

TABLES

Table 2
Soil Results - VOCs

VOCs	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	TPH Disposal Criteria Range ⁷	TPH Disposal Criteria Range ⁸	Sample ID										
						P-5	P-8	P-9	P-10	P-12	P-13	P-14	P-15	P-16	P-17	
						1/18/2024	1/22/2024	1/22/2024	1/22/2024	1/22/2024	1/22/2024	1/18/2024	1/18/2024	1/18/2024	1/18/2024	
TPH-Volatiles (GRO)	NV	25	190	50 - 500	>500	0.48 U	NS	0.1 U	0.43 U	0.1 U	0.43 U	0.1 U	0.1 U	0.1 U	0.1 U	
1,1,1,2-Tetrachloroethane	NV	20	88	NV	NV	0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
1,1,1-Trichloroethane	NV	810	3600			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,2,2-Tetrachloroethane	NV	6	27			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	NV	810	3600			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1-Dichloroethane	NV	36	160			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1-Dichloroethylene	NV	3.1	14			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1-Dichloropropene	NV	NV	NV			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,3-Trichlorobenzene	NV	6.3	93			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,3-Trichloropropane	NV	0.051	1.1			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,4-Trichlorobenzene	NV	5.8	26			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,4-Trimethylbenzene	NV	30	180			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromo-3-chloropropane (DBCP)	NV	0.053	0.64			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromoethane (EDB)	NV	0.36	1.6			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichlorobenzene	NV	180	930			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloroethane	NV	3.1	14			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloropropane	NV	1.6	6.6			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,3,5-Trimethylbenzene	NV	27	150			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,3-Dichlorobenzene	NV	26	110			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,3-Dichloropropane	NV	160	2300			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,4-Dichlorobenzene	NV	26	110			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	NV	NV	NV			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Butanone (MEK)	NV	2700	19000			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.00625
2-Chlorotoluene	NV	160	2300			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Hexanone (MBK)	NV	20	130			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4-Chlorotoluene	NV	160	2300			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4-Isopropyltoluene	NV	190	990			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4-Methyl-2-pentanone (MIBK)	NV	3300	14000			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Acetone	NV	7000	110000			0.0711	NS	0.0216	0.0328	0.0274	0.01 U	0.005 U	0.0107	0.0164	0.0408	
Benzene	NV	8.2	42			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Bromobenzene	NV	29	180			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Bromochloromethane	NV	15	63			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Bromodichloromethane	NV	2.9	13			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Bromoform	NV	160	860			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Bromomethane	NV	0.68	3			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon disulfide	NV	77	350			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	NV	6.5	29			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chlorobenzene	NV	28	130			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloroethane	NV	540	2300			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloroform	NV	3.2	14			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloromethane	NV	11	46			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethylene	NV	6.3	37			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
cis-1,3-Dichloropropene	NV	7.2	31			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromochloromethane	NV	83	390			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromomethane	NV	2.4	9.9			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dichlorodifluoromethane	NV	8.7	37			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Di-isopropyl ether (DIPE)	NV	220	940			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Ethylbenzene	NV	58	250			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Hexachlorobutadiene	NV	7.8	53			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Iodomethane	NV	NV	NV			0.0472 U C	NS	0.01 U C	0.01 U C	0.01 U C	0.01 U C	0.01 C	0.01 U C	0.01 C	0.01 U	0.01 U
Isopropylbenzene	NV	190	990			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
m+p-Xylenes	NV	NV	NV			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	NV	35	320			0.0236 U	NS	0.00537	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methyl-t-butyl ether (MTBE)	NV	470	2100			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Naphthalene	NV	180	730			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
n-Butylbenzene	NV	390	5800			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
n-Propylbenzene	NV	380	2400			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
o-Xylene	NV	64	280			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
sec-Butylbenzene	NV	780	12000			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	NV	32	260			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
tert-Butylbenzene	NV	780	12000			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Tetrachloroethylene (PCE)	NV	8.1	39			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Toluene	NV	490	4700			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,2-Dichloroethylene	NV	7	30			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,3-Dichloropropene	NV	7.2	31			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Trichloroethylene	NV	0.41	1.9			0.0472 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Trichlorofluoromethane	NV	2300	35000			0.0236 U	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U

Table 2
Soil Results - VOCs

VOCs	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	TPH Disposal Criteria Range ⁷	TPH Disposal Criteria Range ⁸	Sample ID													
						P-18	Composite 1 (P-19, P-20, P-21, P-23)		P-22	P-23		P-24	P-25	P-26		P-27		P-28	P-29
						1/23/2024	2/6/2024		2/6/2024	1/23/2024		1/17/2024	1/23/2024	1/23/2024		1/17/2024		1/17/2023	1/17/2024
TPH-Volatiles (GRO)	NV	25	190	50 - 500	>500	0.43 U	2.71		NS	NS		NS	NS	0.1 U	0.34 U	NS	0.1 U		
1,1,1,2-Tetrachloroethane	NV	20	88	NV	NV	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS		
1,1,1-Trichloroethane	NV	810	3600			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS		
1,1,2,2-Tetrachloroethane	NV	6	27			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS		
1,1,2-Trichloroethane	NV	810	3600			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS		
1,1-Dichloroethane	NV	36	160			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS		
1,1-Dichloroethylene	NV	3.1	14			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS		
1,1-Dichloroethylene TCLP (mg/L)	0.7	NV	NV			NS	0.02 U		NS	NS		NS	NS	NS	NS	NS	NS	NS	
1,1-Dichloropropene	NV	NV	NV			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,2,3-Trichlorobenzene	NV	6.3	93			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,2,3-Trichloropropane	NV	0.051	1.1			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,2,4-Trichlorobenzene	NV	5.8	26			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,2,4-Trimethylbenzene	NV	30	180			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,2-Dibromo-3-chloropropane (DBCP)	NV	0.053	0.64			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,2-Dibromoethane (EDB)	NV	0.36	1.6			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,2-Dichlorobenzene	NV	180	930			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,2-Dichloroethane	NV	3.1	14			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,2-Dichloroethane	0.5	NV	NV			NS	0.02 U		NS	NS		NS	NS	NS	NS	NS	NS	NS	
1,2-Dichloropropane	NV	1.6	6.6			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,3,5-Trimethylbenzene	NV	27	150			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,3-Dichlorobenzene	NV	26	110			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,3-Dichloropropane	NV	160	2300			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,4-Dichlorobenzene	NV	26	110			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
1,4-Dichlorobenzene	7.5	NV	NV			NS	0.02 U		NS	NS		NS	NS	NS	NS	NS	NS	NS	
2,2-Dichloropropane	NV	NV	NV			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
2-Butanone (MEK)	NV	2700	19000			0.0257	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
2-Butanone (MEK) TCLP (mg/L)	200.0	NV	NV			NS	0.02 U		NS	NS		NS	NS	NS	NS	NS	NS	NS	
2-Chlorotoluene	NV	160	2300			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
2-Hexanone (MBK)	NV	20	130			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
4-Chlorotoluene	NV	160	2300			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
4-Isopropyltoluene	NV	190	990			0.005 U	24.3 U		NS	0.723		NS	NS	0.005 U	0.005 U	NS	NS	NS	
4-Methyl-2-pentanone (MIBK)	NV	3300	14000			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Acetone	NV	7000	110000			0.144	70.6		NS	0.174		NS	NS	0.0163	0.0129	NS	NS	NS	
Benzene	NV	8.2	42			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Benzene TCLP (mg/L)	0.5	NV	NV			NS	0.05 U		NS	NS		NS	NS	NS	NS	NS	NS	NS	
Bromobenzene	NV	29	180			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Bromochloromethane	NV	15	63			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Bromodichloromethane	NV	2.9	13			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Bromoform	NV	160	860			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Bromomethane	NV	0.68	3			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Carbon disulfide	NV	77	350			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Carbon tetrachloride	NV	6.5	29			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Carbon tetrachloride TCLP (mg/L)	0.5	NV	NV			NS	0.02 U		NS	NS		NS	NS	NS	NS	NS	NS	NS	
Chlorobenzene	NV	28	130			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Chlorobenzene TCLP (mg/L)	100.0	NV	NV			NS	0.02 U		NS	NS		NS	NS	NS	NS	NS	NS	NS	
Chloroethane	NV	540	2300			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Chloroform	NV	3.2	14			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Chloroform TCLP (mg/L)	6.00	NV	NV			NS	0.02 U		NS	NS		NS	NS	NS	NS	NS	NS	NS	
Chloromethane	NV	11	46			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
cis-1,2-Dichloroethylene	NV	6.3	37			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
cis-1,3-Dichloropropene	NV	7.2	31			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Dibromochloromethane	NV	83	390			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Dibromomethane	NV	2.4	9.9			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Dichlorodifluoromethane	NV	8.7	37			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Di-isopropyl ether (DIPE)	NV	220	940			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Ethylbenzene	NV	58	250			0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS	
Hexachlorobutadiene	NV	7.8	53	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
Iodomethane	NV	NV	NV	0.01 U C	48.5 U		NS	0.01 U C		NS	NS	0.01 U C	0.01 U C	NS	NS	NS			
Isopropylbenzene	NV	190	990	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
m+p-Xylenes	NV	NV	NV	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
Methylene chloride	NV	35	320	0.005 U	24.3 U		NS	0.00581		NS	NS	0.00527	0.005 U	NS	NS	NS			
Methyl-t-butyl ether (MTBE)	NV	470	2100	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
Naphthalene	NV	180	730	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
n-Butylbenzene	NV	390	5800	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
n-Propylbenzene	NV	380	2400	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
o-Xylene	NV	64	280	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
sec-Butylbenzene	NV	780	12000	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
Styrene	NV	32	260	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
tert-Butylbenzene	NV	780	12000	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
Tetrachloroethylene (PCE)	NV	8.1	39	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
Tetrachloroethylene (PCE) TCLP (mg/L)	0.7	NV	NV	NS	0.05 U		NS	NS		NS	NS	NS	NS	NS	NS	NS			
Toluene	NV	490	4700	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
trans-1,2-Dichloroethylene	NV	7	30	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
trans-1,3-Dichloropropene	NV	7.2	31	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
Trichloroethylene	NV	0.41	1.9	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
Trichloroethylene TCLP (mg/L)	0.5	NV	NV	NS	0.02 U		NS	NS		NS	NS	NS	NS	NS	NS	NS			
Trichlorofluoromethane	NV	2300	35000	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
Vinyl acetate	NV	91	380	0.01 U	48.5 U		NS	0.01 U		NS	NS	0.01 U	0.01 U	NS	NS	NS			
Vinyl chloride	NV	0.59	17	0.005 U	24.3 U		NS	0.005 U		NS	NS	0.005 U	0.005 U	NS	NS	NS			
Vinyl chloride TCLP (mg/L)	0.2	NV	NV	NS	0.02 U		NS	NS		NS	NS	NS	NS	NS	NS	NS			
Xylenes, Total	NV	58	250	0.015 U	72.8 U		NS	0.015 U		NS	NS	0.015 U	0.015 U	NS	NS	NS			
BTEX Total	NV	NV	NV	<10	>10	Non Detect	Non Detect		NS	Non Detect		NS	NS	Non Detect	Non Detect	NS	NS		

Table 2
Soil Results - VOCs

VOCs	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	TPH Disposal Criteria Range ⁷	TPH Disposal Criteria Range ⁸	Sample ID	
						P-30	P-31
						2/6/2023	1/31/2023
TPH-Volatiles (GRO)	NV	25	190	50 - 500	>500	0.1 U	NS
1,1,1,2-Tetrachloroethane	NV	20	88	NV	NV	0.005 U	NS
1,1,1-Trichloroethane	NV	810	3600			0.005 U	NS
1,1,2,2-Tetrachloroethane	NV	6	27			0.005 U	NS
1,1,2-Trichloroethane	NV	810	3600			0.005 U	NS
1,1-Dichloroethane	NV	36	160			0.005 U	NS
1,1-Dichloroethylene	NV	3.1	14			0.005 U	NS
1,1-Dichloropropene	NV	NV	NV			0.005 U	NS
1,2,3-Trichlorobenzene	NV	6.3	93			0.005 U	NS
1,2,3-Trichloropropane	NV	0.051	1.1			0.005 U	NS
1,2,4-Trichlorobenzene	NV	5.8	26			0.005 U	NS
1,2,4-Trimethylbenzene	NV	30	180			0.005 U	NS
1,2-Dibromo-3-chloropropane (DBCP)	NV	0.053	0.64			0.005 U	NS
1,2-Dibromoethane (EDB)	NV	0.36	1.6			0.005 U	NS
1,2-Dichlorobenzene	NV	180	930			0.005 U	NS
1,2-Dichloroethane	NV	3.1	14			0.005 U	NS
1,2-Dichloropropane	NV	1.6	6.6			0.005 U	NS
1,3,5-Trimethylbenzene	NV	27	150			0.005 U	NS
1,3-Dichlorobenzene	NV	26	110			0.005 U	NS
1,3-Dichloropropane	NV	160	2300			0.005 U	NS
1,4-Dichlorobenzene	NV	26	110			0.005 U	NS
2,2-Dichloropropane	NV	NV	NV			0.005 U	NS
2-Butanone (MEK)	NV	2700	19000			0.0107 U	NS
2-Chlorotoluene	NV	160	2300			0.005 U	NS
2-Hexanone (MBK)	NV	20	130			0.005 U	NS
4-Chlorotoluene	NV	160	2300			0.005 U	NS
4-Isopropyltoluene	NV	190	990			0.005 U	NS
4-Methyl-2-pentanone (MIBK)	NV	3300	14000			0.005 U	NS
Acetone	NV	7000	110000			0.0639	NS
Benzene	NV	8.2	42			0.005 U	NS
Bromobenzene	NV	29	180			0.005 U	NS
Bromochloromethane	NV	15	63			0.005 U	NS
Bromodichloromethane	NV	2.9	13			0.005 U	NS
Bromoform	NV	160	860			0.005 U	NS
Bromomethane	NV	0.68	3			0.005 U	NS
Carbon disulfide	NV	77	350			0.005 U	NS
Carbon tetrachloride	NV	6.5	29			0.005 U	NS
Chlorobenzene	NV	28	130			0.005 U	NS
Chloroethane	NV	540	2300			0.005 U	NS
Chloroform	NV	3.2	14			0.005 U	NS
Chloromethane	NV	11	46			0.005 U	NS
cis-1,2-Dichloroethylene	NV	6.3	37			0.005 U	NS
cis-1,3-Dichloropropene	NV	7.2	31			0.005 U	NS
Dibromochloromethane	NV	83	390			0.005 U	NS
Dibromomethane	NV	2.4	9.9			0.005 U	NS
Dichlorodifluoromethane	NV	8.7	37			0.005 U	NS
Di-isopropyl ether (DIPE)	NV	220	940			0.005 U	NS
Ethylbenzene	NV	58	250			0.005 U	NS
Hexachlorobutadiene	NV	7.8	53			0.005 U	NS
Iodomethane	NV	NV	NV			0.01 U	NS
Isopropylbenzene	NV	190	990			0.005 U	NS
m+p-Xylenes	NV	NV	NV			0.005 U	NS
Methylene chloride	NV	35	320			0.005 U	NS
Methyl-t-butyl ether (MTBE)	NV	470	2100			0.005 U	NS
Naphthalene	NV	180	730			0.005 U	NS
n-Butylbenzene	NV	390	5800			0.005 U	NS
n-Propylbenzene	NV	380	2400			0.005 U	NS
o-Xylene	NV	64	280			0.005 U	NS
sec-Butylbenzene	NV	780	12000			0.005 U	NS
Styrene	NV	32	260			0.005 U	NS
tert-Butylbenzene	NV	780	12000			0.005 U	NS
Tetrachloroethylene (PCE)	NV	8.1	39			0.005 U	NS
Toluene	NV	490	4700			0.005 U	NS
trans-1,2-Dichloroethylene	NV	7	30			0.005 U	NS
trans-1,3-Dichloropropene	NV	7.2	31			0.005 U	NS
Trichloroethylene	NV	0.41	1.9			0.005 U	NS
Trichlorofluoromethane	NV	2300	35000			0.005 U	NS
Vinyl acetate	NV	91	380			0.01 U	NS
Vinyl chloride	NV	0.59	17			0.005 U	NS
Xylenes, Total	NV	58	250			0.015 U	NS
BTEX Total	NV	NV	NV	<10	>10	Non Detect	NS

Notes:

- All units are in mg/kg
 - Results compared to Virginia Department of Environmental Quality Voluntary Remediation Program Tier II Residential SSLs and Tier III Industrial SSL
- Data Qualifiers:
- NS = Soil boring not sampled for analyte
 - U: indicates the analyte was analyzed for but not detected. The number shown is the associated reporting limit
 - C: Continuing calibration verification response for this analyte is outside specifications.
 - NV: No value stated

Table 2 Soil Results - SVOCs																				
SVOCs	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	TPH Disposal Criteria Range ⁴	TPH Disposal Criteria Range ⁵	Sample ID														
						P-5	P-8		P-9	P-10		P-12	P-13		P-14	P-15		P-16		P-17
						1/18/2024	1/22/2024		1/22/2024	1/22/2024		1/22/2024	1/22/2024		1/18/2024	1/18/2024		1/18/2024	1/18/2024	
TPH-Semi-Volatiles (DRO)	NV	9.6	44	50 - 500	>500	382		NS	24.4	130	14.0	15.6	18.4	33.7	16	19.6				
1,2,4,5-Tetrachlorobenzene	NV	0.23	3.5			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
1,2,4-Trichlorobenzene	NV	5.8	26			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
1,2-Dichlorobenzene	NV	180	930			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
1,2-Diphenylhydrazine	NV	6.8	29			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
1,3-Dichlorobenzene	NV	26	110			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
1,3-Dinitrobenzene	NV	0.63	8.2			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
1,4-Dichlorobenzene	NV	26	110			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
1-Chloronaphthalene	NV	NV	NV			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
1-Naphthylamine	NV	NV	NV			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2,2'-Oxybis (1-chloropropane)	NV	310	4700			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2,3,4,6-Tetrachlorophenol	NV	190	2500			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2,4,5-Trichlorophenol	NV	630	8200			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2,4,6-Trichlorophenol	NV	6.3	82			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2,4-Dichlorophenol	NV	19	250			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2,4-Dimethylphenol	NV	130	1600			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2,4-Dinitrophenol	NV	13	160			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2,4-Dinitrotoluene	NV	13	74			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2,6-Dichlorophenol	NV	NV	NV			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2,6-Dinitrotoluene	NV	1.9	15			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2-Chloronaphthalene	NV	480	6000			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2-Chlorophenol	NV	39	580			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2-Methylnaphthalene	NV	24	300			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2-Naphthylamine	NV	3	13			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2-Nitroaniline	NV	63	800			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
2-Nitrophenol	NV	NV	NV			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
3,3'-Dichlorobenzidine	NV	12	51			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
3-Methylcholanthrene	NV	0.055	1			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
3-Nitroaniline	NV	NV	NV			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
4,6-Dinitro-2-methylphenol	NV	0.51	6.6			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
4-Aminobiphenyl	NV	0.26	1.1			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
4-Bromophenyl phenyl ether	NV	NV	NV			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
4-Chloroaniline	NV	3.2	41			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
4-Chlorophenyl phenyl ether	NV	NV	NV			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
4-Nitroaniline	NV	25	330			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
4-Nitrophenol	NV	NV	NV			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
7,12-Dimethylbenz (a) anthracene	NV	0.0046	0.084			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
Acenaphthene	NV	360	4500			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
Acenaphthylene	NV	180	2300			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
Acetophenone	NV	780	12000			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
Aniline	NV	44	570			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
Anthracene	NV	1800	23000			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
Benzidine	NV	0.0053	0.1			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U		
Benzo (a) anthracene	NV	11	210			0.758		NS	0.0833	U	0.106	0.0833	U	0.0833	U	0.0833	U	0.0833	U	
Benzo (a) pyrene	NV	1.1	21			0.729		NS	0.0833	U	0.113	0.0833	U	0.0833	U	0.0833	U	0.0833	U	
Benzo (b) fluoranthene	NV	11	210			1.02		NS	0.0833	U	0.154	0.0833	U	0.0833	U	0.0833	U	0.0833	U	
Benzo (g,h,i) perylene	NV	180	2300			0.32	U	NS	0.0833	C	0.0833	C	0.0833	U	0.0833	U	0.0833	U	0.0833	U
Benzo (k) fluoranthene	NV	110	2100			0.32	U	NS	0.0833	U	0.0835	0.0833	U	0.0833	U	0.0833	U	0.0833	U	
Benzoic acid	NV	25000	330000			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U
Benzyl alcohol	NV	630	8200			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U
bis (2-Chloroethoxy) methane	NV	19	250			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U
bis (2-Chloroethyl) ether	NV	2.3	10			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U
bis (2-Ethylhexyl) phthalate	NV	130	1600			0.32	U	NS	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U	0.0833	U
Butyl benzyl phthalate	NV	1300	12000			0.32	U	NS	0.0833	U	0.0833	U								

Table 2 Soil Results - SVOCs																					
SVOCs	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	TPH Disposal Criteria Range ⁷	TPH Disposal Criteria Range ⁸	Sample ID															
						P-18	Composite 1 (P-19, P-20, P-21, P-23)		P-22	P-24	P-25	P-26	P-27	P-28	P-29	P-30					
						1/23/2024	2/6/2024		2/6/2024	1/17/2024	1/23/2024	1/23/2024	1/17/2024	1/17/2023	1/17/2024	2/6/2023					
TPH-Semi-Volatiles (DRO)	NV	9.6	44	50 - 500	>500	861	223		NS	NS	NS	442	121	NS	NS	39.7					
TPH-Semi-Volatiles (ORO)	NV	9.6	44	50 - 500	>500	NS	148		NS	NS	NS	NS	NS	NS	NS	NS					
1,2,4,5-Tetrachlorobenzene	NV	0.23	3.5	NV	NV	0.825	U	0.333		NS	NS	NS	0.331	U	0.332	U					
1,2,4-Trichlorobenzene	NV	5.8	26			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
1,2-Dichlorobenzene	NV	180	930			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
1,2-Diphenylhydrazine	NV	6.8	29			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
1,3-Dichlorobenzene	NV	26	110			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
1,3-Dinitrobenzene	NV	0.63	8.2			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
1,4-Dichlorobenzene	NV	26	110			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
1-Chloronaphthalene	NV	NV	NV			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
1-Naphthylamine	NV	NV	NV			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2,2'-Oxybis (1-chloropropane)	NV	310	4700			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2,3,4,6-Tetrachlorophenol	NV	190	2500			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2,4,5-Trichlorophenol	NV	630	8200			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2,4,5-Trichlorophenol, TCLP (mg/L)	400.0	NV	NV			NS		0.10	U	NS	NS	NS	NS		NS		NS	NS		NS	
2,4,6-Trichlorophenol	NV	6.3	82			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2,4,6-Trichlorophenol, TCLP (mg/L)	2.00	NV	NV			NS		0.10	U	NS	NS	NS	NS		NS		NS	NS		NS	
2,4-Dichlorophenol	NV	19	250			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2,4-Dimethylphenol	NV	130	1600			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2,4-Dinitrophenol	NV	13	160			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2,4-Dinitrotoluene	NV	13	74			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2,4-Dinitrotoluene, TCLP (mg/L)	0.13	NV	NV			NS		0.10	U	NS	NS	NS	NS		NS		NS	NS		NS	
2,6-Dichlorophenol	NV	NV	NV			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2,6-Dinitrotoluene	NV	1.9	15			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2-Chloronaphthalene	NV	480	6000			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2-Chlorophenol	NV	39	580			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2-Methylnaphthalene	NV	24	300			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2-Naphthylamine	NV	3	13			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2-Nitroaniline	NV	63	800			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
2-Nitrophenol	NV	NV	NV			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
3,3'-Dichlorobenzidine	NV	12	51			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
3-Methylcholanthrene	NV	0.055	1			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
3-Nitroaniline	NV	NV	NV			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
4,6-Dinitro-2-methylphenol	NV	0.51	6.6			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
4-Aminobiphenyl	NV	0.26	1.1			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
4-Bromophenyl phenyl ether	NV	NV	NV			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
4-Chloroaniline	NV	3.2	41			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
4-Chlorophenyl phenyl ether	NV	NV	NV			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
4-Nitroaniline	NV	25	330			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
4-Nitrophenol	NV	NV	NV			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
7,12-Dimethylbenz (a) anthracene	NV	0.0046	0.084			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
Acenaphthene	NV	360	4500			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
Acenaphthylene	NV	180	2300			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
Acetophenone	NV	780	12000			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
Aniline	NV	44	570			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	U
Anthracene	NV	1800	23000			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.427	
Benzidine	NV	0.0053	0.1			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	0.325	
Benzo (a) anthracene	NV	11	210			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.332	U	NS	0.0833	U	2.79	
Benzo (a) pyrene	NV	1.1	21			0.825	U	0.333	U	NS	NS	NS	0.331	U	0.524		NS	0.0833	U	4.89	
Benzo (b) fluoranthene	NV	11	210			0.825	U	0.333	U	NS	NS										

Table 2
Soil Results - SVOCs

SVOCs	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	TPH Disposal Criteria Range ⁷	TPH Disposal Criteria Range ⁸	Sample ID P-31 1/31/2023
TPH-Semi-Volatiles (DRO)	NV	9.6	44	50 - 500	>500	NS
1,2,4,5-Tetrachlorobenzene	NV	0.23	3.5	NV	NV	NS
1,2,4-Trichlorobenzene	NV	5.8	26			NS
1,2-Dichlorobenzene	NV	180	930			NS
1,2-Diphenylhydrazine	NV	6.8	29			NS
1,3-Dichlorobenzene	NV	26	110			NS
1,3-Dinitrobenzene	NV	0.63	8.2			NS
1,4-Dichlorobenzene	NV	26	110			NS
1-Chloronaphthalene	NV	NV	NV			NS
1-Naphthylamine	NV	NV	NV			NS
2,2'-Oxybis (1-chloropropane)	NV	310	4700			NS
2,3,4,6-Tetrachlorophenol	NV	190	2500			NS
2,4,5-Trichlorophenol	NV	630	8200			NS
2,4,6-Trichlorophenol	NV	6.3	82			NS
2,4-Dichlorophenol	NV	19	250			NS
2,4-Dimethylphenol	NV	130	1600			NS
2,4-Dinitrophenol	NV	13	160			NS
2,4-Dinitrotoluene	NV	13	74			NS
2,6-Dichlorophenol	NV	NV	NV			NS
2,6-Dinitrotoluene	NV	1.9	15			NS
2-Chloronaphthalene	NV	480	6000			NS
2-Chlorophenol	NV	39	580			NS
2-Methylnaphthalene	NV	24	300			NS
2-Naphthylamine	NV	3	13			NS
2-Nitroaniline	NV	63	800			NS
2-Nitrophenol	NV	NV	NV			NS
3,3'-Dichlorobenzidine	NV	12	51			NS
3-Methylcholanthrene	NV	0.055	1			NS
3-Nitroaniline	NV	NV	NV			NS
4,6-Dinitro-2-methylphenol	NV	0.51	6.6			NS
4-Aminobiphenyl	NV	0.26	1.1			NS
4-Bromophenyl phenyl ether	NV	NV	NV			NS
4-Chloroaniline	NV	3.2	41			NS
4-Chlorophenyl phenyl ether	NV	NV	NV			NS
4-Nitroaniline	NV	25	330			NS
4-Nitrophenol	NV	NV	NV			NS
7,12-Dimethylbenz (a) anthracene	NV	0.0046	0.084			NS
Acenaphthene	NV	360	4500			NS
Acenaphthylene	NV	180	2300			NS
Acetophenone	NV	780	12000			NS
Aniline	NV	44	570			NS
Anthracene	NV	1800	23000			NS
Benzidine	NV	0.0053	0.1			NS
Benzo (a) anthracene	NV	11	210			NS
Benzo (a) pyrene	NV	1.1	21			NS
Benzo (b) fluoranthene	NV	11	210			NS
Benzo (g,h,i) perylene	NV	180	2300			NS
Benzo (k) fluoranthene	NV	110	2100			NS
Benzoic acid	NV	25000	330000			NS
Benzyl alcohol	NV	630	8200			NS
bis (2-Chloroethoxy) methane	NV	19	250			NS
bis (2-Chloroethyl) ether	NV	2.3	10			NS
bis (2-Ethylhexyl) phthalate	NV	130	1600			NS
Butyl benzyl phthalate	NV	1300	12000			NS
Chrysene	NV	1100	21000			NS
Dibenz (a,h) anthracene	NV	1.1	21			NS
Dibenz (a,j) acridine	NV	NV	NV			NS
Dibenzofuran	NV	7.8	120			NS
Diethyl phthalate	NV	5100	66000			NS
Dimethyl phthalate	NV	NV	NV			NS
Di-n-butyl phthalate	NV	630	8200			NS
Di-n-octyl phthalate	NV	63	820			NS
Diphenylamine	NV	630	8200			NS
Ethyl methanesulfonate	NV	NV	NV			NS
Fluoranthene	NV	240	3000			NS
Fluorene	NV	240	3000			NS
Hexachlorobenzene	NV	0.078	1.2			NS
Hexachlorobutadiene	NV	7.8	53			NS
Hexachlorocyclopentadiene	NV	0.18	0.75			NS
Hexachloroethane	NV	4.5	46			NS
Indeno (1,2,3-cd) pyrene	NV	11	210			NS
Isophorone	NV	1300	16000			NS
m+p-Cresols	NV	630	8200			NS
Methyl methanesulfonate	NV	55	230			NS
Naphthalene	NV	13	59			NS
Nitrobenzene	NV	13	130			NS
n-Nitrosodimethylamine	NV	0.02	0.34			NS
n-Nitrosodi-n-butylamine	NV	0.99	4.6			NS
n-Nitrosodi-n-propylamine	NV	0.78	3.3			NS
n-Nitrosodiphenylamine	NV	1100	4700			NS
n-Nitrosopiperidine	NV	0.58	2.4			NS
o+m+p-Cresols	NV	630	8200			NS
o-Cresol	NV	320	4100			NS
p-(Dimethylamino) azobenzene	NV	1.2	5			NS
p-Chloro-m-cresol	NV	630	8200			NS
Pentachloronitrobenzene (quintozene)	NV	23	130			NS
Pentachlorophenol	NV	10	40			NS
Phenacetin	NV	2500	10000			NS
Phenanthrene	NV	180	2300			NS
Phenol	NV	1900	25000			NS
Pronamide	NV	470	6200			NS
Pyrene	NV	180	2300			NS
Pyridine	NV	7.8	120			NS

- Notes:**
1. All units are in mg/kg
 2. Results compared to Virginia Department of Environmental Quality Voluntary Remediation Program Tier II Residential SSLs and Tier III Industrial SSL
 3. **Text** Cells with bold black text indicate exceedances of Tier II Residential SSLs
 4. **Text** cells with gray highlight - Based on VA Waste Management Board Disposal Criteria for Soil contaminated with petroleum products (9VZC20-81-660). If the concentration of TPH is greater than 50 mg/kg and less than 500 mg/kg
 5. **Text** cells with red highlight - Based on VA Waste Management Board Disposal Criteria for Soil contaminated with petroleum products(9VZC20-81-660). If the concentration of total BTEX is greater than 10 mg/kg or TPH is greater than 500 mg/kg, the soil cannot be disposed of in any landfill unless the facility permit expressly allows such disposal.
- Data Qualifiers:**
6. NS = Soil boring not sampled for analyte
 7. U: indicates the analyte was analyzed for but not detected. The number shown is the associated reporting limit
 8. C: Continuing calibration verification response for this analyte is outside specifications.
 9. NV: No value stated

Table 2
Soil Results - Metals

Analyte	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	Sample ID									
				P-5	P-8	P-9	P-10	P-12	P-13	P-14	P-15	P-16	P-17
				1/18/2024	1/22/2024	1/22/2024	1/22/2024	1/22/2024	1/22/2024	1/18/2024	1/18/2024	1/18/2024	1/18/2024
Metals													
Arsenic	NV	3.5	30	8.91	NS	4.76 U	7.74	1.97 U	4.77 U	2.69	9.888 U	3.51	9.57 U
Barium	NV	1500	22000	381	NS	44.6	91.7	31.0	33.0	36	119	19.1	60.8
Cadmium	NV	0.71	10	0.724	NS	0.951 U	0.384 U	0.394 U	0.954 U	0.384 U	1.98 U	0.398 U	1.91
Chromium	NV	360000	NV	20.1	NS	14.2	9.68	8.34	10.3	9.46	25.4	6.94	14.1
Lead	NV	400	800	3600	NS	12.1	114	35.1	10.3	9.93	22.9	6.26	14.9
Lead TCLP (mg/L)	5	NV	NV	0.116	NS	NS	0.100 U	NS	NS	NS	NS	NS	NS
Mercury	NV	1.1	4.6	0.664	NS	0.036	0.033	0.054	0.026	0.051	0.017	0.1	0.091
Selenium	NV	5.2	580	2.5	NS	11.9 U	4.8	4.92 U	11.9 U	4.8 U	24.7 U	4.98	23.9 U
Silver	NV	1.6	580	0.673	NS	2.38 U	0.961	0.984 U	2.39 U	0.961 U	4.94 U	0.996 U	4.78 U

Metals	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	Sample ID									
				P-18	Composite 1 (P-19, P-20, P-21, P-23)	P-22	P-24	P-25	P-26	P-27	P-28	P-29	P-30
				2/9/2023	1/31/2023	2/9/2023	1/31/2023	2/7/2023	2/2/2023	1/17/2024	2/1/2023	2/1/2023	2/8/2023
Metals													
Arsenic	NV	3.5	30	4.23	2.21	NS	NS	1.98	1 U	3.83	2.31	4.18	4.85
Arsenic TCLP (mg/L)	5	NV	NV	NS	0.100 U	NS	NS	NS	NS	NS	NS	NS	NS
Barium	NV	1500	22000	37.5	44.6	NS	NS	58.9	15.4	48.5	42.9	26.7	34.1
Barium TCLP (mg/L)	100	NV	NV	NS	5.00 U	NS	NS	NS	NS	NS	NS	NS	NS
Cadmium	NV	0.71	10	0.2 U	0.394 U	NS	NS	0.371 U	0.2 U	0.265	0.385 U	0.367 U	0.965 U
Cadmium TCLP (mg/L)	1	NV	NV	NS	0.040 U	NS	NS	NS	NS	NS	NS	NS	NS
Chromium	NV	360000	NV	3.71	8.71	NS	NS	9.51	7.08	6.48	7.79	14.7	12.1
Chromium TCLP (mg/L)	5	NV	NV	NS	0.100 U	NS	NS	NS	NS	NS	NS	NS	NS
Lead	NV	400	800	100	18.0	NS	NS	69.6	2.40	180	58.4	48.3	31.8
Lead TCLP (mg/L)	5	NV	NV	0.100 U	0.100 U	NS	NS	NS	NS	0.100 U	NS	NS	NS
Mercury	NV	1.1	4.6	0.279	0.117	NS	NS	0.836	0.333	0.23	0.09	0.062	0.125
Mercury TCLP (mg/L)	0.2	NV	NV	NS	0.008 U	NS	NS	NS	NS	NS	NS	NS	NS
Selenium	NV	5.2	580	2.5 U	4.93 U	NS	NS	4.64 U	2.5 U	2.5 U	4.82 U	4.58 U	12.1 U
Selenium TCLP (mg/L)	1	NV	NV	NS	0.250 U	NS	NS	NS	NS	0.250 U	NS	NS	NS
Silver	NV	1.6	580	0.5 U	0.985 U	NS	NS	0.928	0.5 U	0.5 U	0.963 U	0.917 U	2.41 U
Silver TCLP (mg/L)	5	NV	NV	NS	0.100 U	NS	NS	NS	NS	NS	NS	NS	NS

Metals	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	Sample ID
				P-31
				2/13/2023
Metals				
Arsenic	NV	3.5	30	NS
Barium	NV	1500	22000	NS
Cadmium	NV	0.71	10	NS
Chromium	NV	360000	NV	NS
Lead	NV	400	800	NS
Mercury	NV	1.1	4.6	NS
Selenium	NV	5.2	580	NS
Silver	NV	1.6	580	NS

- Notes:**
- All units are in mg/kg
 - Results compared to Virginia Department of Environmental Quality Voluntary Remediation Program Tier II Residential SSLs and Tier III Industrial SSL
 - Text** Cells with bold black text indicate exceedances of Tier II Residential SSLs
 - Text** Cells with yellow highlight indicate exceedances of Tier III Industrial SSLs.

