1248 (12672-29-6)	☒	☐	☒	Concentration Mass	ug/L < 0.0076 U					
5.23 PCB-1260 (11096-82-5)	☒	☐	☒	Concentration Mass	ug/L < 0.0048 U					
5.24 PCB-1016 (12674-11-2)	☒	☐	☒	Concentration Mass	ug/L < 0.0076 U					

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v)) ¹										
Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
5.25 Toxaphene (8001-35-2)	☐	☐	☒	Concentration						
				Mass						

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))¹

Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☐ Check here if you believe all pollutants in Table C to be present in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for each pollutant.									
☐ Check here if you believe all pollutants in Table C to be absent in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for each pollutant.									
1. Bromide (24959-67-9)	☐	☒	Concentration Mass						
2. Chlorine, total residual	☐	☒	Concentration Mass						
3. Color	☐	☒	Concentration Mass						
4. Fecal coliform	☐	☒	Concentration Mass						
5. Fluoride (16984-48-8)	☒	☐	Concentration Mass	mg/L	0.24				
6 Nitrate-nitrite	☐	☒	Concentration Mass						
7. Nitrogen, total organic (as N)	☐	☒	Concentration Mass						
8. Oil and grease	☐	☒	Concentration Mass						
9. Phosphorus (as P), total (7723-14-0)	☐	☒	Concentration Mass						
10. Sulfate (as SO ₄) (14808-79-8)	☐	☒	Concentration Mass						
11. Sulfide (as S)	☐	☒	Concentration Mass						

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))¹

Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
12. Sulfite (as SO ₃) (14265-45-3)	☐	☒	Concentration Mass						
13. Surfactants	☐	☒	Concentration Mass						
14. Aluminum, total (7429-90-5)	☒	☐	Concentration Mass	120 ug/L					
15. Barium, total (7440-39-3)	☒	☐	Concentration Mass	38 ug/L					
16. Boron, total (7440-42-8)	☐	☒	Concentration Mass						
17. Cobalt, total (7440-48-4)	☒	☐	Concentration Mass	0.59 ug/L					
18. Iron, total (7439-89-6)	☒	☐	Concentration Mass	130 ug/L					
19. Magnesium, total (7439-95-4)	☒	☐	Concentration Mass	9400 ug/L					
20. Molybdenum, total (7439-98-7)	☐	☒	Concentration Mass						
21. Manganese, total (7439-96-5)	☒	☐	Concentration Mass	66 ug/L					
22. Tin, total (7440-31-5)	☐	☒	Concentration Mass						
23. Titanium, total (7440-32-6)	☐	☒	Concentration Mass						

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))¹

Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
24. Radioactivity									
Alpha, total	☐	☒	Concentration Mass						
Beta, total	☐	☒	Concentration Mass						
Radium, total	☐	☒	Concentration Mass						
Radium 226, total	☐	☒	Concentration Mass						

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
1. Asbestos	☐	☒		
2. Acetaldehyde	☐	☒		
3. Allyl alcohol	☐	☒		
4. Allyl chloride	☐	☒		
5. Amyl acetate	☐	☒		
6. Aniline	☐	☒		
7. Benzotrile	☐	☒		
8. Benzyl chloride	☐	☒		
9. Butyl acetate	☐	☒		
10. Butylamine	☐	☒		
11. Captan	☐	☒		
12. Carbaryl	☐	☒		
13. Carbofuran	☐	☒		
14. Carbon disulfide	☐	☒		
15. Chlorpyrifos	☐	☒		
16. Coumaphos	☐	☒		
17. Cresol	☐	☒		
18. Crotonaldehyde	☐	☒		
19. Cyclohexane	☐	☒		0.1 ug/L U

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
20. 2,4-D (2,4-dichlorophenoxyacetic acid)	☐	☒		
21. Diazinon	☐	☒		
22. Dicamba	☐	☒		
23. Dichlobenil	☐	☒		
24. Diclhone	☐	☒		
25. 2,2-dichloropropionic acid	☐	☒		
26. Dichlorvos	☐	☒		
27. Diethyl amine	☐	☒		
28. Dimethyl amine	☐	☒		
29. Dinitrobenzene	☐	☒		
30. Diquat	☐	☒		
31. Disulfoton	☐	☒		
32. Diuron	☐	☒		
33. Epichlorohydrin	☐	☒		
34. Ethion	☐	☒		
35. Ethylene diamine	☐	☒		
36. Ethylene dibromide	☐	☒		
37. Formaldehyde	☐	☒		
38. Furfural	☐	☒		

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
39. Guthion	☐	☒		
40. Isoprene	☐	☒		
41. Isopropanolamine	☐	☒		
42. Kelthane	☐	☒		
43. Kepone	☐	☒		
44. Malathion	☐	☒		
45. Mercaptodimethur	☐	☒		
46. Methoxychlor	☐	☒		
47. Methyl mercaptan	☐	☒		
48. Methyl methacrylate	☐	☒		
49. Methyl parathion	☐	☒		
50. Mevinphos	☐	☒		
51. Mexacarbate	☐	☒		
52. Monoethyl amine	☐	☒		
53. Monomethyl amine	☐	☒		
54. Naled	☐	☒		
55. Naphthenic acid	☐	☒		
56. Nitrotoluene	☐	☒		
57. Parathion	☐	☒		

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))¹

Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
58. Phenolsulfonate	☐	☒		
59. Phosgene	☐	☒		
60. Propargite	☐	☒		
61. Propylene oxide	☐	☒		
62. Pyrethrins	☐	☒		
63. Quinoline	☐	☒		
64. Resorcinol	☐	☒		
65. Strontium	☐	☒		
66. Strychnine	☐	☒		
67. Styrene	☐	☒		< 0.07 ug/L U
68. 2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	☐	☒		
69. TDE (tetrachlorodiphenyl ethane)	☐	☒		
70. 2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	☐	☒		
71. Trichlorofon	☐	☒		
72. Triethanolamine	☐	☒		
73. Triethylamine	☐	☒		
74. Trimethylamine	☐	☒		
75. Uranium	☐	☒		
76. Vanadium	☐	☒		

EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick	Outfall Number QL-A878TO	OMB No. 2040-0004 Expires 07/31/2026
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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
77. Vinyl acetate	☐	☒		
78. Xylene	☐	☒		
79. Xylenol	☐	☒		
80. Zirconium	☐	☒		

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE E. 2,3,7,8 TETRACHLORODIBENZO P DIOXIN (2,3,7,8 TCDD) (40 CFR 122.21(g)(7)(viii))				
Pollutant	TCDD Congeners Used or Manufactured	Presence or Absence (check one)		Results of Screening Procedure
		Believed Present	Believed Absent	
2,3,7,8-TCDD	☐	☐	☒	

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026	
Form 2C NPDES			U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURE OPERATIONS				
SECTION 1. OUTFALL LOCATION (40 CFR 122.21(G)(1))							
Outfall Location	<u>1.1</u>	Provide information on each of the facility's outfalls in the table below.					
		Outfall Number	Receiving Water Name	Latitude		Longitude	
		QL-A1010	Ground Surface inside EC	Multiple - see map		Multiple - see map	
SECTION 2. LINE DRAWING (40 CFR 122.21(G)(2))							
Line Drawing	<u>2.1</u>	Have you attached a line drawing to this application that shows the water flow through your facility with a water balance? (See instructions for drawing requirements. See Exhibit 2C-1 at end of instructions for example.) ☐ Yes					
SECTION 3. AVERAGE FLOWS AND TREATMENT (40 CFR 122.21(G)(3))							
Average Flows and Treatment	<u>3.1</u>	For each outfall identified under Item 1.1, provide average flow and treatment information. Add additional sheets if necessary.					
		Outfall Number QL-A1010					
		Operations Contributing to Flow					
		Operation			Average Flow		
		Outfall A dewatering			mgd		
					mgd		
					mgd		
					mgd		
		Treatment Units					
		Description (include size, flow rate through each treatment unit, retention time, etc.)		Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge	

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026			
Average Flows and Treatment Continued	3.1 cont.	**Outfall Number** _____							
		Operations Contributing to Flow							
		Operation			Average Flow				
					mgd				
					mgd				
					mgd				
					mgd				
		Treatment Units							
		Description (include size, flow rate through each treatment unit, retention time, etc.)			Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge		
		Outfall Number _____							
		Operations Contributing to Flow							
		Operation			Average Flow				
					mgd				
					mgd				
					mgd				
					mgd				
		Treatment Units							
		Description (include size, flow rate through each treatment unit, retention time, etc.)			Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge		
		System Users	3.2	Are you applying for an NPDES permit to operate a privately owned treatment works? ☐ Yes ☒ No → SKIP to Section 4.					
			3.3	Have you attached a list that identifies each user of the treatment works? ☐ Yes					

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026		
SECTION 4. INTERMITTENT FLOWS (40 CFR 122.21(G)(4))								
Intermittent Flows	4.1	Except for storm runoff, leaks, or spills, are any discharges described in Sections 1 and 3 intermittent or seasonal? ☐ Yes ☒ No → SKIP to Section 5.						
	4.2	Provide information on intermittent or seasonal flows for each applicable outfall. Attach additional pages, if necessary.						
		Outfall Number	Operation (list)	Frequency		Flow Rate		Duration
				Average Days/Week	Average Months/Year	Long-Term Average	Maximum Daily	
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
SECTION 5. PRODUCTION (40 CFR 122.21(G)(5))								
Applicable ELGs	5.1	Do any effluent limitation guidelines (ELGs) promulgated by EPA under Section 304 of the CWA apply to your facility? ☐ Yes ☒ No → SKIP to Section 6.						
	5.2	Provide the following information on applicable ELGs.						
		ELG Category	ELG Subcategory			Regulatory Citation		
Production-Based Limitations	5.3	Are any of the applicable ELGs expressed in terms of production (or other measure of operation)? ☐ Yes ☒ No → SKIP to Section 6.						
	5.4	Provide an actual measure of daily production expressed in terms and units of applicable ELGs.						
		Outfall Number	Operation, Product, or Material			Quantity per Day	Unit of Measure	

EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick	OMB No. 2040-0004 Expires 07/31/2026	
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	5.5	Are you requesting alternative limits based on an anticipated increase in the actual production during the next permit term? (Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)
		☐ Yes ☐ No

SECTION 6. IMPROVEMENTS (40 CFR 122.21(G)(6))

Upgrades and Improvements	6.1	Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?																						
		☐ Yes ☒ No → SKIP to Item 6.3.																						
	6.2	Briefly identify each applicable project in the table below.																						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="2" style="width: 45%;">Brief Identification and Description of Project</th> <th rowspan="2" style="width: 15%;">Affected Outfalls (list outfall number)</th> <th rowspan="2" style="width: 20%;">Source(s) of Discharge</th> <th colspan="2" style="width: 20%;">Final Compliance Dates</th> </tr> <tr> <th style="width: 10%;">Required</th> <th style="width: 10%;">Projected</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		Brief Identification and Description of Project	Affected Outfalls (list outfall number)	Source(s) of Discharge	Final Compliance Dates		Required	Projected															
	Brief Identification and Description of Project	Affected Outfalls (list outfall number)				Source(s) of Discharge	Final Compliance Dates																	
Required			Projected																					
6.3	Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? (<i>optional item</i>)																							
	☐ Yes ☐ No ☒ Not applicable																							

SECTION 7. EFFLUENT AND INTAKE CHARACTERISTICS (40 CFR 122.21(G)(7))

Effluent and Intake Characteristics	See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.	
	Table A. Conventional and Non-Conventional Pollutants	
	7.1	Are you requesting a waiver from your NPDES permitting authority for any Table A pollutants for any of your outfalls?
		☐ Yes ☒ No → SKIP to Item 7.3.
	7.2	If yes, indicate the applicable outfalls below or check the appropriate box to indicate that you are requesting a waiver for all outfalls. Attach waiver request and other required information to the application.
		Outfall number _____ Outfall number _____ Outfall number _____
		☐ I am requesting a waiver for some pollutants at all outfalls. ☐ I am requesting a waiver for all pollutants at all outfalls → SKIP to Item 7.4.
	7.3	Have you completed monitoring for all Table A pollutants at each of your outfalls for which a waiver has not been requested and attached the results to this application package?
	☐ Yes	
Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants		
7.4	Do any of the facility's processes that contribute wastewater fall into one or more of the primary industry categories listed in Exhibit 2C-3? (See end of instructions for exhibit.)	
	☐ Yes ☒ No → SKIP to Item 7.8.	
7.5	Have you checked "Testing Required" for all toxic metals, cyanide, and total phenols in Section 1 of Table B?	
	☐ Yes	

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026		
	7.6	List the applicable primary industry categories and check the boxes indicating the required GC/MS fraction(s) identified in Exhibit 2C-3.						
		Primary Industry Category			Required GC/MS Fraction(s) (check applicable boxes)			
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
Effluent and Intake Characteristics Continued	7.7	Have you checked "Testing Required" for all required pollutants in Sections 2 through 5 of Table B for each of the GC/MS fractions checked in Item 7.6? ☐ Yes						
	7.8	Have you checked "Believed Present" or "Believed Absent" for all pollutants listed in Sections 1 through 5 of Table B where testing is not required? ☐ Yes						
	7.9	Have you provided (1) quantitative data for those Section 1, Table B, pollutants for which you have indicated testing is required or (2) quantitative data or other required information for those Section 1, Table B, pollutants that you have indicated are "Believed Present" in your discharge? ☐ Yes						
	7.10	Does the applicant qualify for a small business exemption under the criteria specified in the instructions? ☐ Yes → Note that you qualify at the top of Table B, then SKIP to Item 7.12. ☒ No						
	7.11	Have you provided (1) quantitative data for those Sections 2 through 5, Table B, pollutants for which you have determined testing is required or (2) quantitative data or an explanation for those Sections 2 through 5, Table B, pollutants you have indicated are "Believed Present" in your discharge? ☒ Yes						
	Table C. Certain Conventional and Non-Conventional Pollutants							
	7.12	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table C for all outfalls? ☒ Yes						
	7.13	Have you completed Table C by providing quantitative data for those pollutants that are limited either directly or indirectly in an ELG? You must provide quantitative data even if the pollutant is "Believed Absent." ☐ Yes ☒ Not applicable						
	7.14	Have you completed Table C by providing quantitative data or an explanation for those pollutants for which you have indicated "Believed Present"? ☒ Yes						
	Table D. Certain Hazardous Substances and Asbestos							
	7.15	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table D for all outfalls? ☒ Yes						
	7.16	Have you completed Table D by (1) describing the reasons the applicable pollutants are expected to be discharged and (2) providing quantitative data, if available? ☒ Yes ☐ No						
	Table E. 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (2,3,7,8-TCDD)							
7.17	Does the facility use or manufacture one or more of the 2,3,7,8-TCDD congeners listed in the instructions, or do you know or have reason to believe that TCDD is or may be present in the effluent? ☐ Yes → Complete Table E. ☒ No → SKIP to Section 8.							
7.18	Have you completed Table E by reporting <i>qualitative</i> data for TCDD? ☐ Yes							

EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick	OMB No. 2040-0004 Expires 07/31/2026
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SECTION 8. USED OR MANUFACTURED TOXICS (40 CFR 122.21(G)(9))

Used or Manufactured Toxics	8.1	Is any pollutant listed in Table B a substance or a component of a substance used or manufactured at your facility as an intermediate or final product or byproduct? ☐ Yes ☒ No → SKIP to Section 9.		
	8.2	List the pollutants below. Attach additional sheets, if necessary.		
	1.	4.	7.	
	2.	5.	8.	
	3.	6.	9.	