- Data Qualifiers:**
- NS = Soil boring not sampled for analyte
 - U: indicates the analyte was analyzed for but not detected. The number shown is the associated reporting limit
 - C: Continuing calibration verification response for this analyte is outside specifications.
 - NV: No value stated

Table 2
Soil Results - Pesticides

Pesticides	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	Sample ID									
				P-5	P-8	P-9	P-10	P-12	P-13	P-14	P-15	P-16	P-17
				1/18/2024	1/22/2024	1/22/2024	1/22/2024	1/22/2024	1/22/2024	1/18/2024	1/18/2024	1/18/2024	1/18/2024
4,4'-DDD	NV	3.2	41	0.006 U	NS	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.004 U	0.006 U	0.006 U
4,4'-DDE	NV	3.9	58	0.004 U	NS	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
4,4'-DDT	NV	3.7	52	0.004 U	NS	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.002 U	0.004 U	0.004 U
Aldrin	NV	0.23	1.8	0.002 U	NS	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
alpha-BHC	NV	0.86	3.6	0.002 U	NS	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
beta-BHC	NV	3	13	0.002 U	NS	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chlordane	NV	3.5	45	0.042 U	NS	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U
delta-BHC	NV	0.86	3.6	0.004 U	NS	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Dieldrin	NV	0.32	1.4	0.004 U	NS	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Endosulfan I	NV	47	700	0.004 U	NS	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Endosulfan II	NV	47	700	0.006 U	NS	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Endosulfan sulfate	NV	38	490	0.002 U	NS	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Endrin	NV	1.9	25	0.004 U	NS	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Endrin aldehyde	NV	1.9	25	0.008 U	NS	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U
gamma-BHC (Lindane)	NV	2.1	25	0.002 U	NS	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Heptachlor	NV	0.78	6.3	0.002 U	NS	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Heptachlor epoxide	NV	0.1	1.5	0.04 U	NS	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Methoxychlor	NV	32	410	0.04 U	NS	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Toxaphene	NV	0.57	7.4	0.042 U	NS	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U

Pesticides	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	Sample ID									
				P-18	Composite 1 (P-19, P-20, P-21, P-23)	P-22	P-24	P-25	P-26	P-27	P-28	P-29	P-30
				1/23/2024	2/6/2024	2/6/2024	1/17/2024	1/23/2024	1/23/2024	1/17/2024	1/17/2023	1/17/2024	2/6/2023
4,4'-DDD	NV	3.2	41	0.006 U	0.006 U	NS	NS	NS	0.006 U	0.004 U	NS	0.006 U	0.006 U
4,4'-DDE	NV	3.9	58	0.004 U	0.004 U	NS	NS	NS	0.004 U	0.004 U	NS	0.004 U	0.004 U
4,4'-DDT	NV	3.7	52	0.004 U	0.004 U	NS	NS	NS	0.004 U	0.002 U	NS	0.004 U	0.004 U
Aldrin	NV	0.23	1.8	0.002 U	0.002 U	NS	NS	NS	0.002 U	0.002 U	NS	0.002 U	0.002 U
alpha-BHC	NV	0.86	3.6	0.002 U	0.002 U	NS	NS	NS	0.002 U	0.002 U	NS	0.002 U	0.002 U
beta-BHC	NV	3	13	0.002 U	0.002 U	NS	NS	NS	0.002 U	0.002 U	NS	0.002 U	0.002 U
Chlordane	NV	3.5	45	0.042 U	0.042 U	NS	NS	NS	0.042 U	0.042 U	NS	0.042 U	0.042 U
Chlordane, TCLP (mg/L)	0.03	NV	NV	NS	0.03 U	NS	NS	NS	NS	NS	NS	NS	NS
delta-BHC	NV	0.86	3.6	0.004 U	0.004 U	NS	NS	NS	0.004 U	0.004 U	NS	0.004 U	0.004 U
Dieldrin	NV	0.32	1.4	0.004 U	0.004 U	NS	NS	NS	0.004 U	0.004 U	NS	0.004 U	0.004 U
Endosulfan I	NV	47	700	0.004 U	0.004 U	NS	NS	NS	0.004 U	0.004 U	NS	0.004 U	0.004 U
Endosulfan II	NV	47	700	0.006 U	0.006 U	NS	NS	NS	0.006 U	0.006 U	NS	0.006 U	0.006 U
Endosulfan sulfate	NV	38	490	0.002 U	0.002 U	NS	NS	NS	0.002 U	0.002 U	NS	0.002 U	0.002 U
Endrin	NV	1.9	25	0.004 U	0.004 U	NS	NS	NS	0.004 U	0.004 U	NS	0.004 U	0.004 U
Endrin, TCLP (mg/L)	0.02	NV	NV	NS	0.005 U	NS	NS	NS	NS	NS	NS	NS	NS
Endrin aldehyde	NV	1.9	25	0.008 U	0.008 U	NS	NS	NS	0.008 U	0.008 U	NS	0.008 U	0.008 U
gamma-BHC (Lindane)	NV	2.1	25	0.002 U	0.002 U	NS	NS	NS	0.002 U	0.002 U	NS	0.002 U	0.002 U
gamma-BHC (Lindane), TCLP (mg/L)	0.4	NV	NV	NS	0.005 U	NS	NS	NS	NS	NS	NS	NS	NS
Heptachlor	NV	0.78	6.3	0.002 U	0.002 U	NS	NS	NS	0.002 U	0.002 U	NS	0.002 U	0.002 U
Heptachlor TCLP (mg/L)	0.008	NV	NV	NS	0.005 U	NS	NS	NS	NS	NS	NS	NS	NS
Heptachlor epoxide	NV	0.1	1.5	0.04 U	0.04 U	NS	NS	NS	0.04 U	0.04 U	NS	0.04 U	0.04 U
Heptachlor Epoxide, TCLP (mg/L)	0.008	0.005	0.005	NS	0.005 U	NS	NS	NS	NS	NS	NS	NS	NS
Methoxychlor	NV	32	410	0.04 U	0.04 U	NS	NS	NS	0.04 U	0.04 U	NS	0.04 U	0.04 U
Methoxychlor, TCLP (mg/L)	10	NV	NV	NS	0.005 U	NS	NS	NS	NS	NS	NS	NS	NS
Toxaphene	NV	0.57	7.4	0.042 U	0.042 U	NS	NS	NS	0.042 U	0.042 U	NS	0.042 U	0.042 U
Toxaphene, TCLP (mg/L)	0.5	0.005	0.005	NS	0.005 U	NS	NS	NS	NS	NS	NS	NS	NS

Pesticides	EPA Maximum Concentration of Contaminants For The Toxicity Characteristic (mg/L)	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	Sample ID
				P-31
				1/31/2023
4,4'-DDD	NV	3.2	41	NS
4,4'-DDE	NV	3.9	58	NS
4,4'-DDT	NV	3.7	52	NS
Aldrin	NV	0.23	1.8	NS
alpha-BHC	NV	0.86	3.6	NS
beta-BHC	NV	3	13	NS
Chlordane	NV	3.5	45	NS
delta-BHC	NV	0.86	3.6	NS
Dieldrin	NV	0.32	1.4	NS
Endosulfan I	NV	47	700	NS
Endosulfan II	NV	47	700	NS
Endosulfan sulfate	NV	38	490	NS
Endrin	NV	1.9	25	NS
Endrin aldehyde	NV	1.9	25	NS
gamma-BHC (Lindane)	NV	2.1	25	NS
Heptachlor	NV	0.78	6.3	NS
Heptachlor epoxide	NV	0.1	1.5	NS
Methoxychlor	NV	32	410	NS
Toxaphene	NV	0.57	7.4	NS

Notes:

1. All units are in mg/kg
2. Results compared to Virginia Department of Environmental Quality Voluntary Remediation Program Tier II Residential SSLs and Tier III Industrial SSLs

Data Qualifiers:

3. NS = Soil boring not sampled for analyte
4. U: indicates the analyte was analyzed for but not detected. The number shown is the associated reporting limit

Table 2
Soil Results - PCBs

PCBs	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	Sample ID									
			P-5	P-8	P-9	P-10	P-12	P-13	P-14	P-15	P-16	P-17
			1/18/2024	1/22/2024	1/22/2024	1/22/2024	1/22/2024	1/22/2024	1/18/2024	1/18/2024	1/18/2024	1/18/2024
Aroclor 1016	0.41	5.1	0.124 U	NS	0.12 U	0.123 U	0.11 U	0.12 U	0.108 U	0.115 U	0.12 U	0.115 U
Aroclor 1221	2	8.3	0.124 U	NS	0.12 U	0.123 U	0.11 U	0.12 U	0.108 U	0.115 U	0.12 U	0.115 U
Aroclor 1232	1.7	7.2	0.124 U	NS	0.12 U	0.123 U	0.11 U	0.12 U	0.108 U	0.115 U	0.12 U	0.115 U
Aroclor 1242	2.3	9.5	0.124 U	NS	0.12 U	0.123 U	0.11 U	0.12 U	0.108 U	0.115 U	0.12 U	0.115 U
Aroclor 1248	2.3	9.4	0.124 U	NS	0.12 U	0.123 U	0.11 U	0.12 U	0.108 U	0.115 U	0.12 U	0.115 U
Aroclor 1254	0.12	1.5	0.124 U	NS	0.12 U	0.123 U	0.11 U	0.12 U	0.108 U	0.115 U	0.12 U	0.115 U
Aroclor 1260	2.4	9.9	0.124 U	NS	0.12 U	0.123 U	0.11 U	0.12 U	0.108 U	0.115 U	0.12 U	0.115 U

PCBs	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	Sample ID									
			P-18	Composite 1(P-19, P-20, P-21, 2/6/2024	P-22	P-24	P-25	P-26	P-27	P-28	P-29	P-30
			1/23/2024		2/6/2024	1/17/2024	1/23/2024	1/23/2024	1/17/2024	1/17/2023	1/17/2024	2/6/2023
Aroclor 1016	0.41	5.1	0.113 U	0.122 U	NS	NS	NS	0.124 U	0.116 U	NS	0.117 U	0.106 U
Aroclor 1221	2	8.3	0.113 U	0.122 U	NS	NS	NS	0.124 U	0.116 U	NS	0.117 U	0.106 U
Aroclor 1232	1.7	7.2	0.113 U	0.122 U	NS	NS	NS	0.124 U	0.116 U	NS	0.117 U	0.106 U
Aroclor 1242	2.3	9.5	0.113 U	0.122 U	NS	NS	NS	0.124 U	0.116 U	NS	0.117 U	0.106 U
Aroclor 1248	2.3	9.4	0.113 U	0.122 U	NS	NS	NS	0.124 U	0.116 U	NS	0.117 U	0.106 U
Aroclor 1254	0.12	1.5	0.113 U	0.122 U	NS	NS	NS	0.124 U	0.116 U	NS	0.117 U	0.106 U
Aroclor 1260	2.4	9.9	0.113 U	0.122 U	NS	NS	NS	0.124 U	0.116 U	NS	0.117 U	0.106 U

PCBs	VRP Tier II Residential SSL	VRP TIER III Industrial SSL	Sample ID
			P-31
			1/31/2023
Aroclor 1016	0.41	5.1	NS
Aroclor 1221	2	8.3	NS
Aroclor 1232	1.7	7.2	NS
Aroclor 1242	2.3	9.5	NS
Aroclor 1248	2.3	9.4	NS
Aroclor 1254	0.12	1.5	NS
Aroclor 1260	2.4	9.9	NS

Notes:

1. All units are in mg/kg
2. Results compared to Virginia Department of Environmental Quality Voluntary Remediation Program Tier II Residential SSLs and Tier III Industrial SSLs

Data Qualifiers:

3. NS = Soil boring not sampled for analyte
4. U: indicates the analyte was analyzed for but not detected. The number shown is the associated reporting limit

**Table 2: Soil Results -
Additional Parameters for Composite Samples**

Analyte (unit)	Sample ID	
	Composite 1 (P-19, P-20, P-21, P-23)	
	2/6/2024	
Cyanide (mg/kg dry)	<1.00	CI
Corrosivity	NonCorrosive	
Extractable Organic Halides (EOX) (mg/kg dry)	<10.0	
Ignitability (°C)	> 65	
Percent Solids (%)	80.8	
Reactive Cyanide as Total Cyanide (mg/kg dry)	<1.00	CI
Reactive Sulfide as Total Sulfide (mg/ kg dry)	< 97.9	
Sulfide (mg/ kg dry)	< 97.9	
TOC (Max) (mg/ kg dry)	5550	
TOC (Mean) (mg/ kg dry)	5470	
TOC (Min) (mg/kg dry)	5440	
Zinc (mg/kg dry)	54.2	

Data Qualifiers

1. CI: Residual chlorine or other oxidizing agent was detected in the container used to analyze this sample.

Table 3
Groundwater - VOCs

VOCs	Residential Tapwater Tier II GWSL	Direct Contact Construction Worker Groundwater Tier III GWSL	Sample ID	
			MW-1 P-23	MW-2 P-5
			2/6/2024	2/6/2024
TPH-Volatiles (GRO)	2.8	378.7810846	0.71	0.18
1,1,1,2-Tetrachloroethane	5.7	262.6104292	0.4 U	0.4 U
1,1,1-Trichloroethane	200	1166.10645	1 U	1 U
1,1,2,2-Tetrachloroethane	0.76	37.62855479	0.4 U	0.4 U
1,1,2-Trichloroethane	5	2.707929315	1 U	1 U
1,1-Dichloroethane	28	922.6018433	1 U	1 U
1,1-Dichloroethylene	7	0.786553349	1 U	1 U
1,1-Dichloropropene	NV	NV	1 U	1 U
1,2,3-Trichlorobenzene	0.7	8960	1 U	1 U
1,2,3-Trichloropropane	0.0075	0.08514153	1 U	1 U
1,2,4-Trichlorobenzene	70	5.626609743	1 U	1 U
1,2,4-Trimethylbenzene	5.6	44.50259835	43.7	3.50
1,2-Dibromo-3-chloropropane (DBCP)	0.2	0.507466295	1 U	1 U
1,2-Dibromoethane (EDB)	0.05	0.596845126	1 U	1 U
1,2-Dichlorobenzene	600	501.7896043	0.5 U	0.5 U
1,2-Dichloroethane	5	14.70859555	1 U	1 U
1,2-Dichloropropane	5	2.017443621	0.5 U	0.5 U
1,3,5-Trimethylbenzene	6	44.38089808	11.9	1 U
1,3-Dichlorobenzene	75	165.6604527	1 U	1 U
1,3-Dichloropropane	37	224000	1 U	1 U
1,4-Dichlorobenzene	75	165.6604527	1 U	1 U
2,2-Dichloropropane	NV	NV	1 U	1 U
2-Butanone (MEK)	560	357.7701759	10 U	10 U
2-Chlorotoluene	24	182.5579201	1 U	1 U
2-Hexanone (MBK)	3.8	9.847668808	5 U	5 U
4-Chlorotoluene	25	224000	1 U	1 U
4-Isopropyltoluene	45	19.95957427	16.8	1 U
4-Methyl-2-pentanone (MIBK)	630	229.9253852	5 U	5 U
Acetone	1800	13199.90939	44.4	14.9
Benzene	5	14.37141356	1 U	1 U
Bromobenzene	6.2	51.44379331	1 U	1 U
Bromochloromethane	8.3	23.75651286	1 U	1 U
Bromodichloromethane	1.3	5.281816616	0.5 U	0.5 U
Bromoform	33	7.003688486	1 U	1 U
Bromomethane	0.75	19.70230401	1 U	1 U
Carbon disulfide	81	123.3389914	10 U	10 U
Carbon tetrachloride	5	46.92874099	1 U	1 U
Chlorobenzene	100	108.612595	1 U	1 U
Chloroethane	830	646.6503864	1 U	1 U
Chloroform	2.2	54.50310652	0.5 U	0.5 U
Chloromethane	19	431.4561321	1 U	1 U
cis-1,2-Dichloroethylene	70	80.13959865	1 U	1 U
cis-1,3-Dichloropropene	3.9	7.82342298	1 U	1 U
Dibromochloromethane	8.7	0.619747589	0.5 U	0.5 U
Dibromomethane	0.83	11.29813201	1 U	1 U
Dichlorodifluoromethane	20	220.5015452	1 U	1 U
Di-isopropyl ether (DIPE)	150	145.6984395	5 U	5 U
Ethylbenzene	700	609.6128449	1.83	1 U
Hexachlorobutadiene	0.65	108.2705331	0.8 U	0.8 U
Iodomethane	NV	NV	10 U	10 U
Isopropylbenzene	45	19.95957427	2.64	1 U
m+p-Xylenes	19	20.90731557	7.06	2 U
Methylene chloride	5	196.3407923	4 U	4 U
Methyl-t-butyl ether (MTBE)	140	623.9384688	1 U	1 U
Naphthalene	0.61	0.771598534	8.45	1 U
n-Butylbenzene	100	112000	6.64	1 U
n-Propylbenzene	66	221.4487225	5.57	1 U
o-Xylene	19	20.97240352	6.21	1 U
sec-Butylbenzene	200	112000	5.38	1 U
Styrene	100	627.6305857	1 U	1 U
tert-Butylbenzene	69	112000	1 U	1 U
Tetrachloroethylene (PCE)	5	10.56712653	1 U	1 U
Toluene	1000	973.7304112	1 U	1 U
trans-1,2-Dichloroethylene	100	158.0390559	1 U	1 U
trans-1,3-Dichloropropene	3.9	7.82342298	1 U	1 U
Trichloroethylene	5	0.498461967	1 U	1 U
Trichlorofluoromethane	520	235.8918548	1 U	1 U
Vinyl acetate	41	7.353746824	10 U	10 U
Vinyl chloride	2	15.87433309	0.5 U	0.5 U
Xylenes, Total	10000	83.67738526	13.3	3 U

Notes:

1. All units are in ug/L.
2. Results compared to Virginia Department of Environmental Quality Voluntary Remediation Program Tier II Residential Tap Water, and Tier III Direct Contact Construction Worker GWSLs.
3. **Text** cells with bold black text indicate exceedances of Tier II Residential Tap Water GWSLs.

Data Qualifiers:

4. U: indicates the analyte was analyzed for but not detected. The number shown is the associated reporting limit.
5. NV: No value stated.

Table 3
Groundwater Results - SVOCs

SVOCs	Residential Tapwater Tier II	Direct Contact Construction Worker Groundwater Tier III	Sample ID	
			MW-1 P-23	MW-2 P-5
			2/6/2024	2/6/2024
TPH-Semi-Volatiles (DRO)	10	22.79219091	7.06	1.10
1,2,4,5-Tetrachlorobenzene	0.017	33.6	10 U	10 U
1,2,4-Trichlorobenzene	70	5.626609743	10 U	10 U
1,2-Dichlorobenzene	600	501.7896043	10 U	10 U
1,2-Diphenylhydrazine	0.78	10220	10 U	10 U
1,3-Dichlorobenzene	75	165.6604527	10 U	10 U
1,3-Dinitrobenzene	0.2	560	2.5 U	2.5 U
1,4-Dichlorobenzene	75	165.6604527	10 U	10 U
1-Naphthylamine	NV	NV	10 U	10 U
2,2'-Oxybis (1-chloropropane)	71	1.815859324	10 U	10 U
2,3,4,6-Tetrachlorophenol	24	11200	10 U	10 U
2,4,5-Trichlorophenol	120	336000	10 U	10 U
2,4,6-Trichlorophenol	1.2	5600	10 U	10 U
2,4-Dichlorophenol	4.6	22400	10 U	10 U
2,4-Dimethylphenol	36	56000	5 U	5 U
2,4-Dinitrophenol	3.9	22400	50 U	50 U
2,4-Dinitrotoluene	2.4	7840	10 U	10 U
2,6-Dichlorophenol	NV	NV	10 U	10 U
2,6-Dinitrotoluene	0.49	4480	10 U	10 U
2-Chloronaphthalene	75	897.381057	10 U	10 U
2-Chlorophenol	9.1	0.138067501	10 U	10 U
2-Methylnaphthalene	3.6	4480	10 U	10 U
2-Naphthylamine	0.39	4542.222222	10 U	10 U
2-Nitroaniline	19	112000	20 U	20 U
2-Nitrophenol	NV	784000	10 U	10 U
3,3'-Dichlorobenzidine	1.3	18168.88889	10 U	10 U
3-Methylcholanthrene	0.011	371.6363636	10 U	10 U
3-Nitroaniline	NV	1120	20 U	20 U
4,6-Dinitro-2-methylphenol	0.15	896	50 U	50 U
4-Aminobiphenyl	0.03	389.3333333	10 U	10 U
4-Bromophenyl phenyl ether	NV	NV	10 U	10 U
4-Chloroaniline	0.95	560	10 U	10 U
4-Chlorophenyl phenyl ether	NV	NV	10 U	10 U
4-Nitroaniline	7.8	11200	20 U	20 U
4-Nitrophenol	NV		50 U	50 U
7,12-Dimethylbenz (a) anthracene	0.001	32.704	10 U	10 U
Acenaphthene	53	224000	10 U	10 U
Acenaphthylene	12	336000	10 U	10 U
Acetophenone	190	896000	20 U	20 U
Aniline	14	7840	50 U	50 U
Anthracene	180	5.277370324	10 U	10 U
Benzidine	0.0011	35.54782609	50 U	50 U
Benzo (a) anthracene	0.3	195.1667778	10 U	10 U
Benzo (a) pyrene	0.2	336	10 U	10 U
Benzo (b) fluoranthene	2.5	81760	10 U	10 U
Benzo (g,h,i) perylene	12	336000	10 U	10 U
Benzo (k) fluoranthene	25	817600	10 U	10 U
Benzoic acid	7500	4480000	50 U	50 U
Benzyl alcohol	200	336000	20 U	20 U
bis (2-Chloroethoxy) methane	5.9	33600	10 U	10 U
bis (2-Chloroethyl) ether	0.14	22.66179085	10 U	10 U
bis (2-Ethylhexyl) phthalate	6	112	10 U	10 U
Butyl benzyl phthalate	160	2240000	10 U	10 U
Chrysene	250	1680000	10 U	10 U
Dibenz (a,h) anthracene	0.25	8176	10 U	10 U
Dibenz (a,j) acridine	NV	NV	10 U	10 U
Dibenzofuran	0.79	3.271257676	5 U	5 U
Diethyl phthalate	1500	6720000	10 U	10 U
Dimethyl phthalate	NV	NV	10 U	10 U
Di-n-butyl phthalate	90	1120000	10 U	10 U
Di-n-octyl phthalate	20	112000	10 U	10 U
Diphenylamine	130	22400	10 U	10 U
Ethyl methanesulfonate	NV	NV	20 U	20 U
Fluoranthene	80	112000	10 U	10 U
Fluorene	29	448000	10 U	10 U
Hexachlorobenzene	1	5.416122466	1 U	1 U
Hexachlorobutadiene	0.65	108.2705331	10 U	10 U
Hexachlorocyclopentadiene	50	37.14465804	10 U	10 U
Hexachloroethane	0.62	208.025757	10 U	10 U
Indeno (1,2,3-cd) pyrene	2.5	81760	10 U	10 U
Isophorone	380	3360000	10 U	10 U
m+p-Cresols	150	112000	10 U	10 U
Methyl methanesulfonate	7.9	82585.85859	10 U	10 U
Naphthalene	0.61	0.771598534	5 U	5 U
Nitrobenzene	1.3	15.02776342	10 U	10 U
n-Nitrosodimethylamine	0.0011	0.23637729	10 U	10 U
n-Nitrosodi-n-butylamine	0.027	0.65077806	10 U	10 U
n-Nitrosodi-n-propylamine	0.11	1120	10 U	10 U
n-Nitrosodiphenylamine	120	1668571.429	10 U	10 U
n-Nitrosopiperidine	0.082	869.787234	10 U	10 U
o+m+p-Cresols	150	112000	10 U	10 U
o-Cresol	93	224000	10 U	10 U
p-(Dimethylamino) azobenzene	0.05	1777.391304	2.5 U	2.5 U
p-Chloro-m-cresol	140	112000	10 U	10 U
Pentachloronitrobenzene (quintoz	1.2	3360	10 U	10 U
Pentachlorophenol	1	20440	20 U	20 U
Phenacetin	340	1008	10 U	10 U
Phenanthrene	12	336000	10 U	10 U
Phenol	580	672000	10 U	10 U
Pronamide	120	84000	10 U	10 U
Pyrene	12	336000	10 U	10 U
Pyridine	2	1064.463187	10 U	10 U

Notes:
1. All units are in ug/L.
2. Results compared to Virginia Department of Environmental Quality Voluntary Remediation Program Tier II Residential Tap Water, and Tier III Direct Contact Construction Worker GWSLs.

Data Qualifiers:
3. U: indicates the analyte was analyzed for but not detected. The number shown is the associated reporting limit.
4. NV: No value stated.

Table 3
Groundwater Results - Dissolved
Metals

Metals	VRP Residential Tapwater Tier II GWSL	VRP Direct Contact Construction Worker Groundwater Tier III GWSL	Sample ID			
			MW-1 (P-23)		MW-2 (P-5)	
			2/6/2024		2/6/2024	
Aluminum, Dissolved	2000	1120000	100	U	100	U
Antimony, Dissolved	6	448	1.40		1	U
Arsenic, Dissolved	10	336	14.8		1.13	
Barium, Dissolved	2000	224000	84.7		219	
Beryllium, Dissolved	4	5600	4	U	4	U
Cadmium, Dissolved	5	560	4	U	4	U
Calcium, Dissolved	NV	NV	149000		158000	
Chromium, Dissolved	100	NV	10	U	10	U
Cobalt, Dissolved	0.6	3360	4	U	4	U
Copper, Dissolved	1300	44800	10	U	10	U
Iron, Dissolved	1400	784000	1580		12300	
Lead, Dissolved	15		1.06		1	U
Magnesium, Dissolved	NV	NV	11400		19200	
Manganese, Dissolved		156800	188		959	
Mercury, Dissolved	2	0.086047166	0.2	U	0.2	U
Nickel, Dissolved	39	22400	10	U	10	U
Potassium, Dissolved	NV	NV	9000		29500	
Selenium, Dissolved	50	5600	1	U	1	U
Silver, Dissolved	9.4	5600	10	U	10	U
Sodium, Dissolved	NV	NV	74700		84600	
Thallium, Dissolved	2	44.8	1	U	1	U
Vanadium, Dissolved	8.6	11200	10	U	10	U
Zinc, Dissolved	600	336000	10	U	71	

- Notes:**
- 1. All units are in ug/L.
 - 2. Results compared to Virginia Department of Environmental Quality Voluntary Remediation Program Tier II Residential Tap Water, and Tier III Direct Contact Construction Worker GWSLs.
 - 3. **Text** cells with bold black text indicate exceedances of Tier II Residential Tap Water GWSLs.
- Data Qualifiers:**
- 4. U: indicates the analyte was analyzed for but not detected. The number shown is the associated reporting limit.
 - 5. NV: No value stated.

Table 3
Groundwater Results - Pesticides

Pesticides	Residential Tapwater Tier II GWSL	Direct Contact Construction Worker Groundwater Tier III GWSL	Sample ID			
			MW-1 P-23		MW-2 P-5	
			2/6/2024		2/6/2024	
4,4'-DDD	0.11	560	0.050	U	0.050	U
4,4'-DDE	0.46	58.50105086	0.050	U	0.050	U
4,4'-DDT	1	560	0.050	U	0.050	U
Aldrin	0.0092	1.189784983	0.050	U	0.050	U
alpha-BHC	0.072	1297.777778	0.050	U	0.050	U
beta-BHC	0.25	672	0.050	U	0.050	U
Chlordane	2	0.159780039	0.200	U	0.200	U
delta-BHC	0.072	1297.777778	0.050	U	0.050	U
Dieldrin	60-57-1	0.018	0.050	U	0.050	U
Endosulfan I	10	5600	0.050	U	0.050	U
Endosulfan II	10	5600	0.050	U	0.050	U
Endosulfan sulfate	11	3360	0.050	U	0.050	U
Endrin	2	672	0.050	U	0.050	U
Endrin aldehyde	2	672	0.050	U	0.050	U
gamma-BHC (Lindane)	0.2	3360	0.050	U	0.050	U
Heptachlor	0.4	2.532760117	0.050	U	0.050	U
Heptachlor epoxide	0.2	3.602001218	0.050	U	0.050	U
Methoxychlor	40	5600	0.050	U	0.050	U
Toxaphene	3	336	1.00	U	1.00	U

- Notes:**
- 1. All units are in ug/L.
 - 2. Results compared to Virginia Department of Environmental Quality Voluntary Remediation Program Tier II Residential Tap Water, and Tier III Direct Contact Construction Worker GWSLs
- Data Qualifiers:**
- 3. U: indicates the analyte was analyzed for but not detected. The number shown is the associated reporting limit

Table 3
Groundwater Results - PCBs

PCBs	Residential Tapwater Tier II	Direct Contact Construction Worker	Sample ID	
			MW-1 P-23	MW-2 P-5
			2/6/2024	2/6/2024
Aroclor 1016	0.14	0.080814516	0.200 U	0.200 U
Aroclor 1221	0.047	4.360654232	0.200 U	0.200 U
Aroclor 1232	0.047	3.792742808	0.200 U	0.200 U
Aroclor 1242	0.078	5.033250612	0.200 U	0.200 U
Aroclor 1248	0.078	4.893738667	0.200 U	0.200 U
Aroclor 1254	0.04	5.448569909	0.200 U	0.200 U
Aroclor 1260	0.078	5.834098393	0.200 U	0.200 U

Notes:

- 1. All units are in ug/L.
- 2. Results compared to Virginia Department of Environmental Quality Voluntary Remediation Program Tier II Residential Tap Water, and Tier III Direct Contact Construction Worker GWSLs

Data Qualifiers:

- 3. U: indicates the analyte was analyzed for but not detected. The number shown is the associated reporting limit



APPENDIX A
SOIL BORING LOGS





BORING LOG

Boring ID: P-5

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/18/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 15 ft
Date Start: 1/18/2024
Date End: 1/18/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	55"	0.5	0-.75' Topsoil	
			.75-4' Black/dark brown sandy clay with brick fragments	
			4-5' , Quartz layer	
5-10'	36"	0.6	5-8' Gray/black, sandy clay	mild petroleum odor
			8-10' Black, sandy clay to clayey sand, brick fragments	very moist to wet at 7',
			very moist to wet	
10-15'	32"	0.9	10-15' Black wet sand	petroleum odor decreasing
				with depth

Other Comments:

VOC's @10'

Metals, Pest/PCB, DRO/GRO@8-10'



BORING LOG

Boring ID: P-8

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/22/2024
Logged By: GHM
Checked By: _____

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 2.5'
Date Start: 1/22/2024
Date End: 1/22/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	12"		0-5' Concrete, fill material to refusal at 2.5'	
			Offset 5' south, re-drill	
0-5'	14"		0-5' Concrete, then fill material to refusal at 2.5'	
			Location abandoned	

Other Comments: no samples



BORING LOG

Boring ID: P-9

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/22/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 10'
Date Start: 1/22/2024
Date End: 1/22/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	14"	0	0-3' Concrete/asphalt, black/brown sand	
			3-5' Brown clayey sand very moist	6" clay layer at 3'
5-10'	36"	0	5-8' Dark brown to black, fine clayey sand	very moist to wet at 7.5'
			8-10' Black, fine sand	

Other Comments:

VOC's @ 5'

Metals, Pest/PCBs, DRO/GRO @ 4-6'



BORING LOG

Boring ID: P-10

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/22/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 10'
Date Start: 1/22/2024
Date End: 1/22/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	30"	0	0-3' Concrete/asphalt, black/brown sand	
			3-5' Gray clayey sand clay, very moist	
5-10'	12"	11.5	5-8' Gray, sandy clay, wet	
			8-10' Gray clay, wood fragment inclusions	

Other Comments:

VOC's @ 5.5 - 6'

Metals, Pest/PCBs, DRO/GRO @ 3-5'



BORING LOG

Boring ID: P-12

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/22/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 10'
Date Start: 1/22/2024
Date End: 1/22/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	30"	0	0-1.5' Asphalt, brown sand	
			1.5 -5' Gray, sandy clay, very moist	
5-10'	12"	11.5	5-7' Gray clayey sand wet	
			7-10' Gray, sandy clay	

Other Comments:

VOC's @ 5'

Metals, Pest/PCBs, DRO/GRO @ 4-6'



BORING LOG

Boring ID: P-13

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/22/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 10'
Date Start: 1/22/2024
Date End: 1/22/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	36"	0	0-1.5' Asphalt, brown clayey sand	
			1.5-5' Brown, sand, moist to very moist	
5-10'	12"	0	5-7' Brown wet clayey sand	
			7-10' Gray, sandy clay	

Other Comments:

VOC's @ 5'

Metals, Pest/PCBs, DRO/GRO @ 3-5'



BORING LOG

Boring ID: P-14

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/18/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 10'
Date Start: 1/18/2024
Date End: 1/18/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	18"	0.2	0-1.5' Asphalt, fill with quartz cobbles	
			1.5-5' Brown, sand, moist to very moist	
5-10'	40"	0.2	5-7' Brown, sand, moist to very moist	
			7-10' Brown sandy clay to gray sandy clay	

Other Comments:

VOC's @ 5'

Metals, Pest/PCBs, DRO/GRO @ 3-5'



BORING LOG

Boring ID: P-15

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/18/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 10'
Date Start: 1/18/2024
Date End: 1/18/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	36"	0.4	0-4' Asphalt, fill, black clayey sand to gray clayey sand	
			4-5', Gray clay moist to very moist	
5-10'	24"	0.2	5-7', Gray clay moist to very moist	
			7-10' Gray sandy clay, very soft, moist to wet	

Other Comments:

VOC's @ 5'

Metals, Pest/PCBs/DRO/GRO @ 4-6'



BORING LOG

Boring ID: P-16

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp:

Project No: 22-02065-001
Date: 1/18/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates:

Driller: M. Becerra
Depth: 15 ft
Date Start: 1/18/2024
Date End: 1/18/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	36"	0.1	0-.75' Asphalt,	
			.75-4.5' black/dark brown, clayey sand to sand	
5-10'	14"	0.2	5-8' Gray/black, sandy clay	
			-10' Black/brown,clayey sand to black clayey sand, very moist to wet	
10-15'	36"	0.1	10-15' Wet Gray/black, sandy clay	

Other Comments:

VOC's @5.5'

Metals, Pest/PCB,DRO/GRO@4-6'



BORING LOG

Boring ID: P-17

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/18/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 15 ft
Date Start: 1/18/2024
Date End: 1/18/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	30"	0.3	0-.75' Asphalt/fill to 8",	
			0.75-5' Black/dark brown, sand, brick fragments inclusions	
5-10'	8"	0.6	5-10' Gray, sandy clay, very moist to wet	wet at 9'
10-15'	24"	0.4	10-14' Gray/black, sandy clay, wet,	quartz fragment layer at 13-14'
			14-15' Gray/blac, clay	

Other Comments:

VOC's @6'

Metals, Pest/PCB,DRO/GRO@4-7'



BORING LOG

Boring ID: P-18

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/23/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 10'
Date Start: 1/23/2024
Date End: 1/23/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	14"	350	0-.5' Asphalt,	
			.5-5' Black, clayey san, moist to very moist	strong petroleum odor
5-10'	24"	250	5-7' Black, clayey sand, moist to very moist	strong petroleum odor
			7-10' Brown/black, clayey sand, very moist to wet	wet at 7'

Other Comments:

VOC's @ 1-2'

Metals, Pest/PCBs,DRO/GRO @ 3-5'



Boring ID: P-19

BORING LOG

Project Name: <u>Alexandria Waterfront</u>	Project No: <u>22-02065-001</u>
Client Name: <u>Skanska</u>	Date: <u>2/6/2024</u>
Location: <u>Alexandria, VA</u>	Logged By: <u>GHM</u>
Weather/Temp: _____	Checked By: <u>AP</u>
Drilling Co: <u>DMY</u>	Driller: <u>M. Becerra</u>
Equipment: <u>Geoprobe 7822T</u>	Depth: <u>35' (attempted)</u>
Method: <u>Direct Push</u>	Date Start: <u>2/6/2024</u>
Coordinates: _____	Date End: <u>2/6/2024</u>

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	55"	0.1	0-.5' Topsoil	
			0.5-5' Light brown to brown, fine sand	
5-10'	42"	0.2	5-10' Brown clayey sand with quartz cobbles, saturated	
10-15'	0	-	Refusal, compacted sand/quartz, unable to probe	
			Offset 3' east, refusal, compacted material, unable to probe	
			Offset 5' north, refusal, compacted material, unable to probe	
			Probing terminated at direction of Client	

Other Comments:
soils retained for composite sampling

Boring ID: P-20

BORING LOG

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 2/6/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 35'
Date Start: 2/6/2024
Date End: 2/6/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	60"	0.3	0-0.5' Topsoil,	
			.5-5' brown clayey sand to black saturated sand, quartz cobbles	
5-10'	55"	120	5-10' Black coarse sand, quartz cobbles	strong petroleum odor
10-15'	50"	1.3	10-15' Black, coarse sand to gray, clay	
15-20'	52"	0	10-15' Gray clay	
20-25'	55"	0	15-20' Gray clay	
25-30'	50"	0	25-30' Gray/Black clay	
30-35'	60"	0	30-35' Gray/Black clay	