SECTION 9. BIOLOGICAL TOXICITY TESTS (40 CFR 122.21(G)(11))

Biological Toxicity Tests	9.1	Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made within the last three years on (1) any of your discharges or (2) a receiving water in relation to your discharge? ☐ Yes ☒ No → SKIP to Section 10.			
	9.2	Identify the tests and their purposes below.			
		Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
				☐ Yes ☐ No	
				☐ Yes ☐ No	
			☐ Yes ☐ No		

SECTION 10. CONTRACT ANALYSES (40 CFR 122.21(G)(12))

Contract Analyses	10.1	Were any of the analyses reported in Section 7 performed by a contract laboratory or consulting firm? ☒ Yes ☐ No → SKIP to Section 11.		
	10.2	Provide information for each contract laboratory or consulting firm below.		
		Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
	Name of laboratory/firm	Eurofins Lancaster Laboratories Environment Testing, LLC		
	Laboratory address	2425 New Holland Pike, Lancaster, PA		
	Phone number	(412) 525-0071		
	Pollutant(s) analyzed	VOCs, SVOCs, GRO/DRO, PCBs, Anions, Metals/Mercury, pH, free cyanide		

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026	
SECTION 11. ADDITIONAL INFORMATION (40 CFR 122.21(G)(13))							
Additional Information	<u>11.1</u>	Has the NPDES permitting authority requested additional information? ☐ Yes ☒ No → SKIP to Section 12.					
	<u>11.2</u>	List the information requested and attach it to this application.					
		1.		4.			
		2.		5.			
		3.		6.			
SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(A) AND (D))							
Checklist and Certification Statement	<u>12.1</u>	In Column 1 below, mark the sections of Form 2C that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.					
		Column 1		Column 2			
		☒ Section 1: Outfall Location		☒ w/ attachments			
		☐ Section 2: Line Drawing		☐ w/ line drawing		☐ w/ additional attachments	
		☐ Section 3: Average Flows and Treatment		☐ w/ attachments		☐ w/ list of each user of privately owned treatment works	
		☐ Section 4: Intermittent Flows		☐ w/ attachments			
		☐ Section 5: Production		☐ w/ attachments			
		☐ Section 6: Improvements		☐ w/ attachments		☐ w/ optional additional sheets describing any additional pollution control plans	
		☒ Section 7: Effluent and Intake Characteristics		☒ w/ request for a waiver and supporting information ☐ w/ small business exemption request ☒ w/ Table A ☒ w/ Table C ☒ w/ Table E		☐ w/ explanation for identical outfalls ☐ w/ other attachments ☒ w/ Table B ☒ w/ Table D ☒ w/ analytical results as an attachment	
		☐ Section 8: Used or Manufactured Toxics		☐ w/ attachments			
		☐ Section 9: Biological Toxicity Tests		☐ w/ attachments			
		☒ Section 10: Contract Analyses		☐ w/ attachments			
		☐ Section 11: Additional Information		☐ w/ attachments			
		☒ Section 12: Checklist and Certification Statement		☐ w/ attachments			

EPA Identification Number	NPDES Permit Number	Facility Name
		Quantum Frederick

OMB No. 2040-0004
Expires 07/31/2026

SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d)) (Continued)

Checklist and Certification Statement	12.2	Provide the following certification. (See instructions to determine the appropriate person to sign the application.)	
		Certification Statement <i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>	
		Name (print or type first and last name)	Official title
		Joshua Mullis	Project Manager
		Signature	Date signed
			4/23/2025

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
		Quantum Frederick	QL-A1010

TABLE A. CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(iii))¹

Pollutant	Waiver Requested (if applicable)	Units (specify)	Effluent				Intake (optional)	
			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☒ Check here if you have applied to your NPDES permitting authority for a waiver for all of the pollutants listed on this table for the noted outfall.								
1. Biochemical oxygen demand (BOD ₅)	☐	Concentration						
		Mass						
2. Chemical oxygen demand (COD)	☐	Concentration						
		Mass						
3. Total organic carbon (TOC)	☐	Concentration						
		Mass						
4. Total suspended solids (TSS)	☐	Concentration						
		Mass						
5. Ammonia (as N)	☐	Concentration						
		Mass						
6. Flow	☐	Rate						
Temperature (winter)	☐	°C						
Temperature (summer)	☒	°C	21.4					
pH (minimum)	☒	Standard units	7.4					
pH (maximum)	☒	Standard units	7.4					

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
☐ Check here if you qualify as a small business per the instructions to Form 2C and, therefore, do not need to submit quantitative data for any of the organic toxic pollutants in Sections 2 through 5 of this table. Note, however, that you must still indicate in the appropriate column of this table if you believe any of the pollutants listed are present in your discharge.										
Section 1. Toxic Metals, Cyanide, and Total Phenols										
1.1 Antimony, total (7440-36-0)	☒	☒	☐	Concentration Mass	ug/L	0.3 J				
1.2 Arsenic, total (7440-38-2)	☐	☒	☐	Concentration Mass	ug/L	0.71 J				
1.3 Beryllium, total (7440-41-7)	☐	☐	☒	Concentration Mass	ug/L	< 0.12 U				
1.4 Cadmium, total (7440-43-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.15 U				
1.5 Chromium, total (7440-47-3)	☒	☐	☒	Concentration Mass	ug/L	< 0.55 U				
1.6 Copper, total (7440-50-8)	☒	☐	☒	Concentration Mass	ug/L	< 0.36 U				
1.7 Lead, total (7439-92-1)	☒	☐	☐	Concentration Mass	ug/L	< 0.12 U				
1.8 Mercury, total (7439-97-6)	☐	☐	☒	Concentration Mass	ug/L	< 0.079 U				
1.9 Nickel, total (7440-02-0)	☒	☐	☒	Concentration Mass	ug/L	< 0.4 U				
1.10 Selenium, total (7782-49-2)	☐	☒	☐	Concentration Mass	ug/L	0.7 J				
1.11 Silver, total (7440-22-4)	☐	☐	☒	Concentration Mass		< 0.1 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
1.12 Thallium, total (7440-28-0)	☐	☐	☒	Concentration ug/L	< 0.13 U					
1.13 Zinc, total (7440-66-6)	☐	☐	☐	Concentration ug/L	< 4.0 U					
1.14 Cyanide, total (57-12-5)	☒	☐	☐	Concentration mg/L	< 0.005 U	free cyanide				
1.15 Phenols, total	☐	☐	☒	Concentration Mass						
Section 2. Organic Toxic Pollutants (GC/MS Fraction—Volatile Compounds)										
2.1 Acrolein (107-02-8)	☐	☐	☒	Concentration Mass						
2.2 Acrylonitrile (107-13-1)	☐	☐	☒	Concentration Mass						
2.3 Benzene (71-43-2)	☐	☐	☒	Concentration ug/L	< 0.1 U					
2.4 Bromoform (75-25-2)	☐	☐	☒	Concentration Mass						
2.5 Carbon tetrachloride (56-23-5)	☐	☐	☒	Concentration ug/L	< 0.1 U					
2.6 Chlorobenzene (108-90-7)	☐	☐	☒	Concentration ug/L	< 0.07 U					
2.7 Chlorodibromomethane (124-48-1)	☐	☐	☒	Concentration Mass						
2.8 Chloroethane (75-00-3)	☐	☐	☒	Concentration ug/L	< 0.1 U					

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
2.9 2-chloroethylvinyl ether (110-75-8)	☐	☐	☒	Concentration Mass						
2.10 Chloroform (67-66-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.09 U				
2.11 Dichlorobromomethane (75-27-4)	☐	☐	☒	Concentration Mass						
2.12 1,1-dichloroethane (75-34-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
2.13 1,2-dichloroethane (107-06-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.07 U				
2.14 1,1-dichloroethylene (75-35-4)	☐	☐	☒	Concentration Mass						
2.15 1,2-dichloropropane (78-87-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
2.16 1,3-dichloropropylene (542-75-6)	☐	☐	☒	Concentration Mass						
2.17 Ethylbenzene (100-41-4)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.18 Methyl bromide (74-83-9)	☐	☐	☒	Concentration Mass						
2.19 Methyl chloride (74-87-3)	☐	☐	☒	Concentration Mass						
2.20 Methylene chloride (75-09-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.2 U				
2.21 1,1,2,2- tetrachloroethane (79-34-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v)) ¹										
Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
2.22 Tetrachloroethylene (127-18-4)	☒	☐	☒	Concentration Mass						
2.23 Toluene (108-88-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.24 1,2-trans-dichloroethylene (156-60-5)	☐	☐	☒	Concentration Mass						
2.25 1,1,1-trichloroethane (71-55-6)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.26 1,1,2-trichloroethane (79-00-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.27 Trichloroethylene (79-01-6)	☐	☐	☒	Concentration Mass						
2.28 Vinyl chloride (75-01-4)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
Section 3. Organic Toxic Pollutants (GC/MS Fraction—Acid Compounds)										
3.1 2-chlorophenol (95-57-8)	☐	☐	☒	Concentration Mass						
3.2 2,4-dichlorophenol (120-83-2)	☐	☐	☒	Concentration Mass						
3.3 2,4-dimethylphenol (105-67-9)	☐	☐	☒	Concentration Mass						
3.4 4,6-dinitro-o-cresol (534-52-1)	☐	☐	☒	Concentration Mass						
3.5 2,4-dinitrophenol (51-28-5)	☐	☐	☒	Concentration Mass						

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
3.6 2-nitrophenol (88-75-5)	☐	☐	☒	Concentration Mass						
3.7 4-nitrophenol (100-02-7)	☐	☐	☒	Concentration Mass						
3.8 p-chloro-m-cresol (59-50-7)	☐	☐	☒	Concentration Mass						
3.9 Pentachlorophenol (87-86-5)	☐	☐	☒	Concentration Mass						
3.10 Phenol (108-95-2)	☐	☐	☒	Concentration Mass						
3.11 2,4,6-trichlorophenol (88-05-2)	☐	☐	☒	Concentration Mass						

Section 4. Organic Toxic Pollutants (GC/MS Fraction—Base /Neutral Compounds)

4.1 Acenaphthene (83-32-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.2 Acenaphthylene (208-96-8)	☒	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.3 Anthracene (120-12-7)	☒	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.4 Benzidine (92-87-5)	☐	☐	☒	Concentration Mass						
4.5 Benzo (a) anthracene (56-55-3)	☒	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.6 Benzo (a) pyrene (50-32-8)	☒	☐	☒	Concentration Mass	ug/L	< 0.01 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.7 3,4-benzofluoranthene (205-99-2)	☐	☐	☒	Concentration Mass						
4.8 Benzo (ghi) perylene (191-24-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.9 Benzo (k) fluoranthene (207-08-9)	☐	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.10 Bis (2-chloroethoxy) methane (111-91-1)	☐	☐	☒	Concentration Mass						
4.11 Bis (2-chloroethyl) ether (111-44-4)	☐	☐	☒	Concentration Mass						
4.12 Bis (2-chloroisopropyl) ether (102-80-1)	☐	☐	☒	Concentration Mass						
4.13 Bis (2-ethylhexyl) phthalate (117-81-7)	☐	☐	☒	Concentration Mass						
4.14 4-bromophenyl phenyl ether (101-55-3)	☐	☐	☒	Concentration Mass						
4.15 Butyl benzyl phthalate (85-68-7)	☐	☐	☒	Concentration Mass						
4.16 2-chloronaphthalene (91-58-7)	☐	☐	☒	Concentration Mass						
4.17 4-chlorophenyl phenyl ether (7005-72-3)	☐	☐	☒	Concentration Mass						
4.18 Chrysene (218-01-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.026 U				
4.19 Dibenzo (a,h) anthracene (53-70-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.021 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent							
4.20 1,2-dichlorobenzene (95-50-1)	☐	☐	☒	Concentration ug/L	Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
				Mass	< 0.07 U					
4.21 1,3-dichlorobenzene (541-73-1)	☐	☐	☒	Concentration ug/L	< 0.07 U					
				Mass						
4.22 1,4-dichlorobenzene (106-46-7)	☐	☐	☒	Concentration ug/L	< 0.07 U					
				Mass						
4.23 3,3-dichlorobenzidine (91-94-1)	☐	☐	☒	Concentration						
				Mass						
4.24 Diethyl phthalate (84-66-2)	☐	☐	☒	Concentration						
				Mass						
4.25 Dimethyl phthalate (131-11-3)	☐	☐	☒	Concentration						
				Mass						
4.26 Di-n-butyl phthalate (84-74-2)	☐	☐	☒	Concentration						
				Mass						
4.27 2,4-dinitrotoluene (121-14-2)	☐	☐	☒	Concentration						
				Mass						
4.28 2,6-dinitrotoluene (606-20-2)	☐	☐	☒	Concentration						
				Mass						
4.29 Di-n-octyl phthalate (117-84-0)	☐	☐	☒	Concentration						
				Mass						
4.30 1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	☐	☐	☒	Concentration						
				Mass						
4.31 Fluoranthene (206-44-0)	☐	☐	☒	Concentration ug/L	< 0.024 U					
				Mass						
4.32 Fluorene (86-73-7)	☐	☐	☒	Concentration ug/L	< 0.01 U					
				Mass						

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.33 Hexachlorobenzene (118-74-1)	☐	☐	☒	Concentration Mass						
4.34 Hexachlorobutadiene (87-68-3)	☐	☐	☒	Concentration Mass						
4.35 Hexachlorocyclopentadiene (77-47-4)	☐	☐	☒	Concentration Mass						
4.36 Hexachloroethane (67-72-1)	☐	☐	☒	Concentration Mass						
4.37 Indeno (1,2,3-cd) pyrene (193-39-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.021 U				
4.38 Isophorone (78-59-1)	☐	☐	☒	Concentration Mass						
4.39 Naphthalene (91-20-3)	☒	☐	☒	Concentration Mass	ug/L	< 0.07 U				
4.40 Nitrobenzene (98-95-3)	☐	☐	☒	Concentration Mass						
4.41 N-nitrosodimethylamine (62-75-9)	☐	☐	☒	Concentration Mass						
4.42 N-nitrosodi-n-propylamine (621-64-7)	☐	☐	☒	Concentration Mass						
4.43 N-nitrosodiphenylamine (86-30-6)	☐	☐	☒	Concentration Mass						
4.44 Phenanthrene (85-01-8)	☐	☐	☒	Concentration Mass	ug/L	< 0.031 U				
4.45 Pyrene (129-00-0)	☐	☐	☒	Concentration Mass	ug/L	< 0.022 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.46 1,2,4-trichlorobenzene (120-82-1)	☐	☐	☒	Concentration ug/L	< 0.07 U					
Section 5. Organic Toxic Pollutants (GC/MS Fraction — Pesticides)										
5.1 Aldrin (309-00-2)	☐	☐	☒	Concentration Mass						
5.2 α -BHC (319-84-6)	☐	☐	☒	Concentration Mass						
5.3 β -BHC (319-85-7)	☐	☐	☒	Concentration Mass						
5.4 γ -BHC (58-89-9)	☐	☐	☒	Concentration Mass						
5.5 δ -BHC (319-86-8)	☐	☐	☒	Concentration Mass						
5.6 Chlordane (57-74-9)	☐	☐	☒	Concentration Mass						
5.7 4,4'-DDT (50-29-3)	☐	☐	☒	Concentration Mass						
5.8 4,4'-DDE (72-55-9)	☐	☐	☒	Concentration Mass						
5.9 4,4'-DDD (72-54-8)	☐	☐	☒	Concentration Mass						
5.10 Dieldrin (60-57-1)	☐	☐	☒	Concentration Mass						
5.11 α -endosulfan (115-29-7)	☐	☐	☒	Concentration Mass						

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
5.12 β-endosulfan (115-29-7)	☐	☐	☒	Concentration Mass						
5.13 Endosulfan sulfate (1031-07-8)	☐	☐	☒	Concentration Mass						
5.14 Endrin (72-20-8)	☐	☐	☒	Concentration Mass						
5.15 Endrin aldehyde (7421-93-4)	☐	☐	☒	Concentration Mass						
5.16 Heptachlor (76-44-8)	☐	☐	☒	Concentration Mass						
5.17 Heptachlor epoxide (1024-57-3)	☐	☐	☒	Concentration Mass						
5.18 PCB-1242 (53469-21-9)	☒	☐	☒	Concentration Mass	< 0.0079 U					
5.19 PCB-1254 (11097-69-1)	☒	☐	☒	Concentration Mass	< 0.0049 U					
5.20 PCB-1221 (11104-28-2)	☒	☐	☒	Concentration Mass	< 0.0079 U					
5.21 PCB-1232 (11141-16-5)	☒	☐	☒	Concentration Mass	< 0.0079 U					
5.22 PCB-1248 (12672-29-6)	☒	☐	☒	Concentration Mass	< 0.0079 U					
5.23 PCB-1260 (11096-82-5)	☒	☐	☒	Concentration Mass	< 0.0049 U					
5.24 PCB-1016 (12674-11-2)	☒	☐	☒	Concentration Mass	< 0.0079 U					

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v)) ¹										
Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
5.25 Toxaphene (8001-35-2)	☐	☐	☒	Concentration Mass						

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))¹

	Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☐ Check here if you believe all pollutants in Table C to be present in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for each pollutant.										
☐ Check here if you believe all pollutants in Table C to be absent in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for each pollutant.										
1.	Bromide (24959-67-9)	☐	☒	Concentration Mass						
2.	Chlorine, total residual	☐	☒	Concentration Mass						
3.	Color	☐	☒	Concentration Mass						
4.	Fecal coliform	☐	☒	Concentration Mass						
5.	Fluoride (16984-48-8)	☒	☐	Concentration Mass	mg/L	0.28				
6	Nitrate-nitrite	☐	☒	Concentration Mass						
7.	Nitrogen, total organic (as N)	☐	☒	Concentration Mass						
8.	Oil and grease	☐	☒	Concentration Mass						
9.	Phosphorus (as P), total (7723-14-0)	☐	☒	Concentration Mass						
10.	Sulfate (as SO ₄) (14808-79-8)	☐	☒	Concentration Mass						
11.	Sulfide (as S)	☐	☒	Concentration Mass						

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))¹

Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
12. Sulfite (as SO ₃) (14265-45-3)	☐	☒	Concentration Mass						
13. Surfactants	☐	☒	Concentration Mass						
14. Aluminum, total (7429-90-5)	☒	☐	Concentration Mass	110					
15. Barium, total (7440-39-3)	☒	☐	Concentration Mass	40					
16. Boron, total (7440-42-8)	☐	☒	Concentration Mass						
17. Cobalt, total (7440-48-4)	☒	☐	Concentration Mass	0.58					
18. Iron, total (7439-89-6)	☒	☐	Concentration Mass	130					
19. Magnesium, total (7439-95-4)	☒	☐	Concentration Mass	9500					
20. Molybdenum, total (7439-98-7)	☐	☒	Concentration Mass						
21. Manganese, total (7439-96-5)	☒	☐	Concentration Mass	100					
22. Tin, total (7440-31-5)	☐	☒	Concentration Mass						
23. Titanium, total (7440-32-6)	☐	☒	Concentration Mass						

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi)) ¹									
Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
24. Radioactivity									
Alpha, total	☐	☒	Concentration Mass						
Beta, total	☐	☒	Concentration Mass						
Radium, total	☐	☒	Concentration Mass						
Radium 226, total	☐	☒	Concentration Mass						

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick	Outfall Number QL-A1010	OMB No. 2040-0004 Expires 07/31/2026
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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
1. Asbestos	☐	☒		
2. Acetaldehyde	☐	☒		
3. Allyl alcohol	☐	☒		
4. Allyl chloride	☐	☒		
5. Amyl acetate	☐	☒		
6. Aniline	☐	☒		
7. Benzotrile	☐	☒		
8. Benzyl chloride	☐	☒		
9. Butyl acetate	☐	☒		
10. Butylamine	☐	☒		
11. Captan	☐	☒		
12. Carbaryl	☐	☒		
13. Carbofuran	☐	☒		
14. Carbon disulfide	☐	☒		
15. Chlorpyrifos	☐	☒		
16. Coumaphos	☐	☒		
17. Cresol	☐	☒		
18. Crotonaldehyde	☐	☒		
19. Cyclohexane	☐	☒		0.1 ug/L U

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
20. 2,4-D (2,4-dichlorophenoxyacetic acid)	☐	☒		
21. Diazinon	☐	☒		
22. Dicamba	☐	☒		
23. Dichlobenil	☐	☒		
24. Diclhone	☐	☒		
25. 2,2-dichloropropionic acid	☐	☒		
26. Dichlorvos	☐	☒		
27. Diethyl amine	☐	☒		
28. Dimethyl amine	☐	☒		
29. Dintrobenezene	☐	☒		
30. Diquat	☐	☒		
31. Disulfoton	☐	☒		
32. Diuron	☐	☒		
33. Epichlorohydrin	☐	☒		
34. Ethion	☐	☒		
35. Ethylene diamine	☐	☒		
36. Ethylene dibromide	☐	☒		
37. Formaldehyde	☐	☒		
38. Furfural	☐	☒		

EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick	Outfall Number QL-A1010	OMB No. 2040-0004 Expires 07/31/2026
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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
39. Guthion	☐	☒		
40. Isoprene	☐	☒		
41. Isopropanolamine	☐	☒		
42. Kelthane	☐	☒		
43. Kepone	☐	☒		
44. Malathion	☐	☒		
45. Mercaptodimethur	☐	☒		
46. Methoxychlor	☐	☒		
47. Methyl mercaptan	☐	☒		
48. Methyl methacrylate	☐	☒		
49. Methyl parathion	☐	☒		
50. Mevinphos	☐	☒		
51. Mexacarbate	☐	☒		
52. Monoethyl amine	☐	☒		
53. Monomethyl amine	☐	☒		
54. Naled	☐	☒		
55. Naphthenic acid	☐	☒		
56. Nitrotoluene	☐	☒		
57. Parathion	☐	☒		

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))¹

Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
58. Phenolsulfonate	☐	☒		
59. Phosgene	☐	☒		
60. Propargite	☐	☒		
61. Propylene oxide	☐	☒		
62. Pyrethrins	☐	☒		
63. Quinoline	☐	☒		
64. Resorcinol	☐	☒		
65. Strontium	☐	☒		
66. Strychnine	☐	☒		
67. Styrene	☐	☒		< 0.07 ug/L U
68. 2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	☐	☒		
69. TDE (tetrachlorodiphenyl ethane)	☐	☒		
70. 2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	☐	☒		
71. Trichlorofon	☐	☒		
72. Triethanolamine	☐	☒		
73. Triethylamine	☐	☒		
74. Trimethylamine	☐	☒		
75. Uranium	☐	☒		
76. Vanadium	☐	☒		

EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick	Outfall Number QL-A1010
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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
77. Vinyl acetate	☐	☒		
78. Xylene	☐	☒		
79. Xylenol	☐	☒		
80. Zirconium	☐	☒		

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE E. 2,3,7,8 TETRACHLORODIBENZO P DIOXIN (2,3,7,8 TCDD) (40 CFR 122.21(g)(7)(viii))				
Pollutant	TCDD Congeners Used or Manufactured	Presence or Absence (check one)		Results of Screening Procedure
		Believed Present	Believed Absent	
2,3,7,8-TCDD	☐	☐	☒	

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026	
Form 2C NPDES			U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURE OPERATIONS				
SECTION 1. OUTFALL LOCATION (40 CFR 122.21(G)(1))							
Outfall Location	<u>1.1</u>	Provide information on each of the facility's outfalls in the table below.					
		Outfall Number	Receiving Water Name	Latitude		Longitude	
		DA11-A3718	Ground surface inside EC	Multiple - see map		Multiple - see map	
SECTION 2. LINE DRAWING (40 CFR 122.21(G)(2))							
Line Drawing	<u>2.1</u>	Have you attached a line drawing to this application that shows the water flow through your facility with a water balance? (See instructions for drawing requirements. See Exhibit 2C-1 at end of instructions for example.) ☐ Yes					
SECTION 3. AVERAGE FLOWS AND TREATMENT (40 CFR 122.21(G)(3))							
Average Flows and Treatment	<u>3.1</u>	For each outfall identified under Item 1.1, provide average flow and treatment information. Add additional sheets if necessary.					
		Outfall Number DA11-A3718					
		Operations Contributing to Flow					
		Operation			Average Flow		
		SW and GW from Outfall A			mgd		
					mgd		
					mgd		
					mgd		
		Treatment Units					
		Description (include size, flow rate through each treatment unit, retention time, etc.)		Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge	

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026			
Average Flows and Treatment Continued	3.1 cont.	**Outfall Number** _____							
		Operations Contributing to Flow							
		Operation			Average Flow				
					mgd				
					mgd				
					mgd				
					mgd				
		Treatment Units							
		Description (include size, flow rate through each treatment unit, retention time, etc.)			Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge		
		Outfall Number _____							
		Operations Contributing to Flow							
		Operation			Average Flow				
					mgd				
					mgd				
					mgd				
					mgd				
		Treatment Units							
		Description (include size, flow rate through each treatment unit, retention time, etc.)			Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge		
		System Users	3.2	Are you applying for an NPDES permit to operate a privately owned treatment works? ☐ Yes ☒ No → SKIP to Section 4.					
			3.3	Have you attached a list that identifies each user of the treatment works? ☐ Yes					

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SECTION 4. INTERMITTENT FLOWS (40 CFR 122.21(G)(4))								
Intermittent Flows	4.1	Except for storm runoff, leaks, or spills, are any discharges described in Sections 1 and 3 intermittent or seasonal? ☐ Yes ☒ No → SKIP to Section 5.						
	4.2	Provide information on intermittent or seasonal flows for each applicable outfall. Attach additional pages, if necessary.						
		Outfall Number	Operation (list)	Frequency		Flow Rate		Duration
				Average Days/Week	Average Months/Year	Long-Term Average	Maximum Daily	
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
SECTION 5. PRODUCTION (40 CFR 122.21(G)(5))								
Applicable ELGs	5.1	Do any effluent limitation guidelines (ELGs) promulgated by EPA under Section 304 of the CWA apply to your facility? ☐ Yes ☒ No → SKIP to Section 6.						
	5.2	Provide the following information on applicable ELGs.						
		ELG Category	ELG Subcategory				Regulatory Citation	
Production-Based Limitations	5.3	Are any of the applicable ELGs expressed in terms of production (or other measure of operation)? ☐ Yes ☒ No → SKIP to Section 6.						
	5.4	Provide an actual measure of daily production expressed in terms and units of applicable ELGs.						
		Outfall Number	Operation, Product, or Material			Quantity per Day	Unit of Measure	

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	5.5	Are you requesting alternative limits based on an anticipated increase in the actual production during the next permit term? (Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)
		☐ Yes ☐ No

SECTION 6. IMPROVEMENTS (40 CFR 122.21(G)(6))

Upgrades and Improvements	6.1	Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?																						
		☐ Yes ☒ No → SKIP to Item 6.3.																						
	6.2	Briefly identify each applicable project in the table below.																						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="2" style="width: 40%;">Brief Identification and Description of Project</th> <th rowspan="2" style="width: 15%;">Affected Outfalls (list outfall number)</th> <th rowspan="2" style="width: 20%;">Source(s) of Discharge</th> <th colspan="2" style="width: 25%;">Final Compliance Dates</th> </tr> <tr> <th style="width: 10%;">Required</th> <th style="width: 15%;">Projected</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		Brief Identification and Description of Project	Affected Outfalls (list outfall number)	Source(s) of Discharge	Final Compliance Dates		Required	Projected															
	Brief Identification and Description of Project	Affected Outfalls (list outfall number)				Source(s) of Discharge	Final Compliance Dates																	
Required			Projected																					
6.3	Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? (<i>optional item</i>)																							
	☐ Yes ☐ No ☒ Not applicable																							

SECTION 7. EFFLUENT AND INTAKE CHARACTERISTICS (40 CFR 122.21(G)(7))