Other Comments: VOCs at 7'
soils retained for composite sampling



Boring ID: P-21

BORING LOG

Project Name: <u>Alexandria Waterfront</u>	Project No: <u>22-02065-001</u>
Client Name: <u>Skanska</u>	Date: <u>2/6/2024</u>
Location: <u>Alexandria, VA</u>	Logged By: <u>GHM</u>
Weather/Temp: _____	Checked By: <u>AP</u>
Drilling Co: <u>DMY</u>	Driller: <u>M. Becerra</u>
Equipment: <u>Geoprobe 7822T</u>	Depth: <u>35'</u>
Method: <u>Direct Push</u>	Date Start: <u>2/6/2024</u>
Coordinates: _____	Date End: <u>2/6/2024</u>

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	48"	67	0-0.5' Topsoil,	strong petroleum odor
			.5-4.5' Brown to black, clayey sand to black sand, saturated	
5-10'	12"	55	5-10' Black sand, quartz cobbles,saturated	moderate petroleum odor
10-15'	10"	1.3	10-15' Bricks, brown/black sand , saturated	
15-20'	36"	0	15-20' Gray, clay	
20-25'	42"	0	20-25' Gray clay	
25-30'	56"	0	25-30' Gray/Black clay	
30-35'	60"	0	30-35' Gray/Black clay	

Other Comments:
soils retained for composite sampling



BORING LOG

Boring ID: P-23

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/23/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 35'
Date Start: 1/23/2024
Date End: 1/23/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	40"	225	0-1.25' Topsoil, fine sand with cobble, wood fragments at 16	strong petroleum odor
			1.25-5' Gray/ black sand with wood fragments, wet	
5-10'	25"	30	5-8 ' Gray/ black, sand with wood fragments, wet	petroleum odor
			8-10 Brown/black, clayey sand to clay, wet	
10-15'	0		no recovery	
15-20'	0		no recovery	
20-25'	36"	12	20-25' Black/brown sandy clay	
			many wood fragments, wet	
25-30'	30"	2	25-30' Black, clay	
30-35'	24"	0	30-35' Black, clay	

Other Comments:

VOC's at 3.5'

soils retained for composite sampling



BORING LOG

Boring ID: P-24

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/22/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 10'
Date Start: 1/22/2024
Date End: 1/22/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	0		No recovery	
5-10'	0		No recovery	

Other Comments: no samples



BORING LOG

Boring ID: P-27

Project Name: Alexandria Waterfront			Project No: 22-02065-001	
Client Name: Skanska			Date: 1/17/2024	
Location: Alexandria, VA			Logged By: GHM	
Weather/Temp:			Checked By: AP	
Drilling Co: DMY			Driller: M. Becerra	
Equipment: Geoprobe 7822T			Depth: 10'	
Method: Direct Push			Date Start: 1/17/2024	
Coordinates:			Date End: 1/17/2024	

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	36"	1.4	0-5' Asphalt, brick/concrete fragments,	
			black/brown, clayey sand, very moist brown sand	
5-10'	14"	38	5-10' Gray, clayey sand	moderate petroleum odor
				wet at 6'

Other Comments:	voc's @ 5'
Metals, Pest/PCBs, DRO/GRO @ 4-6'	



BORING LOG

Boring ID: P-28

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp: _____

Project No: 22-02065-001
Date: 1/17/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates: _____

Driller: M. Becerra
Depth: 10'
Date Start: 1/17/2024
Date End: 1/17/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	8"	0.1	0-5' Asphalt, brick/concrete fragments,	very moist to wet at 5'
			black/brown clayey sand,	
5-10'	4"	0.4	5-10' Black/brown, sand, saturated	

Other Comments: insufficient recovery for all parameters

Metals @ 4-6'



BORING LOG

Boring ID: P-29

Project Name: Alexandria Waterfront			Project No: 22-02065-001	
Client Name: Skanska			Date: 1/17/2024	
Location: Alexandria, VA			Logged By: GHM	
Weather/Temp:			Checked By: AP	
Drilling Co: DMY			Driller: M. Becerra	
Equipment: Geoprobe 7822T			Depth: 10'	
Method: Direct Push			Date Start: 1/17/2024	
Coordinates:			Date End: 1/17/2024	

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	4"		0-5' Asphalt, fill, brown sand	minimal recovery
5-10'	5"		5-10' Brown, sand	minimal recovery
			OFFSET 2' AND RE-DRILL	
0-5'	16"	0.2	0-5' Concrete then fine brown sand	
5-10'	20"	0.2	5-10' Brown, sand to gray fine sand, very moist	

Other Comments:	insufficient sample for all parameters
	sampled for Metals, Pest/PCBs @ 6'



BORING LOG

Boring ID: P-30

Project Name: Alexandria Waterfront
Client Name: Skanska
Location: Alexandria, VA
Weather/Temp:

Project No: 22-02065-001
Date: 1/17/2024
Logged By: GHM
Checked By: AP

Drilling Co: DMY
Equipment: Geoprobe 7822T
Method: Direct Push
Coordinates:

Driller: M. Becerra
Depth: 10'
Date Start: 1/17/2024
Date End: 1/17/2024

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	24"	0.3	0-5' Asphalt, concrete fragments/cobbles, brown to	
			black, sand, moist	
5-10'	18"	0.4	5-10' Black sand, very moist to wet	slight petroleum odor
				wet at 7.5'

Other Comments:

voc's at 7'

Metals, Pest/PCBs, DRO/GRO @ 4-6'

Boring ID: _____ **P-31**

Project Name:	Alexandria Waterfront
Client Name:	Skanska
Location:	Alexandria, VA
Weather/Temp:	

Project No:	22-02065-001
Date:	1/17/2024
Logged By:	GHM
Checked By:	AP

Drilling Co:	<u>DMY</u>
Equipment:	<u>Geoprobe 7822T</u>
Method:	<u>Direct Push</u>
Coordinates:	<u></u>

Driller:	<u>M. Becerra</u>
Depth:	<u>10'</u>
Date Start:	<u>1/17/2024</u>
Date End:	<u>1/17/2024</u>

Depth	Recovery	PID (ppm)	Descriptive Log	Remarks
0-5'	8"	0	0-5' topsoil and gravel fill	
5-10'	0	0	5-10' Gravel	no recovery

Other Comments: no samples



APPENDIX B

MONITORING WELL COMPLETION LOGS





Well ID: MW-1/P-23

MONITORING WELL COMPLETION LOG

Project Name: Alexandria Waterfront

Client Name: Skanska

Location: Alexandria, VA

Weather/Temp:

Project No: 22-02065-001

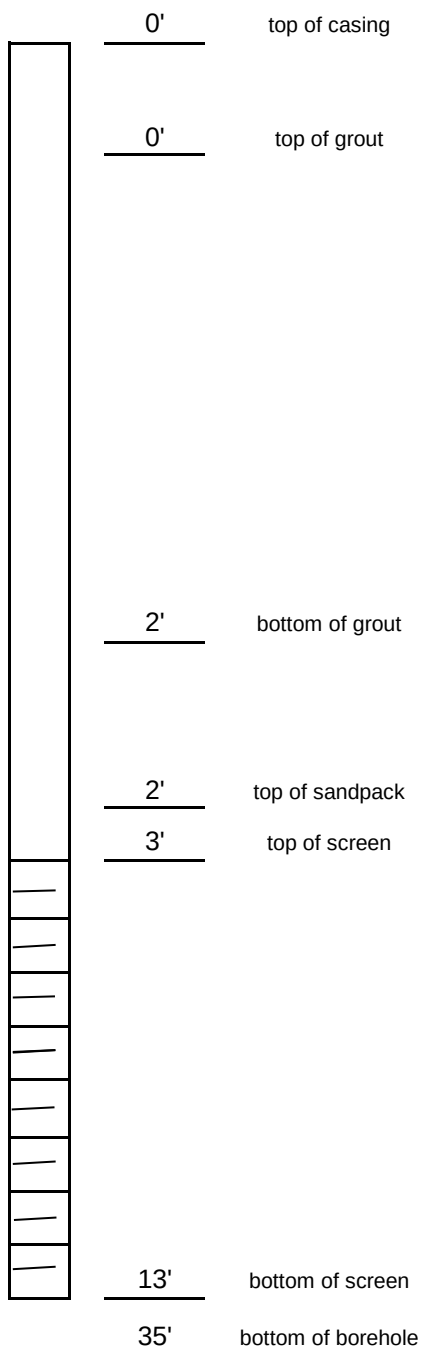
Date: 1/26/2024

Logged By: GHM

Checked By: AP

Construction Details:

FEET BELOW GRADE



Not To Scale

Inspection Notes:

Inspector: GHM

Contractor: DMY

Drilling Method:

Type: Auger

Equipment: Geoprobe

Type of Well: Monitoring

Static Water Level: 2.75

Measuring Point: TOC

Total Depth of Well: 13

Sampling Method:

Type: Peristaltic Pump

Weight:

Interval: 3-13'

Riser Pipe Left In Place:

Material: PVC

Length: 3'

Diameter: 2"

Screen:

Material: PVC

Slot Size: 0.02

Stratigraphic Unit Screened: Clayey Sand

Filter Pack:

Sand Type: Sand Pack

Grade: No. 3

Amount: 11'

Seals:

Type: Grout/Benitite



Well ID: MW-2/P-5

MONITORING WELL COMPLETION LOG

Project Name: Alexandria Waterfront

Client Name: Skanska

Location: Alexandria, VA

Weather/Temp:

Project No: 22-02065-001

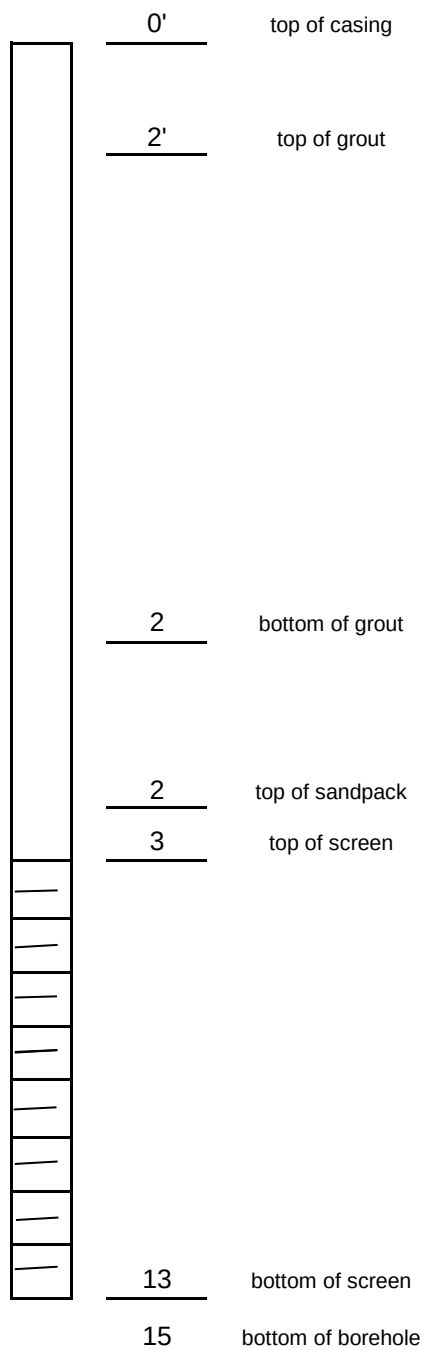
Date: 1/26/2024

Logged By: GHM

Checked By: AP

Construction Details:

FEET BELOW GRADE



Not To Scale

Inspection Notes:

Inspector: GHM

Contractor: DMY

Drilling Method:

Type: Auger

Equipment: Geoprobe

Type of Well: Monitoring

Static Water Level: 3.23

Measuring Point: TOC

Total Depth of Well: 13'

Sampling Method:

Type: Peristaltic Pump

Weight:

Interval: 3-13'

Riser Pipe Left In Place:

Material: PVC

Length: 3

Diameter: 2"

Screen:

Material: PVC

Slot Size: 0.02

Stratigraphic Unit Screened: Sand

Filter Pack:

Sand Type: Sand

Grade: No. 3

Amount: 11'

Seals:

Type: Bentonite/Grout

APPENDIX C
LABORATORY RESULTS



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 24A1221

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmond, VA	Date Received:	January 19, 2024 16:45
	9201 Arboretum Parkway Suite 310	Date Issued:	January 26, 2024 17:06
	Richmond, VA 23236	Project Number:	22-02065 001
Submitted To:	Leo Snead	Purchase Order:	
Client Site I.D.:	Alex Water Front		

Enclosed are the results of analyses for samples received by the laboratory on 01/19/2024 16:45. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads 'Ted Soyars'.

Ted Soyars
Technical Director

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Enthalpy Analytical.





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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 24A1221

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
P-27	24A1221-01	Solids	01/17/2024 12:20	01/19/2024 16:45
P-28	24A1221-02	Solids	01/17/2024 12:50	01/19/2024 16:45
P-29	24A1221-03	Solids	01/17/2024 10:30	01/19/2024 16:45
P-30	24A1221-04	Solids	01/17/2024 11:10	01/19/2024 16:45
P-5	24A1221-05	Solids	01/18/2024 12:30	01/19/2024 16:45
P-15	24A1221-06	Solids	01/18/2024 10:20	01/19/2024 16:45
P-14	24A1221-07	Solids	01/18/2024 09:45	01/19/2024 16:45
P-16	24A1221-08	Solids	01/18/2024 11:15	01/19/2024 16:45
P-17	24A1221-09	Solids	01/18/2024 12:00	01/19/2024 16:45



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Final Report

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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-27 Laboratory Sample ID: 24A1221-01

Grab Date/Time: 01/17/2024 12:20

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010D	<0.500 mg/kg dry		0.500	1	01/22/24 10:30	01/23/24 11:35	ACM
Arsenic	01	SW6010D	3.83 mg/kg dry		1.00	1	01/22/24 10:30	01/23/24 11:35	ACM
Barium	01	SW6010D	48.5 mg/kg dry		0.500	1	01/22/24 10:30	01/23/24 11:35	ACM
Cadmium	01	SW6010D	0.265 mg/kg dry		0.200	1	01/22/24 10:30	01/23/24 11:35	ACM
Chromium	01	SW6010D	6.48 mg/kg dry		0.500	1	01/22/24 10:30	01/23/24 11:35	ACM
Mercury	01	SW7471B	0.230 mg/kg dry		0.014	2	01/24/24 09:13	01/24/24 13:04	NBT
Lead	01	SW6010D	180 mg/kg dry		0.500	1	01/22/24 10:30	01/23/24 11:35	ACM
Selenium	01	SW6010D	<2.50 mg/kg dry		2.50	1	01/22/24 10:30	01/23/24 11:35	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	01	SW8015C	0.34 mg/kg dry		0.10	1	01/24/24 12:46	01/24/24 12:46	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	01	SW8015C	1320 %	S	80-120		01/24/24 12:46	01/24/24 12:46	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,1,1-Trichloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,1,2,2-Tetrachloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,1,2-Trichloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,1-Dichloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,1-Dichloroethylene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,1-Dichloropropene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,2,3-Trichlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,2,3-Trichloropropane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,2,4-Trichlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,2,4-Trimethylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,2-Dibromo-3-chloropropane (DBCP)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-27 Laboratory Sample ID: 24A1221-01

Grab Date/Time: 01/17/2024 12:20

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,2-Dichlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,2-Dichloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,2-Dichloropropane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,3,5-Trimethylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,3-Dichlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,3-Dichloropropane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
1,4-Dichlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
2,2-Dichloropropane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
2-Butanone (MEK)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
2-Chlorotoluene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
2-Hexanone (MBK)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
4-Chlorotoluene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
4-Isopropyltoluene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
4-Methyl-2-pentanone (MIBK)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Acetone	01	SW8260D	12.9 ug/kg dry		10.0	1	01/22/24 16:30	01/22/24 16:30	RJB
Benzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Bromobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Bromochloromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Bromodichloromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Bromoform	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Bromomethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Carbon disulfide	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Carbon tetrachloride	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Chlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Chloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-27

Laboratory Sample ID: 24A1221-01

Grab Date/Time: 01/17/2024 12:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Chloromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
cis-1,2-Dichloroethylene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
cis-1,3-Dichloropropene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Dibromochloromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Dibromomethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Dichlorodifluoromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Di-isopropyl ether (DIPE)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Ethylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Hexachlorobutadiene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Iodomethane	01	SW8260D	<10.0 ug/kg dry	C	10.0	1	01/22/24 16:30	01/22/24 16:30	RJB
Isopropylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
m+p-Xylenes	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Methylene chloride	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Methyl-t-butyl ether (MTBE)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Naphthalene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
n-Butylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
n-Propylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
o-Xylene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
sec-Butylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Styrene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
tert-Butylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Tetrachloroethylene (PCE)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Toluene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
trans-1,2-Dichloroethylene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
trans-1,3-Dichloropropene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-27

Laboratory Sample ID: 24A1221-01

Grab Date/Time: 01/17/2024 12:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Trichlorofluoromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Vinyl acetate	01	SW8260D	<10.0 ug/kg dry		10.0	1	01/22/24 16:30	01/22/24 16:30	RJB
Vinyl chloride	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:30	01/22/24 16:30	RJB
Xylenes, Total	01	SW8260D	<15.0 ug/kg dry		15.0	1	01/22/24 16:30	01/22/24 16:30	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	01	SW8260D	92.1 %		80-120		01/22/24 16:30	01/22/24 16:30	RJB
Surr: 4-Bromofluorobenzene (Surr)	01	SW8260D	92.6 %		85-120		01/22/24 16:30	01/22/24 16:30	RJB
Surr: Dibromofluoromethane (Surr)	01	SW8260D	99.3 %		80-130		01/22/24 16:30	01/22/24 16:30	RJB
Surr: Toluene-d8 (Surr)	01	SW8260D	98.1 %		85-115		01/22/24 16:30	01/22/24 16:30	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
1,2,4-Trichlorobenzene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
1,2-Dichlorobenzene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
1,2-Diphenylhydrazine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
1,3-Dichlorobenzene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
1,3-Dinitrobenzene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
1,4-Dichlorobenzene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
1-Chloronaphthalene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
1-Naphthylamine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2,3,4,6-Tetrachlorophenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2,4,5-Trichlorophenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2,4,6-Trichlorophenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2,4-Dichlorophenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS



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Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-27

Laboratory Sample ID: 24A1221-01

Grab Date/Time: 01/17/2024 12:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2,4-Dinitrophenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2,4-Dinitrotoluene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2,6-Dichlorophenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2,6-Dinitrotoluene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2-Chloronaphthalene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2-Chlorophenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2-Methylnaphthalene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2-Naphthylamine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2-Nitroaniline	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2-Nitrophenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
3,3'-Dichlorobenzidine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
3-Methylcholanthrene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
3-Nitroaniline	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
4,6-Dinitro-2-methylphenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
4-Aminobiphenyl	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
4-Bromophenyl phenyl ether	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
4-Chloroaniline	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
4-Chlorophenyl phenyl ether	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
4-Nitroaniline	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
4-Nitrophenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
7,12-Dimethylbenz (a) anthracene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Acenaphthene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Acenaphthylene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Acetophenone	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS



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Certificate of Analysis

Final Report

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Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-27

Laboratory Sample ID: 24A1221-01

Grab Date/Time: 01/17/2024 12:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Aniline	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Anthracene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Benzidine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Benzo (a) anthracene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Benzo (a) pyrene	01	SW8270E	524 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Benzo (b) fluoranthene	01	SW8270E	606 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Benzo (g,h,i) perylene	01	SW8270E	376 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Benzo (k) fluoranthene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Benzoic acid	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Benzyl alcohol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
bis (2-Chloroethoxy) methane	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
bis (2-Chloroethyl) ether	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
2,2'-Oxybis (1-chloropropane)	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
bis (2-Ethylhexyl) phthalate	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Butyl benzyl phthalate	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Chrysene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Dibenz (a,h) anthracene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Dibenz (a,j) acridine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Dibenzofuran	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Diethyl phthalate	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Dimethyl phthalate	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Di-n-butyl phthalate	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Di-n-octyl phthalate	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Diphenylamine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Ethyl methanesulfonate	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Fluoranthene	01	SW8270E	408 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS



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Final Report

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Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-27

Laboratory Sample ID: 24A1221-01

Grab Date/Time: 01/17/2024 12:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Hexachlorobenzene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Hexachlorobutadiene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Hexachlorocyclopentadiene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Hexachloroethane	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Indeno (1,2,3-cd) pyrene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Isophorone	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
m+p-Cresols	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Methyl methanesulfonate	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Naphthalene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Nitrobenzene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
n-Nitrosodimethylamine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
n-Nitrosodi-n-butylamine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
n-Nitrosodi-n-propylamine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
n-Nitrosodiphenylamine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
n-Nitrosopiperidine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
o+m+p-Cresols	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
o-Cresol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
p-(Dimethylamino) azobenzene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
p-Chloro-m-cresol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Pentachloronitrobenzene (quintozene)	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Pentachlorophenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Phenacetin	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Phenanthrene	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS



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Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-27

Laboratory Sample ID: 24A1221-01

Grab Date/Time: 01/17/2024 12:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Pronamide	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Pyrene	01	SW8270E	574 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Pyridine	01	SW8270E	<332 ug/kg dry		332	4	01/23/24 12:00	01/24/24 15:37	BMS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270E	73.2 %		15-96		01/23/24 12:00	01/24/24 15:37	BMS
Surr: 2-Fluorobiphenyl (Surr)	01	SW8270E	75.2 %		19-105		01/23/24 12:00	01/24/24 15:37	BMS
Surr: 2-Fluorophenol (Surr)	01	SW8270E	76.7 %		12-95		01/23/24 12:00	01/24/24 15:37	BMS
Surr: Nitrobenzene-d5 (Surr)	01	SW8270E	89.3 %		21-100		01/23/24 12:00	01/24/24 15:37	BMS
Surr: Phenol-d5 (Surr)	01	SW8270E	81.7 %		13-100		01/23/24 12:00	01/24/24 15:37	BMS
Surr: p-Terphenyl-d14 (Surr)	01	SW8270E	52.9 %		25-125		01/23/24 12:00	01/24/24 15:37	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01	SW8015C	121 mg/kg dry		10.0	1	01/22/24 17:00	01/23/24 17:05	ATG
Surr: n-Triacontane (Surr)	01	SW8015C	67.0 %		50-125		01/22/24 17:00	01/23/24 17:05	ATG
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	01	SW8082A	<0.116 mg/kg dry		0.116	1	01/22/24 13:00	01/22/24 21:37	ZDR
PCB as Aroclor 1221	01	SW8082A	<0.116 mg/kg dry		0.116	1	01/22/24 13:00	01/22/24 21:37	ZDR
PCB as Aroclor 1232	01	SW8082A	<0.116 mg/kg dry		0.116	1	01/22/24 13:00	01/22/24 21:37	ZDR
PCB as Aroclor 1242	01	SW8082A	<0.116 mg/kg dry		0.116	1	01/22/24 13:00	01/22/24 21:37	ZDR
PCB as Aroclor 1248	01	SW8082A	<0.116 mg/kg dry		0.116	1	01/22/24 13:00	01/22/24 21:37	ZDR
PCB as Aroclor 1254	01	SW8082A	<0.116 mg/kg dry		0.116	1	01/22/24 13:00	01/22/24 21:37	ZDR
PCB as Aroclor 1260	01	SW8082A	<0.116 mg/kg dry		0.116	1	01/22/24 13:00	01/22/24 21:37	ZDR
Surr: DCB	01	SW8082A	87.5 %		30-105		01/22/24 13:00	01/22/24 21:37	ZDR
Surr: TCMX	01	SW8082A	87.4 %		30-105		01/22/24 13:00	01/22/24 21:37	ZDR
4,4'-DDD	01	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 16:46	LBH2



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Analytical Results

Sample I.D. P-27

Laboratory Sample ID: 24A1221-01

Grab Date/Time: 01/17/2024 12:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
4,4'-DDT	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
Aldrin	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
alpha-BHC	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
beta-BHC	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
Chlordane	01	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 16:46	LBH2
delta-BHC	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
Dieldrin	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
Endosulfan I	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
Endosulfan II	01	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
Endosulfan sulfate	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
Endrin	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
Endrin aldehyde	01	SW8081B	<8.00 ug/kg dry		8.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
gamma-BHC (Lindane)	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
Heptachlor	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:46	LBH2
Heptachlor epoxide	01	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 16:46	LBH2
Methoxychlor	01	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 16:46	LBH2
Toxaphene	01	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 16:46	LBH2
Surr: TCMX	01	SW8081B	50.8 %		30-105		01/22/24 13:00	01/25/24 16:46	LBH2
Surr: DCB	01	SW8081B	36.8 %		30-105		01/22/24 13:00	01/25/24 16:46	LBH2
Wet Chemistry Analysis									
Percent Solids	01	SM2540G-2011	82.7 %		0.10	1	01/22/24 16:02	01/22/24 16:02	KJM



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Date Issued: January 26, 2024 17:06
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Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-28

Laboratory Sample ID: 24A1221-02

Grab Date/Time: 01/17/2024 12:50

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010D	<0.963 mg/kg wet		0.963	2	01/22/24 10:30	01/24/24 10:42	ACM
Arsenic	02	SW6010D	2.31 mg/kg wet		1.93	2	01/22/24 10:30	01/24/24 10:42	ACM
Barium	02	SW6010D	42.9 mg/kg wet		0.963	2	01/22/24 10:30	01/24/24 10:42	ACM
Cadmium	02	SW6010D	<0.385 mg/kg wet		0.385	2	01/22/24 10:30	01/24/24 10:42	ACM
Chromium	02	SW6010D	7.79 mg/kg wet		0.963	2	01/22/24 10:30	01/24/24 10:42	ACM
Mercury	02	SW7471B	0.090 mg/kg wet		0.008	1	01/23/24 11:19	01/23/24 15:30	NBT
Lead	02	SW6010D	58.4 mg/kg wet		0.963	2	01/22/24 10:30	01/24/24 10:42	ACM
Selenium	02	SW6010D	<4.82 mg/kg wet		4.82	2	01/22/24 10:30	01/24/24 10:42	ACM



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Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-29

Laboratory Sample ID: 24A1221-03

Grab Date/Time: 01/17/2024 10:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03	SW6010D	<0.917 mg/kg dry		0.917	2	01/22/24 10:30	01/24/24 10:44	ACM
Arsenic	03	SW6010D	4.18 mg/kg dry		1.83	2	01/22/24 10:30	01/24/24 10:44	ACM
Barium	03	SW6010D	26.7 mg/kg dry		0.917	2	01/22/24 10:30	01/24/24 10:44	ACM
Cadmium	03	SW6010D	<0.367 mg/kg dry		0.367	2	01/22/24 10:30	01/24/24 10:44	ACM
Chromium	03	SW6010D	14.7 mg/kg dry		0.917	2	01/22/24 10:30	01/24/24 10:44	ACM
Mercury	03	SW7471B	0.062 mg/kg dry		0.008	1	01/23/24 11:19	01/23/24 15:33	NBT
Lead	03	SW6010D	48.3 mg/kg dry		0.917	2	01/22/24 10:30	01/24/24 10:44	ACM
Selenium	03	SW6010D	<4.58 mg/kg dry		4.58	2	01/22/24 10:30	01/24/24 10:44	ACM

Semivolatile Organic Compounds by GCMS

1,2,4,5-Tetrachlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
1,2,4-Trichlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
1,2-Dichlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
1,2-Diphenylhydrazine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
1,3-Dichlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
1,3-Dinitrobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
1,4-Dichlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
1-Chloronaphthalene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
1-Naphthylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2,3,4,6-Tetrachlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2,4,5-Trichlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2,4,6-Trichlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2,4-Dichlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2,4-Dimethylphenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2,4-Dinitrophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2,4-Dinitrotoluene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2,6-Dichlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS



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Certificate of Analysis

Final Report

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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-29

Laboratory Sample ID: 24A1221-03

Grab Date/Time: 01/17/2024 10:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,6-Dinitrotoluene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2-Chloronaphthalene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2-Chlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2-Methylnaphthalene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2-Naphthylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2-Nitroaniline	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2-Nitrophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
3,3'-Dichlorobenzidine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
3-Methylcholanthrene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
3-Nitroaniline	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
4,6-Dinitro-2-methylphenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
4-Aminobiphenyl	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
4-Bromophenyl phenyl ether	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
4-Chloroaniline	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
4-Chlorophenyl phenyl ether	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
4-Nitroaniline	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
4-Nitrophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
7,12-Dimethylbenz (a) anthracene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Acenaphthene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Acenaphthylene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Acetophenone	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Aniline	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Anthracene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Benzidine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Benzo (a) anthracene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS



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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-29

Laboratory Sample ID: 24A1221-03

Grab Date/Time: 01/17/2024 10:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzo (a) pyrene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Benzo (b) fluoranthene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Benzo (g,h,i) perylene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Benzo (k) fluoranthene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Benzoic acid	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Benzyl alcohol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
bis (2-Chloroethoxy) methane	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
bis (2-Chloroethyl) ether	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
2,2'-Oxybis (1-chloropropane)	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
bis (2-Ethylhexyl) phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Butyl benzyl phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Chrysene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Dibenz (a,h) anthracene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Dibenz (a,j) acridine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Dibenzofuran	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Diethyl phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Dimethyl phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Di-n-butyl phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Di-n-octyl phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Diphenylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Ethyl methanesulfonate	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Fluoranthene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Fluorene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Hexachlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Hexachlorobutadiene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Hexachlorocyclopentadiene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS



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Final Report

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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-29

Laboratory Sample ID: 24A1221-03

Grab Date/Time: 01/17/2024 10:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Hexachloroethane	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Indeno (1,2,3-cd) pyrene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Isophorone	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
m+p-Cresols	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Methyl methanesulfonate	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Naphthalene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Nitrobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
n-Nitrosodimethylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
n-Nitrosodi-n-butylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
n-Nitrosodi-n-propylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
n-Nitrosodiphenylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
n-Nitrosopiperidine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
o+m+p-Cresols	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
o-Cresol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
p-(Dimethylamino) azobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
p-Chloro-m-cresol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Pentachloronitrobenzene (quintozene)	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Pentachlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Phenacetin	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Phenanthrene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Phenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Pronamide	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Pyrene	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS
Pyridine	03	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 16:06	BMS



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Analytical Results

Sample I.D. P-29

Laboratory Sample ID: 24A1221-03

Grab Date/Time: 01/17/2024 10:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2,4,6-Tribromophenol (Surr)	03	SW8270E	92.1 %		15-96		01/23/24 12:00	01/24/24 16:06	BMS
Surr: 2-Fluorobiphenyl (Surr)	03	SW8270E	31.1 %		19-105		01/23/24 12:00	01/24/24 16:06	BMS
Surr: 2-Fluorophenol (Surr)	03	SW8270E	78.1 %		12-95		01/23/24 12:00	01/24/24 16:06	BMS
Surr: Nitrobenzene-d5 (Surr)	03	SW8270E	76.7 %		21-100		01/23/24 12:00	01/24/24 16:06	BMS
Surr: Phenol-d5 (Surr)	03	SW8270E	79.7 %		13-100		01/23/24 12:00	01/24/24 16:06	BMS
Surr: p-Terphenyl-d14 (Surr)	03	SW8270E	89.7 %		25-125		01/23/24 12:00	01/24/24 16:06	BMS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	03	SW8082A	<0.117 mg/kg dry		0.117	1	01/22/24 13:00	01/22/24 21:57	ZDR
PCB as Aroclor 1221	03	SW8082A	<0.117 mg/kg dry		0.117	1	01/22/24 13:00	01/22/24 21:57	ZDR
PCB as Aroclor 1232	03	SW8082A	<0.117 mg/kg dry		0.117	1	01/22/24 13:00	01/22/24 21:57	ZDR
PCB as Aroclor 1242	03	SW8082A	<0.117 mg/kg dry		0.117	1	01/22/24 13:00	01/22/24 21:57	ZDR
PCB as Aroclor 1248	03	SW8082A	<0.117 mg/kg dry		0.117	1	01/22/24 13:00	01/22/24 21:57	ZDR
PCB as Aroclor 1254	03	SW8082A	<0.117 mg/kg dry		0.117	1	01/22/24 13:00	01/22/24 21:57	ZDR
PCB as Aroclor 1260	03	SW8082A	<0.117 mg/kg dry		0.117	1	01/22/24 13:00	01/22/24 21:57	ZDR
Surr: DCB	03	SW8082A	83.0 %		30-105		01/22/24 13:00	01/22/24 21:57	ZDR
Surr: TCMX	03	SW8082A	51.6 %		30-105		01/22/24 13:00	01/22/24 21:57	ZDR
4,4'-DDD	03	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
4,4'-DDE	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
4,4'-DDT	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
Aldrin	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
alpha-BHC	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
beta-BHC	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
Chlordane	03	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 16:59	LBH2
delta-BHC	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
Dieldrin	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:59	LBH2



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Sample I.D. P-29

Laboratory Sample ID: 24A1221-03

Grab Date/Time: 01/17/2024 10:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Endosulfan I	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
Endosulfan II	03	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
Endosulfan sulfate	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
Endrin	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
Endrin aldehyde	03	SW8081B	<8.00 ug/kg dry		8.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
gamma-BHC (Lindane)	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
Heptachlor	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 16:59	LBH2
Heptachlor epoxide	03	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 16:59	LBH2
Methoxychlor	03	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 16:59	LBH2
Toxaphene	03	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 16:59	LBH2
Surr: TCMX	03	SW8081B	58.8 %		30-105		01/22/24 13:00	01/25/24 16:59	LBH2
Surr: DCB	03	SW8081B	50.1 %		30-105		01/22/24 13:00	01/25/24 16:59	LBH2
Wet Chemistry Analysis									
Percent Solids	03	SM2540G-2011	80.1 %		0.10	1	01/22/24 16:02	01/22/24 16:02	KJM



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Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-30

Laboratory Sample ID: 24A1221-04

Grab Date/Time: 01/17/2024 11:10

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04	SW6010D	<2.41 mg/kg dry		2.41	5	01/22/24 10:30	01/24/24 10:46	ACM
Arsenic	04	SW6010D	4.85 mg/kg dry		4.83	5	01/22/24 10:30	01/24/24 10:46	ACM
Barium	04	SW6010D	34.1 mg/kg dry		2.41	5	01/22/24 10:30	01/24/24 10:46	ACM
Cadmium	04	SW6010D	<0.965 mg/kg dry		0.965	5	01/22/24 10:30	01/24/24 10:46	ACM
Chromium	04	SW6010D	12.1 mg/kg dry		2.41	5	01/22/24 10:30	01/24/24 10:46	ACM
Mercury	04	SW7471B	0.125 mg/kg dry		0.008	1	01/23/24 11:19	01/23/24 15:35	NBT
Lead	04	SW6010D	31.8 mg/kg dry		2.41	5	01/22/24 10:30	01/24/24 10:46	ACM
Selenium	04	SW6010D	<12.1 mg/kg dry		12.1	5	01/22/24 10:30	01/24/24 10:46	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	04	SW8015C	<0.10 mg/kg dry		0.10	1	01/23/24 14:07	01/23/24 14:07	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	04	SW8015C	90.8 %		80-120		01/23/24 14:07	01/23/24 14:07	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,1,1-Trichloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,1,2,2-Tetrachloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,1,2-Trichloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,1-Dichloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,1-Dichloroethylene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,1-Dichloropropene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,2,3-Trichlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,2,3-Trichloropropane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,2,4-Trichlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,2,4-Trimethylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,2-Dibromo-3-chloropropane (DBCP)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-30 Laboratory Sample ID: 24A1221-04

Grab Date/Time: 01/17/2024 11:10

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,2-Dichlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,2-Dichloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,2-Dichloropropane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,3,5-Trimethylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,3-Dichlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,3-Dichloropropane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
1,4-Dichlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
2,2-Dichloropropane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
2-Butanone (MEK)	04	SW8260D	10.7 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
2-Chlorotoluene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
2-Hexanone (MBK)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
4-Chlorotoluene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
4-Isopropyltoluene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
4-Methyl-2-pentanone (MIBK)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Acetone	04	SW8260D	63.9 ug/kg dry		10.0	1	01/22/24 16:53	01/22/24 16:53	RJB
Benzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Bromobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Bromochloromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Bromodichloromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Bromoform	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Bromomethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Carbon disulfide	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Carbon tetrachloride	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Chlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Chloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB



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Sample I.D. P-30

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Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Chloromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
cis-1,2-Dichloroethylene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
cis-1,3-Dichloropropene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Dibromochloromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Dibromomethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Dichlorodifluoromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Di-isopropyl ether (DIPE)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Ethylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Hexachlorobutadiene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Iodomethane	04	SW8260D	<10.0 ug/kg dry	C	10.0	1	01/22/24 16:53	01/22/24 16:53	RJB
Isopropylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
m+p-Xylenes	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Methylene chloride	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Methyl-t-butyl ether (MTBE)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Naphthalene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
n-Butylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
n-Propylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
o-Xylene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
sec-Butylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Styrene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
tert-Butylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Tetrachloroethylene (PCE)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Toluene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
trans-1,2-Dichloroethylene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
trans-1,3-Dichloropropene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB



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Analytical Results

Sample I.D. P-30

Laboratory Sample ID: 24A1221-04

Grab Date/Time: 01/17/2024 11:10

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Trichlorofluoromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Vinyl acetate	04	SW8260D	<10.0 ug/kg dry		10.0	1	01/22/24 16:53	01/22/24 16:53	RJB
Vinyl chloride	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 16:53	01/22/24 16:53	RJB
Xylenes, Total	04	SW8260D	<15.0 ug/kg dry		15.0	1	01/22/24 16:53	01/22/24 16:53	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	04	SW8260D	94.2 %		80-120		01/22/24 16:53	01/22/24 16:53	RJB
Surr: 4-Bromofluorobenzene (Surr)	04	SW8260D	98.7 %		85-120		01/22/24 16:53	01/22/24 16:53	RJB
Surr: Dibromofluoromethane (Surr)	04	SW8260D	100 %		80-130		01/22/24 16:53	01/22/24 16:53	RJB
Surr: Toluene-d8 (Surr)	04	SW8260D	100 %		85-115		01/22/24 16:53	01/22/24 16:53	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
1,2,4-Trichlorobenzene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
1,2-Dichlorobenzene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
1,2-Diphenylhydrazine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
1,3-Dichlorobenzene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
1,3-Dinitrobenzene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
1,4-Dichlorobenzene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
1-Chloronaphthalene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
1-Naphthylamine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2,3,4,6-Tetrachlorophenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2,4,5-Trichlorophenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2,4,6-Trichlorophenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2,4-Dichlorophenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS



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Sample I.D. P-30

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Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2,4-Dinitrophenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2,4-Dinitrotoluene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2,6-Dichlorophenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2,6-Dinitrotoluene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2-Chloronaphthalene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2-Chlorophenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2-Methylnaphthalene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2-Naphthylamine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2-Nitroaniline	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2-Nitrophenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
3,3'-Dichlorobenzidine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
3-Methylcholanthrene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
3-Nitroaniline	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
4,6-Dinitro-2-methylphenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
4-Aminobiphenyl	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
4-Bromophenyl phenyl ether	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
4-Chloroaniline	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
4-Chlorophenyl phenyl ether	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
4-Nitroaniline	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
4-Nitrophenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
7,12-Dimethylbenz (a) anthracene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Acenaphthene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Acenaphthylene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Acetophenone	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS



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Field pH:

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Semivolatile Organic Compounds by GCMS									
Aniline	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Anthracene	04	SW8270E	427 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Benzidine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Benzo (a) anthracene	04	SW8270E	2790 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Benzo (a) pyrene	04	SW8270E	4890 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Benzo (b) fluoranthene	04	SW8270E	5380 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Benzo (g,h,i) perylene	04	SW8270E	1920 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Benzo (k) fluoranthene	04	SW8270E	2010 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Benzoic acid	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Benzyl alcohol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
bis (2-Chloroethoxy) methane	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
bis (2-Chloroethyl) ether	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
2,2'-Oxybis (1-chloropropane)	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
bis (2-Ethylhexyl) phthalate	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Butyl benzyl phthalate	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Chrysene	04	SW8270E	1980 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Dibenz (a,h) anthracene	04	SW8270E	774 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Dibenz (a,j) acridine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Dibenzofuran	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Diethyl phthalate	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Dimethyl phthalate	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Di-n-butyl phthalate	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Di-n-octyl phthalate	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Diphenylamine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Ethyl methanesulfonate	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Fluoranthene	04	SW8270E	3410 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Fluorene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS



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Date Issued: January 26, 2024 17:06
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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-30

Laboratory Sample ID: 24A1221-04

Grab Date/Time: 01/17/2024 11:10

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Hexachlorobenzene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Hexachlorobutadiene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Hexachlorocyclopentadiene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Hexachloroethane	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Indeno (1,2,3-cd) pyrene	04	SW8270E	2130 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Isophorone	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
m+p-Cresols	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Methyl methanesulfonate	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Naphthalene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Nitrobenzene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
n-Nitrosodimethylamine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
n-Nitrosodi-n-butylamine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
n-Nitrosodi-n-propylamine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
n-Nitrosodiphenylamine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
n-Nitrosopiperidine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
o+m+p-Cresols	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
o-Cresol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
p-(Dimethylamino) azobenzene	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
p-Chloro-m-cresol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Pentachloronitrobenzene (quintozene)	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Pentachlorophenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Phenacetin	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Phenanthrene	04	SW8270E	1700 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Phenol	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Pronamide	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS



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Analytical Results

Sample I.D. P-30

Laboratory Sample ID: 24A1221-04

Grab Date/Time: 01/17/2024 11:10

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Pyrene	04	SW8270E	3120 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Pyridine	04	SW8270E	<325 ug/kg dry		325	4	01/23/24 12:00	01/24/24 16:36	BMS
Surr: 2,4,6-Tribromophenol (Surr)	04	SW8270E	82.1 %		15-96		01/23/24 12:00	01/24/24 16:36	BMS
Surr: 2-Fluorobiphenyl (Surr)	04	SW8270E	68.7 %		19-105		01/23/24 12:00	01/24/24 16:36	BMS
Surr: 2-Fluorophenol (Surr)	04	SW8270E	81.2 %		12-95		01/23/24 12:00	01/24/24 16:36	BMS
Surr: Nitrobenzene-d5 (Surr)	04	SW8270E	83.8 %		21-100		01/23/24 12:00	01/24/24 16:36	BMS
Surr: Phenol-d5 (Surr)	04	SW8270E	79.8 %		13-100		01/23/24 12:00	01/24/24 16:36	BMS
Surr: p-Terphenyl-d14 (Surr)	04	SW8270E	59.7 %		25-125		01/23/24 12:00	01/24/24 16:36	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	04	SW8015C	39.7 mg/kg dry		10.0	1	01/22/24 17:00	01/23/24 17:26	ATG
Surr: n-Triacontane (Surr)	04	SW8015C	61.7 %		50-125		01/22/24 17:00	01/23/24 17:26	ATG
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	04	SW8082A	<0.106 mg/kg dry		0.106	1	01/22/24 13:00	01/22/24 22:16	ZDR
PCB as Aroclor 1221	04	SW8082A	<0.106 mg/kg dry		0.106	1	01/22/24 13:00	01/22/24 22:16	ZDR
PCB as Aroclor 1232	04	SW8082A	<0.106 mg/kg dry		0.106	1	01/22/24 13:00	01/22/24 22:16	ZDR
PCB as Aroclor 1242	04	SW8082A	<0.106 mg/kg dry		0.106	1	01/22/24 13:00	01/22/24 22:16	ZDR
PCB as Aroclor 1248	04	SW8082A	<0.106 mg/kg dry		0.106	1	01/22/24 13:00	01/22/24 22:16	ZDR
PCB as Aroclor 1254	04	SW8082A	<0.106 mg/kg dry		0.106	1	01/22/24 13:00	01/22/24 22:16	ZDR
PCB as Aroclor 1260	04	SW8082A	<0.106 mg/kg dry		0.106	1	01/22/24 13:00	01/22/24 22:16	ZDR
Surr: DCB	04	SW8082A	93.7 %		30-105		01/22/24 13:00	01/22/24 22:16	ZDR
Surr: TCMX	04	SW8082A	80.3 %		30-105		01/22/24 13:00	01/22/24 22:16	ZDR
4,4'-DDD	04	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
4,4'-DDE	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
4,4'-DDT	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:12	LBH2



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Sample I.D. P-30

Laboratory Sample ID: 24A1221-04

Grab Date/Time: 01/17/2024 11:10

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Aldrin	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
alpha-BHC	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
beta-BHC	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
Chlordane	04	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 17:12	LBH2
delta-BHC	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
Dieldrin	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
Endosulfan I	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
Endosulfan II	04	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
Endosulfan sulfate	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
Endrin	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
Endrin aldehyde	04	SW8081B	<8.00 ug/kg dry		8.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
gamma-BHC (Lindane)	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
Heptachlor	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:12	LBH2
Heptachlor epoxide	04	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 17:12	LBH2
Methoxychlor	04	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 17:12	LBH2
Toxaphene	04	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 17:12	LBH2
Surr: TCMX	04	SW8081B	44.6 %		30-105		01/22/24 13:00	01/25/24 17:12	LBH2
Surr: DCB	04	SW8081B	108 %	S	30-105		01/22/24 13:00	01/25/24 17:12	LBH2

Wet Chemistry Analysis

Percent Solids	04	SM2540G-2011	90.1 %		0.10	1	01/22/24 16:02	01/22/24 16:02	KJM



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Analytical Results

Sample I.D. P-5 Laboratory Sample ID: 24A1221-05

Grab Date/Time: 01/18/2024 12:30

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05	SW6010D	0.673 mg/kg dry		0.500	1	01/22/24 10:30	01/23/24 11:45	ACM
Arsenic	05	SW6010D	8.91 mg/kg dry		1.00	1	01/22/24 10:30	01/23/24 11:45	ACM
Barium	05	SW6010D	381 mg/kg dry		0.500	1	01/22/24 10:30	01/23/24 11:45	ACM
Cadmium	05	SW6010D	0.724 mg/kg dry		0.200	1	01/22/24 10:30	01/23/24 11:45	ACM
Chromium	05	SW6010D	20.1 mg/kg dry		0.500	1	01/22/24 10:30	01/23/24 11:45	ACM
Mercury	05	SW7471B	0.664 mg/kg dry		0.075	10	01/24/24 09:13	01/24/24 13:07	NBT
Lead	05RE1	SW6010D	3600 mg/kg dry		9.94	20	01/22/24 10:30	01/24/24 13:42	ACM
Selenium	05	SW6010D	<2.50 mg/kg dry		2.50	1	01/22/24 10:30	01/23/24 11:45	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	05RE1	SW8015C	<0.48 mg/kg dry		0.48	1	01/24/24 16:07	01/24/24 16:07	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	05RE1	SW8015C	109 %		80-120		01/24/24 16:07	01/24/24 16:07	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,1,1-Trichloroethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,1,2,2-Tetrachloroethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,1,2-Trichloroethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,1-Dichloroethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,1-Dichloroethylene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,1-Dichloropropene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,2,3-Trichlorobenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,2,3-Trichloropropane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,2,4-Trichlorobenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,2,4-Trimethylbenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,2-Dibromo-3-chloropropane (DBCP)	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB



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Sample I.D. P-5 Laboratory Sample ID: 24A1221-05

Grab Date/Time: 01/18/2024 12:30

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,2-Dichlorobenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,2-Dichloroethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,2-Dichloropropane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,3,5-Trimethylbenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,3-Dichlorobenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,3-Dichloropropane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
1,4-Dichlorobenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
2,2-Dichloropropane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
2-Butanone (MEK)	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
2-Chlorotoluene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
2-Hexanone (MBK)	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
4-Chlorotoluene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
4-Isopropyltoluene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
4-Methyl-2-pentanone (MIBK)	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Acetone	05	SW8260D	71.1 ug/kg dry		47.2	1	01/22/24 17:16	01/22/24 17:16	RJB
Benzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Bromobenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Bromochloromethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Bromodichloromethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Bromoform	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Bromomethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Carbon disulfide	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Carbon tetrachloride	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Chlorobenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Chloroethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-5 Laboratory Sample ID: 24A1221-05

Grab Date/Time: 01/18/2024 12:30

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Chloromethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
cis-1,2-Dichloroethylene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
cis-1,3-Dichloropropene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Dibromochloromethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Dibromomethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Dichlorodifluoromethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Di-isopropyl ether (DIPE)	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Ethylbenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Hexachlorobutadiene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Iodomethane	05	SW8260D	<47.2 ug/kg dry	C	47.2	1	01/22/24 17:16	01/22/24 17:16	RJB
Isopropylbenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
m+p-Xylenes	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Methylene chloride	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Methyl-t-butyl ether (MTBE)	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Naphthalene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
n-Butylbenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
n-Propylbenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
o-Xylene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
sec-Butylbenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Styrene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
tert-Butylbenzene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Tetrachloroethylene (PCE)	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Toluene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
trans-1,2-Dichloroethylene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
trans-1,3-Dichloropropene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB



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Final Report

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9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-5 Laboratory Sample ID: 24A1221-05
Grab Date/Time: 01/18/2024 12:30
Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Trichlorofluoromethane	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Vinyl acetate	05	SW8260D	<47.2 ug/kg dry		47.2	1	01/22/24 17:16	01/22/24 17:16	RJB
Vinyl chloride	05	SW8260D	<23.6 ug/kg dry		23.6	1	01/22/24 17:16	01/22/24 17:16	RJB
Xylenes, Total	05	SW8260D	<70.8 ug/kg dry		70.8	1	01/22/24 17:16	01/22/24 17:16	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	05	SW8260D	99.8 %		80-120		01/22/24 17:16	01/22/24 17:16	RJB
Surr: 4-Bromofluorobenzene (Surr)	05	SW8260D	100 %		85-120		01/22/24 17:16	01/22/24 17:16	RJB
Surr: Dibromofluoromethane (Surr)	05	SW8260D	99.7 %		80-130		01/22/24 17:16	01/22/24 17:16	RJB
Surr: Toluene-d8 (Surr)	05	SW8260D	99.8 %		85-115		01/22/24 17:16	01/22/24 17:16	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
1,2,4-Trichlorobenzene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
1,2-Dichlorobenzene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
1,2-Diphenylhydrazine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
1,3-Dichlorobenzene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
1,3-Dinitrobenzene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
1,4-Dichlorobenzene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
1-Chloronaphthalene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
1-Naphthylamine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2,3,4,6-Tetrachlorophenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2,4,5-Trichlorophenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2,4,6-Trichlorophenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2,4-Dichlorophenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-5 Laboratory Sample ID: 24A1221-05

Grab Date/Time: 01/18/2024 12:30

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2,4-Dinitrophenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2,4-Dinitrotoluene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2,6-Dichlorophenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2,6-Dinitrotoluene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2-Chloronaphthalene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2-Chlorophenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2-Methylnaphthalene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2-Naphthylamine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2-Nitroaniline	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2-Nitrophenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
3,3'-Dichlorobenzidine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
3-Methylcholanthrene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
3-Nitroaniline	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
4,6-Dinitro-2-methylphenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
4-Aminobiphenyl	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
4-Bromophenyl phenyl ether	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
4-Chloroaniline	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
4-Chlorophenyl phenyl ether	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
4-Nitroaniline	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
4-Nitrophenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
7,12-Dimethylbenz (a) anthracene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Acenaphthene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Acenaphthylene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Acetophenone	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS



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Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-5 Laboratory Sample ID: 24A1221-05

Grab Date/Time: 01/18/2024 12:30

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Aniline	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Anthracene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Benzidine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Benzo (a) anthracene	05	SW8270E	758 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Benzo (a) pyrene	05	SW8270E	729 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Benzo (b) fluoranthene	05	SW8270E	1020 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Benzo (g,h,i) perylene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Benzo (k) fluoranthene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Benzoic acid	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Benzyl alcohol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
bis (2-Chloroethoxy) methane	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
bis (2-Chloroethyl) ether	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
2,2'-Oxybis (1-chloropropane)	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
bis (2-Ethylhexyl) phthalate	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Butyl benzyl phthalate	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Chrysene	05	SW8270E	573 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Dibenz (a,h) anthracene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Dibenz (a,j) acridine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Dibenzofuran	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Diethyl phthalate	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Dimethyl phthalate	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Di-n-butyl phthalate	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Di-n-octyl phthalate	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Diphenylamine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Ethyl methanesulfonate	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Fluoranthene	05	SW8270E	1470 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS



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Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-5 Laboratory Sample ID: 24A1221-05

Grab Date/Time: 01/18/2024 12:30

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Hexachlorobenzene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Hexachlorobutadiene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Hexachlorocyclopentadiene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Hexachloroethane	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Indeno (1,2,3-cd) pyrene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Isophorone	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
m+p-Cresols	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Methyl methanesulfonate	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Naphthalene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Nitrobenzene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
n-Nitrosodimethylamine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
n-Nitrosodi-n-butylamine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
n-Nitrosodi-n-propylamine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
n-Nitrosodiphenylamine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
n-Nitrosopiperidine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
o+m+p-Cresols	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
o-Cresol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
p-(Dimethylamino) azobenzene	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
p-Chloro-m-cresol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Pentachloronitrobenzene (quintozene)	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Pentachlorophenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Phenacetin	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Phenanthrene	05	SW8270E	1290 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS



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Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-5

Laboratory Sample ID: 24A1221-05

Grab Date/Time: 01/18/2024 12:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Pronamide	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Pyrene	05	SW8270E	1570 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Pyridine	05	SW8270E	<320 ug/kg dry		320	4	01/23/24 12:00	01/24/24 17:05	BMS
Surr: 2,4,6-Tribromophenol (Surr)	05	SW8270E	79.2 %		15-96		01/23/24 12:00	01/24/24 17:05	BMS
Surr: 2-Fluorobiphenyl (Surr)	05	SW8270E	49.8 %		19-105		01/23/24 12:00	01/24/24 17:05	BMS
Surr: 2-Fluorophenol (Surr)	05	SW8270E	80.2 %		12-95		01/23/24 12:00	01/24/24 17:05	BMS
Surr: Nitrobenzene-d5 (Surr)	05	SW8270E	73.3 %		21-100		01/23/24 12:00	01/24/24 17:05	BMS
Surr: Phenol-d5 (Surr)	05	SW8270E	74.3 %		13-100		01/23/24 12:00	01/24/24 17:05	BMS
Surr: p-Terphenyl-d14 (Surr)	05	SW8270E	64.9 %		25-125		01/23/24 12:00	01/24/24 17:05	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	05	SW8015C	382 mg/kg dry		10.0	1	01/22/24 17:00	01/23/24 17:48	ATG
Surr: n-Triacontane (Surr)	05	SW8015C	69.5 %		50-125		01/22/24 17:00	01/23/24 17:48	ATG
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	05	SW8082A	<0.124 mg/kg dry		0.124	1	01/22/24 13:00	01/22/24 22:36	ZDR
PCB as Aroclor 1221	05	SW8082A	<0.124 mg/kg dry		0.124	1	01/22/24 13:00	01/22/24 22:36	ZDR
PCB as Aroclor 1232	05	SW8082A	<0.124 mg/kg dry		0.124	1	01/22/24 13:00	01/22/24 22:36	ZDR
PCB as Aroclor 1242	05	SW8082A	<0.124 mg/kg dry		0.124	1	01/22/24 13:00	01/22/24 22:36	ZDR
PCB as Aroclor 1248	05	SW8082A	<0.124 mg/kg dry		0.124	1	01/22/24 13:00	01/22/24 22:36	ZDR
PCB as Aroclor 1254	05	SW8082A	<0.124 mg/kg dry		0.124	1	01/22/24 13:00	01/22/24 22:36	ZDR
PCB as Aroclor 1260	05	SW8082A	<0.124 mg/kg dry		0.124	1	01/22/24 13:00	01/22/24 22:36	ZDR
Surr: DCB	05	SW8082A	61.4 %		30-105		01/22/24 13:00	01/22/24 22:36	ZDR
Surr: TCMX	05	SW8082A	46.2 %		30-105		01/22/24 13:00	01/22/24 22:36	ZDR
4,4'-DDD	05	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 17:26	LBH2



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D.		P-5		Laboratory Sample ID:			24A1221-05		
Grab Date/Time:		01/18/2024 12:30							
Field Residual Cl:				Field pH:					
Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
4,4'-DDT	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
Aldrin	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
alpha-BHC	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
beta-BHC	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
Chlordane	05	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 17:26	LBH2
delta-BHC	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
Dieldrin	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
Endosulfan I	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
Endosulfan II	05	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
Endosulfan sulfate	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
Endrin	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
Endrin aldehyde	05	SW8081B	<8.00 ug/kg dry		8.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
gamma-BHC (Lindane)	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
Heptachlor	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:26	LBH2
Heptachlor epoxide	05	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 17:26	LBH2
Methoxychlor	05	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 17:26	LBH2
Toxaphene	05	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 17:26	LBH2
Surr: TCMX	05	SW8081B	42.6 %		30-105		01/22/24 13:00	01/25/24 17:26	LBH2
Surr: DCB	05	SW8081B	21.6 %	S	30-105		01/22/24 13:00	01/25/24 17:26	LBH2
Wet Chemistry Analysis									
Percent Solids	05	SM2540G-2011	77.6 %		0.10	1	01/22/24 16:02	01/22/24 16:02	KJM



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Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
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Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-15

Laboratory Sample ID: 24A1221-06

Grab Date/Time: 01/18/2024 10:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	06	SW6010D	<4.94 mg/kg dry		4.94	10	01/22/24 10:30	01/24/24 10:56	ACM
Arsenic	06	SW6010D	<9.88 mg/kg dry		9.88	10	01/22/24 10:30	01/24/24 10:56	ACM
Barium	06	SW6010D	119 mg/kg dry		4.94	10	01/22/24 10:30	01/24/24 10:56	ACM
Cadmium	06	SW6010D	<1.98 mg/kg dry		1.98	10	01/22/24 10:30	01/24/24 10:56	ACM
Chromium	06	SW6010D	25.4 mg/kg dry		4.94	10	01/22/24 10:30	01/24/24 10:56	ACM
Mercury	06	SW7471B	0.017 mg/kg dry		0.008	1	01/23/24 11:19	01/23/24 15:47	NBT
Lead	06	SW6010D	22.9 mg/kg dry		4.94	10	01/22/24 10:30	01/24/24 10:56	ACM
Selenium	06	SW6010D	<24.7 mg/kg dry		24.7	10	01/22/24 10:30	01/24/24 10:56	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	06	SW8015C	<0.10 mg/kg dry		0.10	1	01/23/24 14:52	01/23/24 14:52	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	06	SW8015C	74.6 %	S	80-120		01/23/24 14:52	01/23/24 14:52	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,1,1-Trichloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,1,2,2-Tetrachloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,1,2-Trichloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,1-Dichloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,1-Dichloroethylene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,1-Dichloropropene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,2,3-Trichlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,2,3-Trichloropropane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,2,4-Trichlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,2,4-Trimethylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,2-Dibromo-3-chloropropane (DBCP)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB



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Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-15 Laboratory Sample ID: 24A1221-06

Grab Date/Time: 01/18/2024 10:20

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,2-Dichlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,2-Dichloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,2-Dichloropropane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,3,5-Trimethylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,3-Dichlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,3-Dichloropropane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
1,4-Dichlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
2,2-Dichloropropane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
2-Butanone (MEK)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
2-Chlorotoluene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
2-Hexanone (MBK)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
4-Chlorotoluene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
4-Isopropyltoluene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
4-Methyl-2-pentanone (MIBK)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Acetone	06	SW8260D	10.7 ug/kg dry		10.0	1	01/22/24 17:40	01/22/24 17:40	RJB
Benzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Bromobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Bromochloromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Bromodichloromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Bromoform	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Bromomethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Carbon disulfide	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Carbon tetrachloride	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Chlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Chloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB



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Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-15

Laboratory Sample ID: 24A1221-06

Grab Date/Time: 01/18/2024 10:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Chloromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
cis-1,2-Dichloroethylene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
cis-1,3-Dichloropropene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Dibromochloromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Dibromomethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Dichlorodifluoromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Di-isopropyl ether (DIPE)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Ethylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Hexachlorobutadiene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Iodomethane	06	SW8260D	<10.0 ug/kg dry	C	10.0	1	01/22/24 17:40	01/22/24 17:40	RJB
Isopropylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
m+p-Xylenes	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Methylene chloride	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Methyl-t-butyl ether (MTBE)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Naphthalene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
n-Butylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
n-Propylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
o-Xylene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
sec-Butylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Styrene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
tert-Butylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Tetrachloroethylene (PCE)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Toluene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
trans-1,2-Dichloroethylene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
trans-1,3-Dichloropropene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB



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Analytical Results

Sample I.D. P-15

Laboratory Sample ID: 24A1221-06

Grab Date/Time: 01/18/2024 10:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Trichlorofluoromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Vinyl acetate	06	SW8260D	<10.0 ug/kg dry		10.0	1	01/22/24 17:40	01/22/24 17:40	RJB
Vinyl chloride	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 17:40	01/22/24 17:40	RJB
Xylenes, Total	06	SW8260D	<15.0 ug/kg dry		15.0	1	01/22/24 17:40	01/22/24 17:40	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	06	SW8260D	96.7 %		80-120		01/22/24 17:40	01/22/24 17:40	RJB
Surr: 4-Bromofluorobenzene (Surr)	06	SW8260D	98.8 %		85-120		01/22/24 17:40	01/22/24 17:40	RJB
Surr: Dibromofluoromethane (Surr)	06	SW8260D	99.8 %		80-130		01/22/24 17:40	01/22/24 17:40	RJB
Surr: Toluene-d8 (Surr)	06	SW8260D	101 %		85-115		01/22/24 17:40	01/22/24 17:40	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
1,2,4-Trichlorobenzene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
1,2-Dichlorobenzene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
1,2-Diphenylhydrazine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
1,3-Dichlorobenzene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
1,3-Dinitrobenzene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
1,4-Dichlorobenzene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
1-Chloronaphthalene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
1-Naphthylamine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2,3,4,6-Tetrachlorophenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2,4,5-Trichlorophenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2,4,6-Trichlorophenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2,4-Dichlorophenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-15 Laboratory Sample ID: 24A1221-06

Grab Date/Time: 01/18/2024 10:20

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2,4-Dinitrophenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2,4-Dinitrotoluene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2,6-Dichlorophenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2,6-Dinitrotoluene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2-Chloronaphthalene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2-Chlorophenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2-Methylnaphthalene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2-Naphthylamine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2-Nitroaniline	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2-Nitrophenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
3,3'-Dichlorobenzidine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
3-Methylcholanthrene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
3-Nitroaniline	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
4,6-Dinitro-2-methylphenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
4-Aminobiphenyl	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
4-Bromophenyl phenyl ether	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
4-Chloroaniline	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
4-Chlorophenyl phenyl ether	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
4-Nitroaniline	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
4-Nitrophenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
7,12-Dimethylbenz (a) anthracene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Acenaphthene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Acenaphthylene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Acetophenone	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS



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Final Report

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Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-15

Laboratory Sample ID: 24A1221-06

Grab Date/Time: 01/18/2024 10:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Aniline	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Anthracene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Benzidine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Benzo (a) anthracene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Benzo (a) pyrene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Benzo (b) fluoranthene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Benzo (g,h,i) perylene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Benzo (k) fluoranthene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Benzoic acid	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Benzyl alcohol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
bis (2-Chloroethoxy) methane	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
bis (2-Chloroethyl) ether	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
2,2'-Oxybis (1-chloropropane)	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
bis (2-Ethylhexyl) phthalate	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Butyl benzyl phthalate	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Chrysene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Dibenz (a,h) anthracene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Dibenz (a,j) acridine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Dibenzofuran	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Diethyl phthalate	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Dimethyl phthalate	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Di-n-butyl phthalate	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Di-n-octyl phthalate	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Diphenylamine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Ethyl methanesulfonate	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Fluoranthene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS



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Date Issued: January 26, 2024 17:06
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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-15 Laboratory Sample ID: 24A1221-06

Grab Date/Time: 01/18/2024 10:20

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Hexachlorobenzene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Hexachlorobutadiene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Hexachlorocyclopentadiene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Hexachloroethane	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Indeno (1,2,3-cd) pyrene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Isophorone	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
m+p-Cresols	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Methyl methanesulfonate	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Naphthalene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Nitrobenzene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
n-Nitrosodimethylamine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
n-Nitrosodi-n-butylamine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
n-Nitrosodi-n-propylamine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
n-Nitrosodiphenylamine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
n-Nitrosopiperidine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
o+m+p-Cresols	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
o-Cresol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
p-(Dimethylamino) azobenzene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
p-Chloro-m-cresol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Pentachloronitrobenzene (quintozene)	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Pentachlorophenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Phenacetin	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Phenanthrene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS



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Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-15

Laboratory Sample ID: 24A1221-06

Grab Date/Time: 01/18/2024 10:20

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Pronamide	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Pyrene	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Pyridine	06	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 17:34	BMS
Surr: 2,4,6-Tribromophenol (Surr)	06	SW8270E	80.6 %		15-96		01/23/24 12:00	01/24/24 17:34	BMS
Surr: 2-Fluorobiphenyl (Surr)	06	SW8270E	42.0 %		19-105		01/23/24 12:00	01/24/24 17:34	BMS
Surr: 2-Fluorophenol (Surr)	06	SW8270E	77.6 %		12-95		01/23/24 12:00	01/24/24 17:34	BMS
Surr: Nitrobenzene-d5 (Surr)	06	SW8270E	79.0 %		21-100		01/23/24 12:00	01/24/24 17:34	BMS
Surr: Phenol-d5 (Surr)	06	SW8270E	80.7 %		13-100		01/23/24 12:00	01/24/24 17:34	BMS
Surr: p-Terphenyl-d14 (Surr)	06	SW8270E	83.5 %		25-125		01/23/24 12:00	01/24/24 17:34	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	06	SW8015C	33.7 mg/kg dry		10.0	1	01/23/24 15:45	01/24/24 14:44	ATG
Surr: n-Triacontane (Surr)	06	SW8015C	70.4 %		50-125		01/23/24 15:45	01/24/24 14:44	ATG
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	06	SW8082A	<0.112 mg/kg dry		0.112	1	01/22/24 13:00	01/22/24 22:55	ZDR
PCB as Aroclor 1221	06	SW8082A	<0.112 mg/kg dry		0.112	1	01/22/24 13:00	01/22/24 22:55	ZDR
PCB as Aroclor 1232	06	SW8082A	<0.112 mg/kg dry		0.112	1	01/22/24 13:00	01/22/24 22:55	ZDR
PCB as Aroclor 1242	06	SW8082A	<0.112 mg/kg dry		0.112	1	01/22/24 13:00	01/22/24 22:55	ZDR
PCB as Aroclor 1248	06	SW8082A	<0.112 mg/kg dry		0.112	1	01/22/24 13:00	01/22/24 22:55	ZDR
PCB as Aroclor 1254	06	SW8082A	<0.112 mg/kg dry		0.112	1	01/22/24 13:00	01/22/24 22:55	ZDR
PCB as Aroclor 1260	06	SW8082A	<0.112 mg/kg dry		0.112	1	01/22/24 13:00	01/22/24 22:55	ZDR
Surr: DCB	06	SW8082A	40.5 %		30-105		01/22/24 13:00	01/22/24 22:55	ZDR
Surr: TCMX	06	SW8082A	49.2 %		30-105		01/22/24 13:00	01/22/24 22:55	ZDR
4,4'-DDD	06	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 17:39	LBH2



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Analytical Results

Sample I.D. P-15

Laboratory Sample ID: 24A1221-06

Grab Date/Time: 01/18/2024 10:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	06	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
4,4'-DDT	06	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
Aldrin	06	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
alpha-BHC	06	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
beta-BHC	06	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
Chlordane	06	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 17:39	LBH2
delta-BHC	06	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
Dieldrin	06	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
Endosulfan I	06	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
Endosulfan II	06	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
Endosulfan sulfate	06	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
Endrin	06	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
Endrin aldehyde	06	SW8081B	<8.00 ug/kg dry		8.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
gamma-BHC (Lindane)	06	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
Heptachlor	06	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:39	LBH2
Heptachlor epoxide	06	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 17:39	LBH2
Methoxychlor	06	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 17:39	LBH2
Toxaphene	06	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 17:39	LBH2
Surr: TCMX	06	SW8081B	43.0 %		30-105		01/22/24 13:00	01/25/24 17:39	LBH2
Surr: DCB	06	SW8081B	21.4 %	S	30-105		01/22/24 13:00	01/25/24 17:39	LBH2
Wet Chemistry Analysis									
Percent Solids	06	SM2540G-2011	83.9 %		0.10	1	01/22/24 16:02	01/22/24 16:02	KJM



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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-14

Laboratory Sample ID: 24A1221-07

Grab Date/Time: 01/18/2024 09:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	07	SW6010D	<0.961 mg/kg dry		0.961	2	01/22/24 10:30	01/24/24 10:59	ACM
Arsenic	07	SW6010D	2.69 mg/kg dry		1.92	2	01/22/24 10:30	01/24/24 10:59	ACM
Barium	07	SW6010D	36.0 mg/kg dry		0.961	2	01/22/24 10:30	01/24/24 10:59	ACM
Cadmium	07	SW6010D	<0.384 mg/kg dry		0.384	2	01/22/24 10:30	01/24/24 10:59	ACM
Chromium	07	SW6010D	9.46 mg/kg dry		0.961	2	01/22/24 10:30	01/24/24 10:59	ACM
Mercury	07	SW7471B	0.051 mg/kg dry		0.008	1	01/23/24 11:19	01/23/24 15:49	NBT
Lead	07	SW6010D	9.93 mg/kg dry		0.961	2	01/22/24 10:30	01/24/24 10:59	ACM
Selenium	07	SW6010D	<4.80 mg/kg dry		4.80	2	01/22/24 10:30	01/24/24 10:59	ACM
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	07	SW8015C	<0.10 mg/kg dry		0.10	1	01/23/24 15:14	01/23/24 15:14	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	07	SW8015C	99.0 %		80-120		01/23/24 15:14	01/23/24 15:14	JWR
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,1,1-Trichloroethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,1,2,2-Tetrachloroethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,1,2-Trichloroethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,1-Dichloroethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,1-Dichloroethylene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,1-Dichloropropene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,2,3-Trichlorobenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,2,3-Trichloropropane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,2,4-Trichlorobenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,2,4-Trimethylbenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,2-Dibromo-3-chloropropane (DBCP)	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB



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Certificate of Analysis

Final Report

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Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-14 Laboratory Sample ID: 24A1221-07

Grab Date/Time: 01/18/2024 09:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,2-Dichlorobenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,2-Dichloroethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,2-Dichloropropane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,3,5-Trimethylbenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,3-Dichlorobenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,3-Dichloropropane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
1,4-Dichlorobenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
2,2-Dichloropropane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
2-Butanone (MEK)	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
2-Chlorotoluene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
2-Hexanone (MBK)	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
4-Chlorotoluene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
4-Isopropyltoluene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
4-Methyl-2-pentanone (MIBK)	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Acetone	07	SW8260D	<10.0 ug/kg dry		10.0	1	01/22/24 18:03	01/22/24 18:03	RJB
Benzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Bromobenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Bromochloromethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Bromodichloromethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Bromoform	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Bromomethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Carbon disulfide	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Carbon tetrachloride	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Chlorobenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Chloroethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB



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Sample I.D. P-14

Laboratory Sample ID: 24A1221-07

Grab Date/Time: 01/18/2024 09:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Chloromethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
cis-1,2-Dichloroethylene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
cis-1,3-Dichloropropene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Dibromochloromethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Dibromomethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Dichlorodifluoromethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Di-isopropyl ether (DIPE)	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Ethylbenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Hexachlorobutadiene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Iodomethane	07	SW8260D	<10.0 ug/kg dry	C	10.0	1	01/22/24 18:03	01/22/24 18:03	RJB
Isopropylbenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
m+p-Xylenes	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Methylene chloride	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Methyl-t-butyl ether (MTBE)	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Naphthalene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
n-Butylbenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
n-Propylbenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
o-Xylene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
sec-Butylbenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Styrene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
tert-Butylbenzene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Tetrachloroethylene (PCE)	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Toluene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
trans-1,2-Dichloroethylene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
trans-1,3-Dichloropropene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB



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Analytical Results

Sample I.D. P-14

Laboratory Sample ID: 24A1221-07

Grab Date/Time: 01/18/2024 09:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Trichlorofluoromethane	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Vinyl acetate	07	SW8260D	<10.0 ug/kg dry		10.0	1	01/22/24 18:03	01/22/24 18:03	RJB
Vinyl chloride	07	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:03	01/22/24 18:03	RJB
Xylenes, Total	07	SW8260D	<15.0 ug/kg dry		15.0	1	01/22/24 18:03	01/22/24 18:03	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	07	SW8260D	97.4 %		80-120		01/22/24 18:03	01/22/24 18:03	RJB
Surr: 4-Bromofluorobenzene (Surr)	07	SW8260D	100 %		85-120		01/22/24 18:03	01/22/24 18:03	RJB
Surr: Dibromofluoromethane (Surr)	07	SW8260D	100 %		80-130		01/22/24 18:03	01/22/24 18:03	RJB
Surr: Toluene-d8 (Surr)	07	SW8260D	99.6 %		85-115		01/22/24 18:03	01/22/24 18:03	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
1,2,4-Trichlorobenzene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
1,2-Dichlorobenzene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
1,2-Diphenylhydrazine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
1,3-Dichlorobenzene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
1,3-Dinitrobenzene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
1,4-Dichlorobenzene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
1-Chloronaphthalene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
1-Naphthylamine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2,3,4,6-Tetrachlorophenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2,4,5-Trichlorophenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2,4,6-Trichlorophenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2,4-Dichlorophenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS



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Grab Date/Time: 01/18/2024 09:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2,4-Dinitrophenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2,4-Dinitrotoluene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2,6-Dichlorophenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2,6-Dinitrotoluene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2-Chloronaphthalene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2-Chlorophenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2-Methylnaphthalene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2-Naphthylamine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2-Nitroaniline	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2-Nitrophenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
3,3'-Dichlorobenzidine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
3-Methylcholanthrene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
3-Nitroaniline	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
4,6-Dinitro-2-methylphenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
4-Aminobiphenyl	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
4-Bromophenyl phenyl ether	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
4-Chloroaniline	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
4-Chlorophenyl phenyl ether	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
4-Nitroaniline	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
4-Nitrophenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
7,12-Dimethylbenz (a) anthracene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Acenaphthene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Acenaphthylene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Acetophenone	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS



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Semivolatile Organic Compounds by GCMS									
Aniline	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Anthracene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Benzidine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Benzo (a) anthracene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Benzo (a) pyrene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Benzo (b) fluoranthene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Benzo (g,h,i) perylene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Benzo (k) fluoranthene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Benzoic acid	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Benzyl alcohol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
bis (2-Chloroethoxy) methane	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
bis (2-Chloroethyl) ether	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
2,2'-Oxybis (1-chloropropane)	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
bis (2-Ethylhexyl) phthalate	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Butyl benzyl phthalate	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Chrysene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Dibenz (a,h) anthracene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Dibenz (a,j) acridine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Dibenzofuran	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Diethyl phthalate	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Dimethyl phthalate	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Di-n-butyl phthalate	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Di-n-octyl phthalate	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Diphenylamine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Ethyl methanesulfonate	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Fluoranthene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS



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Certificate of Analysis

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Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-14

Laboratory Sample ID: 24A1221-07

Grab Date/Time: 01/18/2024 09:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Hexachlorobenzene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Hexachlorobutadiene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Hexachlorocyclopentadiene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Hexachloroethane	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Indeno (1,2,3-cd) pyrene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Isophorone	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
m+p-Cresols	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Methyl methanesulfonate	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Naphthalene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Nitrobenzene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
n-Nitrosodimethylamine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
n-Nitrosodi-n-butylamine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
n-Nitrosodi-n-propylamine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
n-Nitrosodiphenylamine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
n-Nitrosopiperidine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
o+m+p-Cresols	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
o-Cresol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
p-(Dimethylamino) azobenzene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
p-Chloro-m-cresol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Pentachloronitrobenzene (quintozene)	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Pentachlorophenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Phenacetin	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Phenanthrene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS



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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-14

Laboratory Sample ID: 24A1221-07

Grab Date/Time: 01/18/2024 09:45

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Pronamide	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Pyrene	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Pyridine	07	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:04	BMS
Surr: 2,4,6-Tribromophenol (Surr)	07	SW8270E	104 %	S	15-96		01/23/24 12:00	01/24/24 18:04	BMS
Surr: 2-Fluorobiphenyl (Surr)	07	SW8270E	62.1 %		19-105		01/23/24 12:00	01/24/24 18:04	BMS
Surr: 2-Fluorophenol (Surr)	07	SW8270E	81.8 %		12-95		01/23/24 12:00	01/24/24 18:04	BMS
Surr: Nitrobenzene-d5 (Surr)	07	SW8270E	88.1 %		21-100		01/23/24 12:00	01/24/24 18:04	BMS
Surr: Phenol-d5 (Surr)	07	SW8270E	83.7 %		13-100		01/23/24 12:00	01/24/24 18:04	BMS
Surr: p-Terphenyl-d14 (Surr)	07	SW8270E	140 %	S	25-125		01/23/24 12:00	01/24/24 18:04	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	07	SW8015C	18.4 mg/kg dry		10.0	1	01/23/24 15:45	01/24/24 15:05	ATG
Surr: n-Triacontane (Surr)	07	SW8015C	62.7 %		50-125		01/23/24 15:45	01/24/24 15:05	ATG
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	07	SW8082A	<0.108 mg/kg dry		0.108	1	01/22/24 13:00	01/22/24 23:15	ZDR
PCB as Aroclor 1221	07	SW8082A	<0.108 mg/kg dry		0.108	1	01/22/24 13:00	01/22/24 23:15	ZDR
PCB as Aroclor 1232	07	SW8082A	<0.108 mg/kg dry		0.108	1	01/22/24 13:00	01/22/24 23:15	ZDR
PCB as Aroclor 1242	07	SW8082A	<0.108 mg/kg dry		0.108	1	01/22/24 13:00	01/22/24 23:15	ZDR
PCB as Aroclor 1248	07	SW8082A	<0.108 mg/kg dry		0.108	1	01/22/24 13:00	01/22/24 23:15	ZDR
PCB as Aroclor 1254	07	SW8082A	<0.108 mg/kg dry		0.108	1	01/22/24 13:00	01/22/24 23:15	ZDR
PCB as Aroclor 1260	07	SW8082A	<0.108 mg/kg dry		0.108	1	01/22/24 13:00	01/22/24 23:15	ZDR
Surr: DCB	07	SW8082A	66.3 %		30-105		01/22/24 13:00	01/22/24 23:15	ZDR
Surr: TCMX	07	SW8082A	56.5 %		30-105		01/22/24 13:00	01/22/24 23:15	ZDR
4,4'-DDD	07	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 17:52	LBH2



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Sample I.D. P-14

Laboratory Sample ID: 24A1221-07

Grab Date/Time: 01/18/2024 09:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	07	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
4,4'-DDT	07	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
Aldrin	07	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
alpha-BHC	07	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
beta-BHC	07	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
Chlordane	07	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 17:52	LBH2
delta-BHC	07	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
Dieldrin	07	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
Endosulfan I	07	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
Endosulfan II	07	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
Endosulfan sulfate	07	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
Endrin	07	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
Endrin aldehyde	07	SW8081B	<8.00 ug/kg dry		8.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
gamma-BHC (Lindane)	07	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
Heptachlor	07	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 17:52	LBH2
Heptachlor epoxide	07	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 17:52	LBH2
Methoxychlor	07	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 17:52	LBH2
Toxaphene	07	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 17:52	LBH2
Surr: TCMX	07	SW8081B	62.3 %		30-105		01/22/24 13:00	01/25/24 17:52	LBH2
Surr: DCB	07	SW8081B	34.9 %		30-105		01/22/24 13:00	01/25/24 17:52	LBH2
Wet Chemistry Analysis									
Percent Solids	07	SM2540G-2011	89.6 %		0.10	1	01/22/24 16:02	01/22/24 16:02	KJM



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Analytical Results

Sample I.D. P-16 Laboratory Sample ID: 24A1221-08

Grab Date/Time: 01/18/2024 11:15

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	08	SW6010D	<0.996 mg/kg dry		0.996	2	01/22/24 10:30	01/24/24 11:01	ACM
Arsenic	08	SW6010D	3.51 mg/kg dry		1.99	2	01/22/24 10:30	01/24/24 11:01	ACM
Barium	08	SW6010D	19.1 mg/kg dry		0.996	2	01/22/24 10:30	01/24/24 11:01	ACM
Cadmium	08	SW6010D	<0.398 mg/kg dry		0.398	2	01/22/24 10:30	01/24/24 11:01	ACM
Chromium	08	SW6010D	6.94 mg/kg dry		0.996	2	01/22/24 10:30	01/24/24 11:01	ACM
Mercury	08	SW7471B	0.100 mg/kg dry		0.008	1	01/26/24 09:13	01/26/24 16:30	NBT
Lead	08	SW6010D	6.26 mg/kg dry		0.996	2	01/22/24 10:30	01/24/24 11:01	ACM
Selenium	08	SW6010D	<4.98 mg/kg dry		4.98	2	01/22/24 10:30	01/24/24 11:01	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	08	SW8015C	<0.10 mg/kg dry		0.10	1	01/23/24 15:36	01/23/24 15:36	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	08	SW8015C	81.2 %		80-120		01/23/24 15:36	01/23/24 15:36	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,1,1-Trichloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,1,2,2-Tetrachloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,1,2-Trichloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,1-Dichloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,1-Dichloroethylene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,1-Dichloropropene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,2,3-Trichlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,2,3-Trichloropropane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,2,4-Trichlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,2,4-Trimethylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,2-Dibromo-3-chloropropane (DBCP)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB



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Analytical Results

Sample I.D. P-16

Laboratory Sample ID: 24A1221-08

Grab Date/Time: 01/18/2024 11:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,2-Dichlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,2-Dichloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,2-Dichloropropane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,3,5-Trimethylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,3-Dichlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,3-Dichloropropane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
1,4-Dichlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
2,2-Dichloropropane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
2-Butanone (MEK)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
2-Chlorotoluene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
2-Hexanone (MBK)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
4-Chlorotoluene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
4-Isopropyltoluene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
4-Methyl-2-pentanone (MIBK)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Acetone	08	SW8260D	16.4 ug/kg dry		10.0	1	01/22/24 18:26	01/22/24 18:26	RJB
Benzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Bromobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Bromochloromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Bromodichloromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Bromoform	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Bromomethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Carbon disulfide	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Carbon tetrachloride	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Chlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Chloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-16

Laboratory Sample ID: 24A1221-08

Grab Date/Time: 01/18/2024 11:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Chloromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
cis-1,2-Dichloroethylene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
cis-1,3-Dichloropropene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Dibromochloromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Dibromomethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Dichlorodifluoromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Di-isopropyl ether (DIPE)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Ethylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Hexachlorobutadiene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Iodomethane	08	SW8260D	<10.0 ug/kg dry	C	10.0	1	01/22/24 18:26	01/22/24 18:26	RJB
Isopropylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
m+p-Xylenes	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Methylene chloride	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Methyl-t-butyl ether (MTBE)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Naphthalene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
n-Butylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
n-Propylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
o-Xylene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
sec-Butylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Styrene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
tert-Butylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Tetrachloroethylene (PCE)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Toluene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
trans-1,2-Dichloroethylene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
trans-1,3-Dichloropropene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB



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Final Report

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Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-16 Laboratory Sample ID: 24A1221-08

Grab Date/Time: 01/18/2024 11:15

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Trichlorofluoromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Vinyl acetate	08	SW8260D	<10.0 ug/kg dry		10.0	1	01/22/24 18:26	01/22/24 18:26	RJB
Vinyl chloride	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:26	01/22/24 18:26	RJB
Xylenes, Total	08	SW8260D	<15.0 ug/kg dry		15.0	1	01/22/24 18:26	01/22/24 18:26	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	08	SW8260D	101 %		80-120		01/22/24 18:26	01/22/24 18:26	RJB
Surr: 4-Bromofluorobenzene (Surr)	08	SW8260D	101 %		85-120		01/22/24 18:26	01/22/24 18:26	RJB
Surr: Dibromofluoromethane (Surr)	08	SW8260D	100 %		80-130		01/22/24 18:26	01/22/24 18:26	RJB
Surr: Toluene-d8 (Surr)	08	SW8260D	101 %		85-115		01/22/24 18:26	01/22/24 18:26	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
1,2,4-Trichlorobenzene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
1,2-Dichlorobenzene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
1,2-Diphenylhydrazine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
1,3-Dichlorobenzene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
1,3-Dinitrobenzene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
1,4-Dichlorobenzene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
1-Chloronaphthalene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
1-Naphthylamine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2,3,4,6-Tetrachlorophenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2,4,5-Trichlorophenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2,4,6-Trichlorophenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2,4-Dichlorophenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS



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Analytical Results

Sample I.D. P-16 Laboratory Sample ID: 24A1221-08

Grab Date/Time: 01/18/2024 11:15

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2,4-Dinitrophenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2,4-Dinitrotoluene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2,6-Dichlorophenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2,6-Dinitrotoluene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2-Chloronaphthalene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2-Chlorophenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2-Methylnaphthalene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2-Naphthylamine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2-Nitroaniline	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2-Nitrophenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
3,3'-Dichlorobenzidine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
3-Methylcholanthrene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
3-Nitroaniline	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
4,6-Dinitro-2-methylphenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
4-Aminobiphenyl	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
4-Bromophenyl phenyl ether	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
4-Chloroaniline	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
4-Chlorophenyl phenyl ether	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
4-Nitroaniline	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
4-Nitrophenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
7,12-Dimethylbenz (a) anthracene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Acenaphthene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Acenaphthylene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Acetophenone	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS



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Analytical Results

Sample I.D. P-16 Laboratory Sample ID: 24A1221-08

Grab Date/Time: 01/18/2024 11:15

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Aniline	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Anthracene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Benzidine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Benzo (a) anthracene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Benzo (a) pyrene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Benzo (b) fluoranthene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Benzo (g,h,i) perylene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Benzo (k) fluoranthene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Benzoic acid	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Benzyl alcohol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
bis (2-Chloroethoxy) methane	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
bis (2-Chloroethyl) ether	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
2,2'-Oxybis (1-chloropropane)	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
bis (2-Ethylhexyl) phthalate	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Butyl benzyl phthalate	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Chrysene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Dibenz (a,h) anthracene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Dibenz (a,j) acridine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Dibenzofuran	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Diethyl phthalate	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Dimethyl phthalate	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Di-n-butyl phthalate	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Di-n-octyl phthalate	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Diphenylamine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Ethyl methanesulfonate	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Fluoranthene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS



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Grab Date/Time: 01/18/2024 11:15

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Hexachlorobenzene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Hexachlorobutadiene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Hexachlorocyclopentadiene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Hexachloroethane	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Indeno (1,2,3-cd) pyrene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Isophorone	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
m+p-Cresols	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Methyl methanesulfonate	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Naphthalene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Nitrobenzene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
n-Nitrosodimethylamine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
n-Nitrosodi-n-butylamine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
n-Nitrosodi-n-propylamine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
n-Nitrosodiphenylamine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
n-Nitrosopiperidine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
o+m+p-Cresols	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
o-Cresol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
p-(Dimethylamino) azobenzene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
p-Chloro-m-cresol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Pentachloronitrobenzene (quintozene)	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Pentachlorophenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Phenacetin	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Phenanthrene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-16

Laboratory Sample ID: 24A1221-08

Grab Date/Time: 01/18/2024 11:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Pronamide	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Pyrene	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Pyridine	08	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 18:33	BMS
Surr: 2,4,6-Tribromophenol (Surr)	08	SW8270E	119 %	S	15-96		01/23/24 12:00	01/24/24 18:33	BMS
Surr: 2-Fluorobiphenyl (Surr)	08	SW8270E	70.1 %		19-105		01/23/24 12:00	01/24/24 18:33	BMS
Surr: 2-Fluorophenol (Surr)	08	SW8270E	96.7 %	S	12-95		01/23/24 12:00	01/24/24 18:33	BMS
Surr: Nitrobenzene-d5 (Surr)	08	SW8270E	101 %	S	21-100		01/23/24 12:00	01/24/24 18:33	BMS
Surr: Phenol-d5 (Surr)	08	SW8270E	98.4 %		13-100		01/23/24 12:00	01/24/24 18:33	BMS
Surr: p-Terphenyl-d14 (Surr)	08	SW8270E	126 %	S	25-125		01/23/24 12:00	01/24/24 18:33	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	08	SW8015C	16.0 mg/kg dry		10.0	1	01/23/24 15:45	01/24/24 15:27	ATG
Surr: n-Triacontane (Surr)	08	SW8015C	54.0 %		50-125		01/23/24 15:45	01/24/24 15:27	ATG
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	08	SW8082A	<0.120 mg/kg dry		0.120	1	01/22/24 13:00	01/23/24 00:14	ZDR
PCB as Aroclor 1221	08	SW8082A	<0.120 mg/kg dry		0.120	1	01/22/24 13:00	01/23/24 00:14	ZDR
PCB as Aroclor 1232	08	SW8082A	<0.120 mg/kg dry		0.120	1	01/22/24 13:00	01/23/24 00:14	ZDR
PCB as Aroclor 1242	08	SW8082A	<0.120 mg/kg dry		0.120	1	01/22/24 13:00	01/23/24 00:14	ZDR
PCB as Aroclor 1248	08	SW8082A	<0.120 mg/kg dry		0.120	1	01/22/24 13:00	01/23/24 00:14	ZDR
PCB as Aroclor 1254	08	SW8082A	<0.120 mg/kg dry		0.120	1	01/22/24 13:00	01/23/24 00:14	ZDR
PCB as Aroclor 1260	08	SW8082A	<0.120 mg/kg dry		0.120	1	01/22/24 13:00	01/23/24 00:14	ZDR
Surr: DCB	08	SW8082A	46.0 %		30-105		01/22/24 13:00	01/23/24 00:14	ZDR
Surr: TCMX	08	SW8082A	75.5 %		30-105		01/22/24 13:00	01/23/24 00:14	ZDR
4,4'-DDD	08	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 18:32	LBH2



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Date Issued: January 26, 2024 17:06
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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-16

Laboratory Sample ID: 24A1221-08

Grab Date/Time: 01/18/2024 11:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
4,4'-DDT	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
Aldrin	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
alpha-BHC	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
beta-BHC	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
Chlordane	08	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 18:32	LBH2
delta-BHC	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
Dieldrin	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
Endosulfan I	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
Endosulfan II	08	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
Endosulfan sulfate	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
Endrin	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
Endrin aldehyde	08	SW8081B	<8.00 ug/kg dry		8.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
gamma-BHC (Lindane)	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
Heptachlor	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:32	LBH2
Heptachlor epoxide	08	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 18:32	LBH2
Methoxychlor	08	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 18:32	LBH2
Toxaphene	08	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 18:32	LBH2
Surr: TCMX	08	SW8081B	66.4 %		30-105		01/22/24 13:00	01/25/24 18:32	LBH2
Surr: DCB	08	SW8081B	34.2 %		30-105		01/22/24 13:00	01/25/24 18:32	LBH2
Wet Chemistry Analysis									
Percent Solids	08	SM2540G-2011	83.1 %		0.10	1	01/22/24 16:02	01/22/24 16:02	KJM



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Analytical Results

Sample I.D. P-17

Laboratory Sample ID: 24A1221-09

Grab Date/Time: 01/18/2024 12:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	09	SW6010D	<4.78 mg/kg dry		4.78	10	01/22/24 10:30	01/24/24 11:14	ACM
Arsenic	09	SW6010D	<9.57 mg/kg dry		9.57	10	01/22/24 10:30	01/24/24 11:14	ACM
Barium	09	SW6010D	60.8 mg/kg dry		4.78	10	01/22/24 10:30	01/24/24 11:14	ACM
Cadmium	09	SW6010D	<1.91 mg/kg dry		1.91	10	01/22/24 10:30	01/24/24 11:14	ACM
Chromium	09	SW6010D	14.1 mg/kg dry		4.78	10	01/22/24 10:30	01/24/24 11:14	ACM
Mercury	09	SW7471B	0.091 mg/kg dry		0.008	1	01/23/24 11:19	01/23/24 15:53	NBT
Lead	09	SW6010D	14.9 mg/kg dry		4.78	10	01/22/24 10:30	01/24/24 11:14	ACM
Selenium	09	SW6010D	<23.9 mg/kg dry		23.9	10	01/22/24 10:30	01/24/24 11:14	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	09	SW8015C	<0.10 mg/kg dry		0.10	1	01/23/24 15:58	01/23/24 15:58	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	09	SW8015C	94.7 %		80-120		01/23/24 15:58	01/23/24 15:58	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,1,1-Trichloroethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,1,2,2-Tetrachloroethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,1,2-Trichloroethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,1-Dichloroethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,1-Dichloroethylene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,1-Dichloropropene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,2,3-Trichlorobenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,2,3-Trichloropropane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,2,4-Trichlorobenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,2,4-Trimethylbenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,2-Dibromo-3-chloropropane (DBCP)	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB



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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-17 Laboratory Sample ID: 24A1221-09

Grab Date/Time: 01/18/2024 12:00

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,2-Dichlorobenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,2-Dichloroethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,2-Dichloropropane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,3,5-Trimethylbenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,3-Dichlorobenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,3-Dichloropropane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
1,4-Dichlorobenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
2,2-Dichloropropane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
2-Butanone (MEK)	09	SW8260D	6.25 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
2-Chlorotoluene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
2-Hexanone (MBK)	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
4-Chlorotoluene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
4-Isopropyltoluene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
4-Methyl-2-pentanone (MIBK)	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Acetone	09	SW8260D	40.8 ug/kg dry		10.0	1	01/22/24 18:49	01/22/24 18:49	RJB
Benzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Bromobenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Bromochloromethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Bromodichloromethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Bromoform	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Bromomethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Carbon disulfide	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Carbon tetrachloride	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Chlorobenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Chloroethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB



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Analytical Results

Sample I.D. P-17

Laboratory Sample ID: 24A1221-09

Grab Date/Time: 01/18/2024 12:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Chloromethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
cis-1,2-Dichloroethylene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
cis-1,3-Dichloropropene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Dibromochloromethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Dibromomethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Dichlorodifluoromethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Di-isopropyl ether (DIPE)	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Ethylbenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Hexachlorobutadiene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Iodomethane	09	SW8260D	<10.0 ug/kg dry	C	10.0	1	01/22/24 18:49	01/22/24 18:49	RJB
Isopropylbenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
m+p-Xylenes	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Methylene chloride	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Methyl-t-butyl ether (MTBE)	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Naphthalene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
n-Butylbenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
n-Propylbenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
o-Xylene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
sec-Butylbenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Styrene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
tert-Butylbenzene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Tetrachloroethylene (PCE)	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Toluene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
trans-1,2-Dichloroethylene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
trans-1,3-Dichloropropene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB



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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-17 Laboratory Sample ID: 24A1221-09

Grab Date/Time: 01/18/2024 12:00

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Trichlorofluoromethane	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Vinyl acetate	09	SW8260D	<10.0 ug/kg dry		10.0	1	01/22/24 18:49	01/22/24 18:49	RJB
Vinyl chloride	09	SW8260D	<5.00 ug/kg dry		5.00	1	01/22/24 18:49	01/22/24 18:49	RJB
Xylenes, Total	09	SW8260D	<15.0 ug/kg dry		15.0	1	01/22/24 18:49	01/22/24 18:49	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	09	SW8260D	97.4 %		80-120		01/22/24 18:49	01/22/24 18:49	RJB
Surr: 4-Bromofluorobenzene (Surr)	09	SW8260D	99.6 %		85-120		01/22/24 18:49	01/22/24 18:49	RJB
Surr: Dibromofluoromethane (Surr)	09	SW8260D	99.8 %		80-130		01/22/24 18:49	01/22/24 18:49	RJB
Surr: Toluene-d8 (Surr)	09	SW8260D	99.7 %		85-115		01/22/24 18:49	01/22/24 18:49	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
1,2,4-Trichlorobenzene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
1,2-Dichlorobenzene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
1,2-Diphenylhydrazine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
1,3-Dichlorobenzene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
1,3-Dinitrobenzene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
1,4-Dichlorobenzene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
1-Chloronaphthalene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
1-Naphthylamine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2,3,4,6-Tetrachlorophenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2,4,5-Trichlorophenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2,4,6-Trichlorophenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2,4-Dichlorophenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-17 Laboratory Sample ID: 24A1221-09

Grab Date/Time: 01/18/2024 12:00

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2,4-Dinitrophenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2,4-Dinitrotoluene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2,6-Dichlorophenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2,6-Dinitrotoluene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2-Chloronaphthalene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2-Chlorophenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2-Methylnaphthalene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2-Naphthylamine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2-Nitroaniline	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2-Nitrophenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
3,3'-Dichlorobenzidine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
3-Methylcholanthrene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
3-Nitroaniline	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
4,6-Dinitro-2-methylphenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
4-Aminobiphenyl	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
4-Bromophenyl phenyl ether	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
4-Chloroaniline	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
4-Chlorophenyl phenyl ether	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
4-Nitroaniline	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
4-Nitrophenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
7,12-Dimethylbenz (a) anthracene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Acenaphthene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Acenaphthylene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Acetophenone	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS



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Project Number: 22-02065 001
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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-17 Laboratory Sample ID: 24A1221-09

Grab Date/Time: 01/18/2024 12:00

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Aniline	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Anthracene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Benzidine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Benzo (a) anthracene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Benzo (a) pyrene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Benzo (b) fluoranthene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Benzo (g,h,i) perylene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Benzo (k) fluoranthene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Benzoic acid	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Benzyl alcohol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
bis (2-Chloroethoxy) methane	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
bis (2-Chloroethyl) ether	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
2,2'-Oxybis (1-chloropropane)	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
bis (2-Ethylhexyl) phthalate	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Butyl benzyl phthalate	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Chrysene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Dibenz (a,h) anthracene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Dibenz (a,j) acridine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Dibenzofuran	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Diethyl phthalate	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Dimethyl phthalate	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Di-n-butyl phthalate	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Di-n-octyl phthalate	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Diphenylamine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Ethyl methanesulfonate	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Fluoranthene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS



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Project Number: 22-02065 001
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Laboratory Order ID: 24A1221

Analytical Results

Sample I.D. P-17 Laboratory Sample ID: 24A1221-09

Grab Date/Time: 01/18/2024 12:00

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Hexachlorobenzene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Hexachlorobutadiene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Hexachlorocyclopentadiene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Hexachloroethane	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Indeno (1,2,3-cd) pyrene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Isophorone	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
m+p-Cresols	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Methyl methanesulfonate	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Naphthalene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Nitrobenzene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
n-Nitrosodimethylamine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
n-Nitrosodi-n-butylamine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
n-Nitrosodi-n-propylamine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
n-Nitrosodiphenylamine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
n-Nitrosopiperidine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
o+m+p-Cresols	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
o-Cresol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
p-(Dimethylamino) azobenzene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
p-Chloro-m-cresol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Pentachloronitrobenzene (quintozene)	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Pentachlorophenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Phenacetin	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Phenanthrene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS



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Analytical Results

Sample I.D. P-17

Laboratory Sample ID: 24A1221-09

Grab Date/Time: 01/18/2024 12:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Pronamide	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Pyrene	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Pyridine	09	SW8270E	<83.3 ug/kg dry		83.3	1	01/23/24 12:00	01/24/24 19:02	BMS
Surr: 2,4,6-Tribromophenol (Surr)	09	SW8270E	114 %	S	15-96		01/23/24 12:00	01/24/24 19:02	BMS
Surr: 2-Fluorobiphenyl (Surr)	09	SW8270E	65.1 %		19-105		01/23/24 12:00	01/24/24 19:02	BMS
Surr: 2-Fluorophenol (Surr)	09	SW8270E	84.3 %		12-95		01/23/24 12:00	01/24/24 19:02	BMS
Surr: Nitrobenzene-d5 (Surr)	09	SW8270E	96.0 %		21-100		01/23/24 12:00	01/24/24 19:02	BMS
Surr: Phenol-d5 (Surr)	09	SW8270E	91.4 %		13-100		01/23/24 12:00	01/24/24 19:02	BMS
Surr: p-Terphenyl-d14 (Surr)	09	SW8270E	116 %		25-125		01/23/24 12:00	01/24/24 19:02	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	09	SW8015C	19.6 mg/kg dry		10.0	1	01/23/24 15:45	01/24/24 15:48	ATG
Surr: n-Triacontane (Surr)	09	SW8015C	64.4 %		50-125		01/23/24 15:45	01/24/24 15:48	ATG
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	09	SW8082A	<0.115 mg/kg dry		0.115	1	01/22/24 13:00	01/23/24 00:33	ZDR
PCB as Aroclor 1221	09	SW8082A	<0.115 mg/kg dry		0.115	1	01/22/24 13:00	01/23/24 00:33	ZDR
PCB as Aroclor 1232	09	SW8082A	<0.115 mg/kg dry		0.115	1	01/22/24 13:00	01/23/24 00:33	ZDR
PCB as Aroclor 1242	09	SW8082A	<0.115 mg/kg dry		0.115	1	01/22/24 13:00	01/23/24 00:33	ZDR
PCB as Aroclor 1248	09	SW8082A	<0.115 mg/kg dry		0.115	1	01/22/24 13:00	01/23/24 00:33	ZDR
PCB as Aroclor 1254	09	SW8082A	<0.115 mg/kg dry		0.115	1	01/22/24 13:00	01/23/24 00:33	ZDR
PCB as Aroclor 1260	09	SW8082A	<0.115 mg/kg dry		0.115	1	01/22/24 13:00	01/23/24 00:33	ZDR
Surr: DCB	09	SW8082A	60.1 %		30-105		01/22/24 13:00	01/23/24 00:33	ZDR
Surr: TCMX	09	SW8082A	46.6 %		30-105		01/22/24 13:00	01/23/24 00:33	ZDR
4,4'-DDD	09	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 18:45	LBH2



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Sample I.D. P-17

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Grab Date/Time: 01/18/2024 12:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	09	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
4,4'-DDT	09	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
Aldrin	09	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
alpha-BHC	09	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
beta-BHC	09	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
Chlordane	09	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 18:45	LBH2
delta-BHC	09	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
Dieldrin	09	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
Endosulfan I	09	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
Endosulfan II	09	SW8081B	<6.00 ug/kg dry		6.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
Endosulfan sulfate	09	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
Endrin	09	SW8081B	<4.00 ug/kg dry		4.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
Endrin aldehyde	09	SW8081B	<8.00 ug/kg dry		8.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
gamma-BHC (Lindane)	09	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
Heptachlor	09	SW8081B	<2.00 ug/kg dry		2.00	1	01/22/24 13:00	01/25/24 18:45	LBH2
Heptachlor epoxide	09	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 18:45	LBH2
Methoxychlor	09	SW8081B	<40.0 ug/kg dry		40.0	1	01/22/24 13:00	01/25/24 18:45	LBH2
Toxaphene	09	SW8081B	<42.0 ug/kg dry		42.0	1	01/22/24 13:00	01/25/24 18:45	LBH2
Surr: TCMX	09	SW8081B	62.7 %		30-105		01/22/24 13:00	01/25/24 18:45	LBH2
Surr: DCB	09	SW8081B	56.4 %		30-105		01/22/24 13:00	01/25/24 18:45	LBH2
Wet Chemistry Analysis									
Percent Solids	09	SM2540G-2011	86.4 %		0.10	1	01/22/24 16:02	01/22/24 16:02	KJM



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310 Project Number: 22-02065 001
Purchase Order:
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Metals (Total) by EPA 6000/7000 Series Methods

Preparation Method:

EPA245.1R3.0/SW7470A

24A1221-01	0.585 g / 20.0 mL	SW7471B	BHA0784	SHA0731	AA40285
24A1221-05	0.534 g / 20.0 mL	SW7471B	BHA0784	SHA0731	AA40285

Metals (Total) by EPA 6000/7000 Series Methods

Preparation Method:

EPA245.1R3.0/SW7470A

24A1221-08	0.526 g / 20.0 mL	SW7471B	BHA0895	SHA0812	AA40303

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Wet Chemistry Analysis

Preparation Method:

No Prep Wet Chem

24A1221-01	10.0 g / 10.0 mL	SM2540G-2011	BHA0722	SHA0660	
24A1221-03	10.0 g / 10.0 mL	SM2540G-2011	BHA0722	SHA0660	
24A1221-04	10.0 g / 10.0 mL	SM2540G-2011	BHA0722	SHA0660	
24A1221-05	10.0 g / 10.0 mL	SM2540G-2011	BHA0722	SHA0660	
24A1221-06	10.0 g / 10.0 mL	SM2540G-2011	BHA0722	SHA0660	
24A1221-07	10.0 g / 10.0 mL	SM2540G-2011	BHA0722	SHA0660	
24A1221-08	10.0 g / 10.0 mL	SM2540G-2011	BHA0722	SHA0660	
24A1221-09	10.0 g / 10.0 mL	SM2540G-2011	BHA0722	SHA0660	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Metals (Total) by EPA 6000/7000 Series Methods

Preparation Method:

SW3050B-ICP

24A1221-01	1.03 g / 50.0 mL	SW6010D	BHA0686	SHA0717	AA40274
24A1221-02	1.04 g / 50.0 mL	SW6010D	BHA0686	SHA0718	AA40280
24A1221-03	1.09 g / 50.0 mL	SW6010D	BHA0686	SHA0718	AA40280
24A1221-04	1.04 g / 50.0 mL	SW6010D	BHA0686	SHA0718	AA40280
24A1221-05	1.01 g / 50.0 mL	SW6010D	BHA0686	SHA0717	AA40274
24A1221-05RE1	1.01 g / 50.0 mL	SW6010D	BHA0686	SHA0718	AA40280
24A1221-06	1.01 g / 50.0 mL	SW6010D	BHA0686	SHA0718	AA40280
24A1221-07	1.04 g / 50.0 mL	SW6010D	BHA0686	SHA0718	AA40280
24A1221-08	1.00 g / 50.0 mL	SW6010D	BHA0686	SHA0718	AA40280



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
24A1221-09	1.04 g / 50.0 mL	SW6010D	BHA0686	SHA0718	AA40280

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Organochlorine Pesticides and PCBs by GC/ECD

Preparation Method: SW3550C/EPA600-ECD

24A1221-01	31.4 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218
24A1221-03	31.9 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218
24A1221-04	31.3 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218
24A1221-05	31.2 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218
24A1221-06	32.0 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218
24A1221-07	31.1 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218
24A1221-08	30.2 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218
24A1221-09	30.3 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Semivolatile Hydrocarbons by GC

Preparation Method: SW3550C/EPA600-FID

24A1221-01	50.4 g / 1.00 mL	SW8015C	BHA0730	SHA0762	AL30311
24A1221-04	50.4 g / 1.00 mL	SW8015C	BHA0730	SHA0762	AL30311
24A1221-05	50.0 g / 1.00 mL	SW8015C	BHA0730	SHA0762	AL30311

Semivolatile Hydrocarbons by GC

Preparation Method: SW3550C/EPA600-FID

24A1221-06	50.8 g / 1.00 mL	SW8015C	BHA0765	SHA0778	AL30311
24A1221-07	51.3 g / 1.00 mL	SW8015C	BHA0765	SHA0778	AL30311
24A1221-08	50.5 g / 1.00 mL	SW8015C	BHA0765	SHA0778	AL30311
24A1221-09	50.5 g / 1.00 mL	SW8015C	BHA0765	SHA0778	AL30311

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Semivolatile Organic Compounds by GC/MS

Preparation Method: SW3550C/EPA600-MS

24A1221-01	30.1 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271
24A1221-03	31.6 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271
24A1221-04	30.8 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271
24A1221-05	31.2 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271
24A1221-06	30.6 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271
24A1221-07	30.8 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
24A1221-08	30.7 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271
24A1221-09	30.1 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC		Preparation Method: SW5030B-GC			
24A1221-01	5.08 g / 5.00 mL	SW8015C	BHA0717	SHA0651	AA40215
24A1221-04	5.13 g / 5.00 mL	SW8015C	BHA0717	SHA0651	AA40215
24A1221-05	5.06 g / 5.00 mL	SW8015C	BHA0717	SHA0651	AA40215
24A1221-06	5.08 g / 5.00 mL	SW8015C	BHA0717	SHA0651	AA40215
24A1221-07	5.05 g / 5.00 mL	SW8015C	BHA0717	SHA0651	AA40215
24A1221-08	5.17 g / 5.00 mL	SW8015C	BHA0717	SHA0651	AA40215
24A1221-09	5.07 g / 5.00 mL	SW8015C	BHA0717	SHA0651	AA40215

Volatile Hydrocarbons by GC		Preparation Method: SW5030B-GC			
24A1221-05RE1	1.05 g / 5.00 mL	SW8015C	BHA0809	SHA0737	AA40215

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS		Preparation Method: SW5030B-MS			
24A1221-01	5.02 g / 5.00 mL	SW8260D	BHA0710	SHA0654	AA40197
24A1221-04	5.00 g / 5.00 mL	SW8260D	BHA0710	SHA0654	AA40197
24A1221-05	1.06 g / 5.00 mL	SW8260D	BHA0710	SHA0654	AA40197
24A1221-06	5.07 g / 5.00 mL	SW8260D	BHA0710	SHA0654	AA40197
24A1221-07	5.04 g / 5.00 mL	SW8260D	BHA0710	SHA0654	AA40197
24A1221-08	5.10 g / 5.00 mL	SW8260D	BHA0710	SHA0654	AA40197
24A1221-09	5.03 g / 5.00 mL	SW8260D	BHA0710	SHA0654	AA40197