Effluent and Intake Characteristics	See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.	
	Table A. Conventional and Non-Conventional Pollutants	
	7.1	Are you requesting a waiver from your NPDES permitting authority for any Table A pollutants for any of your outfalls?
		☐ Yes ☒ No → SKIP to Item 7.3.
	7.2	If yes, indicate the applicable outfalls below or check the appropriate box to indicate that you are requesting a waiver for all outfalls. Attach waiver request and other required information to the application.
		Outfall number _____ Outfall number _____ Outfall number _____
		☐ I am requesting a waiver for some pollutants at all outfalls. ☐ I am requesting a waiver for all pollutants at all outfalls → SKIP to Item 7.4.
	7.3	Have you completed monitoring for all Table A pollutants at each of your outfalls for which a waiver has not been requested and attached the results to this application package?
	☐ Yes	
Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants		
7.4	Do any of the facility's processes that contribute wastewater fall into one or more of the primary industry categories listed in Exhibit 2C-3? (See end of instructions for exhibit.)	
	☐ Yes ☒ No → SKIP to Item 7.8.	
7.5	Have you checked "Testing Required" for all toxic metals, cyanide, and total phenols in Section 1 of Table B?	
	☐ Yes	

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	7.6	List the applicable primary industry categories and check the boxes indicating the required GC/MS fraction(s) identified in Exhibit 2C-3.						
		Primary Industry Category			Required GC/MS Fraction(s) (check applicable boxes)			
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
Effluent and Intake Characteristics Continued	7.7	Have you checked "Testing Required" for all required pollutants in Sections 2 through 5 of Table B for each of the GC/MS fractions checked in Item 7.6? ☐ Yes						
	7.8	Have you checked "Believed Present" or "Believed Absent" for all pollutants listed in Sections 1 through 5 of Table B where testing is not required? ☐ Yes						
	7.9	Have you provided (1) quantitative data for those Section 1, Table B, pollutants for which you have indicated testing is required or (2) quantitative data or other required information for those Section 1, Table B, pollutants that you have indicated are "Believed Present" in your discharge? ☐ Yes						
	7.10	Does the applicant qualify for a small business exemption under the criteria specified in the instructions? ☐ Yes → Note that you qualify at the top of Table B, then SKIP to Item 7.12. ☒ No						
	7.11	Have you provided (1) quantitative data for those Sections 2 through 5, Table B, pollutants for which you have determined testing is required or (2) quantitative data or an explanation for those Sections 2 through 5, Table B, pollutants you have indicated are "Believed Present" in your discharge? ☒ Yes						
	Table C. Certain Conventional and Non-Conventional Pollutants							
	7.12	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table C for all outfalls? ☒ Yes						
	7.13	Have you completed Table C by providing quantitative data for those pollutants that are limited either directly or indirectly in an ELG? You must provide quantitative data even if the pollutant is "Believed Absent." ☐ Yes ☒ Not applicable						
	7.14	Have you completed Table C by providing quantitative data or an explanation for those pollutants for which you have indicated "Believed Present"? ☒ Yes						
	Table D. Certain Hazardous Substances and Asbestos							
	7.15	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table D for all outfalls? ☒ Yes						
	7.16	Have you completed Table D by (1) describing the reasons the applicable pollutants are expected to be discharged and (2) providing quantitative data, if available? ☒ Yes ☐ No						
	Table E. 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (2,3,7,8-TCDD)							
7.17	Does the facility use or manufacture one or more of the 2,3,7,8-TCDD congeners listed in the instructions, or do you know or have reason to believe that TCDD is or may be present in the effluent? ☐ Yes → Complete Table E. ☒ No → SKIP to Section 8.							
7.18	Have you completed Table E by reporting <i>qualitative</i> data for TCDD? ☐ Yes							

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SECTION 8. USED OR MANUFACTURED TOXICS (40 CFR 122.21(G)(9))

Used or Manufactured Toxics	8.1	Is any pollutant listed in Table B a substance or a component of a substance used or manufactured at your facility as an intermediate or final product or byproduct? ☐ Yes ☒ No → SKIP to Section 9.		
	8.2	List the pollutants below. Attach additional sheets, if necessary.		
		1.	4.	7.
		2.	5.	8.
		3.	6.	9.

SECTION 9. BIOLOGICAL TOXICITY TESTS (40 CFR 122.21(G)(11))

Biological Toxicity Tests	9.1	Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made within the last three years on (1) any of your discharges or (2) a receiving water in relation to your discharge? ☐ Yes ☒ No → SKIP to Section 10.		
	9.2	Identify the tests and their purposes below.		
		Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?
				☐ Yes ☐ No
				☐ Yes ☐ No
			☐ Yes ☐ No	

SECTION 10. CONTRACT ANALYSES (40 CFR 122.21(G)(12))

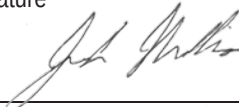
Contract Analyses	10.1	Were any of the analyses reported in Section 7 performed by a contract laboratory or consulting firm? ☒ Yes ☐ No → SKIP to Section 11.			
	10.2	Provide information for each contract laboratory or consulting firm below.			
			Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
		Name of laboratory/firm	Eurofins Lancaster Laboratories Environment Testing, LLC		
		Laboratory address	2425 New Holland Pike, Lancaster, PA		
		Phone number	(412) 525-0071		
	Pollutant(s) analyzed	VOCs, SVOCs, GRO/DRO, PCBs, Anions, Metals/Mercury, pH, free cyanide			

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SECTION 11. ADDITIONAL INFORMATION (40 CFR 122.21(G)(13))							
Additional Information	<u>11.1</u>	Has the NPDES permitting authority requested additional information? ☐ Yes ☒ No → SKIP to Section 12.					
	<u>11.2</u>	List the information requested and attach it to this application.					
		1.		4.			
		2.		5.			
		3.		6.			
SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(A) AND (D))							
Checklist and Certification Statement	<u>12.1</u>	In Column 1 below, mark the sections of Form 2C that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.					
		Column 1		Column 2			
		☒ Section 1: Outfall Location		☒ w/ attachments			
		☐ Section 2: Line Drawing		☐ w/ line drawing		☐ w/ additional attachments	
		☐ Section 3: Average Flows and Treatment		☐ w/ attachments		☐ w/ list of each user of privately owned treatment works	
		☐ Section 4: Intermittent Flows		☐ w/ attachments			
		☐ Section 5: Production		☐ w/ attachments			
		☐ Section 6: Improvements		☐ w/ attachments		☐ w/ optional additional sheets describing any additional pollution control plans	
		☒ Section 7: Effluent and Intake Characteristics		☒ w/ request for a waiver and supporting information ☐ w/ small business exemption request ☒ w/ Table A ☒ w/ Table C ☒ w/ Table E		☐ w/ explanation for identical outfalls ☐ w/ other attachments ☒ w/ Table B ☒ w/ Table D ☒ w/ analytical results as an attachment	
		☐ Section 8: Used or Manufactured Toxics		☐ w/ attachments			
		☐ Section 9: Biological Toxicity Tests		☐ w/ attachments			
		☒ Section 10: Contract Analyses		☐ w/ attachments			
		☐ Section 11: Additional Information		☐ w/ attachments			
		☒ Section 12: Checklist and Certification Statement		☐ w/ attachments			

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		Quantum Frederick

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SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d)) (Continued)

Checklist and Certification Statement	12.2	Provide the following certification. (See instructions to determine the appropriate person to sign the application.)	
		Certification Statement <i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>	
		Name (print or type first and last name)	Official title
		Joshua Mullis	Project Manager
		Signature	Date signed
			4/23/2025

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
		Quantum Frederick	DA11-A3718

TABLE A. CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(iii))¹

TABLE 1. CONVENTIONAL POLLUTANT MONITORING AND REPORTING REQUIREMENTS (10 C.F.R. 1.1111-10)									
Pollutant	Waiver Requested (if applicable)	Units (specify)	Effluent				Intake (optional)		
			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses	
☒	Check here if you have applied to your NPDES permitting authority for a waiver for <i>all</i> of the pollutants listed on this table for the noted outfall.								
1.	Biochemical oxygen demand (BOD ₅)	☐	Concentration						
			Mass						
2.	Chemical oxygen demand (COD)	☐	Concentration						
			Mass						
3.	Total organic carbon (TOC)	☐	Concentration						
			Mass						
4.	Total suspended solids (TSS)	☐	Concentration						
			Mass						
5.	Ammonia (as N)	☐	Concentration						
			Mass						
6.	Flow	☐	Rate						
	Temperature (winter)	☐	°C						
7.	Temperature (summer)	☒	°C	21.3					
	pH (minimum)	☒	Standard units	7.9					
8.	pH (maximum)	☒	Standard units	7.9					

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
☐ Check here if you qualify as a small business per the instructions to Form 2C and, therefore, do not need to submit quantitative data for any of the organic toxic pollutants in Sections 2 through 5 of this table. Note, however, that you must still indicate in the appropriate column of this table if you believe any of the pollutants listed are present in your discharge.										
Section 1. Toxic Metals, Cyanide, and Total Phenols										
1.1 Antimony, total (7440-36-0)	☒	☐	☒	Concentration Mass	ug/L	< 0.2 U				
1.2 Arsenic, total (7440-38-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.68 U				
1.3 Beryllium, total (7440-41-7)	☐	☐	☒	Concentration Mass	ug/L	< 0.12 U				
1.4 Cadmium, total (7440-43-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.15 U				
1.5 Chromium, total (7440-47-3)	☒	☐	☒	Concentration Mass	ug/L	< 0.55 U				
1.6 Copper, total (7440-50-8)	☒	☒	☐	Concentration Mass	ug/L	0.70 J				
1.7 Lead, total (7439-92-1)	☒	☐	☒	Concentration Mass	ug/L	< 0.12 U				
1.8 Mercury, total (7439-97-6)	☐	☐	☒	Concentration Mass	ug/L	< 0.079 U				
1.9 Nickel, total (7440-02-0)	☒	☒	☐	Concentration Mass	ug/L	1.1				
1.10 Selenium, total (7782-49-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.28 U				
1.11 Silver, total (7440-22-4)	☐	☐	☒	Concentration Mass		< 0.1 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
1.12 Thallium, total (7440-28-0)	☐	☐	☒	Concentration ug/L	< 0.13 U					
1.13 Zinc, total (7440-66-6)	☐	☐	☐	Concentration ug/L	< 4.0 U					
1.14 Cyanide, total (57-12-5)	☒	☐	☒	Concentration mg/L	< 0.005 U	free cyanide				
1.15 Phenols, total	☐	☐	☒	Concentration Mass						
Section 2. Organic Toxic Pollutants (GC/MS Fraction—Volatile Compounds)										
2.1 Acrolein (107-02-8)	☐	☐	☒	Concentration Mass						
2.2 Acrylonitrile (107-13-1)	☐	☐	☒	Concentration Mass						
2.3 Benzene (71-43-2)	☐	☐	☒	Concentration ug/L	< 0.1 U					
2.4 Bromoform (75-25-2)	☐	☐	☒	Concentration Mass						
2.5 Carbon tetrachloride (56-23-5)	☐	☐	☒	Concentration ug/L	< 0.1 U					
2.6 Chlorobenzene (108-90-7)	☐	☐	☒	Concentration ug/L	< 0.07 U					
2.7 Chlorodibromomethane (124-48-1)	☐	☐	☒	Concentration Mass						
2.8 Chloroethane (75-00-3)	☐	☐	☒	Concentration ug/L	< 0.1 U					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number	OMB No. 2040-0004 Expires 07/31/2026
		Quantum Frederick	DA11-A3718	

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
2.9 2-chloroethylvinyl ether (110-75-8)	☐	☐	☒	Concentration Mass						
2.10 Chloroform (67-66-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.09 U				
2.11 Dichlorobromomethane (75-27-4)	☐	☐	☒	Concentration Mass						
2.12 1,1-dichloroethane (75-34-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
2.13 1,2-dichloroethane (107-06-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.07 U				
2.14 1,1-dichloroethylene (75-35-4)	☐	☐	☒	Concentration Mass						
2.15 1,2-dichloropropane (78-87-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
2.16 1,3-dichloropropylene (542-75-6)	☐	☐	☒	Concentration Mass						
2.17 Ethylbenzene (100-41-4)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.18 Methyl bromide (74-83-9)	☐	☐	☒	Concentration Mass						
2.19 Methyl chloride (74-87-3)	☐	☐	☒	Concentration Mass						
2.20 Methylene chloride (75-09-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.2 U				
2.21 1,1,2,2-tetrachloroethane (79-34-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v)) ¹										
Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
2.22 Tetrachloroethylene (127-18-4)	☒	☐	☒	Concentration Mass						
2.23 Toluene (108-88-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.24 1,2-trans-dichloroethylene (156-60-5)	☐	☐	☒	Concentration Mass						
2.25 1,1,1-trichloroethane (71-55-6)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.26 1,1,2-trichloroethane (79-00-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.27 Trichloroethylene (79-01-6)	☐	☐	☒	Concentration Mass						
2.28 Vinyl chloride (75-01-4)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
Section 3. Organic Toxic Pollutants (GC/MS Fraction—Acid Compounds)										
3.1 2-chlorophenol (95-57-8)	☐	☐	☒	Concentration Mass						
3.2 2,4-dichlorophenol (120-83-2)	☐	☐	☒	Concentration Mass						
3.3 2,4-dimethylphenol (105-67-9)	☐	☐	☒	Concentration Mass						
3.4 4,6-dinitro-o-cresol (534-52-1)	☐	☐	☒	Concentration Mass						
3.5 2,4-dinitrophenol (51-28-5)	☐	☐	☒	Concentration Mass						

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
3.6 2-nitrophenol (88-75-5)	☐	☐	☒	Concentration Mass						
3.7 4-nitrophenol (100-02-7)	☐	☐	☒	Concentration Mass						
3.8 p-chloro-m-cresol (59-50-7)	☐	☐	☒	Concentration Mass						
3.9 Pentachlorophenol (87-86-5)	☐	☐	☒	Concentration Mass						
3.10 Phenol (108-95-2)	☐	☐	☒	Concentration Mass						
3.11 2,4,6-trichlorophenol (88-05-2)	☐	☐	☒	Concentration Mass						

Section 4. Organic Toxic Pollutants (GC/MS Fraction—Base /Neutral Compounds)