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: SW7471B			
24A1221-02	0.521 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279
24A1221-03	0.517 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279
24A1221-04	0.501 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279
24A1221-06	0.532 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279
24A1221-07	0.549 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
24A1221-09	0.510 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Organochlorine Pesticides and PCBs by GC/ECD		Preparation Method:		SW8151A/EPA600	
24A1221-01	31.4 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
24A1221-03	31.9 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
24A1221-04	31.3 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
24A1221-05	31.2 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
24A1221-06	32.0 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
24A1221-07	31.1 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
24A1221-08	30.2 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
24A1221-09	30.3 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206



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QC Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods			Preparation Method:	EPA245.1R3.0/SW7470A	
BHA0784-BLK1	0.536 g / 20.0 mL	SW7471B	BHA0784	SHA0731	AA40285
BHA0784-BS1	0.553 g / 20.0 mL	SW7471B	BHA0784	SHA0731	AA40285
BHA0784-MS1	0.533 g / 20.0 mL	SW7471B	BHA0784	SHA0731	AA40285
BHA0784-MSD1	0.516 g / 20.0 mL	SW7471B	BHA0784	SHA0731	AA40285
BHA0895-BLK1	0.508 g / 20.0 mL	SW7471B	BHA0895	SHA0812	AA40303
BHA0895-BS1	0.509 g / 20.0 mL	SW7471B	BHA0895	SHA0812	AA40303
BHA0895-MS1	0.522 g / 20.0 mL	SW7471B	BHA0895	SHA0812	AA40303
BHA0895-MSD1	0.506 g / 20.0 mL	SW7471B	BHA0895	SHA0812	AA40303
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis			Preparation Method:	No Prep Wet Chem	
BHA0722-BLK1	10.0 g / 10.0 mL	SM2540G-2011	BHA0722	SHA0660	
BHA0722-DUP1	10.0 g / 10.0 mL	SM2540G-2011	BHA0722	SHA0660	
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods			Preparation Method:	SW3050B-ICP	
BHA0686-BLK1	1.07 g / 50.0 mL	SW6010D	BHA0686	SHA0717	AA40274
BHA0686-BS1	1.06 g / 50.0 mL	SW6010D	BHA0686	SHA0717	AA40274
BHA0686-MS1	1.04 g / 50.0 mL	SW6010D	BHA0686	SHA0718	AA40280
BHA0686-MS2		SW6010D	BHA0686	SHA0718	AA40280
BHA0686-MSD1	1.07 g / 50.0 mL	SW6010D	BHA0686	SHA0718	AA40280
BHA0686-MSD2		SW6010D	BHA0686	SHA0718	AA40280
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD			Preparation Method:	SW3550C/EPA600-ECD	
BHA0715-BLK1	30.5 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218
BHA0715-BS1	30.6 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218
BHA0715-MS1	31.0 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD			Preparation Method: SW3550C/EPA600-ECD		
BHA0715-MSD1	31.0 g / 5.00 mL	SW8082A	BHA0715	SHA0683	AA40218

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Hydrocarbons by GC			Preparation Method: SW3550C/EPA600-FID		
BHA0730-BLK1	51.0 g / 1.00 mL	SW8015C	BHA0730	SHA0762	AL30311
BHA0730-BS1	51.2 g / 1.00 mL	SW8015C	BHA0730	SHA0762	AL30311
BHA0730-MS1	50.1 g / 1.00 mL	SW8015C	BHA0730	SHA0778	AL30311
BHA0730-MSD1	50.2 g / 1.00 mL	SW8015C	BHA0730	SHA0778	AL30311
BHA0765-BLK1	50.2 g / 1.00 mL	SW8015C	BHA0765	SHA0778	AL30311
BHA0765-BS1	50.9 g / 1.00 mL	SW8015C	BHA0765	SHA0778	AL30311
BHA0765-MS1	50.3 g / 1.00 mL	SW8015C	BHA0765	SHA0778	AL30311
BHA0765-MSD1	50.9 g / 1.00 mL	SW8015C	BHA0765	SHA0778	AL30311

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS			Preparation Method: SW3550C/EPA600-MS		
BHA0758-BLK1	30.2 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271
BHA0758-BLK2		SW8270E	BHA0758	SHA0798	AA40281
BHA0758-BS1	31.7 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271
BHA0758-BS2		SW8270E	BHA0758	SHA0798	AA40281
BHA0758-MS1	30.0 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271
BHA0758-MSD1	31.1 g / 1.00 mL	SW8270E	BHA0758	SHA0784	AK30271

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC			Preparation Method: SW5030B-GC		
BHA0717-BLK1	5.00 g / 5.00 mL	SW8015C	BHA0717	SHA0651	AA40215
BHA0717-BS1	5.00 g / 5.00 mL	SW8015C	BHA0717	SHA0651	AA40215
BHA0717-MS1	5.09 g / 5.00 mL	SW8015C	BHA0717	SHA0651	AA40215
BHA0717-MSD1	5.02 g / 5.00 mL	SW8015C	BHA0717	SHA0651	AA40215
BHA0809-BLK1	5.00 g / 5.00 mL	SW8015C	BHA0809	SHA0737	AA40215
BHA0809-BS1	5.00 g / 5.00 mL	SW8015C	BHA0809	SHA0737	AA40215
BHA0809-MS1	5.05 g / 5.00 mL	SW8015C	BHA0809	SHA0737	AA40215
BHA0809-MSD1	5.13 g / 5.00 mL	SW8015C	BHA0809	SHA0737	AA40215



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS			Preparation Method:	SW5030B-MS	
BHA0710-BLK1	5.00 g / 5.00 mL	SW8260D	BHA0710	SHA0654	AA40197
BHA0710-BS1	5.00 g / 5.00 mL	SW8260D	BHA0710	SHA0654	AA40197
BHA0710-MS1	5.06 g / 5.00 mL	SW8260D	BHA0710	SHA0654	AA40197
BHA0710-MSD1	5.02 g / 5.00 mL	SW8260D	BHA0710	SHA0654	AA40197

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods			Preparation Method:	SW7471B	
BHA0742-BLK1	0.570 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279
BHA0742-BS1	0.582 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279
BHA0742-MS1	0.529 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279
BHA0742-MS2	0.543 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279
BHA0742-MSD1	0.532 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279
BHA0742-MSD2	0.528 g / 20.0 mL	SW7471B	BHA0742	SHA0688	AA40279

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD			Preparation Method:	SW8151A/EPA600	
BHA0719-BLK1	30.5 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
BHA0719-BS1	30.2 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
BHA0719-BS3	30.0 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
BHA0719-BS4	30.1 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
BHA0719-MS1	31.4 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206
BHA0719-MSD1	31.3 g / 5.00 mL	SW8081B	BHA0719	SHA0820	AA40206



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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0686 - SW3050B-ICP

Blank (BHA0686-BLK1)

Prepared: 01/22/2024 Analyzed: 01/23/2024

Barium	<0.500 mg/kg wet	0.500	mg/kg wet
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet
Lead	<0.500 mg/kg wet	0.500	mg/kg wet
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet
Silver	<0.500 mg/kg wet	0.500	mg/kg wet

LCS (BHA0686-BS1)

Prepared: 01/22/2024 Analyzed: 01/23/2024

Cadmium	98.8 mg/kg wet	0.200	mg/kg wet	94.6	mg/kg wet	104	80-120
Silver	4.88 mg/kg wet	0.500	mg/kg wet	4.73	mg/kg wet	103	80-120
Selenium	91.1 mg/kg wet	2.50	mg/kg wet	94.6	mg/kg wet	96.3	80-120
Chromium	100 mg/kg wet	0.500	mg/kg wet	94.6	mg/kg wet	106	80-120
Barium	102 mg/kg wet	0.500	mg/kg wet	94.6	mg/kg wet	108	80-120
Arsenic	96.8 mg/kg wet	1.00	mg/kg wet	94.6	mg/kg wet	102	80-120
Lead	101 mg/kg wet	0.500	mg/kg wet	94.6	mg/kg wet	107	80-120

Matrix Spike (BHA0686-MS1)

Source: 24A1203-01

Prepared: 01/22/2024 Analyzed: 01/24/2024

Silver	11.8 mg/kg dry	2.40	mg/kg dry	12.9	<2.40 mg/kg	91.0	75-125		M2
Arsenic	244 mg/kg dry	4.80	mg/kg dry	259	16.9 mg/kg dry	87.8	75-125		M2
Barium	371 mg/kg dry	2.40	mg/kg dry	259	146 mg/kg dry	86.8	75-125		M2
Cadmium	235 mg/kg dry	0.961	mg/kg dry	259	1.43 mg/kg dry	90.2	75-125		M2
Chromium	292 mg/kg dry	2.40	mg/kg dry	259	51.0 mg/kg dry	93.2	75-125		M2
Lead	422 mg/kg dry	2.40	mg/kg dry	259	176 mg/kg dry	95.2	75-125		M2
Selenium	229 mg/kg dry	12.0	mg/kg dry	259	<12.0 mg/kg	88.5	75-125		M2

Matrix Spike Dup (BHA0686-MSD1)

Source: 24A1203-01

Prepared: 01/22/2024 Analyzed: 01/24/2024

Barium	326 mg/kg dry	2.33	mg/kg dry	251	146 mg/kg dry	71.7	75-125	12.7	20	M2
Cadmium	230 mg/kg dry	0.932	mg/kg dry	251	1.43 mg/kg dry	91.3	75-125	1.82	20	
Chromium	281 mg/kg dry	2.33	mg/kg dry	251	51.0 mg/kg dry	91.9	75-125	3.69	20	
Lead	384 mg/kg dry	2.33	mg/kg dry	251	176 mg/kg dry	82.9	75-125	9.52	20	
Selenium	224 mg/kg dry	11.6	mg/kg dry	251	<11.6 mg/kg	89.2	75-125	2.24	20	
Silver	10.4 mg/kg dry	2.33	mg/kg dry	12.5	<2.33 mg/kg	83.0	75-125	12.2	20	



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310 Project Number: 22-02065 001
Purchase Order:
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0686 - SW3050B-ICP

Matrix Spike Dup (BHA0686-MSD1) Source: 24A1203-01 Prepared: 01/22/2024 Analyzed: 01/24/2024

Arsenic 238 mg/kg dry 4.66 mg/kg dry 251 16.9 mg/kg dry 88.3 75-125 2.29 20

Batch BHA0742 - SW7471B

Blank (BHA0742-BLK1) Prepared & Analyzed: 01/23/2024

Mercury <0.008 mg/kg wet 0.008 mg/kg wet

LCS (BHA0742-BS1) Prepared & Analyzed: 01/23/2024

Mercury 0.091 mg/kg wet 0.008 mg/kg wet 0.0859 mg/kg wet 106 80-120

Matrix Spike (BHA0742-MS1) Source: 24A0705-10 Prepared & Analyzed: 01/23/2024

Mercury 0.099 mg/kg wet 0.008 mg/kg wet 0.0945 0.022 mg/kg wet 81.7 80-120

Matrix Spike (BHA0742-MS2) Source: 24A0705-11 Prepared & Analyzed: 01/23/2024

Mercury 0.104 mg/kg wet 0.008 mg/kg wet 0.0921 0.012 mg/kg wet 101 80-120

Matrix Spike Dup (BHA0742-MSD1) Source: 24A0705-10 Prepared & Analyzed: 01/23/2024

Mercury 0.103 mg/kg wet 0.008 mg/kg wet 0.0940 0.022 mg/kg wet 86.9 80-120 4.45 20

Matrix Spike Dup (BHA0742-MSD2) Source: 24A0705-11 Prepared & Analyzed: 01/23/2024

Mercury 0.104 mg/kg wet 0.008 mg/kg wet 0.0947 0.012 mg/kg wet 97.8 80-120 0.127 20

Batch BHA0784 - EPA245.1R3.0/SW7470A

Blank (BHA0784-BLK1) Prepared & Analyzed: 01/24/2024

Mercury <0.008 mg/kg wet 0.008 mg/kg wet



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Batch BHA0784 - EPA245.1R3.0/SW7470A

LCS (BHA0784-BS1)		Prepared & Analyzed: 01/24/2024								
Mercury	0.073 mg/kg wet	0.008	mg/kg wet	0.0904	mg/kg wet	80.5	80-120			
Matrix Spike (BHA0784-MS1)		Source: 24A1290-04		Prepared & Analyzed: 01/24/2024						
Mercury	0.075 mg/kg dry	0.008	mg/kg dry	0.109	0.023 mg/kg dry	48.1	80-120			M
Matrix Spike Dup (BHA0784-MSD1)		Source: 24A1290-04		Prepared & Analyzed: 01/24/2024						
Mercury	0.170 mg/kg dry	0.008	mg/kg dry	0.112	0.023 mg/kg dry	131	80-120	77.3	20	M, P

Batch BHA0895 - EPA245.1R3.0/SW7470A

Blank (BHA0895-BLK1)		Prepared & Analyzed: 01/26/2024								
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet							
LCS (BHA0895-BS1)		Prepared & Analyzed: 01/26/2024								
Mercury	0.103 mg/kg wet	0.008	mg/kg wet	0.0982	mg/kg wet	105	80-120			
Matrix Spike (BHA0895-MS1)		Source: 24A1359-10		Prepared & Analyzed: 01/26/2024						
Mercury	0.130 mg/kg dry	0.008	mg/kg dry	0.111	<0.008 mg/kg	116	80-120			
Matrix Spike Dup (BHA0895-MSD1)		Source: 24A1359-10		Prepared & Analyzed: 01/26/2024						
Mercury	0.127 mg/kg dry	0.008	mg/kg dry	0.115	<0.008 mg/kg	110	80-120	2.54	20	



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Volatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

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Batch BHA0717 - SW5030B-GC

Blank (BHA0717-BLK1)

Prepared & Analyzed: 01/23/2024

TPH-Volatiles (GRO)	<0.10 mg/kg wet	0.10	mg/kg wet							
Surr: 2,5-Dibromotoluene (Surr FID)	96.1		ug/L	100		96.1	80-120			

LCS (BHA0717-BS1)

Prepared & Analyzed: 01/23/2024

TPH-Volatiles (GRO)	0.87 mg/kg wet	0.10	mg/kg wet	1.00	mg/kg wet	87.1	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	99.8		ug/L	100	ug/L	99.8	80-120			

Matrix Spike (BHA0717-MS1)

Source: 24A1221-01

Prepared & Analyzed: 01/24/2024

TPH-Volatiles (GRO)	0.98 mg/kg dry	0.10	mg/kg dry	1.19	0.34 mg/kg dry	53.9	70-130			M
Surr: 2,5-Dibromotoluene (Surr FID)	103		ug/L	100	ug/L	103	80-120			

Matrix Spike Dup (BHA0717-MSD1)

Source: 24A1221-01

Prepared & Analyzed: 01/24/2024

TPH-Volatiles (GRO)	0.94 mg/kg dry	0.10	mg/kg dry	1.20	0.34 mg/kg dry	50.2	70-130	3.73	20	M
Surr: 2,5-Dibromotoluene (Surr FID)	90.0		ug/L	100	ug/L	90.0	80-120			

Batch BHA0809 - SW5030B-GC

Blank (BHA0809-BLK1)

Prepared & Analyzed: 01/24/2024

TPH-Volatiles (GRO)	<0.10 mg/kg wet	0.10	mg/kg wet							
Surr: 2,5-Dibromotoluene (Surr FID)	103		ug/L	100		103	80-120			

LCS (BHA0809-BS1)

Prepared & Analyzed: 01/24/2024

TPH-Volatiles (GRO)	0.84 mg/kg wet	0.10	mg/kg wet	1.00	mg/kg wet	83.8	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	107		ug/L	100	ug/L	107	80-120			

Matrix Spike (BHA0809-MS1)

Source: 24A1326-03

Prepared & Analyzed: 01/24/2024

TPH-Volatiles (GRO)	0.63 mg/kg wet	0.10	mg/kg wet	0.990	<0.10 mg/kg	63.5	70-130			M
Surr: 2,5-Dibromotoluene (Surr FID)	93.8		ug/L	100	ug/L	93.8	80-120			



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Volatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0809 - SW5030B-GC

Matrix Spike Dup (BHA0809-MSD1)		Source: 24A1326-03			Prepared & Analyzed: 01/24/2024					
TPH-Volatiles (GRO)	0.63 mg/kg wet	0.10	mg/kg wet	0.975	<0.10 mg/kg	64.7	70-130	0.332	20	M
Surr: 2,5-Dibromotoluene (Surr FID)	101		ug/L	100	ug/L	101	80-120			



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0710 - SW5030B-MS

Blank (BHA0710-BLK1)

Prepared & Analyzed: 01/22/2024

1,1,1,2-Tetrachloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1,1-Trichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1,2,2-Tetrachloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1,2-Trichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1-Dichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
1,1-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,3-Trichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,3-Trichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,4-Trichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,4-Trimethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dibromo-3-chloropropane (DBCP)	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dibromoethane (EDB)	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
1,3,5-Trimethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,3-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,3-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
1,4-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
2,2-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
2-Butanone (MEK)	<5.00 ug/kg wet	5.00	ug/kg wet
2-Chlorotoluene	<5.00 ug/kg wet	5.00	ug/kg wet
2-Hexanone (MBK)	<5.00 ug/kg wet	5.00	ug/kg wet
4-Chlorotoluene	<5.00 ug/kg wet	5.00	ug/kg wet
4-Isopropyltoluene	<5.00 ug/kg wet	5.00	ug/kg wet
4-Methyl-2-pentanone (MIBK)	<5.00 ug/kg wet	5.00	ug/kg wet
Acetone	<10.0 ug/kg wet	10.0	ug/kg wet
Benzene	<5.00 ug/kg wet	5.00	ug/kg wet
Bromobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Bromochloromethane	<5.00 ug/kg wet	5.00	ug/kg wet



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Batch BHA0710 - SW5030B-MS

Blank (BHA0710-BLK1)

Prepared & Analyzed: 01/22/2024

Bromodichloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Bromoform	<5.00 ug/kg wet	5.00	ug/kg wet
Bromomethane	<5.00 ug/kg wet	5.00	ug/kg wet
Carbon disulfide	<5.00 ug/kg wet	5.00	ug/kg wet
Carbon tetrachloride	<5.00 ug/kg wet	5.00	ug/kg wet
Chlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Chloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
Chloroform	<5.00 ug/kg wet	5.00	ug/kg wet
Chloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
cis-1,2-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
cis-1,3-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet
Dibromochloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Dibromomethane	<5.00 ug/kg wet	5.00	ug/kg wet
Dichlorodifluoromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Di-isopropyl ether (DIPE)	<5.00 ug/kg wet	5.00	ug/kg wet
Ethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Hexachlorobutadiene	<5.00 ug/kg wet	5.00	ug/kg wet
Iodomethane	<10.0 ug/kg wet	10.0	ug/kg wet
Isopropylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
m+p-Xylenes	<5.00 ug/kg wet	5.00	ug/kg wet
Methylene chloride	<5.00 ug/kg wet	5.00	ug/kg wet
Methyl-t-butyl ether (MTBE)	<5.00 ug/kg wet	5.00	ug/kg wet
Naphthalene	<5.00 ug/kg wet	5.00	ug/kg wet
n-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
n-Propylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
o-Xylene	<5.00 ug/kg wet	5.00	ug/kg wet
sec-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Styrene	<5.00 ug/kg wet	5.00	ug/kg wet
tert-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Tetrachloroethylene (PCE)	<5.00 ug/kg wet	5.00	ug/kg wet
Toluene	<5.00 ug/kg wet	5.00	ug/kg wet



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0710 - SW5030B-MS

Blank (BHA0710-BLK1)

Prepared & Analyzed: 01/22/2024

trans-1,2-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
trans-1,3-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet
Trichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
Trichlorofluoromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Vinyl acetate	<10.0 ug/kg wet	10.0	ug/kg wet
Vinyl chloride	<5.00 ug/kg wet	5.00	ug/kg wet
Xylenes, Total	<15.0 ug/kg wet	15.0	ug/kg wet

Surr: 1,2-Dichloroethane-d4 (Surr)	49.5	ug/L	50.0	99.0	80-120
Surr: 4-Bromofluorobenzene (Surr)	50.5	ug/L	50.0	101	85-120
Surr: Dibromofluoromethane (Surr)	49.2	ug/L	50.0	98.3	80-130
Surr: Toluene-d8 (Surr)	49.8	ug/L	50.0	99.6	85-115

LCS (BHA0710-BS1)

Prepared & Analyzed: 01/22/2024

1,1,1,2-Tetrachloroethane	49.4 ug/L	5	ug/L	50.0 ug/L	98.8	85-132
1,1,1-Trichloroethane	51.3 ug/L	5	ug/L	50.0 ug/L	103	70-135
1,1,2,2-Tetrachloroethane	46.3 ug/L	5	ug/L	50.0 ug/L	92.5	55-130
1,1,2-Trichloroethane	49.4 ug/L	5	ug/L	50.0 ug/L	98.8	60-125
1,1-Dichloroethane	48.6 ug/L	5	ug/L	50.0 ug/L	97.2	70-136
1,1-Dichloroethylene	48.6 ug/L	5	ug/L	50.0 ug/L	97.2	65-135
1,1-Dichloropropene	50.1 ug/L	5	ug/L	50.0 ug/L	100	70-135
1,2,3-Trichlorobenzene	50.4 ug/L	5	ug/L	50.0 ug/L	101	60-135
1,2,3-Trichloropropane	45.7 ug/L	5	ug/L	50.0 ug/L	91.5	65-130
1,2,4-Trichlorobenzene	49.9 ug/L	5	ug/L	50.0 ug/L	99.9	65-130
1,2,4-Trimethylbenzene	52.1 ug/L	5	ug/L	50.0 ug/L	104	65-135
1,2-Dibromo-3-chloropropane (DBCP)	44.6 ug/L	5	ug/L	50.0 ug/L	89.2	40-135
1,2-Dibromoethane (EDB)	48.7 ug/L	5	ug/L	50.0 ug/L	97.4	70-125
1,2-Dichlorobenzene	48.9 ug/L	5	ug/L	50.0 ug/L	97.8	75-120
1,2-Dichloroethane	47.6 ug/L	5	ug/L	50.0 ug/L	95.3	70-135
1,2-Dichloropropane	51.7 ug/L	5	ug/L	50.0 ug/L	103	70-120
1,3,5-Trimethylbenzene	50.2 ug/L	5	ug/L	50.0 ug/L	100	65-135
1,3-Dichlorobenzene	49.4 ug/L	5	ug/L	50.0 ug/L	98.8	70-125
1,3-Dichloropropane	49.9 ug/L	5	ug/L	50.0 ug/L	99.8	75-125



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Batch BHA0710 - SW5030B-MS

LCS (BHA0710-BS1)

Prepared & Analyzed: 01/22/2024

1,4-Dichlorobenzene	47.8 ug/L	5	ug/L	50.0	ug/L	95.7	70-125	
2,2-Dichloropropane	48.4 ug/L	5	ug/L	50.0	ug/L	96.7	65-135	
2-Butanone (MEK)	37.5 ug/L	5	ug/L	50.0	ug/L	75.0	30-160	
2-Chlorotoluene	48.2 ug/L	5	ug/L	50.0	ug/L	96.4	70-130	
2-Hexanone (MBK)	40.4 ug/L	5	ug/L	50.0	ug/L	80.9	45-145	
4-Chlorotoluene	46.6 ug/L	5	ug/L	50.0	ug/L	93.3	75-125	
4-Isopropyltoluene	52.3 ug/L	5	ug/L	50.0	ug/L	105	75-135	
4-Methyl-2-pentanone (MIBK)	43.1 ug/L	5	ug/L	50.0	ug/L	86.2	45-145	
Acetone	35.3 ug/L	10	ug/L	50.0	ug/L	70.7	20-160	
Benzene	50.9 ug/L	5	ug/L	50.0	ug/L	102	75-125	
Bromobenzene	50.1 ug/L	5	ug/L	50.0	ug/L	100	65-120	
Bromochloromethane	46.8 ug/L	5	ug/L	50.0	ug/L	93.5	70-125	
Bromodichloromethane	52.3 ug/L	5	ug/L	50.0	ug/L	105	70-130	
Bromoform	48.9 ug/L	5	ug/L	50.0	ug/L	97.8	55-135	
Bromomethane	51.4 ug/L	5	ug/L	50.0	ug/L	103	30-160	
Carbon disulfide	48.6 ug/L	5	ug/L	50.0	ug/L	97.1	45-160	
Carbon tetrachloride	49.8 ug/L	5	ug/L	50.0	ug/L	99.6	65-135	
Chlorobenzene	50.0 ug/L	5	ug/L	50.0	ug/L	99.9	75-125	
Chloroethane	54.9 ug/L	5	ug/L	50.0	ug/L	110	40-155	
Chloroform	47.8 ug/L	5	ug/L	50.0	ug/L	95.6	70-125	
Chloromethane	64.1 ug/L	5	ug/L	50.0	ug/L	128	50-130	
cis-1,2-Dichloroethylene	47.8 ug/L	5	ug/L	50.0	ug/L	95.6	65-125	
cis-1,3-Dichloropropene	49.7 ug/L	5	ug/L	50.0	ug/L	99.5	70-125	
Dibromochloromethane	49.1 ug/L	5	ug/L	50.0	ug/L	98.1	65-130	
Dibromomethane	53.1 ug/L	5	ug/L	50.0	ug/L	106	75-130	
Dichlorodifluoromethane	105 ug/L	5	ug/L	50.0	ug/L	210	35-135	L
Ethylbenzene	51.2 ug/L	5	ug/L	50.0	ug/L	102	75-125	
Hexachlorobutadiene	48.8 ug/L	5	ug/L	50.0	ug/L	97.6	55-140	
Isopropylbenzene	47.2 ug/L	5	ug/L	50.0	ug/L	94.4	75-130	
m+p-Xylenes	98.9 ug/L	5	ug/L	100	ug/L	98.9	80-125	
Methylene chloride	44.3 ug/L	5	ug/L	50.0	ug/L	88.5	55-140	



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0710 - SW5030B-MS

LCS (BHA0710-BS1)

Prepared & Analyzed: 01/22/2024

Methyl-t-butyl ether (MTBE)	50.5 ug/L	5	ug/L	50.0	ug/L	101	65-125		
Naphthalene	51.7 ug/L	5	ug/L	50.0	ug/L	103	40-125		
n-Butylbenzene	53.0 ug/L	5	ug/L	50.0	ug/L	106	65-140		
n-Propylbenzene	47.6 ug/L	5	ug/L	50.0	ug/L	95.3	65-135		
o-Xylene	48.6 ug/L	5	ug/L	50.0	ug/L	97.3	75-125		
sec-Butylbenzene	53.2 ug/L	5	ug/L	50.0	ug/L	106	65-130		
Styrene	48.3 ug/L	5	ug/L	50.0	ug/L	96.6	75-125		
tert-Butylbenzene	49.6 ug/L	5	ug/L	50.0	ug/L	99.2	65-130		
Tetrachloroethylene (PCE)	50.0 ug/L	5	ug/L	50.0	ug/L	100	48.1-219		
Toluene	51.0 ug/L	5	ug/L	50.0	ug/L	102	70-125		
trans-1,2-Dichloroethylene	47.5 ug/L	5	ug/L	50.0	ug/L	95.0	65-135		
trans-1,3-Dichloropropene	53.0 ug/L	5	ug/L	50.0	ug/L	106	65-125		
Trichloroethylene	49.8 ug/L	5	ug/L	50.0	ug/L	99.7	75-125		
Trichlorofluoromethane	55.7 ug/L	5	ug/L	50.0	ug/L	111	25-185		
Vinyl chloride	55.3 ug/L	5	ug/L	50.0	ug/L	111	60-125		
Surr: 1,2-Dichloroethane-d4 (Surr)	46.2		ug/L	50.0	ug/L	92.5	80-120		
Surr: 4-Bromofluorobenzene (Surr)	49.5		ug/L	50.0	ug/L	98.9	85-120		
Surr: Dibromofluoromethane (Surr)	47.0		ug/L	50.0	ug/L	94.1	80-130		
Surr: Toluene-d8 (Surr)	49.2		ug/L	50.0	ug/L	98.4	85-115		

Matrix Spike (BHA0710-MS1)

Source: 24A1221-07

Prepared & Analyzed: 01/22/2024

1,1,1,2-Tetrachloroethane	47.4 ug/L	5	ug/L	50.0	<5 ug/kg	94.8	52-140		
1,1,1-Trichloroethane	49.0 ug/L	5	ug/L	50.0	<5 ug/kg	97.9	70-135		
1,1,2,2-Tetrachloroethane	44.5 ug/L	5	ug/L	50.0	<5 ug/kg	89.1	55-130		
1,1,2-Trichloroethane	47.7 ug/L	5	ug/L	50.0	<5 ug/kg	95.3	60-125		
1,1-Dichloroethane	45.8 ug/L	5	ug/L	50.0	<5 ug/kg	91.5	60-134		
1,1-Dichloroethylene	42.4 ug/L	5	ug/L	50.0	<5 ug/kg	84.9	65-135		
1,1-Dichloropropene	46.6 ug/L	5	ug/L	50.0	<5 ug/kg	93.2	70-135		
1,2,3-Trichlorobenzene	46.4 ug/L	5	ug/L	50.0	<5 ug/kg	92.8	60-135		
1,2,3-Trichloropropane	44.8 ug/L	5	ug/L	50.0	<5 ug/kg	89.6	65-130		
1,2,4-Trichlorobenzene	45.6 ug/L	5	ug/L	50.0	<5 ug/kg	91.3	65-130		
1,2,4-Trimethylbenzene	50.1 ug/L	5	ug/L	50.0	<5 ug/kg	100	65-135		



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310 Project Number: 22-02065 001
Purchase Order:
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0710 - SW5030B-MS

Matrix Spike (BHA0710-MS1)

Source: 24A1221-07

Prepared & Analyzed: 01/22/2024

1,2-Dibromo-3-chloropropane (DBCP)	42.9 ug/L	5	ug/L	50.0	<5 ug/kg	85.8	40-135		
1,2-Dibromoethane (EDB)	46.7 ug/L	5	ug/L	50.0	<5 ug/kg	93.4	70-125		
1,2-Dichlorobenzene	47.2 ug/L	5	ug/L	50.0	<5 ug/kg	94.3	75-120		
1,2-Dichloroethane	45.7 ug/L	5	ug/L	50.0	<5 ug/kg	91.3	70-135		
1,2-Dichloropropane	50.0 ug/L	5	ug/L	50.0	<5 ug/kg	99.9	70-120		
1,3,5-Trimethylbenzene	48.2 ug/L	5	ug/L	50.0	<5 ug/kg	96.3	65-135		
1,3-Dichlorobenzene	47.2 ug/L	5	ug/L	50.0	<5 ug/kg	94.4	70-125		
1,3-Dichloropropane	48.2 ug/L	5	ug/L	50.0	<5 ug/kg	96.3	75-125		
1,4-Dichlorobenzene	45.2 ug/L	5	ug/L	50.0	<5 ug/kg	90.5	70-125		
2,2-Dichloropropane	46.7 ug/L	5	ug/L	50.0	<5 ug/kg	93.5	65-135		
2-Butanone (MEK)	35.9 ug/L	5	ug/L	50.0	<5 ug/kg	71.8	30-160		
2-Chlorotoluene	46.1 ug/L	5	ug/L	50.0	<5 ug/kg	92.2	70-130		
2-Hexanone (MBK)	41.2 ug/L	5	ug/L	50.0	<5 ug/kg	82.4	45-145		
4-Chlorotoluene	45.3 ug/L	5	ug/L	50.0	<5 ug/kg	90.6	75-125		
4-Isopropyltoluene	49.8 ug/L	5	ug/L	50.0	<5 ug/kg	99.6	75-135		
4-Methyl-2-pentanone (MIBK)	43.8 ug/L	5	ug/L	50.0	<5 ug/kg	87.6	45-145		
Acetone	39.2 ug/L	10	ug/L	50.0	<10 ug/kg	60.8	20-160		
Benzene	48.7 ug/L	5	ug/L	50.0	<5 ug/kg	97.5	75-125		
Bromobenzene	46.6 ug/L	5	ug/L	50.0	<5 ug/kg	93.2	65-120		
Bromochloromethane	43.9 ug/L	5	ug/L	50.0	<5 ug/kg	87.7	70-125		
Bromodichloromethane	49.5 ug/L	5	ug/L	50.0	<5 ug/kg	99.0	70-130		
Bromoform	46.7 ug/L	5	ug/L	50.0	<5 ug/kg	93.3	55-135		
Bromomethane	50.0 ug/L	5	ug/L	50.0	<5 ug/kg	100	30-160		
Carbon disulfide	42.4 ug/L	5	ug/L	50.0	<5 ug/kg	83.5	45-160		
Carbon tetrachloride	46.7 ug/L	5	ug/L	50.0	<5 ug/kg	93.5	65-135		
Chlorobenzene	47.3 ug/L	5	ug/L	50.0	<5 ug/kg	94.6	75-125		
Chloroethane	52.0 ug/L	5	ug/L	50.0	<5 ug/kg	104	40-155		
Chloroform	45.7 ug/L	5	ug/L	50.0	<5 ug/kg	91.4	70-125		
Chloromethane	61.4 ug/L	5	ug/L	50.0	<5 ug/kg	123	50-130		
cis-1,2-Dichloroethylene	45.4 ug/L	5	ug/L	50.0	<5 ug/kg	90.8	65-125		
cis-1,3-Dichloropropene	48.1 ug/L	5	ug/L	50.0	<5 ug/kg	96.2	70-125		



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310 Project Number: 22-02065 001
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Client Site I.D.: Alex Water Front

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0710 - SW5030B-MS

Matrix Spike (BHA0710-MS1)

Source: 24A1221-07

Prepared & Analyzed: 01/22/2024

Dibromochloromethane	47.0 ug/L	5	ug/L	50.0	<5 ug/kg	94.1	65-130		
Dibromomethane	49.5 ug/L	5	ug/L	50.0	<5 ug/kg	99.1	75-130		
Dichlorodifluoromethane	99.7 ug/L	5	ug/L	50.0	<5 ug/kg	199	35-135		M
Ethylbenzene	48.2 ug/L	5	ug/L	50.0	<5 ug/kg	96.5	75-125		
Hexachlorobutadiene	43.3 ug/L	5	ug/L	50.0	<5 ug/kg	86.6	55-140		
Isopropylbenzene	44.0 ug/L	5	ug/L	50.0	<5 ug/kg	88.0	75-130		
m+p-Xylenes	93.1 ug/L	5	ug/L	100	<5 ug/kg	93.1	80-125		
Methylene chloride	42.5 ug/L	5	ug/L	50.0	<5 ug/kg	83.7	55-140		
Methyl-t-butyl ether (MTBE)	49.4 ug/L	5	ug/L	50.0	<5 ug/kg	98.7	65-125		
Naphthalene	49.3 ug/L	5	ug/L	50.0	<5 ug/kg	98.6	40-125		
n-Butylbenzene	48.6 ug/L	5	ug/L	50.0	<5 ug/kg	97.1	65-140		
n-Propylbenzene	46.0 ug/L	5	ug/L	50.0	<5 ug/kg	91.9	65-135		
o-Xylene	46.5 ug/L	5	ug/L	50.0	<5 ug/kg	93.0	75-125		
sec-Butylbenzene	49.8 ug/L	5	ug/L	50.0	<5 ug/kg	99.7	65-130		
Styrene	45.9 ug/L	5	ug/L	50.0	<5 ug/kg	91.8	75-125		
tert-Butylbenzene	47.0 ug/L	5	ug/L	50.0	<5 ug/kg	94.0	65-130		
Tetrachloroethylene (PCE)	48.0 ug/L	5	ug/L	50.0	<5 ug/kg	95.9	48.1-219		
Toluene	48.3 ug/L	5	ug/L	50.0	<5 ug/kg	96.7	70-125		
trans-1,2-Dichloroethylene	44.9 ug/L	5	ug/L	50.0	<5 ug/kg	89.7	65-135		
trans-1,3-Dichloropropene	50.6 ug/L	5	ug/L	50.0	<5 ug/kg	101	65-125		
Trichloroethylene	47.6 ug/L	5	ug/L	50.0	<5 ug/kg	95.2	75-125		
Trichlorofluoromethane	49.4 ug/L	5	ug/L	50.0	<5 ug/kg	98.9	25-185		
Vinyl chloride	52.6 ug/L	5	ug/L	50.0	<5 ug/kg	105	60-125		
Surr: 1,2-Dichloroethane-d4 (Surr)	48.8		ug/L	50.0	ug/L	97.5	80-120		
Surr: 4-Bromofluorobenzene (Surr)	49.9		ug/L	50.0	ug/L	99.8	85-120		
Surr: Dibromofluoromethane (Surr)	47.3		ug/L	50.0	ug/L	94.6	80-130		
Surr: Toluene-d8 (Surr)	49.6		ug/L	50.0	ug/L	99.2	85-115		



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0710 - SW5030B-MS

Matrix Spike Dup (BHA0710-MSD1)