4.1 Acenaphthene (83-32-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.2 Acenaphthylene (208-96-8)	☒	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.3 Anthracene (120-12-7)	☒	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.4 Benzidine (92-87-5)	☐	☐	☒	Concentration Mass						
4.5 Benzo (a) anthracene (56-55-3)	☒	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.6 Benzo (a) pyrene (50-32-8)	☒	☐	☒	Concentration Mass	ug/L	< 0.01 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.7 3,4-benzofluoranthene (205-99-2)	☐	☐	☒	Concentration Mass						
4.8 Benzo (ghi) perylene (191-24-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.9 Benzo (k) fluoranthene (207-08-9)	☐	☐	☒	Concentration Mass	ug/L	< 0.01 U				
4.10 Bis (2-chloroethoxy) methane (111-91-1)	☐	☐	☒	Concentration Mass						
4.11 Bis (2-chloroethyl) ether (111-44-4)	☐	☐	☒	Concentration Mass						
4.12 Bis (2-chloroisopropyl) ether (102-80-1)	☐	☐	☒	Concentration Mass						
4.13 Bis (2-ethylhexyl) phthalate (117-81-7)	☐	☐	☒	Concentration Mass						
4.14 4-bromophenyl phenyl ether (101-55-3)	☐	☐	☒	Concentration Mass						
4.15 Butyl benzyl phthalate (85-68-7)	☐	☐	☒	Concentration Mass						
4.16 2-chloronaphthalene (91-58-7)	☐	☐	☒	Concentration Mass						
4.17 4-chlorophenyl phenyl ether (7005-72-3)	☐	☐	☒	Concentration Mass						
4.18 Chrysene (218-01-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.026 U				
4.19 Dibenzo (a,h) anthracene (53-70-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.021 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)		Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.20	1,2-dichlorobenzene (95-50-1)	☐	☐	☒	Concentration	ug/L	< 0.07 U					
4.21	1,3-dichlorobenzene (541-73-1)	☐	☐	☒	Concentration	ug/L	< 0.07 U					
4.22	1,4-dichlorobenzene (106-46-7)	☐	☐	☒	Concentration	ug/L	< 0.07 U					
4.23	3,3-dichlorobenzidine (91-94-1)	☐	☐	☒	Concentration							
4.24	Diethyl phthalate (84-66-2)	☐	☐	☒	Concentration							
4.25	Dimethyl phthalate (131-11-3)	☐	☐	☒	Concentration							
4.26	Di-n-butyl phthalate (84-74-2)	☐	☐	☒	Concentration							
4.27	2,4-dinitrotoluene (121-14-2)	☐	☐	☒	Concentration							
4.28	2,6-dinitrotoluene (606-20-2)	☐	☐	☒	Concentration							
4.29	Di-n-octyl phthalate (117-84-0)	☐	☐	☒	Concentration							
4.30	1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	☐	☐	☒	Concentration							
4.31	Fluoranthene (206-44-0)	☐	☐	☒	Concentration	ug/L	< 0.024 U					
4.32	Fluorene (86-73-7)	☐	☐	☒	Concentration	ug/L	< 0.01 U					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number	OMB No. 2040-0004 Expires 07/31/2026
		Quantum Frederick	DA11-A3718	

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.33 Hexachlorobenzene (118-74-1)	☐	☐	☒	Concentration Mass						
4.34 Hexachlorobutadiene (87-68-3)	☐	☐	☒	Concentration Mass						
4.35 Hexachlorocyclopentadiene (77-47-4)	☐	☐	☒	Concentration Mass						
4.36 Hexachloroethane (67-72-1)	☐	☐	☒	Concentration Mass						
4.37 Indeno (1,2,3-cd) pyrene (193-39-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.021 U				
4.38 Isophorone (78-59-1)	☐	☐	☒	Concentration Mass						
4.39 Naphthalene (91-20-3)	☒	☐	☒	Concentration Mass	ug/L	< 0.071 U				
4.40 Nitrobenzene (98-95-3)	☐	☐	☒	Concentration Mass						
4.41 N-nitrosodimethylamine (62-75-9)	☐	☐	☒	Concentration Mass						
4.42 N-nitrosodi-n-propylamine (621-64-7)	☐	☐	☒	Concentration Mass						
4.43 N-nitrosodiphenylamine (86-30-6)	☐	☐	☒	Concentration Mass						
4.44 Phenanthrene (85-01-8)	☐	☐	☒	Concentration Mass	ug/L	< 0.031 U				
4.45 Pyrene (129-00-0)	☐	☐	☒	Concentration Mass	ug/L	< 0.022 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.46 1,2,4-trichlorobenzene (120-82-1)	☐	☐	☒	Concentration ug/L	< 0.07 U					
Section 5. Organic Toxic Pollutants (GC/MS Fraction—Pesticides)										
5.1 Aldrin (309-00-2)	☐	☐	☒	Concentration Mass						
5.2 α -BHC (319-84-6)	☐	☐	☒	Concentration Mass						
5.3 β -BHC (319-85-7)	☐	☐	☒	Concentration Mass						
5.4 γ -BHC (58-89-9)	☐	☐	☒	Concentration Mass						
5.5 δ -BHC (319-86-8)	☐	☐	☒	Concentration Mass						
5.6 Chlordane (57-74-9)	☐	☐	☒	Concentration Mass						
5.7 4,4'-DDT (50-29-3)	☐	☐	☒	Concentration Mass						
5.8 4,4'-DDE (72-55-9)	☐	☐	☒	Concentration Mass						
5.9 4,4'-DDD (72-54-8)	☐	☐	☒	Concentration Mass						
5.10 Dieldrin (60-57-1)	☐	☐	☒	Concentration Mass						
5.11 α -endosulfan (115-29-7)	☐	☐	☒	Concentration Mass						

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number	OMB No. 2040-0004 Expires 07/31/2026							
		Quantum Frederick	DA11-A3718								
TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v)) ¹											
Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
5.12 β-endosulfan (115-29-7)	☐	☐	☒	Concentration Mass							
5.13 Endosulfan sulfate (1031-07-8)	☐	☐	☒	Concentration Mass							
5.14 Endrin (72-20-8)	☐	☐	☒	Concentration Mass							
5.15 Endrin aldehyde (7421-93-4)	☐	☐	☒	Concentration Mass							
5.16 Heptachlor (76-44-8)	☐	☐	☒	Concentration Mass							
5.17 Heptachlor epoxide (1024-57-3)	☐	☐	☒	Concentration Mass							
5.18 PCB-1242 (53469-21-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.0081 U					
5.19 PCB-1254 (11097-69-1)	☒	☐	☒	Concentration Mass	ug/L	< 0.0050 U					
5.20 PCB-1221 (11104-28-2)	☒	☐	☒	Concentration Mass	ug/L	< 0.0081 U					
5.21 PCB-1232 (11141-16-5)	☒	☐	☒	Concentration Mass	ug/L	< 0.0081 U					
5.22 PCB-1248 (12672-29-6)	☒	☐	☒	Concentration Mass	ug/L	< 0.0081 U					
5.23 PCB-1260 (11096-82-5)	☒	☐	☒	Concentration Mass	ug/L	< 0.0050 U					
5.24 PCB-1016 (12674-11-2)	☒	☐	☒	Concentration Mass	ug/L	< 0.0081 U					

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v)) ¹											
Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
Toxaphene (8001-35-2)	☐	☐	☒	Concentration							
				Mass							

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))¹

Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☐ Check here if you believe all pollutants in Table C to be present in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for each pollutant.									
☐ Check here if you believe all pollutants in Table C to be absent in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for each pollutant.									
1. Bromide (24959-67-9)	☐	☒	Concentration Mass						
2. Chlorine, total residual	☐	☒	Concentration Mass						
3. Color	☐	☒	Concentration Mass						
4. Fecal coliform	☐	☒	Concentration Mass						
5. Fluoride (16984-48-8)	☒	☐	Concentration Mass	mg/L	0.26				
6 Nitrate-nitrite	☐	☒	Concentration Mass						
7. Nitrogen, total organic (as N)	☐	☒	Concentration Mass						
8. Oil and grease	☐	☒	Concentration Mass						
9. Phosphorus (as P), total (7723-14-0)	☐	☒	Concentration Mass						
10. Sulfate (as SO ₄) (14808-79-8)	☐	☒	Concentration Mass						
11. Sulfide (as S)	☐	☒	Concentration Mass						

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number	OMB No. 2040-0004 Expires 07/31/2026
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TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))¹

	Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
12.	Sulfite (as SO ₃) (14265-45-3)	☐	☒	Concentration Mass						
13.	Surfactants	☐	☒	Concentration Mass						
14.	Aluminum, total (7429-90-5)	☒	☐	Concentration Mass	ug/L	22 J				
15.	Barium, total (7440-39-3)	☒	☐	Concentration Mass	ug/L	42				
16.	Boron, total (7440-42-8)	☐	☒	Concentration Mass						
17.	Cobalt, total (7440-48-4)	☒	☐	Concentration Mass	ug/L	0.38 J				
18.	Iron, total (7439-89-6)	☒	☐	Concentration Mass	ug/L	41 J				
19.	Magnesium, total (7439-95-4)	☒	☐	Concentration Mass	ug/L	9600				
20.	Molybdenum, total (7439-98-7)	☐	☒	Concentration Mass						
21.	Manganese, total (7439-96-5)	☒	☐	Concentration Mass	ug/L	52				
22.	Tin, total (7440-31-5)	☐	☒	Concentration Mass						
23.	Titanium, total (7440-32-6)	☐	☒	Concentration Mass						

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number	OMB No. 2040-0004 Expires 07/31/2026
		Quantum Frederick	DA11-A3718	

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi)) ¹									
Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
24. Radioactivity									
Alpha, total	☐	☒	Concentration Mass						
Beta, total	☐	☒	Concentration Mass						
Radium, total	☐	☒	Concentration Mass						
Radium 226, total	☐	☒	Concentration Mass						

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
1. Asbestos	☐	☒		
2. Acetaldehyde	☐	☒		
3. Allyl alcohol	☐	☒		
4. Allyl chloride	☐	☒		
5. Amyl acetate	☐	☒		
6. Aniline	☐	☒		
7. Benzotrile	☐	☒		
8. Benzyl chloride	☐	☒		
9. Butyl acetate	☐	☒		
10. Butylamine	☐	☒		
11. Captan	☐	☒		
12. Carbaryl	☐	☒		
13. Carbofuran	☐	☒		
14. Carbon disulfide	☐	☒		
15. Chlorpyrifos	☐	☒		
16. Coumaphos	☐	☒		
17. Cresol	☐	☒		
18. Crotonaldehyde	☐	☒		
19. Cyclohexane	☐	☒		0.1 ug/L U

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))¹

Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
20. 2,4-D (2,4-dichlorophenoxyacetic acid)	☐	☒		
21. Diazinon	☐	☒		
22. Dicamba	☐	☒		
23. Dichlobenil	☐	☒		
24. Diclhone	☐	☒		
25. 2,2-dichloropropionic acid	☐	☒		
26. Dichlorvos	☐	☒		
27. Diethyl amine	☐	☒		
28. Dimethyl amine	☐	☒		
29. Dinitrobenzene	☐	☒		
30. Diquat	☐	☒		
31. Disulfoton	☐	☒		
32. Diuron	☐	☒		
33. Epichlorohydrin	☐	☒		
34. Ethion	☐	☒		
35. Ethylene diamine	☐	☒		
36. Ethylene dibromide	☐	☒		
37. Formaldehyde	☐	☒		
38. Furfural	☐	☒		

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
39. Guthion	☐	☒		
40. Isoprene	☐	☒		
41. Isopropanolamine	☐	☒		
42. Kelthane	☐	☒		
43. Kepone	☐	☒		
44. Malathion	☐	☒		
45. Mercaptodimethur	☐	☒		
46. Methoxychlor	☐	☒		
47. Methyl mercaptan	☐	☒		
48. Methyl methacrylate	☐	☒		
49. Methyl parathion	☐	☒		
50. Mevinphos	☐	☒		
51. Mexacarbate	☐	☒		
52. Monoethyl amine	☐	☒		
53. Monomethyl amine	☐	☒		
54. Naled	☐	☒		
55. Naphthenic acid	☐	☒		
56. Nitrotoluene	☐	☒		
57. Parathion	☐	☒		

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))¹

Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
58. Phenolsulfonate	☐	☒		
59. Phosgene	☐	☒		
60. Propargite	☐	☒		
61. Propylene oxide	☐	☒		
62. Pyrethrins	☐	☒		
63. Quinoline	☐	☒		
64. Resorcinol	☐	☒		
65. Strontium	☐	☒		
66. Strychnine	☐	☒		
67. Styrene	☐	☒		< 0.07 ug/L U
68. 2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	☐	☒		
69. TDE (tetrachlorodiphenyl ethane)	☐	☒		
70. 2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	☐	☒		
71. Trichlorofon	☐	☒		
72. Triethanolamine	☐	☒		
73. Triethylamine	☐	☒		
74. Trimethylamine	☐	☒		
75. Uranium	☐	☒		
76. Vanadium	☐	☒		

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
77. Vinyl acetate	☐	☒		
78. Xylene	☐	☒		
79. Xylenol	☐	☒		
80. Zirconium	☐	☒		

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE E. 2,3,7,8 TETRACHLORODIBENZO P DIOXIN (2,3,7,8 TCDD) (40 CFR 122.21(g)(7)(viii))				
Pollutant	TCDD Congeners Used or Manufactured	Presence or Absence (check one)		Results of Screening Procedure
		Believed Present	Believed Absent	
2,3,7,8-TCDD	☐	☐	☒	

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026	
Form 2C NPDES			U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURE OPERATIONS				
SECTION 1. OUTFALL LOCATION (40 CFR 122.21(G)(1))							
Outfall Location	<u>1.1</u>	Provide information on each of the facility's outfalls in the table below.					
		Outfall Number	Receiving Water Name	Latitude		Longitude	
		DA11-A4209	Groundsurface inside EC	Multiple - see map		Multiple - see map	
SECTION 2. LINE DRAWING (40 CFR 122.21(G)(2))							
Line Drawing	<u>2.1</u>	Have you attached a line drawing to this application that shows the water flow through your facility with a water balance? (See instructions for drawing requirements. See Exhibit 2C-1 at end of instructions for example.) ☐ Yes					
SECTION 3. AVERAGE FLOWS AND TREATMENT (40 CFR 122.21(G)(3))							
Average Flows and Treatment	<u>3.1</u>	For each outfall identified under Item 1.1, provide average flow and treatment information. Add additional sheets if necessary.					
		Outfall Number DA11-A4209					
		Operations Contributing to Flow					
		Operation			Average Flow		
		MH8 repair dewatering			mgd		
					mgd		
					mgd		
					mgd		
		Treatment Units					
		Description (include size, flow rate through each treatment unit, retention time, etc.)		Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge	

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026			
Average Flows and Treatment Continued	3.1 cont.	**Outfall Number** _____							
		Operations Contributing to Flow							
		Operation			Average Flow				
					mgd				
					mgd				
					mgd				
					mgd				
		Treatment Units							
		Description (include size, flow rate through each treatment unit, retention time, etc.)			Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge		
		Outfall Number _____							
		Operations Contributing to Flow							
		Operation			Average Flow				
					mgd				
					mgd				
					mgd				
					mgd				
		Treatment Units							
		Description (include size, flow rate through each treatment unit, retention time, etc.)			Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge		
		System Users	3.2	Are you applying for an NPDES permit to operate a privately owned treatment works? ☐ Yes ☒ No → SKIP to Section 4.					
			3.3	Have you attached a list that identifies each user of the treatment works? ☐ Yes					

EPA Identification Number		NPDES Permit Number		Facility Name Quantum Frederick		OMB No. 2040-0004 Expires 07/31/2026		
SECTION 4. INTERMITTENT FLOWS (40 CFR 122.21(G)(4))								
Intermittent Flows	4.1	Except for storm runoff, leaks, or spills, are any discharges described in Sections 1 and 3 intermittent or seasonal? ☐ Yes ☒ No → SKIP to Section 5.						
	4.2	Provide information on intermittent or seasonal flows for each applicable outfall. Attach additional pages, if necessary.						
		Outfall Number	Operation (list)	Frequency		Flow Rate		Duration
				Average Days/Week	Average Months/Year	Long-Term Average	Maximum Daily	
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
SECTION 5. PRODUCTION (40 CFR 122.21(G)(5))								
Applicable ELGs	5.1	Do any effluent limitation guidelines (ELGs) promulgated by EPA under Section 304 of the CWA apply to your facility? ☐ Yes ☒ No → SKIP to Section 6.						
	5.2	Provide the following information on applicable ELGs.						
		ELG Category	ELG Subcategory			Regulatory Citation		
Production-Based Limitations	5.3	Are any of the applicable ELGs expressed in terms of production (or other measure of operation)? ☐ Yes ☒ No → SKIP to Section 6.						
	5.4	Provide an actual measure of daily production expressed in terms and units of applicable ELGs.						
		Outfall Number	Operation, Product, or Material			Quantity per Day	Unit of Measure	

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	5.5	Are you requesting alternative limits based on an anticipated increase in the actual production during the next permit term? (Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)
		☐ Yes ☐ No

SECTION 6. IMPROVEMENTS (40 CFR 122.21(G)(6))

Upgrades and Improvements	6.1	Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?																						
		☐ Yes ☒ No → SKIP to Item 6.3.																						
	6.2	Briefly identify each applicable project in the table below.																						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="2" style="width: 40%;">Brief Identification and Description of Project</th> <th rowspan="2" style="width: 15%;">Affected Outfalls (list outfall number)</th> <th rowspan="2" style="width: 20%;">Source(s) of Discharge</th> <th colspan="2" style="width: 25%;">Final Compliance Dates</th> </tr> <tr> <th style="width: 10%;">Required</th> <th style="width: 15%;">Projected</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		Brief Identification and Description of Project	Affected Outfalls (list outfall number)	Source(s) of Discharge	Final Compliance Dates		Required	Projected															
	Brief Identification and Description of Project	Affected Outfalls (list outfall number)				Source(s) of Discharge	Final Compliance Dates																	
Required			Projected																					
6.3	Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? (<i>optional item</i>)																							
	☐ Yes ☐ No ☒ Not applicable																							

SECTION 7. EFFLUENT AND INTAKE CHARACTERISTICS (40 CFR 122.21(G)(7))

Effluent and Intake Characteristics	See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.	
	Table A. Conventional and Non-Conventional Pollutants	
	7.1	Are you requesting a waiver from your NPDES permitting authority for any Table A pollutants for any of your outfalls?
		☐ Yes ☒ No → SKIP to Item 7.3.
	7.2	If yes, indicate the applicable outfalls below or check the appropriate box to indicate that you are requesting a waiver for all outfalls. Attach waiver request and other required information to the application.
		Outfall number _____ Outfall number _____ Outfall number _____
		☐ I am requesting a waiver for some pollutants at all outfalls. ☐ I am requesting a waiver for all pollutants at all outfalls → SKIP to Item 7.4.
	7.3	Have you completed monitoring for all Table A pollutants at each of your outfalls for which a waiver has not been requested and attached the results to this application package?
	☐ Yes	
Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants		
7.4	Do any of the facility's processes that contribute wastewater fall into one or more of the primary industry categories listed in Exhibit 2C-3? (See end of instructions for exhibit.)	
	☐ Yes ☒ No → SKIP to Item 7.8.	
7.5	Have you checked "Testing Required" for all toxic metals, cyanide, and total phenols in Section 1 of Table B?	
	☐ Yes	

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	7.6	List the applicable primary industry categories and check the boxes indicating the required GC/MS fraction(s) identified in Exhibit 2C-3.						
		Primary Industry Category			Required GC/MS Fraction(s) (check applicable boxes)			
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
					☐ Volatile	☐ Acid	☐ Base/neutral	☐ Pesticide
Effluent and Intake Characteristics Continued	7.7	Have you checked "Testing Required" for all required pollutants in Sections 2 through 5 of Table B for each of the GC/MS fractions checked in Item 7.6? ☐ Yes						
	7.8	Have you checked "Believed Present" or "Believed Absent" for all pollutants listed in Sections 1 through 5 of Table B where testing is not required? ☐ Yes						
	7.9	Have you provided (1) quantitative data for those Section 1, Table B, pollutants for which you have indicated testing is required or (2) quantitative data or other required information for those Section 1, Table B, pollutants that you have indicated are "Believed Present" in your discharge? ☐ Yes						
	7.10	Does the applicant qualify for a small business exemption under the criteria specified in the instructions? ☐ Yes → Note that you qualify at the top of Table B, then SKIP to Item 7.12. ☒ No						
	7.11	Have you provided (1) quantitative data for those Sections 2 through 5, Table B, pollutants for which you have determined testing is required or (2) quantitative data or an explanation for those Sections 2 through 5, Table B, pollutants you have indicated are "Believed Present" in your discharge? ☒ Yes						
	Table C. Certain Conventional and Non-Conventional Pollutants							
	7.12	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table C for all outfalls? ☒ Yes						
	7.13	Have you completed Table C by providing quantitative data for those pollutants that are limited either directly or indirectly in an ELG? You must provide quantitative data even if the pollutant is "Believed Absent." ☐ Yes ☒ Not applicable						
	7.14	Have you completed Table C by providing quantitative data or an explanation for those pollutants for which you have indicated "Believed Present"? ☒ Yes						
	Table D. Certain Hazardous Substances and Asbestos							
	7.15	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table D for all outfalls? ☒ Yes						
	7.16	Have you completed Table D by (1) describing the reasons the applicable pollutants are expected to be discharged and (2) providing quantitative data, if available? ☒ Yes ☐ No						
	Table E. 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (2,3,7,8-TCDD)							
7.17	Does the facility use or manufacture one or more of the 2,3,7,8-TCDD congeners listed in the instructions, or do you know or have reason to believe that TCDD is or may be present in the effluent? ☐ Yes → Complete Table E. ☒ No → SKIP to Section 8.							
7.18	Have you completed Table E by reporting <i>qualitative</i> data for TCDD? ☐ Yes							

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SECTION 8. USED OR MANUFACTURED TOXICS (40 CFR 122.21(G)(9))

Used or Manufactured Toxics	8.1	Is any pollutant listed in Table B a substance or a component of a substance used or manufactured at your facility as an intermediate or final product or byproduct? ☐ Yes ☒ No → SKIP to Section 9.		
	8.2	List the pollutants below. Attach additional sheets, if necessary.		
	1.	4.	7.	
	2.	5.	8.	
	3.	6.	9.	

SECTION 9. BIOLOGICAL TOXICITY TESTS (40 CFR 122.21(G)(11))

Biological Toxicity Tests	9.1	Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made within the last three years on (1) any of your discharges or (2) a receiving water in relation to your discharge? ☐ Yes ☒ No → SKIP to Section 10.			
	9.2	Identify the tests and their purposes below.			
		Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
				☐ Yes ☐ No	
				☐ Yes ☐ No	
			☐ Yes ☐ No		

SECTION 10. CONTRACT ANALYSES (40 CFR 122.21(G)(12))

Contract Analyses	10.1	Were any of the analyses reported in Section 7 performed by a contract laboratory or consulting firm? ☒ Yes ☐ No → SKIP to Section 11.		
	10.2	Provide information for each contract laboratory or consulting firm below.		
		Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
	Name of laboratory/firm	Eurofins Lancaster Laboratories Environment Testing, LLC		
	Laboratory address	2425 New Holland Pike, Lancaster, PA		
	Phone number	(412) 525-0071		
	Pollutant(s) analyzed	VOCs, SVOCs, GRO/DRO, PCBs, Anions, Metals/Mercury, pH, free cyanide		

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SECTION 11. ADDITIONAL INFORMATION (40 CFR 122.21(G)(13))							
Additional Information	<u>11.1</u>	Has the NPDES permitting authority requested additional information? ☐ Yes ☒ No → SKIP to Section 12.					
	<u>11.2</u>	List the information requested and attach it to this application.					
		1.		4.			
		2.		5.			
		3.		6.			
SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(A) AND (D))							
Checklist and Certification Statement	<u>12.1</u>	In Column 1 below, mark the sections of Form 2C that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.					
		Column 1		Column 2			
		☒ Section 1: Outfall Location		☒ w/ attachments			
		☐ Section 2: Line Drawing		☐ w/ line drawing		☐ w/ additional attachments	
		☐ Section 3: Average Flows and Treatment		☐ w/ attachments		☐ w/ list of each user of privately owned treatment works	
		☐ Section 4: Intermittent Flows		☐ w/ attachments			
		☐ Section 5: Production		☐ w/ attachments			
		☐ Section 6: Improvements		☐ w/ attachments		☐ w/ optional additional sheets describing any additional pollution control plans	
		☒ Section 7: Effluent and Intake Characteristics		☒ w/ request for a waiver and supporting information ☐ w/ small business exemption request ☒ w/ Table A ☒ w/ Table C ☒ w/ Table E		☐ w/ explanation for identical outfalls ☐ w/ other attachments ☒ w/ Table B ☒ w/ Table D ☒ w/ analytical results as an attachment	
		☐ Section 8: Used or Manufactured Toxics		☐ w/ attachments			
		☐ Section 9: Biological Toxicity Tests		☐ w/ attachments			
		☒ Section 10: Contract Analyses		☐ w/ attachments			
		☐ Section 11: Additional Information		☐ w/ attachments			
		☒ Section 12: Checklist and Certification Statement		☐ w/ attachments			

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SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d)) (Continued)

Checklist and Certification Statement	12.2	Provide the following certification. (See instructions to determine the appropriate person to sign the application.)	
		Certification Statement <i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>	
		Name (print or type first and last name) Joshua Mullis	Official title Project Manager
		Signature 	Date signed 4/23/2025

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
		Quantum Frederick	DA11-A4209

TABLE A. CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(iii))¹

TABLE 1. CONVENTIONAL POLLUTANT MONITORING AND REPORTING REQUIREMENTS (18 OF 18) (10/1/2017)									
Pollutant	Waiver Requested (if applicable)	Units (specify)	Effluent				Intake (optional)		
			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses	
☒	Check here if you have applied to your NPDES permitting authority for a waiver for all of the pollutants listed on this table for the noted outfall.								
1. Biochemical oxygen demand (BOD ₅)	☐	Concentration							
		Mass							
2. Chemical oxygen demand (COD)	☐	Concentration							
		Mass							
3. Total organic carbon (TOC)	☐	Concentration							
		Mass							
4. Total suspended solids (TSS)	☐	Concentration							
		Mass							
5. Ammonia (as N)	☐	Concentration							
		Mass							
6. Flow	☐	Rate							
Temperature (winter)	☐	°C							
Temperature (summer)	☒	°C	21.3						
pH (minimum)	☒	Standard units	7.5						
pH (maximum)	☒	Standard units	7.5						

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
☐ Check here if you qualify as a small business per the instructions to Form 2C and, therefore, do not need to submit quantitative data for any of the organic toxic pollutants in Sections 2 through 5 of this table. Note, however, that you must still indicate in the appropriate column of this table if you believe any of the pollutants listed are present in your discharge.											
Section 1. Toxic Metals, Cyanide, and Total Phenols											
1.1 Antimony, total (7440-36-0)	☒	☐	☒	Concentration Mass	ug/L	< 0.2 U					
1.2 Arsenic, total (7440-38-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.68 U					
1.3 Beryllium, total (7440-41-7)	☐	☐	☒	Concentration Mass	ug/L	< 0.12 U					
1.4 Cadmium, total (7440-43-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.15 U					
1.5 Chromium, total (7440-47-3)	☒	☒	☐	Concentration Mass	ug/L	0.61 J					
1.6 Copper, total (7440-50-8)	☒	☒	☐	Concentration Mass	ug/L	1.1					
1.7 Lead, total (7439-92-1)	☒	☐	☐	Concentration Mass	ug/L	< 0.12 U					
1.8 Mercury, total (7439-97-6)	☐	☐	☒	Concentration Mass	ug/L	< 0.079 U					
1.9 Nickel, total (7440-02-0)	☒	☒	☐	Concentration Mass	ug/L	0.68 J					
1.10 Selenium, total (7782-49-2)	☐	☒	☐	Concentration Mass	ug/L	0.3 J					
1.11 Silver, total (7440-22-4)	☐	☐	☒	Concentration Mass		< 0.1 U					

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
1.12 Thallium, total (7440-28-0)	☐	☒	☐	Concentration Mass	ug/L	0.25 J				
1.13 Zinc, total (7440-66-6)	☐	☐	☒	Concentration Mass	ug/L	< 4.0 U				
1.14 Cyanide, total (57-12-5)	☒	☐	☒	Concentration Mass	mg/L	< 0.005 U	free cyanide			
1.15 Phenols, total	☐	☐	☒	Concentration Mass						
Section 2. Organic Toxic Pollutants (GC/MS Fraction—Volatile Compounds)										
2.1 Acrolein (107-02-8)	☐	☐	☒	Concentration Mass						
2.2 Acrylonitrile (107-13-1)	☐	☐	☒	Concentration Mass						
2.3 Benzene (71-43-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
2.4 Bromoform (75-25-2)	☐	☐	☒	Concentration Mass						
2.5 Carbon tetrachloride (56-23-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
2.6 Chlorobenzene (108-90-7)	☐	☐	☒	Concentration Mass	ug/L	< 0.07 U				
2.7 Chlorodibromomethane (124-48-1)	☐	☐	☒	Concentration Mass						
2.8 Chloroethane (75-00-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
2.9 2-chloroethylvinyl ether (110-75-8)	☐	☐	☒	Concentration Mass						
2.10 Chloroform (67-66-3)	☐	☐	☒	Concentration Mass	ug/L	0.51				
2.11 Dichlorobromomethane (75-27-4)	☐	☐	☒	Concentration Mass						
2.12 1,1-dichloroethane (75-34-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
2.13 1,2-dichloroethane (107-06-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.07 U				
2.14 1,1-dichloroethylene (75-35-4)	☐	☐	☒	Concentration Mass						
2.15 1,2-dichloropropane (78-87-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				
2.16 1,3-dichloropropylene (542-75-6)	☐	☐	☒	Concentration Mass						
2.17 Ethylbenzene (100-41-4)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.18 Methyl bromide (74-83-9)	☐	☐	☒	Concentration Mass						
2.19 Methyl chloride (74-87-3)	☐	☐	☒	Concentration Mass						
2.20 Methylene chloride (75-09-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.2 U				
2.21 1,1,2,2-tetrachloroethane (79-34-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
2.22 Tetrachloroethylene (127-18-4)	☒	☐	☒	Concentration Mass						
2.23 Toluene (108-88-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.24 1,2-trans-dichloroethylene (156-60-5)	☐	☐	☒	Concentration Mass						
2.25 1,1,1-trichloroethane (71-55-6)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.26 1,1,2-trichloroethane (79-00-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.08 U				
2.27 Trichloroethylene (79-01-6)	☐	☐	☒	Concentration Mass						
2.28 Vinyl chloride (75-01-4)	☐	☐	☒	Concentration Mass	ug/L	< 0.1 U				