Source: 24A1221-07

Prepared & Analyzed: 01/22/2024

1,1,1,2-Tetrachloroethane	43.6 ug/L	5	ug/L	50.0	<5 ug/kg	87.2	52-140	8.35	30
1,1,1-Trichloroethane	46.0 ug/L	5	ug/L	50.0	<5 ug/kg	91.9	70-135	6.36	30
1,1,2,2-Tetrachloroethane	41.2 ug/L	5	ug/L	50.0	<5 ug/kg	82.4	55-130	7.79	30
1,1,2-Trichloroethane	44.3 ug/L	5	ug/L	50.0	<5 ug/kg	88.7	60-125	7.24	30
1,1-Dichloroethane	43.3 ug/L	5	ug/L	50.0	<5 ug/kg	86.6	60-134	5.46	30
1,1-Dichloroethylene	42.4 ug/L	5	ug/L	50.0	<5 ug/kg	84.8	65-135	0.0707	30
1,1-Dichloropropene	44.3 ug/L	5	ug/L	50.0	<5 ug/kg	88.6	70-135	5.08	30
1,2,3-Trichlorobenzene	42.4 ug/L	5	ug/L	50.0	<5 ug/kg	84.9	60-135	8.90	30
1,2,3-Trichloropropane	40.4 ug/L	5	ug/L	50.0	<5 ug/kg	80.7	65-130	10.4	30
1,2,4-Trichlorobenzene	41.7 ug/L	5	ug/L	50.0	<5 ug/kg	83.4	65-130	8.95	30
1,2,4-Trimethylbenzene	46.5 ug/L	5	ug/L	50.0	<5 ug/kg	92.9	65-135	7.52	30
1,2-Dibromo-3-chloropropane (DBCP)	39.5 ug/L	5	ug/L	50.0	<5 ug/kg	78.9	40-135	8.30	30
1,2-Dibromoethane (EDB)	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.8	70-125	7.33	30
1,2-Dichlorobenzene	43.2 ug/L	5	ug/L	50.0	<5 ug/kg	86.3	75-120	8.83	30
1,2-Dichloroethane	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.3	70-135	6.84	30
1,2-Dichloropropane	45.9 ug/L	5	ug/L	50.0	<5 ug/kg	91.8	70-120	8.53	30
1,3,5-Trimethylbenzene	45.0 ug/L	5	ug/L	50.0	<5 ug/kg	90.1	65-135	6.65	30
1,3-Dichlorobenzene	43.8 ug/L	5	ug/L	50.0	<5 ug/kg	87.6	70-125	7.45	30
1,3-Dichloropropane	44.2 ug/L	5	ug/L	50.0	<5 ug/kg	88.3	75-125	8.69	30
1,4-Dichlorobenzene	42.1 ug/L	5	ug/L	50.0	<5 ug/kg	84.1	70-125	7.24	30
2,2-Dichloropropane	43.2 ug/L	5	ug/L	50.0	<5 ug/kg	86.3	65-135	7.97	30
2-Butanone (MEK)	37.6 ug/L	5	ug/L	50.0	<5 ug/kg	75.3	30-160	4.68	30
2-Chlorotoluene	43.8 ug/L	5	ug/L	50.0	<5 ug/kg	87.6	70-130	5.12	30
2-Hexanone (MBK)	42.7 ug/L	5	ug/L	50.0	<5 ug/kg	85.4	45-145	3.55	30
4-Chlorotoluene	42.3 ug/L	5	ug/L	50.0	<5 ug/kg	84.7	75-125	6.73	30
4-Isopropyltoluene	46.3 ug/L	5	ug/L	50.0	<5 ug/kg	92.5	75-135	7.39	30
4-Methyl-2-pentanone (MIBK)	45.8 ug/L	5	ug/L	50.0	<5 ug/kg	91.6	45-145	4.42	30
Acetone	37.2 ug/L	10	ug/L	50.0	<10 ug/kg	56.8	20-160	5.34	30
Benzene	44.8 ug/L	5	ug/L	50.0	<5 ug/kg	89.7	75-125	8.31	30
Bromobenzene	43.6 ug/L	5	ug/L	50.0	<5 ug/kg	87.1	65-120	6.72	30
Bromochloromethane	41.6 ug/L	5	ug/L	50.0	<5 ug/kg	83.3	70-125	5.17	30



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0710 - SW5030B-MS

Matrix Spike Dup (BHA0710-MSD1)

Source: 24A1221-07

Prepared & Analyzed: 01/22/2024

Bromodichloromethane	46.0 ug/L	5	ug/L	50.0	<5 ug/kg	92.1	70-130	7.24	30	
Bromoform	43.1 ug/L	5	ug/L	50.0	<5 ug/kg	86.2	55-135	7.98	30	
Bromomethane	46.6 ug/L	5	ug/L	50.0	<5 ug/kg	93.2	30-160	7.02	30	
Carbon disulfide	46.8 ug/L	5	ug/L	50.0	<5 ug/kg	92.4	45-160	9.93	30	
Carbon tetrachloride	42.9 ug/L	5	ug/L	50.0	<5 ug/kg	85.8	65-135	8.59	30	
Chlorobenzene	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.9	75-125	8.49	30	
Chloroethane	48.7 ug/L	5	ug/L	50.0	<5 ug/kg	97.4	40-155	6.65	30	
Chloroform	42.4 ug/L	5	ug/L	50.0	<5 ug/kg	84.9	70-125	7.46	30	
Chloromethane	57.5 ug/L	5	ug/L	50.0	<5 ug/kg	115	50-130	6.53	30	
cis-1,2-Dichloroethylene	42.2 ug/L	5	ug/L	50.0	<5 ug/kg	84.5	65-125	7.23	30	
cis-1,3-Dichloropropene	43.8 ug/L	5	ug/L	50.0	<5 ug/kg	87.7	70-125	9.20	30	
Dibromochloromethane	43.7 ug/L	5	ug/L	50.0	<5 ug/kg	87.4	65-130	7.41	30	
Dibromomethane	45.6 ug/L	5	ug/L	50.0	<5 ug/kg	91.2	75-130	8.28	30	
Dichlorodifluoromethane	93.3 ug/L	5	ug/L	50.0	<5 ug/kg	187	35-135	6.68	30	M
Ethylbenzene	44.5 ug/L	5	ug/L	50.0	<5 ug/kg	89.0	75-125	8.04	30	
Hexachlorobutadiene	39.6 ug/L	5	ug/L	50.0	<5 ug/kg	79.2	55-140	8.90	30	
Isopropylbenzene	41.4 ug/L	5	ug/L	50.0	<5 ug/kg	82.8	75-130	6.04	30	
m+p-Xylenes	87.2 ug/L	5	ug/L	100	<5 ug/kg	87.2	80-125	6.54	30	
Methylene chloride	39.7 ug/L	5	ug/L	50.0	<5 ug/kg	78.0	55-140	6.96	30	
Methyl-t-butyl ether (MTBE)	46.4 ug/L	5	ug/L	50.0	<5 ug/kg	92.8	65-125	6.12	30	
Naphthalene	44.5 ug/L	5	ug/L	50.0	<5 ug/kg	88.9	40-125	10.3	30	
n-Butylbenzene	45.6 ug/L	5	ug/L	50.0	<5 ug/kg	91.2	65-140	6.31	30	
n-Propylbenzene	43.2 ug/L	5	ug/L	50.0	<5 ug/kg	86.4	65-135	6.19	30	
o-Xylene	42.7 ug/L	5	ug/L	50.0	<5 ug/kg	85.4	75-125	8.61	30	
sec-Butylbenzene	46.9 ug/L	5	ug/L	50.0	<5 ug/kg	93.7	65-130	6.16	30	
Styrene	42.3 ug/L	5	ug/L	50.0	<5 ug/kg	84.7	75-125	8.11	30	
tert-Butylbenzene	44.9 ug/L	5	ug/L	50.0	<5 ug/kg	89.8	65-130	4.61	30	
Tetrachloroethylene (PCE)	45.3 ug/L	5	ug/L	50.0	<5 ug/kg	90.5	48.1-219	5.77	30	
Toluene	44.7 ug/L	5	ug/L	50.0	<5 ug/kg	89.3	70-125	7.89	30	
trans-1,2-Dichloroethylene	41.4 ug/L	5	ug/L	50.0	<5 ug/kg	82.9	65-135	7.93	30	
trans-1,3-Dichloropropene	46.3 ug/L	5	ug/L	50.0	<5 ug/kg	92.5	65-125	8.96	30	



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0710 - SW5030B-MS

Matrix Spike Dup (BHA0710-MSD1)

Source: 24A1221-07

Prepared & Analyzed: 01/22/2024

Trichloroethylene	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.7	75-125	9.34	30	
Trichlorofluoromethane	50.6 ug/L	5	ug/L	50.0	<5 ug/kg	101	25-185	2.22	30	
Vinyl chloride	48.7 ug/L	5	ug/L	50.0	<5 ug/kg	97.4	60-125	7.56	30	
Surr: 1,2-Dichloroethane-d4 (Surr)	46.8		ug/L	50.0	ug/L	93.6	80-120			
Surr: 4-Bromofluorobenzene (Surr)	49.4		ug/L	50.0	ug/L	98.7	85-120			
Surr: Dibromofluoromethane (Surr)	47.1		ug/L	50.0	ug/L	94.2	80-130			
Surr: Toluene-d8 (Surr)	48.9		ug/L	50.0	ug/L	97.8	85-115			



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0758 - SW3550C/EPA600-MS

Blank (BHA0758-BLK1)

Prepared: 01/23/2024 Analyzed: 01/24/2024

1,2,4,5-Tetrachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,2,4-Trichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,2-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,2-Diphenylhydrazine	<83.3 ug/kg wet	83.3	ug/kg wet
1,3-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,3-Dinitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,4-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
1-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet
2,3,4,6-Tetrachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4,5-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4,6-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dimethylphenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dinitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet
2,6-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,6-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet
2-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
2-Chlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2-Methylnaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
2-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet
2-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet
2-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet
3,3'-Dichlorobenzidine	<83.3 ug/kg wet	83.3	ug/kg wet
3-Methylcholanthrene	<83.3 ug/kg wet	83.3	ug/kg wet
3-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet
4,6-Dinitro-2-methylphenol	<83.3 ug/kg wet	83.3	ug/kg wet
4-Aminobiphenyl	<83.3 ug/kg wet	83.3	ug/kg wet
4-Bromophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet
4-Chloroaniline	<83.3 ug/kg wet	83.3	ug/kg wet



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0758 - SW3550C/EPA600-MS

Blank (BHA0758-BLK1)

Prepared: 01/23/2024 Analyzed: 01/24/2024

4-Chlorophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet
4-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet
4-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet
7,12-Dimethylbenz (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Acenaphthene	<83.3 ug/kg wet	83.3	ug/kg wet
Acenaphthylene	<83.3 ug/kg wet	83.3	ug/kg wet
Acetophenone	<83.3 ug/kg wet	83.3	ug/kg wet
Aniline	<83.3 ug/kg wet	83.3	ug/kg wet
Anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzidine	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (a) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (b) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (g,h,i) perylene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (k) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzoic acid	<83.3 ug/kg wet	83.3	ug/kg wet
Benzyl alcohol	<83.3 ug/kg wet	83.3	ug/kg wet
bis (2-Chloroethoxy) methane	<83.3 ug/kg wet	83.3	ug/kg wet
bis (2-Chloroethyl) ether	<83.3 ug/kg wet	83.3	ug/kg wet
2,2'-Oxybis (1-chloropropane)	<83.3 ug/kg wet	83.3	ug/kg wet
bis (2-Ethylhexyl) phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Butyl benzyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Chrysene	<83.3 ug/kg wet	83.3	ug/kg wet
Dibenz (a,h) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Dibenz (a,j) acridine	<83.3 ug/kg wet	83.3	ug/kg wet
Dibenzofuran	<83.3 ug/kg wet	83.3	ug/kg wet
Diethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Dimethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Di-n-butyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Di-n-octyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Diphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0758 - SW3550C/EPA600-MS

Blank (BHA0758-BLK1)

Prepared: 01/23/2024 Analyzed: 01/24/2024

Ethyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet
Fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet
Fluorene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachlorobutadiene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachlorocyclopentadiene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachloroethane	<83.3 ug/kg wet	83.3	ug/kg wet
Indeno (1,2,3-cd) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet
Isophorone	<83.3 ug/kg wet	83.3	ug/kg wet
m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet
Methyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet
Naphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
Nitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodimethylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodi-n-butylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodi-n-propylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodiphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosopiperidine	<83.3 ug/kg wet	83.3	ug/kg wet
o+m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet
o-Cresol	<83.3 ug/kg wet	83.3	ug/kg wet
p-(Dimethylamino) azobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
p-Chloro-m-cresol	<83.3 ug/kg wet	83.3	ug/kg wet
Pentachloronitrobenzene (quintozene)	<83.3 ug/kg wet	83.3	ug/kg wet
Pentachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
Phenacetin	<83.3 ug/kg wet	83.3	ug/kg wet
Phenanthrene	<83.3 ug/kg wet	83.3	ug/kg wet
Phenol	<83.3 ug/kg wet	83.3	ug/kg wet
Pronamide	<83.3 ug/kg wet	83.3	ug/kg wet
Pyrene	<83.3 ug/kg wet	83.3	ug/kg wet
Pyridine	<83.3 ug/kg wet	83.3	ug/kg wet

Surr: 2,4,6-Tribromophenol (Surr)

3910

ug/kg wet

3310

118

15-96

S



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0758 - SW3550C/EPA600-MS

Blank (BHA0758-BLK1)

Prepared: 01/23/2024 Analyzed: 01/24/2024

Surr: 2-Fluorobiphenyl (Surr)	1490	ug/kg wet	1660	90.1	19-105	
Surr: 2-Fluorophenol (Surr)	3210	ug/kg wet	3310	97.0	12-95	S
Surr: Nitrobenzene-d5 (Surr)	1730	ug/kg wet	1660	105	21-100	S
Surr: Phenol-d5 (Surr)	3290	ug/kg wet	3310	99.3	13-100	
Surr: p-Terphenyl-d14 (Surr)	1700	ug/kg wet	1660	103	25-125	

LCS (BHA0758-BS1)

Prepared: 01/23/2024 Analyzed: 01/24/2024

1,2,4-Trichlorobenzene	1100 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	69.8	70-130		L
1,2-Dichlorobenzene	1450 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	92.2	70-130		
1,3-Dichlorobenzene	1160 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	73.9	70-130		
1,4-Dichlorobenzene	1360 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	86.5	70-130		
2,4,6-Trichlorophenol	1510 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	95.7	20-115		
2,4-Dichlorophenol	1270 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	80.6	20-111		
2,4-Dimethylphenol	1410 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	89.3	20-110		
2,4-Dinitrophenol	1240 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	78.9	10-169		
2,4-Dinitrotoluene	1590 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	101	21-125		
2,6-Dinitrotoluene	1230 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	78.1	15-140		
2-Chloronaphthalene	1410 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	89.2	22-105		
2-Chlorophenol	1350 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	85.7	15-107		
2-Nitrophenol	1220 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	77.7	20-115		
3,3'-Dichlorobenzidine	1020 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	64.7	10-110		
4,6-Dinitro-2-methylphenol	1330 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	84.5	40-130		
4-Bromophenyl phenyl ether	1410 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	89.5	20-114		
4-Chlorophenyl phenyl ether	1270 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	80.5	15-110		
4-Nitrophenol	1770 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	112	15-110		L
Acenaphthene	1480 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	93.9	24-110		
Acenaphthylene	1600 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	102	25-106		
Acetophenone	1370 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	86.8	25-106		
Anthracene	1460 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	92.5	25-117		
Benzo (a) anthracene	1460 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	92.4	25-127		
Benzo (a) pyrene	1680 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	106	18-127		
Benzo (b) fluoranthene	1600 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	101	20-132		



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0758 - SW3550C/EPA600-MS

LCS (BHA0758-BS1)

Prepared: 01/23/2024 Analyzed: 01/24/2024

Benzo (g,h,i) perylene	1350 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	85.8	10-136			
Benzo (k) fluoranthene	1870 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	118	14-136			
bis (2-Chloroethoxy) methane	1240 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	78.5	20-100			
bis (2-Chloroethyl) ether	1260 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	79.7	13-100			
2,2'-Oxybis (1-chloropropane)	1310 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	83.0	40-125			
bis (2-Ethylhexyl) phthalate	1270 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	80.3	18-137			
Butyl benzyl phthalate	1310 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	83.2	20-141			
Chrysene	1260 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	80.1	21-141			
Dibenz (a,h) anthracene	1680 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	106	10-142			
Diethyl phthalate	1660 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	105	20-120			
Dimethyl phthalate	1340 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	84.7	23-109			
Di-n-butyl phthalate	1650 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	104	18-136			
Di-n-octyl phthalate	2260 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	143	10-160			
Fluoranthene	1860 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	118	19-138			
Fluorene	1600 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	101	25-114			
Hexachlorobenzene	1440 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	91.2	20-113			
Hexachlorobutadiene	1230 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	77.9	25-125			
Hexachlorocyclopentadiene	1080 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	68.6	10-125			
Hexachloroethane	1570 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	99.4	25-125			
Indeno (1,2,3-cd) pyrene	1540 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	97.7	10-136			
Isophorone	1050 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	66.4	10-110			
Naphthalene	1600 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	102	18-109			
Nitrobenzene	1630 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	104	18-104			
n-Nitrosodimethylamine	1040 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	66.1	18-110			
n-Nitrosodi-n-propylamine	1630 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	103	12-102			L
n-Nitrosodiphenylamine	1210 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	76.7	12-97			
p-Chloro-m-cresol	1410 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	89.5	24-120			
Pentachlorophenol	1010 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	63.7	10-116			
Phenanthrene	2250 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	143	25-122			L
Phenol	1470 ug/kg wet	83.3	ug/kg wet	1590	ug/kg wet	92.1	12-115			
Pyrene	1240 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	78.4	17-159			



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Enthalpy Analytical

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Batch BHA0758 - SW3550C/EPA600-MS

LCS (BHA0758-BS1)

Prepared: 01/23/2024 Analyzed: 01/24/2024

Pyridine	1030 ug/kg wet	83.3	ug/kg wet	1580	ug/kg wet	65.5	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	3840		ug/kg wet	3150	ug/kg wet	122	15-96			S
Surr: 2-Fluorobiphenyl (Surr)	1460		ug/kg wet	1580	ug/kg wet	92.3	19-105			
Surr: 2-Fluorophenol (Surr)	1510		ug/kg wet	3150	ug/kg wet	47.9	12-95			
Surr: Nitrobenzene-d5 (Surr)	1640		ug/kg wet	1580	ug/kg wet	104	21-100			S
Surr: Phenol-d5 (Surr)	3220		ug/kg wet	3150	ug/kg wet	102	13-100			S
Surr: p-Terphenyl-d14 (Surr)	1270		ug/kg wet	1580	ug/kg wet	80.3	25-125			

Matrix Spike (BHA0758-MS1)

Source: 24A1221-04

Prepared: 01/23/2024 Analyzed: 01/24/2024

1,2,4-Trichlorobenzene	992 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	53.6	70-130			M2
1,2-Dichlorobenzene	1160 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	62.8	70-130			M2
1,3-Dichlorobenzene	1030 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	55.4	70-130			M2
1,4-Dichlorobenzene	1210 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	65.2	70-130			M2
2,4,6-Trichlorophenol	1180 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	63.5	10-115			
2,4-Dichlorophenol	976 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	52.7	10-128			
2,4-Dimethylphenol	1160 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	62.6	10-121			
2,4-Dinitrophenol	1650 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	89.0	10-228			
2,4-Dinitrotoluene	1010 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	54.6	10-141			
2,6-Dinitrotoluene	1010 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	54.5	15-140			
2-Chloronaphthalene	1230 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	66.4	10-108			
2-Chlorophenol	1200 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	64.9	10-117			
2-Nitrophenol	990 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	53.5	10-131			
3,3'-Dichlorobenzidine	865 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	46.7	10-110			
4,6-Dinitro-2-methylphenol	854 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	46.2	10-110			
4-Bromophenyl phenyl ether	1210 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	65.4	10-119			
4-Chlorophenyl phenyl ether	1130 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	60.8	15-110			
4-Nitrophenol	1590 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	86.1	15-110			
Acenaphthene	1430 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	77.0	10-124			
Acenaphthylene	1460 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	79.0	10-118			
Acetophenone	1020 ug/kg dry	333	ug/kg dry	37.0	<333 ug/kg	2750	10-110			M2
Anthracene	1210 ug/kg dry	333	ug/kg dry	1850	427 ug/kg dry	42.3	10-143			
Benzo (a) anthracene	3090 ug/kg dry	333	ug/kg dry	1850	2790 ug/kg dry	16.4	10-169			



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0758 - SW3550C/EPA600-MS

Matrix Spike (BHA0758-MS1)		Source: 24A1221-04			Prepared: 01/23/2024 Analyzed: 01/24/2024					
Benzo (a) pyrene	4320 ug/kg dry	333	ug/kg dry	1850	4890 ug/kg dry	-30.9	10-149			M2
Benzo (b) fluoranthene	4960 ug/kg dry	333	ug/kg dry	1850	5380 ug/kg dry	-22.5	10-150			M2
Benzo (g,h,i) perylene	1910 ug/kg dry	333	ug/kg dry	1850	1920 ug/kg dry	-0.118	10-123			M2
Benzo (k) fluoranthene	2120 ug/kg dry	333	ug/kg dry	1850	2010 ug/kg dry	6.25	10-211			M2
bis (2-Chloroethoxy) methane	1040 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	56.4	10-108			
bis (2-Chloroethyl) ether	1080 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	58.5	10-100			
2,2'-Oxybis (1-chloropropane)	1170 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	63.4	40-125			
bis (2-Ethylhexyl) phthalate	1120 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	60.5	10-210			
Butyl benzyl phthalate	1350 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	73.0	10-165			
Chrysene	2710 ug/kg dry	333	ug/kg dry	1850	1980 ug/kg dry	39.4	10-172			
Dibenz (a,h) anthracene	1640 ug/kg dry	333	ug/kg dry	1850	774 ug/kg dry	46.6	10-128			
Diethyl phthalate	1410 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	76.4	10-120			
Dimethyl phthalate	1210 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	65.4	10-125			
Di-n-butyl phthalate	1200 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	65.0	10-133			
Di-n-octyl phthalate	1630 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	88.1	10-196			
Fluoranthene	3100 ug/kg dry	333	ug/kg dry	1850	3410 ug/kg dry	-16.8	10-271			M2
Fluorene	1420 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	76.6	10-124			
Hexachlorobenzene	1220 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	66.1	10-125			
Hexachlorobutadiene	1080 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	58.5	10-125			
Hexachlorocyclopentadiene	905 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	48.9	10-125			
Hexachloroethane	1220 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	65.9	10-220			
Indeno (1,2,3-cd) pyrene	2240 ug/kg dry	333	ug/kg dry	1850	2130 ug/kg dry	5.95	10-127			M2
Isophorone	953 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	51.5	10-110			
Naphthalene	1140 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	61.7	10-118			
Nitrobenzene	1310 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	71.0	10-126			
n-Nitrosodimethylamine	570 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	30.8	10-110			
n-Nitrosodi-n-propylamine	1350 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	73.0	10-107			
n-Nitrosodiphenylamine	1030 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	55.5	10-107			
p-Chloro-m-cresol	1200 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	64.8	10-131			
Pentachlorophenol	1620 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	87.4	10-151			
Phenanthrene	2320 ug/kg dry	333	ug/kg dry	1850	1700 ug/kg dry	33.3	10-393			



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Client Site I.D.: Alex Water Front

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0758 - SW3550C/EPA600-MS

Matrix Spike (BHA0758-MS1)		Source: 24A1221-04			Prepared: 01/23/2024 Analyzed: 01/24/2024				
Phenol	1230 ug/kg dry	333	ug/kg dry	1870	<333 ug/kg	65.8	10-133		
Pyrene	3520 ug/kg dry	333	ug/kg dry	1850	3120 ug/kg dry	21.5	10-212		
Pyridine	982 ug/kg dry	333	ug/kg dry	1850	<333 ug/kg	53.0	0-200		

Surr: 2,4,6-Tribromophenol (Surr)	2600		ug/kg dry	3700	ug/kg dry	70.2	15-96		
Surr: 2-Fluorobiphenyl (Surr)	1240		ug/kg dry	1850	ug/kg dry	67.2	19-105		
Surr: 2-Fluorophenol (Surr)	2190		ug/kg dry	3700	ug/kg dry	59.2	12-95		
Surr: Nitrobenzene-d5 (Surr)	1390		ug/kg dry	1850	ug/kg dry	75.2	21-100		
Surr: Phenol-d5 (Surr)	2530		ug/kg dry	3700	ug/kg dry	68.3	13-100		
Surr: p-Terphenyl-d14 (Surr)	1160		ug/kg dry	1850	ug/kg dry	62.8	25-125		

Matrix Spike Dup (BHA0758-MSD1)		Source: 24A1221-04			Prepared: 01/23/2024 Analyzed: 01/24/2024				
1,2,4-Trichlorobenzene	880 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	49.3	70-130	12.0	20 M2
1,2-Dichlorobenzene	931 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	52.2	70-130	22.1	20 M2, P
1,3-Dichlorobenzene	868 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	48.6	70-130	16.6	20 M2
1,4-Dichlorobenzene	1000 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	56.1	70-130	18.6	20 M2
2,4,6-Trichlorophenol	1230 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	68.9	10-115	4.50	20
2,4-Dichlorophenol	934 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	52.3	10-128	4.36	20
2,4-Dimethylphenol	1030 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	57.5	10-121	12.1	20
2,4-Dinitrophenol	<321 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg		10-228		20 M2
2,4-Dinitrotoluene	958 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	53.7	10-141	5.23	20
2,6-Dinitrotoluene	921 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	51.6	15-140	9.03	20
2-Chloronaphthalene	1190 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	66.6	10-108	3.36	20
2-Chlorophenol	1070 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	59.8	10-117	11.8	20
2-Nitrophenol	947 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	53.0	10-131	4.50	20
3,3'-Dichlorobenzidine	965 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	54.1	10-110	11.0	20
4,6-Dinitro-2-methylphenol	825 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	46.2	10-110	3.43	20
4-Bromophenyl phenyl ether	1150 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	64.2	10-119	5.45	20
4-Chlorophenyl phenyl ether	1050 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	58.6	15-110	7.22	20
4-Nitrophenol	1430 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	80.2	15-110	10.6	20
Acenaphthene	1430 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	79.8	10-124	0.0311	20
Acenaphthylene	1370 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	76.8	10-118	6.37	20
Acetophenone	884 ug/kg dry	321	ug/kg dry	35.7	<321 ug/kg	2480	10-110	14.1	20 M2



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0758 - SW3550C/EPA600-MS

Matrix Spike Dup (BHA0758-MSD1)		Source: 24A1221-04			Prepared: 01/23/2024 Analyzed: 01/24/2024					
Anthracene	1360 ug/kg dry	321	ug/kg dry	1790	427 ug/kg dry	52.0	10-143	11.4	20	
Benzo (a) anthracene	4290 ug/kg dry	321	ug/kg dry	1790	2790 ug/kg dry	84.1	10-169	32.4	20	P
Benzo (a) pyrene	6580 ug/kg dry	321	ug/kg dry	1790	4890 ug/kg dry	94.4	10-149	41.4	20	P
Benzo (b) fluoranthene	8060 ug/kg dry	321	ug/kg dry	1790	5380 ug/kg dry	150	10-150	47.6	20	M2, P
Benzo (g,h,i) perylene	2880 ug/kg dry	321	ug/kg dry	1790	1920 ug/kg dry	53.9	10-123	40.3	20	P
Benzo (k) fluoranthene	3850 ug/kg dry	321	ug/kg dry	1790	2010 ug/kg dry	103	10-211	57.7	20	P
bis (2-Chloroethoxy) methane	974 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	54.6	10-108	6.92	20	
bis (2-Chloroethyl) ether	893 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	50.0	10-100	19.2	20	
2,2'-Oxybis (1-chloropropane)	1020 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	57.0	40-125	14.2	20	
bis (2-Ethylhexyl) phthalate	1060 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	59.1	10-210	5.87	20	
Butyl benzyl phthalate	1220 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	68.6	10-165	9.81	20	
Chrysene	3480 ug/kg dry	321	ug/kg dry	1790	1980 ug/kg dry	83.7	10-172	24.7	20	P
Dibenz (a,h) anthracene	1610 ug/kg dry	321	ug/kg dry	1790	774 ug/kg dry	46.7	10-128	1.72	20	
Diethyl phthalate	1350 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	75.7	10-120	4.55	20	
Dimethyl phthalate	1140 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	63.7	10-125	6.20	20	
Di-n-butyl phthalate	1140 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	63.9	10-133	5.34	20	
Di-n-octyl phthalate	1710 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	96.0	10-196	5.01	20	
Fluoranthene	4510 ug/kg dry	321	ug/kg dry	1790	3410 ug/kg dry	61.6	10-271	37.1	20	P
Fluorene	1410 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	79.0	10-124	0.619	20	
Hexachlorobenzene	1160 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	64.9	10-125	5.43	20	
Hexachlorobutadiene	991 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	55.5	10-125	8.79	20	
Hexachlorocyclopentadiene	873 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	48.9	10-125	3.60	20	
Hexachloroethane	1010 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	56.7	10-220	18.6	20	
Indeno (1,2,3-cd) pyrene	3350 ug/kg dry	321	ug/kg dry	1790	2130 ug/kg dry	68.2	10-127	39.6	20	P
Isophorone	903 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	50.6	10-110	5.48	20	
Naphthalene	1150 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	64.2	10-118	0.466	20	
Nitrobenzene	1160 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	64.9	10-126	12.7	20	
n-Nitrosodimethylamine	557 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	31.2	10-110	2.31	20	
n-Nitrosodi-n-propylamine	1230 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	68.6	10-107	9.70	20	
n-Nitrosodiphenylamine	1000 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	56.1	10-107	2.60	20	
p-Chloro-m-cresol	1190 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	66.4	10-131	1.16	20	



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0758 - SW3550C/EPA600-MS

Matrix Spike Dup (BHA0758-MSD1)		Source: 24A1221-04			Prepared: 01/23/2024 Analyzed: 01/24/2024				
Pentachlorophenol	1630 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	91.0	10-151	0.525	20
Phenanthrene	2910 ug/kg dry	321	ug/kg dry	1790	1700 ug/kg dry	67.9	10-393	22.8	20 P
Phenol	1100 ug/kg dry	321	ug/kg dry	1800	<321 ug/kg	60.9	10-133	11.3	20
Pyrene	4590 ug/kg dry	321	ug/kg dry	1790	3120 ug/kg dry	82.6	10-212	26.6	20 P
Pyridine	527 ug/kg dry	321	ug/kg dry	1790	<321 ug/kg	29.5	0-200	60.3	20 P

Surr: 2,4,6-Tribromophenol (Surr)	2580		ug/kg dry	3570	ug/kg dry	72.2	15-96		
Surr: 2-Fluorobiphenyl (Surr)	1140		ug/kg dry	1790	ug/kg dry	63.8	19-105		
Surr: 2-Fluorophenol (Surr)	1970		ug/kg dry	3570	ug/kg dry	55.1	12-95		
Surr: Nitrobenzene-d5 (Surr)	1250		ug/kg dry	1790	ug/kg dry	70.0	21-100		
Surr: Phenol-d5 (Surr)	2290		ug/kg dry	3570	ug/kg dry	64.2	13-100		
Surr: p-Terphenyl-d14 (Surr)	1050		ug/kg dry	1790	ug/kg dry	58.6	25-125		



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Semivolatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0730 - SW3550C/EPA600-FID

Blank (BHA0730-BLK1)

Prepared: 01/22/2024 Analyzed: 01/23/2024

TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet							
Surr: n-Triacontane (Surr)	3.10		mg/kg wet	4.90		63.3	50-125			

LCS (BHA0730-BS1)

Prepared: 01/22/2024 Analyzed: 01/23/2024

TPH-Semi-Volatiles (DRO)	78.3 mg/kg wet	10.0	mg/kg wet	97.7	mg/kg wet	80.2	70-130			
Surr: n-Triacontane (Surr)	3.00		mg/kg wet	4.88	mg/kg wet	61.5	50-125			

Matrix Spike (BHA0730-MS1)

Source: 24A1201-04

Prepared: 01/22/2024 Analyzed: 01/24/2024

TPH-Semi-Volatiles (DRO)	72.5 mg/kg wet	10.0	mg/kg wet	99.8	16.9 mg/kg wet	55.7	70-130			M
Surr: n-Triacontane (Surr)	2.73		mg/kg wet	4.99	mg/kg wet	54.8	50-125			

Matrix Spike Dup (BHA0730-MSD1)

Source: 24A1201-04

Prepared: 01/22/2024 Analyzed: 01/24/2024

TPH-Semi-Volatiles (DRO)	71.2 mg/kg wet	10.0	mg/kg wet	99.6	16.9 mg/kg wet	54.5	70-130	1.75	20	M
Surr: n-Triacontane (Surr)	3.05		mg/kg wet	4.98	mg/kg wet	61.3	50-125			

Batch BHA0765 - SW3550C/EPA600-FID

Blank (BHA0765-BLK1)

Prepared: 01/23/2024 Analyzed: 01/24/2024

TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet							
Surr: n-Triacontane (Surr)	3.12		mg/kg wet	4.98		62.7	50-125			

LCS (BHA0765-BS1)

Prepared: 01/23/2024 Analyzed: 01/24/2024

TPH-Semi-Volatiles (DRO)	79.0 mg/kg wet	10.0	mg/kg wet	98.2	mg/kg wet	80.4	70-130			
Surr: n-Triacontane (Surr)	3.11		mg/kg wet	4.91	mg/kg wet	63.2	50-125			

Matrix Spike (BHA0765-MS1)

Source: 24A1224-01

Prepared: 01/23/2024 Analyzed: 01/24/2024

TPH-Semi-Volatiles (DRO)	109 mg/kg dry	10.0	mg/kg dry	118	72.9 mg/kg dry	30.9	70-130			M
Surr: n-Triacontane (Surr)	5.47		mg/kg dry	5.90	mg/kg dry	92.7	50-125			



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Semivolatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0765 - SW3550C/EPA600-FID

Matrix Spike Dup (BHA0765-MSD1)

Source: 24A1224-01

Prepared: 01/23/2024 Analyzed: 01/24/2024

TPH-Semi-Volatiles (DRO)	176 mg/kg dry	10.0	mg/kg dry	117	72.9 mg/kg dry	88.5	70-130	46.8	20	M
Surr: n-Triacontane (Surr)	6.51		mg/kg dry	5.84	mg/kg dry	112	50-125			



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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0715 - SW3550C/EPA600-ECD

Blank (BHA0715-BLK1)

Prepared & Analyzed: 01/22/2024

PCB as Aroclor 1016	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1260	<0.100 mg/kg wet	0.100	mg/kg wet							
Surr: DCB	0.0300		mg/kg wet	0.0328		91.6	30-105			
Surr: TCMX	0.0247		mg/kg wet	0.0328		75.5	30-105			

LCS (BHA0715-BS1)

Prepared & Analyzed: 01/22/2024

PCB as Aroclor 1016	0.148 mg/kg wet	0.100	mg/kg wet	0.163	mg/kg wet	90.8	70-130			
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1260	0.149 mg/kg wet	0.100	mg/kg wet	0.163	mg/kg wet	91.1	70-130			
Surr: DCB	0.0287		mg/kg wet	0.0327	mg/kg wet	87.8	30-105			
Surr: TCMX	0.0248		mg/kg wet	0.0327	mg/kg wet	75.8	30-105			

Matrix Spike (BHA0715-MS1)

Source: 24A1221-07

Prepared & Analyzed: 01/22/2024

PCB as Aroclor 1016	0.178 mg/kg dry	0.108	mg/kg dry	0.180	<0.108 mg/kg	99.0	70-130			
PCB as Aroclor 1221	<0.108 mg/kg dry	0.108	mg/kg dry		<0.108 mg/kg		0-200			
PCB as Aroclor 1232	<0.108 mg/kg dry	0.108	mg/kg dry		<0.108 mg/kg		0-200			
PCB as Aroclor 1242	<0.108 mg/kg dry	0.108	mg/kg dry		<0.108 mg/kg		0-200			
PCB as Aroclor 1248	<0.108 mg/kg dry	0.108	mg/kg dry		<0.108 mg/kg		0-200			
PCB as Aroclor 1254	<0.108 mg/kg dry	0.108	mg/kg dry		<0.108 mg/kg		0-200			
PCB as Aroclor 1260	0.137 mg/kg dry	0.108	mg/kg dry	0.180	<0.108 mg/kg	76.3	70-130			
Surr: DCB	0.0279		mg/kg dry	0.0360	mg/kg dry	77.5	30-105			
Surr: TCMX	0.0226		mg/kg dry	0.0360	mg/kg dry	62.6	30-105			