Section 3. Organic Toxic Pollutants (GC/MS Fraction—Acid Compounds)

3.1 2-chlorophenol (95-57-8)	☐	☐	☒	Concentration Mass						
3.2 2,4-dichlorophenol (120-83-2)	☐	☐	☒	Concentration Mass						
3.3 2,4-dimethylphenol (105-67-9)	☐	☐	☒	Concentration Mass						
3.4 4,6-dinitro-o-cresol (534-52-1)	☐	☐	☒	Concentration Mass						
3.5 2,4-dinitrophenol (51-28-5)	☐	☐	☒	Concentration Mass						

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
3.6 2-nitrophenol (88-75-5)	☐	☐	☒	Concentration Mass						
3.7 4-nitrophenol (100-02-7)	☐	☐	☒	Concentration Mass						
3.8 p-chloro-m-cresol (59-50-7)	☐	☐	☒	Concentration Mass						
3.9 Pentachlorophenol (87-86-5)	☐	☐	☒	Concentration Mass						
3.10 Phenol (108-95-2)	☐	☐	☒	Concentration Mass						
3.11 2,4,6-trichlorophenol (88-05-2)	☐	☐	☒	Concentration Mass						

Section 4. Organic Toxic Pollutants (GC/MS Fraction—Base /Neutral Compounds)

4.1 Acenaphthene (83-32-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.2 Acenaphthylene (208-96-8)	☒	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.3 Anthracene (120-12-7)	☒	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.4 Benzidine (92-87-5)	☐	☐	☒	Concentration Mass						
4.5 Benzo (a) anthracene (56-55-3)	☒	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.6 Benzo (a) pyrene (50-32-8)	☒	☐	☒	Concentration Mass	ug/L	< 0.011 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.7 3,4-benzofluoranthene (205-99-2)	☐	☐	☒	Concentration Mass						
4.8 Benzo (ghi) perylene (191-24-2)	☐	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.9 Benzo (k) fluoranthene (207-08-9)	☐	☐	☒	Concentration Mass	ug/L	< 0.011 U				
4.10 Bis (2-chloroethoxy) methane (111-91-1)	☐	☐	☒	Concentration Mass						
4.11 Bis (2-chloroethyl) ether (111-44-4)	☐	☐	☒	Concentration Mass						
4.12 Bis (2-chloroisopropyl) ether (102-80-1)	☐	☐	☒	Concentration Mass						
4.13 Bis (2-ethylhexyl) phthalate (117-81-7)	☐	☐	☒	Concentration Mass						
4.14 4-bromophenyl phenyl ether (101-55-3)	☐	☐	☒	Concentration Mass						
4.15 Butyl benzyl phthalate (85-68-7)	☐	☐	☒	Concentration Mass						
4.16 2-chloronaphthalene (91-58-7)	☐	☐	☒	Concentration Mass						
4.17 4-chlorophenyl phenyl ether (7005-72-3)	☐	☐	☒	Concentration Mass						
4.18 Chrysene (218-01-9)	☒	☐	☒	Concentration Mass	ug/L	< 0.027 U				
4.19 Dibenzo (a,h) anthracene (53-70-3)	☐	☐	☒	Concentration Mass	ug/L	< 0.022 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent							
4.20 1,2-dichlorobenzene (95-50-1)	☐	☐	☒	Concentration ug/L	Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
				Mass	< 0.07 U					
4.21 1,3-dichlorobenzene (541-73-1)	☐	☐	☒	Concentration ug/L	< 0.07 U					
				Mass						
4.22 1,4-dichlorobenzene (106-46-7)	☐	☐	☒	Concentration ug/L	< 0.07 U					
				Mass						
4.23 3,3-dichlorobenzidine (91-94-1)	☐	☐	☒	Concentration						
				Mass						
4.24 Diethyl phthalate (84-66-2)	☐	☐	☒	Concentration						
				Mass						
4.25 Dimethyl phthalate (131-11-3)	☐	☐	☒	Concentration						
				Mass						
4.26 Di-n-butyl phthalate (84-74-2)	☐	☐	☒	Concentration						
				Mass						
4.27 2,4-dinitrotoluene (121-14-2)	☐	☐	☒	Concentration						
				Mass						
4.28 2,6-dinitrotoluene (606-20-2)	☐	☐	☒	Concentration						
				Mass						
4.29 Di-n-octyl phthalate (117-84-0)	☐	☐	☒	Concentration						
				Mass						
4.30 1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	☐	☐	☒	Concentration						
				Mass						
4.31 Fluoranthene (206-44-0)	☐	☐	☒	Concentration ug/L	< 0.025 U					
				Mass						
4.32 Fluorene (86-73-7)	☐	☐	☒	Concentration ug/L	< 0.011 U					
				Mass						

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.33 Hexachlorobenzene (118-74-1)	☐	☐	☒	Concentration Mass						
4.34 Hexachlorobutadiene (87-68-3)	☐	☐	☒	Concentration Mass						
4.35 Hexachlorocyclopentadiene (77-47-4)	☐	☐	☒	Concentration Mass						
4.36 Hexachloroethane (67-72-1)	☐	☐	☒	Concentration Mass						
4.37 Indeno (1,2,3-cd) pyrene (193-39-5)	☐	☐	☒	Concentration Mass	ug/L	< 0.022 U				
4.38 Isophorone (78-59-1)	☐	☐	☒	Concentration Mass						
4.39 Naphthalene (91-20-3)	☒	☐	☒	Concentration Mass	ug/L	< 0.074 U				
4.40 Nitrobenzene (98-95-3)	☐	☐	☒	Concentration Mass						
4.41 N-nitrosodimethylamine (62-75-9)	☐	☐	☒	Concentration Mass						
4.42 N-nitrosodi-n-propylamine (621-64-7)	☐	☐	☒	Concentration Mass						
4.43 N-nitrosodiphenylamine (86-30-6)	☐	☐	☒	Concentration Mass						
4.44 Phenanthrene (85-01-8)	☐	☐	☒	Concentration Mass	ug/L	< 0.033 U				
4.45 Pyrene (129-00-0)	☐	☐	☒	Concentration Mass	ug/L	< 0.023 U				

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.46 1,2,4-trichlorobenzene (120-82-1)	☐	☐	☒	Concentration ug/L	< 0.07 U					
Section 5. Organic Toxic Pollutants (GC/MS Fraction—Pesticides)										
5.1 Aldrin (309-00-2)	☐	☐	☒	Concentration Mass						
5.2 α -BHC (319-84-6)	☐	☐	☒	Concentration Mass						
5.3 β -BHC (319-85-7)	☐	☐	☒	Concentration Mass						
5.4 γ -BHC (58-89-9)	☐	☐	☒	Concentration Mass						
5.5 δ -BHC (319-86-8)	☐	☐	☒	Concentration Mass						
5.6 Chlordane (57-74-9)	☐	☐	☒	Concentration Mass						
5.7 4,4'-DDT (50-29-3)	☐	☐	☒	Concentration Mass						
5.8 4,4'-DDE (72-55-9)	☐	☐	☒	Concentration Mass						
5.9 4,4'-DDD (72-54-8)	☐	☐	☒	Concentration Mass						
5.10 Dieldrin (60-57-1)	☐	☐	☒	Concentration Mass						
5.11 α -endosulfan (115-29-7)	☐	☐	☒	Concentration Mass						

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
5.12 β-endosulfan (115-29-7)	☐	☐	☒	Concentration Mass						
5.13 Endosulfan sulfate (1031-07-8)	☐	☐	☒	Concentration Mass						
5.14 Endrin (72-20-8)	☐	☐	☒	Concentration Mass						
5.15 Endrin aldehyde (7421-93-4)	☐	☐	☒	Concentration Mass						
5.16 Heptachlor (76-44-8)	☐	☐	☒	Concentration Mass						
5.17 Heptachlor epoxide (1024-57-3)	☐	☐	☒	Concentration Mass						
5.18 PCB-1242 (53469-21-9)	☒	☐	☒	Concentration Mass	ug/L < 0.0079 U					
5.19 PCB-1254 (11097-69-1)	☒	☐	☒	Concentration Mass	ug/L < 0.0049 U					
5.20 PCB-1221 (11104-28-2)	☒	☐	☒	Concentration Mass	ug/L < 0.0079 U					
5.21 PCB-1232 (11141-16-5)	☒	☐	☒	Concentration Mass	ug/L < 0.0079 U					
5.22 PCB-1248 (12672-29-6)	☒	☐	☒	Concentration Mass	ug/L < 0.0079 U					
5.23 PCB-1260 (11096-82-5)	☒	☐	☒	Concentration Mass	ug/L < 0.0049 U					
5.24 PCB-1016 (12674-11-2)	☒	☐	☒	Concentration Mass	ug/L < 0.0079 U					

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v)) ¹										
Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
5.25 Toxaphene (8001-35-2)	☐	☐	☒	Concentration						
				Mass						

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))¹

Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☐ Check here if you believe all pollutants in Table C to be present in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for each pollutant.									
☐ Check here if you believe all pollutants in Table C to be absent in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for each pollutant.									
1. Bromide (24959-67-9)	☐	☒	Concentration Mass						
2. Chlorine, total residual	☐	☒	Concentration Mass						
3. Color	☐	☒	Concentration Mass						
4. Fecal coliform	☐	☒	Concentration Mass						
5. Fluoride (16984-48-8)	☒	☐	Concentration Mass	mg/L	0.44				
6 Nitrate-nitrite	☐	☒	Concentration Mass						
7. Nitrogen, total organic (as N)	☐	☒	Concentration Mass						
8. Oil and grease	☐	☒	Concentration Mass						
9. Phosphorus (as P), total (7723-14-0)	☐	☒	Concentration Mass						
10. Sulfate (as SO ₄) (14808-79-8)	☐	☒	Concentration Mass						
11. Sulfide (as S)	☐	☒	Concentration Mass						

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))¹

Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
12. Sulfite (as SO ₃) (14265-45-3)	☐	☒	Concentration Mass						
13. Surfactants	☐	☒	Concentration Mass						
14. Aluminum, total (7429-90-5)	☒	☐	Concentration Mass	94					
15. Barium, total (7440-39-3)	☒	☐	Concentration Mass	35					
16. Boron, total (7440-42-8)	☐	☒	Concentration Mass						
17. Cobalt, total (7440-48-4)	☒	☐	Concentration Mass	0.56					
18. Iron, total (7439-89-6)	☒	☐	Concentration Mass	79					
19. Magnesium, total (7439-95-4)	☒	☐	Concentration Mass	8700					
20. Molybdenum, total (7439-98-7)	☐	☒	Concentration Mass						
21. Manganese, total (7439-96-5)	☒	☐	Concentration Mass	19					
22. Tin, total (7440-31-5)	☐	☒	Concentration Mass						
23. Titanium, total (7440-32-6)	☐	☒	Concentration Mass						

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number	OMB No. 2040-0004 Expires 07/31/2026
		Quantum Frederick	DA11-A4209	

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi)) ¹									
Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
24. Radioactivity									
Alpha, total	☐	☒	Concentration Mass						
Beta, total	☐	☒	Concentration Mass						
Radium, total	☐	☒	Concentration Mass						
Radium 226, total	☐	☒	Concentration Mass						

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick	Outfall Number DA11-A4209	OMB No. 2040-0004 Expires 07/31/2026
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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
1. Asbestos	☐	☒		
2. Acetaldehyde	☐	☒		
3. Allyl alcohol	☐	☒		
4. Allyl chloride	☐	☒		
5. Amyl acetate	☐	☒		
6. Aniline	☐	☒		
7. Benzotrile	☐	☒		
8. Benzyl chloride	☐	☒		
9. Butyl acetate	☐	☒		
10. Butylamine	☐	☒		
11. Captan	☐	☒		
12. Carbaryl	☐	☒		
13. Carbofuran	☐	☒		
14. Carbon disulfide	☐	☒		
15. Chlorpyrifos	☐	☒		
16. Coumaphos	☐	☒		
17. Cresol	☐	☒		
18. Crotonaldehyde	☐	☒		
19. Cyclohexane	☐	☒		0.1 ug/L U

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
20. 2,4-D (2,4-dichlorophenoxyacetic acid)	☐	☒		
21. Diazinon	☐	☒		
22. Dicamba	☐	☒		
23. Dichlobenil	☐	☒		
24. Diclhone	☐	☒		
25. 2,2-dichloropropionic acid	☐	☒		
26. Dichlorvos	☐	☒		
27. Diethyl amine	☐	☒		
28. Dimethyl amine	☐	☒		
29. Dintrobenezene	☐	☒		
30. Diquat	☐	☒		
31. Disulfoton	☐	☒		
32. Diuron	☐	☒		
33. Epichlorohydrin	☐	☒		
34. Ethion	☐	☒		
35. Ethylene diamine	☐	☒		
36. Ethylene dibromide	☐	☒		
37. Formaldehyde	☐	☒		
38. Furfural	☐	☒		

EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick	Outfall Number DA11-A4209	OMB No. 2040-0004 Expires 07/31/2026
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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
39. Guthion	☐	☒		
40. Isoprene	☐	☒		
41. Isopropanolamine	☐	☒		
42. Kelthane	☐	☒		
43. Kepone	☐	☒		
44. Malathion	☐	☒		
45. Mercaptodimethur	☐	☒		
46. Methoxychlor	☐	☒		
47. Methyl mercaptan	☐	☒		
48. Methyl methacrylate	☐	☒		
49. Methyl parathion	☐	☒		
50. Mevinphos	☐	☒		
51. Mexacarbate	☐	☒		
52. Monoethyl amine	☐	☒		
53. Monomethyl amine	☐	☒		
54. Naled	☐	☒		
55. Naphthenic acid	☐	☒		
56. Nitrotoluene	☐	☒		
57. Parathion	☐	☒		

EPA Identification Number	NPDES Permit Number	Facility Name Quantum Frederick	Outfall Number DA11-A4209	OMB No. 2040-0004 Expires 07/31/2026
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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))¹

Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
58. Phenolsulfonate	☐	☒		
59. Phosgene	☐	☒		
60. Propargite	☐	☒		
61. Propylene oxide	☐	☒		
62. Pyrethrins	☐	☒		
63. Quinoline	☐	☒		
64. Resorcinol	☐	☒		
65. Strontium	☐	☒		
66. Strychnine	☐	☒		
67. Styrene	☐	☒		< 0.07 ug/L U
68. 2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	☐	☒		
69. TDE (tetrachlorodiphenyl ethane)	☐	☒		
70. 2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	☐	☒		
71. Trichlorofon	☐	☒		
72. Triethanolamine	☐	☒		
73. Triethylamine	☐	☒		
74. Trimethylamine	☐	☒		
75. Uranium	☐	☒		
76. Vanadium	☐	☒		

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
77. Vinyl acetate	☐	☒		
78. Xylene	☐	☒		
79. Xylenol	☐	☒		
80. Zirconium	☐	☒		

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE E. 2,3,7,8 TETRACHLORODIBENZO P DIOXIN (2,3,7,8 TCDD) (40 CFR 122.21(g)(7)(viii))				
Pollutant	TCDD Congeners Used or Manufactured	Presence or Absence (check one)		Results of Screening Procedure
		Believed Present	Believed Absent	
2,3,7,8-TCDD	☐	☐	☒	

ANALYTICAL REPORT

PREPARED FOR

Attn: Josh Mullis
Tetra Tech Inc
20251 Century Blvd
Suite 200
Germantown, Maryland 20874

Generated 4/16/2025 10:51:44 AM

JOB DESCRIPTION

Soil and Water Analysis - QL Frederick

JOB NUMBER

410-213877-1

Eurofins Lancaster Laboratories Environment Testing, LLC

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
Stephen Gordon, Senior Project Manager
Stephen.Gordon@et.eurofinsus.com
(412)525-0071

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
 - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
 - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



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Definitions/Glossary

Client: Tetra Tech Inc
Project/Site: Soil and Water Analysis - QL Frederick

Job ID: 410-213877-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
cn	Refer to Case Narrative for further detail
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Tetra Tech Inc
Project: Soil and Water Analysis - QL Frederick

Job ID: 410-213877-1

Job ID: 410-213877-1

Eurofins Lancaster Laboratories Environment

Job Narrative 410-213877-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 3/25/2025 5:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.9°C and 7.1°C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: TB-20250325 (410-213877-1), QM-A3718-20250325 (410-213877-2) and QM-A4209-20250325 (410-213877-3). The sample(s) is considered acceptable since it was collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

GC/MS VOA

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 410-622498 recovered outside acceptance criteria, low biased, for Carbon disulfide. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Non-detections of the affected analytes are reported. Any detections are considered estimated.

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 410-622498 recovered above the upper control limit for 2-Hexanone. Non-detections of the affected analytes are reported. Any detections are considered estimated.

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 410-623107 recovered outside acceptance criteria, low biased, for Carbon disulfide. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Non-detections of the affected analytes are reported. Any detections are considered estimated.

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 410-623107 recovered above the upper control limit for 2-Hexanone. Non-detections of the affected analytes are reported. Any detections are considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gasoline Range Organics

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PCBs

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Eurofins Lancaster Laboratories Environment Testing, LLC

Case Narrative

Client: Tetra Tech Inc
Project: Soil and Water Analysis - QL Frederick

Job ID: 410-213877-1

Job ID: 410-213877-1 (Continued)

Eurofins Lancaster Laboratories Environment

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Tetra Tech Inc
Project/Site: Soil and Water Analysis - QL Frederick

Job ID: 410-213877-1

Client Sample ID: TB-20250325

Lab Sample ID: 410-213877-1

No Detections.

Client Sample ID: QM-A3718-20250325

Lab Sample ID: 410-213877-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Fluoride	0.26		0.20	0.090	mg/L	1			EPA 300.0 R2.1	Total/NA
Aluminum	22	J	25	12	ug/L	1			6020B	Total Recoverable
Barium	42		2.0	0.75	ug/L	1			6020B	Total Recoverable
Calcium	87000		120	50	ug/L	1			6020B	Total Recoverable
Cobalt	0.38	J	0.50	0.16	ug/L	1			6020B	Total Recoverable
Copper	0.70	J	1.0	0.36	ug/L	1			6020B	Total Recoverable
Iron	41	J	50	20	ug/L	1			6020B	Total Recoverable
Magnesium	9600		50	16	ug/L	1			6020B	Total Recoverable
Manganese	52		2.0	0.95	ug/L	1			6020B	Total Recoverable
Nickel	1.1		1.0	0.40	ug/L	1			6020B	Total Recoverable
Potassium	3300		200	65	ug/L	1			6020B	Total Recoverable
Sodium	8800		200	90	ug/L	1			6020B	Total Recoverable
pH	7.9	HF	0.01	0.01	S.U.	1			9040C	Total/NA
Temperature	21.3	HF	0.01	0.01	Degrees C	1			9040C	Total/NA
Corrosivity	no	HF	0.01	0.01	NONE	1			9040C	Total/NA

Client Sample ID: QM-A4209-20250325

Lab Sample ID: 410-213877-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	1.7	J	5.0	1.5	ug/L	1			8260D	Total/NA
Bromodichloromethane	0.13	J	0.50	0.080	ug/L	1			8260D	Total/NA
Chloroform	0.51		0.50	0.090	ug/L	1			8260D	Total/NA
Dibromochloromethane	0.11	J	0.50	0.080	ug/L	1			8260D	Total/NA
Fluoride	0.44		0.20	0.090	mg/L	1			EPA 300.0 R2.1	Total/NA
Aluminum	94		25	12	ug/L	1			6020B	Total Recoverable
Barium	35		2.0	0.75	ug/L	1			6020B	Total Recoverable
Calcium	72000		120	50	ug/L	1			6020B	Total Recoverable
Chromium	0.61	J	2.0	0.55	ug/L	1			6020B	Total Recoverable
Cobalt	0.56		0.50	0.16	ug/L	1			6020B	Total Recoverable
Copper	1.1		1.0	0.36	ug/L	1			6020B	Total Recoverable
Iron	79		50	20	ug/L	1			6020B	Total Recoverable
Magnesium	8700		50	16	ug/L	1			6020B	Total Recoverable
Manganese	19		2.0	0.95	ug/L	1			6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Tetra Tech Inc
Project/Site: Soil and Water Analysis - QL Frederick

Job ID: 410-213877-1

Client Sample ID: QM-A4209-20250325 (Continued)

Lab Sample ID: 410-213877-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nickel	0.68	J	1.0	0.40	ug/L	1		6020B	Total
									Recoverable
Potassium	2900		200	65	ug/L	1		6020B	Total
									Recoverable
Selenium	0.30	J	1.0	0.28	ug/L	1		6020B	Total
									Recoverable
Sodium	13000		200	90	ug/L	1		6020B	Total
									Recoverable
Thallium	0.25	J	0.50	0.13	ug/L	1		6020B	Total
									Recoverable
pH	7.5	HF	0.01	0.01	S.U.	1		9040C	Total/NA
Temperature	21.3	HF	0.01	0.01	Degrees C	1		9040C	Total/NA
Corrosivity	no	HF	0.01	0.01	NONE	1		9040C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Method Summary

Client: Tetra Tech Inc
Project/Site: Soil and Water Analysis - QL Frederick

Job ID: 410-213877-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	ELLE
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	ELLE
8015D	Gasoline Range Organics (GRO) (GC)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
8015D	Diesel Range Organics (DRO) (GC)	SW846	ELLE
8082A	Polychlorinated Biphenyls (PCBs) (GC)	SW846	ELLE
PCB	Total PCB Calculation	TAL SOP	ELLE
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
7470A	Mercury (CVAA)	SW846	ELLE
9040C	pH	SW846	ELLE
OIA-1677	Cyanide, Free (Flow Injection)	OI CORP	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
7470A	Preparation, Mercury	SW846	ELLE
8011	Microextraction	SW846	ELLE

Protocol References:

EPA = US Environmental Protection Agency

OI CORP = OI Corporation Instrument Manual.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Tetra Tech Inc
Project/Site: Soil and Water Analysis - QL Frederick

Job ID: 410-213877-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-213877-1	TB-20250325	Water	03/25/25 07:00	03/25/25 17:30
410-213877-2	QM-A3718-20250325	Water	03/25/25 10:00	03/25/25 17:30
410-213877-3	QM-A4209-20250325	Water	03/25/25 11:10	03/25/25 17:30

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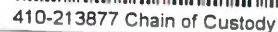
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ironme

Chain of Custody Record



Environment Testing

[illegible]

Login Sample Receipt Checklist

Client: Tetra Tech Inc

Job Number: 410-213877-1

Login Number: 213877

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Fuehrer, Stephanie

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	False	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	True	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	True	

ANALYTICAL REPORT

PREPARED FOR

Attn: Josh Mullis
Tetra Tech Inc
20251 Century Blvd
Suite 200
Germantown, Maryland 20874

Generated 4/16/2025 10:53:27 AM

JOB DESCRIPTION

Soil and Water Analysis - QM Frederick

JOB NUMBER

410-214329-1

Eurofins Lancaster Laboratories Environment Testing, LLC

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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4/16/2025 10:53:27 AM

Authorized for release by
Stephen Gordon, Senior Project Manager
Stephen.Gordon@et.eurofinsus.com
(412)525-0071

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
 - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
 - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



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Definitions/Glossary

Client: Tetra Tech Inc
Project/Site: Soil and Water Analysis - QM Frederick

Job ID: 410-214329-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.

Metals

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

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Tetra Tech Inc
Project: Soil and Water Analysis - QM Frederick

Job ID: 410-214329-1

Job ID: 410-214329-1

Eurofins Lancaster Laboratories Environment

Job Narrative 410-214329-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 3/27/2025 6:27 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.7°C and 2.0°C.

GC/MS VOA

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 410-623926 recovered above the upper control limit for 2-Butanone, 2-Hexanone, 4-Methyl-2-pentanone and Methyl acetate. Non-detections of the affected analytes are reported. Any detections are considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gasoline Range Organics

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PCBs

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Tetra Tech Inc
Project/Site: Soil and Water Analysis - QM Frederick

Job ID: 410-214329-1

Client Sample ID: TB-20250327

Lab Sample ID: 410-214329-1

No Detections.

Client Sample ID: QM-A878TO-20250327

Lab Sample ID: 410-214329-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.24		0.20	0.090	mg/L	1		EPA 300.0 R2.1	Total/NA
Aluminum	120		25	12	ug/L	1		6020B	Total Recoverable
Barium	38		2.0	0.75	ug/L	1		6020B	Total Recoverable
Calcium	85000		120	50	ug/L	1		6020B	Total Recoverable
Cobalt	0.59		0.50	0.16	ug/L	1		6020B	Total Recoverable
Iron	130		50	20	ug/L	1		6020B	Total Recoverable
Magnesium	9400		50	16	ug/L	1		6020B	Total Recoverable
Manganese	66		2.0	0.95	ug/L	1		6020B	Total Recoverable
Potassium	2000		200	65	ug/L	1		6020B	Total Recoverable
Selenium	0.30	J	1.0	0.28	ug/L	1		6020B	Total Recoverable
Sodium	9100		200	90	ug/L	1		6020B	Total Recoverable
pH	7.6	HF	0.01	0.01	S.U.	1		9040C	Total/NA
Temperature	21.3	HF	0.01	0.01	Degrees C	1		9040C	Total/NA
Corrosivity	no	HF	0.01	0.01	NONE	1		9040C	Total/NA

Client Sample ID: QM-A1010-20250327

Lab Sample ID: 410-214329-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.28		0.20	0.090	mg/L	1		EPA 300.0 R2.1	Total/NA
Aluminum	110		25	12	ug/L	1		6020B	Total Recoverable
Antimony	0.30	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Arsenic	0.71	J	2.0	0.68	ug/L	1		6020B	Total Recoverable
Barium	40		2.0	0.75	ug/L	1		6020B	Total Recoverable
Calcium	85000		120	50	ug/L	1		6020B	Total Recoverable
Cobalt	0.58		0.50	0.16	ug/L	1		6020B	Total Recoverable
Iron	130		50	20	ug/L	1		6020B	Total Recoverable
Magnesium	9500		50	16	ug/L	1		6020B	Total Recoverable
Manganese	100		2.0	0.95	ug/L	1		6020B	Total Recoverable
Potassium	1900		200	65	ug/L	1		6020B	Total Recoverable
Selenium	0.70	J	1.0	0.28	ug/L	1		6020B	Total Recoverable
Sodium	9200		200	90	ug/L	1		6020B	Total Recoverable
pH	7.4	HF	0.01	0.01	S.U.	1		9040C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Tetra Tech Inc
Project/Site: Soil and Water Analysis - QM Frederick

Job ID: 410-214329-1

Client Sample ID: QM-A1010-20250327 (Continued)

Lab Sample ID: 410-214329-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Temperature	21.4	HF	0.01	0.01	Degrees C	1		9040C	Total/NA
Corrosivity	no	HF	0.01	0.01	NONE	1		9040C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Method Summary

Client: Tetra Tech Inc
Project/Site: Soil and Water Analysis - QM Frederick

Job ID: 410-214329-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	ELLE
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	ELLE
8015D	Gasoline Range Organics (GRO) (GC)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
8015D	Diesel Range Organics (DRO) (GC)	SW846	ELLE
8082A	Polychlorinated Biphenyls (PCBs) (GC)	SW846	ELLE
PCB	Total PCB Calculation	TAL SOP	ELLE
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
7470A	Mercury (CVAA)	SW846	ELLE
9040C	pH	SW846	ELLE
OIA-1677	Cyanide, Free (Flow Injection)	OI CORP	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
7470A	Preparation, Mercury	SW846	ELLE
8011	Microextraction	SW846	ELLE

Protocol References:

EPA = US Environmental Protection Agency

OI CORP = OI Corporation Instrument Manual.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Tetra Tech Inc
Project/Site: Soil and Water Analysis - QM Frederick

Job ID: 410-214329-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-214329-1	TB-20250327	Water	03/27/25 07:00	03/27/25 18:27
410-214329-2	QM-A878TO-20250327	Water	03/27/25 11:00	03/27/25 18:27
410-214329-3	QM-A1010-20250327	Water	03/27/25 11:45	03/27/25 18:27

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Login Sample Receipt Checklist

Client: Tetra Tech Inc

Job Number: 410-214329-1

Login Number: 214329

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Metzger, Katherine A

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	Not present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	True	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	True	