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: January 26, 2024 17:06
9201 Arboretum Parkway Suite 310 Project Number: 22-02065 001
Purchase Order:
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0715 - SW3550C/EPA600-ECD

Matrix Spike Dup (BHA0715-MSD1)		Source: 24A1221-07			Prepared & Analyzed: 01/22/2024					
PCB as Aroclor 1016	0.198 mg/kg dry	0.108	mg/kg dry	0.180	<0.108 mg/kg	110	70-130	10.4	20	
PCB as Aroclor 1221	<0.108 mg/kg dry	0.108	mg/kg dry		<0.108 mg/kg		0-200		20	
PCB as Aroclor 1232	<0.108 mg/kg dry	0.108	mg/kg dry		<0.108 mg/kg		0-200		20	
PCB as Aroclor 1242	<0.108 mg/kg dry	0.108	mg/kg dry		<0.108 mg/kg		0-200		20	
PCB as Aroclor 1248	<0.108 mg/kg dry	0.108	mg/kg dry		<0.108 mg/kg		0-200		20	
PCB as Aroclor 1254	<0.108 mg/kg dry	0.108	mg/kg dry		<0.108 mg/kg		0-200		20	
PCB as Aroclor 1260	0.128 mg/kg dry	0.108	mg/kg dry	0.180	<0.108 mg/kg	71.2	70-130	6.95	20	
Surr: DCB	0.0266		mg/kg dry	0.0360	mg/kg dry	73.8	30-105			
Surr: TCMX	0.0256		mg/kg dry	0.0360	mg/kg dry	71.0	30-105			

Batch BHA0719 - SW8151A/EPA600

Blank (BHA0719-BLK1)		Prepared: 01/22/2024 Analyzed: 01/25/2024								
4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet							
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet							
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet							
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet							
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet							
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet							
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet							
delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet							
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet							
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet							
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet							
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet							
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet							
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet							
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet							
Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet							
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet							
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet							



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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0719 - SW8151A/EPA600

Blank (BHA0719-BLK1)

Prepared: 01/22/2024 Analyzed: 01/25/2024

Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet							
Surr: TCMX	29.3		ug/kg wet	32.8		89.3	30-105			
Surr: DCB	22.1		ug/kg wet	32.8		67.3	30-105			

LCS (BHA0719-BS1)

Prepared: 01/22/2024 Analyzed: 01/25/2024

4,4'-DDD	17.8 ug/kg wet	6.00	ug/kg wet	16.6	ug/kg wet	108	23-134			
4,4'-DDE	18.7 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	113	23-134			
4,4'-DDT	17.1 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	103	23-134			
Aldrin	15.7 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	94.6	23-134			
alpha-BHC	15.2 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	91.9	23-134			
beta-BHC	15.8 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	95.3	23-134			
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet		ug/kg wet		23-134			
delta-BHC	16.6 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	100	23-134			
Dieldrin	15.7 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	95.0	23-134			
Endosulfan I	14.9 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	90.2	23-134			
Endosulfan II	16.9 ug/kg wet	6.00	ug/kg wet	16.6	ug/kg wet	102	23-134			
Endosulfan sulfate	15.2 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	92.0	23-134			
Endrin	16.1 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	97.0	23-134			
Endrin aldehyde	14.8 ug/kg wet	8.00	ug/kg wet	16.6	ug/kg wet	89.6	23-134			
Endrin ketone	15.6 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	94.2	23-134			
gamma-BHC (Lindane)	15.5 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	93.9	23-134			
Heptachlor	15.6 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	94.4	23-134			
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet	16.6	ug/kg wet	99.7	23-134			
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet	16.6	ug/kg wet	109	23-134			
Mirex	16.4 ug/kg wet	6.00	ug/kg wet	16.6	ug/kg wet	99.1	23-134			
Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet		ug/kg wet		23-134			
Surr: TCMX	26.5		ug/kg wet	33.1	ug/kg wet	79.9	30-105			
Surr: DCB	25.8		ug/kg wet	33.1	ug/kg wet	77.9	30-105			



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Date Issued: January 26, 2024 17:06
Project Number: 22-02065 001
Purchase Order:

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0719 - SW8151A/EPA600

LCS (BHA0719-BS3)

Prepared: 01/22/2024 Analyzed: 01/25/2024

4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet	23-134			
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet	23-134			
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet	23-134			
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet	23-134			
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet	23-134			
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet	23-134			
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet		ug/kg wet	23-134			
delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet	23-134			
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet	23-134			
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet	23-134			
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet	23-134			
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet	23-134			
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet	23-134			
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet		ug/kg wet	23-134			
Endrin ketone	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet	23-134			
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet	23-134			
Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet	23-134			
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet		ug/kg wet	23-134			
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet		ug/kg wet	23-134			
Mirex	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet	23-134			
Toxaphene	489 ug/kg wet	42.0	ug/kg wet	417	ug/kg wet	117	23-134		
Surr: TCMX	27.3		ug/kg wet	33.3	ug/kg wet	81.9	30-105		
Surr: DCB	28.7		ug/kg wet	33.3	ug/kg wet	86.0	30-105		

LCS (BHA0719-BS4)

Prepared: 01/22/2024 Analyzed: 01/25/2024

4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet	23-134			
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet	23-134			
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet	23-134			
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet	23-134			
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet	23-134			
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet	23-134			
Chlordane	406 ug/kg wet	42.0	ug/kg wet	415	ug/kg wet	97.7	23-134		



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310 Project Number: 22-02065 001
Purchase Order:
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0719 - SW8151A/EPA600

LCS (BHA0719-BS4)

Prepared: 01/22/2024 Analyzed: 01/25/2024

delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet	ug/kg wet	23-134		
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet	ug/kg wet	23-134		
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet	ug/kg wet	23-134		
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet	ug/kg wet	23-134		
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet	ug/kg wet	23-134		
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet	ug/kg wet	23-134		
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet	ug/kg wet	23-134		
Endrin ketone	<2.00 ug/kg wet	2.00	ug/kg wet	ug/kg wet	23-134		
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet	ug/kg wet	23-134		
Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet	ug/kg wet	23-134		
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet	ug/kg wet	23-134		
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet	ug/kg wet	23-134		
Mirex	<6.00 ug/kg wet	6.00	ug/kg wet	ug/kg wet	23-134		
Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet	ug/kg wet	23-134		
Surr: TCMX	30.3		ug/kg wet	33.2	ug/kg wet	91.2	30-105
Surr: DCB	28.5		ua/ka wet	33.2	ua/ka wet	85.8	30-105

Matrix Spike (BHA0719-MS1)

Source: 24A1221-07

Prepared: 01/22/2024 Analyzed: 01/25/2024

4,4'-DDD	12.7 ug/kg dry	6.00	ug/kg dry	17.8	<6.00 ug/kg	71.6	23-134
4,4'-DDE	13.6 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	76.5	23-134
4,4'-DDT	9.68 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	54.4	23-134
Aldrin	10.4 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	58.2	23-134
alpha-BHC	12.9 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	72.3	23-134
beta-BHC	13.8 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	77.8	23-134
delta-BHC	13.2 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	74.4	23-134
Dieldrin	10.2 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	57.5	23-134
Endosulfan I	8.42 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	47.4	23-134
Endosulfan II	10.8 ug/kg dry	6.00	ug/kg dry	17.8	<6.00 ug/kg	61.0	23-134
Endosulfan sulfate	9.18 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	51.6	23-134
Endrin	11.1 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	62.6	23-134
Endrin aldehyde	8.83 ug/kg dry	8.00	ug/kg dry	17.8	<8.00 ug/kg	49.6	23-134
Endrin ketone	9.92 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	55.8	23-134



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Certificate of Analysis

Final Report

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Purchase Order:

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0719 - SW8151A/EPA600

Matrix Spike (BHA0719-MS1)		Source: 24A1221-07			Prepared: 01/22/2024 Analyzed: 01/25/2024					
gamma-BHC (Lindane)	12.5 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	70.1	23-134			
Heptachlor	10.4 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	58.8	23-134			
Heptachlor epoxide	<40.0 ug/kg dry	40.0	ug/kg dry	17.8	<40.0 ug/kg	67.0	23-134			
Methoxychlor	<40.0 ug/kg dry	40.0	ug/kg dry	17.8	<40.0 ug/kg	59.0	23-134			
Mirex	9.63 ug/kg dry	6.00	ug/kg dry	17.8	<6.00 ug/kg	54.1	23-134			
Surr: TCMX	20.5		ug/kg dry	35.6	ug/kg dry	57.6	30-105			
Surr: DCB	14.7		ug/kg dry	35.6	ug/kg dry	41.3	30-105			

Matrix Spike Dup (BHA0719-MSD1)		Source: 24A1221-07			Prepared: 01/22/2024 Analyzed: 01/25/2024					
4,4'-DDD	12.1 ug/kg dry	6.00	ug/kg dry	17.8	<6.00 ug/kg	68.0	23-134	4.90	20	
4,4'-DDE	13.1 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	73.7	23-134	3.40	20	
4,4'-DDT	9.23 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	51.8	23-134	4.77	20	
Aldrin	9.92 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	55.6	23-134	4.30	20	
alpha-BHC	12.4 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	69.4	23-134	3.77	20	
beta-BHC	11.0 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	61.7	23-134	22.9	20	P
delta-BHC	12.4 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	69.8	23-134	6.12	20	
Dieldrin	9.73 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	54.5	23-134	4.88	20	
Endosulfan I	7.99 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	44.8	23-134	5.23	20	
Endosulfan II	10.4 ug/kg dry	6.00	ug/kg dry	17.8	<6.00 ug/kg	58.2	23-134	4.28	20	
Endosulfan sulfate	8.60 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	48.2	23-134	6.45	20	
Endrin	11.2 ug/kg dry	4.00	ug/kg dry	17.8	<4.00 ug/kg	63.0	23-134	0.972	20	
Endrin aldehyde	8.51 ug/kg dry	8.00	ug/kg dry	17.8	<8.00 ug/kg	47.7	23-134	3.65	20	
Endrin ketone	9.94 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	55.7	23-134	0.193	20	
gamma-BHC (Lindane)	12.4 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	69.7	23-134	0.282	20	
Heptachlor	10.2 ug/kg dry	2.00	ug/kg dry	17.8	<2.00 ug/kg	57.4	23-134	1.94	20	
Heptachlor epoxide	<40.0 ug/kg dry	40.0	ug/kg dry	17.8	<40.0 ug/kg	62.5	23-134	6.67	20	
Methoxychlor	<40.0 ug/kg dry	40.0	ug/kg dry	17.8	<40.0 ug/kg	64.1	23-134	8.60	20	
Mirex	9.22 ug/kg dry	6.00	ug/kg dry	17.8	<6.00 ug/kg	51.7	23-134	4.25	20	
Surr: TCMX	20.3		ug/kg dry	35.7	ug/kg dry	57.0	30-105			
Surr: DCB	14.6		ug/kg dry	35.7	ug/kg dry	40.8	30-105			



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Client Site I.D.: Alex Water Front

Wet Chemistry Analysis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA0722 - No Prep Wet Chem

Blank (BHA0722-BLK1)

Prepared & Analyzed: 01/22/2024

Percent Solids 100 % 0.10 %

Duplicate (BHA0722-DUP1)

Source: 24A1221-05

Prepared & Analyzed: 01/22/2024

Percent Solids 78.7 % 0.10 % 77.6 % 1.37 20



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Certified Analyses included in this Report

Analyte	Certifications
SW6010D in Solids	
Arsenic	VELAP,WVDEP,PADEP
Barium	VELAP,WVDEP,PADEP
Cadmium	VELAP,WVDEP,PADEP
Chromium	VELAP,WVDEP,PADEP
Lead	VELAP,WVDEP,PADEP
Selenium	VELAP,WVDEP,PADEP
Silver	VELAP,WVDEP,PADEP
SW7471B in Solids	
Mercury	VELAP,PADEP,NCDEQ,WVDEP
SW8015C in Solids	
TPH-Semi-Volatiles (DRO)	VELAP,PADEP,NCDEQ,WVDEP
TPH-Volatiles (GRO)	VELAP,PADEP,NCDEQ,WVDEP
SW8081B in Solids	
4,4'-DDD	VELAP,NCDEQ,WVDEP,PADEP
4,4'-DDE	VELAP,NCDEQ,WVDEP,PADEP
4,4'-DDT	VELAP,NCDEQ,WVDEP,PADEP
Aldrin	VELAP,NCDEQ,WVDEP,PADEP
alpha-BHC	VELAP,NCDEQ,WVDEP,PADEP
beta-BHC	VELAP,NCDEQ,WVDEP,PADEP
Chlordane	VELAP,NCDEQ,WVDEP,PADEP
delta-BHC	VELAP,NCDEQ,WVDEP,PADEP
Dieldrin	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan I	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan II	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan sulfate	VELAP,NCDEQ,WVDEP,PADEP
Endrin	VELAP,NCDEQ,WVDEP,PADEP
Endrin aldehyde	VELAP,NCDEQ,WVDEP,PADEP
gamma-BHC (Lindane)	VELAP,NCDEQ,WVDEP,PADEP
Heptachlor	VELAP,NCDEQ,WVDEP,PADEP
Heptachlor epoxide	VELAP,NCDEQ,WVDEP,PADEP
Methoxychlor	VELAP,NCDEQ,WVDEP,PADEP
Toxaphene	VELAP,NCDEQ,WVDEP,PADEP
SW8082A in Solids	
PCB as Aroclor 1016	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1221	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1232	VELAP,PADEP,NCDEQ,WVDEP



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Water Front

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Analyte	Certifications
PCB as Aroclor 1242	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1248	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1254	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1260	VELAP,PADEP,NCDEQ,WVDEP
SW8260D in Solids	
1,1,1,2-Tetrachloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1,1-Trichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1,2,2-Tetrachloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1,2-Trichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1-Dichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1-Dichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
1,1-Dichloropropene	VELAP,PADEP,NCDEQ,WVDEP
1,2,3-Trichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2,3-Trichloropropane	VELAP,PADEP,NCDEQ,WVDEP
1,2,4-Trichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2,4-Trimethylbenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dibromo-3-chloropropane (DBCP)	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dibromoethane (EDB)	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dichloropropane	VELAP,PADEP,NCDEQ,WVDEP
1,3,5-Trimethylbenzene	VELAP,PADEP,NCDEQ,WVDEP
1,3-Dichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,3-Dichloropropane	VELAP,PADEP,NCDEQ,WVDEP
1,4-Dichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
2,2-Dichloropropane	VELAP,PADEP,NCDEQ,WVDEP
2-Butanone (MEK)	VELAP,PADEP,NCDEQ,WVDEP
2-Chlorotoluene	VELAP,PADEP,NCDEQ,WVDEP
2-Hexanone (MBK)	VELAP,PADEP,NCDEQ,WVDEP
4-Chlorotoluene	VELAP,PADEP,NCDEQ,WVDEP
4-Isopropyltoluene	VELAP,PADEP,NCDEQ,WVDEP
4-Methyl-2-pentanone (MIBK)	VELAP,PADEP,NCDEQ,WVDEP
Acetone	VELAP,PADEP,NCDEQ,WVDEP
Benzene	VELAP,PADEP,NCDEQ,WVDEP
Bromobenzene	VELAP,PADEP,NCDEQ,WVDEP
Bromochloromethane	VELAP,PADEP,NCDEQ,WVDEP
Bromodichloromethane	VELAP,PADEP,NCDEQ,WVDEP
Bromoform	VELAP,PADEP,NCDEQ,WVDEP



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Bromomethane	VELAP,PADEP,NCDEQ,WVDEP
Carbon disulfide	VELAP,PADEP,NCDEQ,WVDEP
Carbon tetrachloride	VELAP,PADEP,NCDEQ,WVDEP
Chlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
Chloroethane	VELAP,PADEP,NCDEQ,WVDEP
Chloroform	VELAP,PADEP,NCDEQ,WVDEP
Chloromethane	VELAP,PADEP,NCDEQ,WVDEP
cis-1,2-Dichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
cis-1,3-Dichloropropene	VELAP,PADEP,NCDEQ,WVDEP
Dibromochloromethane	VELAP,PADEP,NCDEQ,WVDEP
Dibromomethane	VELAP,PADEP,NCDEQ,WVDEP
Dichlorodifluoromethane	VELAP,PADEP,NCDEQ,WVDEP
Di-isopropyl ether (DIPE)	VELAP,PADEP,NCDEQ,WVDEP
Ethylbenzene	VELAP,PADEP,NCDEQ,WVDEP
Hexachlorobutadiene	VELAP,PADEP,NCDEQ,WVDEP
Iodomethane	VELAP,PADEP,NCDEQ,WVDEP
Isopropylbenzene	VELAP,PADEP,NCDEQ,WVDEP
m+p-Xylenes	VELAP,PADEP,NCDEQ,WVDEP
Methylene chloride	VELAP,PADEP,NCDEQ,WVDEP
Methyl-t-butyl ether (MTBE)	VELAP,PADEP,NCDEQ,WVDEP
Naphthalene	VELAP,PADEP,NCDEQ,WVDEP
n-Butylbenzene	VELAP,PADEP,NCDEQ,WVDEP
n-Propylbenzene	VELAP,PADEP,NCDEQ,WVDEP
o-Xylene	VELAP,PADEP,NCDEQ,WVDEP
sec-Butylbenzene	VELAP,PADEP,NCDEQ,WVDEP
Styrene	VELAP,PADEP,NCDEQ,WVDEP
tert-Butylbenzene	VELAP,PADEP,NCDEQ,WVDEP
Tetrachloroethylene (PCE)	VELAP,PADEP,NCDEQ,WVDEP
Toluene	VELAP,PADEP,NCDEQ,WVDEP
trans-1,2-Dichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
trans-1,3-Dichloropropene	VELAP,PADEP,NCDEQ,WVDEP
Trichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
Trichlorofluoromethane	VELAP,PADEP,NCDEQ,WVDEP
Vinyl acetate	VELAP,PADEP,NCDEQ,WVDEP
Vinyl chloride	VELAP,PADEP,NCDEQ,WVDEP
Xylenes, Total	VELAP,PADEP,NCDEQ,WVDEP
Dibromofluoromethane (Surr)	VELAP

SW8270E in Solids



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Analyte	Certifications
1,2,4,5-Tetrachlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2,4-Trichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2-Diphenylhydrazine	WVDEP,VELAP
1,3-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,3-Dinitrobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,4-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1-Chloronaphthalene	NCDEQ,WVDEP,VELAP,PADEP
1-Naphthylamine	NCDEQ,WVDEP,VELAP,PADEP
2,3,4,6-Tetrachlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4,5-Trichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4,6-Trichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dimethylphenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dinitrophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dinitrotoluene	NCDEQ,WVDEP,VELAP,PADEP
2,6-Dichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,6-Dinitrotoluene	NCDEQ,WVDEP,VELAP,PADEP
2-Chloronaphthalene	NCDEQ,WVDEP,VELAP,PADEP
2-Chlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2-Methylnaphthalene	NCDEQ,WVDEP,VELAP,PADEP
2-Naphthylamine	NCDEQ,WVDEP,VELAP,PADEP
2-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
2-Nitrophenol	NCDEQ,WVDEP,VELAP,PADEP
3,3'-Dichlorobenzidine	NCDEQ,WVDEP,VELAP,PADEP
3-Methylcholanthrene	NCDEQ,WVDEP,VELAP,PADEP
3-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
4,6-Dinitro-2-methylphenol	NCDEQ,WVDEP,VELAP,PADEP
4-Aminobiphenyl	NCDEQ,WVDEP,VELAP,PADEP
4-Bromophenyl phenyl ether	NCDEQ,WVDEP,VELAP,PADEP
4-Chloroaniline	NCDEQ,WVDEP,VELAP,PADEP
4-Chlorophenyl phenyl ether	NCDEQ,WVDEP,VELAP,PADEP
4-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
4-Nitrophenol	NCDEQ,WVDEP,VELAP,PADEP
7,12-Dimethylbenz (a) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Acenaphthene	NCDEQ,WVDEP,VELAP,PADEP
Acenaphthylene	NCDEQ,WVDEP,VELAP,PADEP
Acetophenone	NCDEQ,WVDEP,VELAP,PADEP



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Aniline	NCDEQ,WVDEP,VELAP,PADEP
Anthracene	NCDEQ,WVDEP,VELAP,PADEP
Benzidine	NCDEQ,WVDEP,VELAP,PADEP
Benzo (a) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (a) pyrene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (b) fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (g,h,i) perylene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (k) fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Benzoic acid	NCDEQ,WVDEP,VELAP,PADEP
Benzyl alcohol	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Chloroethoxy) methane	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Chloroethyl) ether	NCDEQ,WVDEP,VELAP,PADEP
2,2'-Oxybis (1-chloropropane)	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Ethylhexyl) phthalate	NCDEQ,WVDEP,VELAP,PADEP
Butyl benzyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Chrysene	NCDEQ,WVDEP,VELAP,PADEP
Dibenz (a,h) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Dibenz (a,j) acridine	NCDEQ,WVDEP,VELAP,PADEP
Dibenzofuran	NCDEQ,WVDEP,VELAP,PADEP
Diethyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Dimethyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Di-n-butyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Di-n-octyl phthalate	NCDEQ,WVDEP,VELAP
Diphenylamine	NCDEQ,WVDEP,VELAP,PADEP
Ethyl methanesulfonate	NCDEQ,WVDEP,VELAP,PADEP
Fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Fluorene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorobutadiene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorocyclopentadiene	NCDEQ,WVDEP,VELAP,PADEP
Hexachloroethane	NCDEQ,WVDEP,VELAP,PADEP
Indeno (1,2,3-cd) pyrene	NCDEQ,WVDEP,VELAP,PADEP
Isophorone	NCDEQ,WVDEP,VELAP,PADEP
m+p-Cresols	NCDEQ,WVDEP,VELAP,PADEP
Methyl methanesulfonate	NCDEQ,WVDEP,VELAP,PADEP
Naphthalene	NCDEQ,WVDEP,VELAP,PADEP
Nitrobenzene	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodimethylamine	NCDEQ,WVDEP,VELAP,PADEP



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n-Nitrosodi-n-butylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodi-n-propylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodiphenylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosopiperidine	NCDEQ,WVDEP,VELAP,PADEP
o+m+p-Cresols	NCDEQ,WVDEP,VELAP,PADEP
o-Cresol	NCDEQ,WVDEP,VELAP,PADEP
p-(Dimethylamino) azobenzene	NCDEQ,WVDEP,VELAP
p-Chloro-m-cresol	NCDEQ,WVDEP,VELAP,PADEP
Pentachloronitrobenzene (quintozene)	NCDEQ,WVDEP
Pentachlorophenol	NCDEQ,WVDEP,VELAP,PADEP
Phenacetin	NCDEQ,WVDEP,VELAP,PADEP
Phenanthrene	NCDEQ,WVDEP,VELAP,PADEP
Phenol	NCDEQ,WVDEP,VELAP,PADEP
Pronamide	NCDEQ,WVDEP,VELAP,PADEP
Pyrene	NCDEQ,WVDEP,VELAP,PADEP
Pyridine	NCDEQ,WVDEP,VELAP,PADEP

Code	Description	Laboratory ID	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2024
NCDEQ	North Carolina DEQ	495	12/31/2024
NCDOH	North Carolina Department of Health	51714	07/31/2024
NYDOH	New York DOH Drinking Water	12069	04/01/2024
PADEP	NELAP-Pennsylvania Certificate #009	68-03503	10/31/2024
SCDHEC	South Carolina Dept of Health and Environmental	93016	06/14/2024
TXCEQ	Texas Comm on Environmental Quality #T104704	T104704576	05/31/2024
VELAP	NELAP-Virginia Certificate #12617	460021	06/14/2024
WVDEP	West Virginia DEP	350	11/30/2024



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Summary of Data Qualifiers

C	Continuing calibration verification response for this analyte is outside specifications.
L	LCS recovery is outside of established acceptance limits
M	Matrix spike recovery is outside established acceptance limits
M2	Sample was diluted due to matrix interference.
P	Duplicate analysis does not meet the acceptance criteria for precision
S	Surrogate recovery was outside acceptance criteria
RPD	Relative Percent Difference
Qual	Qualifiers
-RE	Denotes sample was re-analyzed
D.F.	Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
PCBs, Total	Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: JMT			INVOICE TO: JMT			PROJECT NAME/Quote #: Alex Water front																																																																																																																																																																										
CONTACT: Garry Moore			INVOICE CONTACT:			SITE NAME: Alex Water front																																																																																																																																																																										
ADDRESS: 9201 Arboretum Pkwy, Ste 310			INVOICE ADDRESS:			PROJECT NUMBER: 22-02065 001																																																																																																																																																																										
PHONE #: 804 357 1811			INVOICE PHONE #:			P.O. #:																																																																																																																																																																										
FAX #:			EMAIL: ghmoore5044@gmail.com			Pretreatment Program:																																																																																																																																																																										
Is sample for compliance reporting? YES ☒ NO ☐			Regulatory State: VA			Is sample from a chlorinated supply? YES ☒ NO ☐																																																																																																																																																																										
SAMPLER NAME (PRINT): Garry Moore			SAMPLER SIGNATURE: <i>[Signature]</i>			Turn Around Time: Circle 10 5 Days or _Day(s)																																																																																																																																																																										
Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other _____								COMMENTS Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)																																																																																																																																																																								
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">CLIENT SAMPLE I.D.</th> <th rowspan="2">Grab</th> <th rowspan="2">Composite</th> <th rowspan="2">Field Filtered (Dissolved Metals)</th> <th rowspan="2">Composite Start Date</th> <th rowspan="2">Composite Start Time</th> <th rowspan="2">Grab Date or Composite Stop Date</th> <th rowspan="2">Grab Time or Composite Stop Time</th> <th rowspan="2">Time Preserved</th> <th rowspan="2">Matrix (See Codes)</th> <th rowspan="2">Number of Containers</th> <th colspan="4">ANALYSIS / (PRESERVATIVE)</th> </tr> <tr> <th>DRO/GRO 8015</th> <th>VOCs 8260</th> <th>PCPA Metals</th> <th>Pest/PCB/SVOC</th> </tr> </thead> <tbody> <tr><td>1) P 27</td><td>X</td><td></td><td></td><td></td><td></td><td>1/17</td><td>1220</td><td></td><td>S</td><td>4</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td></tr> <tr><td>2) P 28</td><td>X</td><td></td><td></td><td></td><td></td><td>1/17</td><td>1250</td><td></td><td>S</td><td>1</td><td></td><td></td><td>✓</td><td></td></tr> <tr><td>3) P 29</td><td>X</td><td></td><td></td><td></td><td></td><td>1/17</td><td>1030</td><td></td><td>S</td><td>2</td><td></td><td></td><td>✓</td><td>✓</td></tr> <tr><td>4) P 30</td><td>X</td><td></td><td></td><td></td><td></td><td>1/17</td><td>1110</td><td></td><td>S</td><td>4</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td></tr> <tr><td>5) P 5</td><td>X</td><td></td><td></td><td></td><td></td><td>1/18</td><td>1230</td><td></td><td>S</td><td>4</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td></tr> <tr><td>6) P 15</td><td>X</td><td></td><td></td><td></td><td></td><td>1/18</td><td>1020</td><td></td><td>S</td><td>4</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td></tr> <tr><td>7) P 14</td><td>X</td><td></td><td></td><td></td><td></td><td>1/18</td><td>945</td><td></td><td>S</td><td>4</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td></tr> <tr><td>8) P 16</td><td>X</td><td></td><td></td><td></td><td></td><td>1/18</td><td>1115</td><td></td><td>S</td><td>4</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td></tr> <tr><td>9) P 17</td><td>X</td><td></td><td></td><td></td><td></td><td>1/18</td><td>1200</td><td></td><td>S</td><td>4</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td></tr> <tr><td>10)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>									CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)				DRO/GRO 8015	VOCs 8260	PCPA Metals	Pest/PCB/SVOC	1) P 27	X					1/17	1220		S	4	✓	✓	✓	✓	2) P 28	X					1/17	1250		S	1			✓		3) P 29	X					1/17	1030		S	2			✓	✓	4) P 30	X					1/17	1110		S	4	✓	✓	✓	✓	5) P 5	X					1/18	1230		S	4	✓	✓	✓	✓	6) P 15	X					1/18	1020		S	4	✓	✓	✓	✓	7) P 14	X					1/18	945		S	4	✓	✓	✓	✓	8) P 16	X					1/18	1115		S	4	✓	✓	✓	✓	9) P 17	X					1/18	1200		S	4	✓	✓	✓	✓	10)													
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2) P 28	X					1/17	1250		S	1			✓																																																																																																																																																																			
3) P 29	X					1/17	1030		S	2			✓	✓																																																																																																																																																																		
4) P 30	X					1/17	1110		S	4	✓	✓	✓	✓																																																																																																																																																																		
5) P 5	X					1/18	1230		S	4	✓	✓	✓	✓																																																																																																																																																																		
6) P 15	X					1/18	1020		S	4	✓	✓	✓	✓																																																																																																																																																																		
7) P 14	X					1/18	945		S	4	✓	✓	✓	✓																																																																																																																																																																		
8) P 16	X					1/18	1115		S	4	✓	✓	✓	✓																																																																																																																																																																		
9) P 17	X					1/18	1200		S	4	✓	✓	✓	✓																																																																																																																																																																		
10)																																																																																																																																																																																
RELINQUISHED: <i>[Signature]</i>		DATE / TIME: 1/14/24 1645		RECEIVED: <i>[Signature]</i>		DATE / TIME: 1-14-24 1645		QC Data Package		LAB USE ONLY Therm ID: 338		COOLER TEMP 35 °C																																																																																																																																																																				
RELINQUISHED:		DATE / TIME:		RECEIVED:		DATE / TIME:		Level III ☐		Custody Seals used and intact? (Y/N) ☒		Received on ice? (Y/N) ☒																																																																																																																																																																				
RELINQUISHED:		DATE / TIME:		RECEIVED:		DATE / TIME:		Le: 24A1221		JMT-Richmond VA 24A1221																																																																																																																																																																						
										2023 Alexandria - Soil																																																																																																																																																																						
										Recd: 01/19/2024 Due: 01/26/2024																																																																																																																																																																						



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Certificate of Analysis

Final Report

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	January 26, 2024 17:06
	9201 Arboretum Parkway Suite 310	Project Number:	22-02065 001
	Richmond VA, 23236	Purchase Order:	
Submitted To:	Leo Snead		
Client Site I.D.:	Alex Water Front		

Sample Conditions Checklist

Samples Received at:	3.50°C
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits or received on ice, and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis. In addition, field parameters are always received outside holding time and will be marked accordingly.	Yes

Work Order Comments



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Certificate of Analysis

Final Report

Laboratory Order ID 24A1607

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmond, VA	Date Received:	January 26, 2024 17:11
	9201 Arboretum Parkway Suite 310	Date Issued:	February 2, 2024 17:18
	Richmond, VA 23236	Project Number:	2202065001
Submitted To:	Leo Snead	Purchase Order:	2202065001
Client Site I.D.:	Alexandria - Soil		

Enclosed are the results of analyses for samples received by the laboratory on 01/26/2024 17:11. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads 'Ted Soyars'.

Ted Soyars
Technical Director

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Enthalpy Analytical.





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Certificate of Analysis

Final Report

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 02, 2024 17:18
	9201 Arboretum Parkway Suite 310	Project Number:	2202065001
	Richmond VA, 23236	Purchase Order:	2202065001
Submitted To:	Leo Snead		
Client Site I.D.:	Alexandria - Soil		

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 24A1607

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
P.9	24A1607-01	Solids	01/22/2024 12:10	01/26/2024 17:11
P10	24A1607-02	Solids	01/22/2024 09:40	01/26/2024 17:11
P12	24A1607-03	Solids	01/22/2024 10:45	01/26/2024 17:11
P13	24A1607-04	Solids	01/22/2024 10:00	01/26/2024 17:11
P18	24A1607-05	Solids	01/23/2024 12:35	01/26/2024 17:11
P23	24A1607-06	Solids	01/26/2024 12:45	01/26/2024 17:11
P25	24A1607-07	Solids	01/23/2024 12:05	01/26/2024 17:11
P26	24A1607-08	Solids	01/23/2024 11:40	01/26/2024 17:11



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P.9

Laboratory Sample ID: 24A1607-01

Grab Date/Time: 01/22/2024 12:10

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010D	<2.38 mg/kg dry		2.38	5	01/30/24 09:45	02/02/24 14:17	ACM
Arsenic	01	SW6010D	<4.76 mg/kg dry		4.76	5	01/30/24 09:45	02/02/24 14:17	ACM
Barium	01	SW6010D	44.6 mg/kg dry		2.38	5	01/30/24 09:45	02/02/24 14:17	ACM
Cadmium	01	SW6010D	<0.951 mg/kg dry		0.951	5	01/30/24 09:45	02/02/24 14:17	ACM
Chromium	01	SW6010D	14.2 mg/kg dry		2.38	5	01/30/24 09:45	02/02/24 14:17	ACM
Mercury	01	SW7471B	0.036 mg/kg dry		0.008	1	01/31/24 09:40	01/31/24 12:58	NBT
Lead	01	SW6010D	12.1 mg/kg dry		2.38	5	01/30/24 09:45	02/02/24 14:17	ACM
Selenium	01	SW6010D	<11.9 mg/kg dry		11.9	5	01/30/24 09:45	02/02/24 14:17	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	01	SW8015C	<0.10 mg/kg dry		0.10	1	01/29/24 22:04	01/29/24 22:04	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	01	SW8015C	110 %		80-120		01/29/24 22:04	01/29/24 22:04	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,1,1-Trichloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,1,2,2-Tetrachloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,1,2-Trichloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,1-Dichloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,1-Dichloroethylene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,1-Dichloropropene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,2,3-Trichlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,2,3-Trichloropropane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,2,4-Trichlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,2,4-Trimethylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,2-Dibromo-3-chloropropane (DBCP)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P.9 Laboratory Sample ID: 24A1607-01

Grab Date/Time: 01/22/2024 12:10

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,2-Dichlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,2-Dichloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,2-Dichloropropane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,3,5-Trimethylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,3-Dichlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,3-Dichloropropane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
1,4-Dichlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
2,2-Dichloropropane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
2-Butanone (MEK)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
2-Chlorotoluene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
2-Hexanone (MBK)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
4-Chlorotoluene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
4-Isopropyltoluene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
4-Methyl-2-pentanone (MIBK)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Acetone	01	SW8260D	21.6 ug/kg dry		10.0	1	01/30/24 13:37	01/30/24 13:37	RJB
Benzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Bromobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Bromochloromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Bromodichloromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Bromoform	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Bromomethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Carbon disulfide	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Carbon tetrachloride	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Chlorobenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Chloroethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P.9 Laboratory Sample ID: 24A1607-01

Grab Date/Time: 01/22/2024 12:10

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Chloromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
cis-1,2-Dichloroethylene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
cis-1,3-Dichloropropene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Dibromochloromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Dibromomethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Dichlorodifluoromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Di-isopropyl ether (DIPE)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Ethylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Hexachlorobutadiene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Iodomethane	01	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 13:37	01/30/24 13:37	RJB
Isopropylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
m+p-Xylenes	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Methylene chloride	01	SW8260D	5.37 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Methyl-t-butyl ether (MTBE)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Naphthalene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
n-Butylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
n-Propylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
o-Xylene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
sec-Butylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Styrene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
tert-Butylbenzene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Tetrachloroethylene (PCE)	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Toluene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
trans-1,2-Dichloroethylene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
trans-1,3-Dichloropropene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P.9 Laboratory Sample ID: 24A1607-01
Grab Date/Time: 01/22/2024 12:10
Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Trichlorofluoromethane	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Vinyl acetate	01	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 13:37	01/30/24 13:37	RJB
Vinyl chloride	01	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 13:37	01/30/24 13:37	RJB
Xylenes, Total	01	SW8260D	<15.0 ug/kg dry		15.0	1	01/30/24 13:37	01/30/24 13:37	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	01	SW8260D	98.0 %		80-120		01/30/24 13:37	01/30/24 13:37	RJB
Surr: 4-Bromofluorobenzene (Surr)	01	SW8260D	102 %		85-120		01/30/24 13:37	01/30/24 13:37	RJB
Surr: Dibromofluoromethane (Surr)	01	SW8260D	96.5 %		80-130		01/30/24 13:37	01/30/24 13:37	RJB
Surr: Toluene-d8 (Surr)	01	SW8260D	99.2 %		85-115		01/30/24 13:37	01/30/24 13:37	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
1,2,4-Trichlorobenzene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
1,2-Dichlorobenzene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
1,2-Diphenylhydrazine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
1,3-Dichlorobenzene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
1,3-Dinitrobenzene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
1,4-Dichlorobenzene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
1-Chloronaphthalene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
1-Naphthylamine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2,3,4,6-Tetrachlorophenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2,4,5-Trichlorophenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2,4,6-Trichlorophenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2,4-Dichlorophenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P.9 Laboratory Sample ID: 24A1607-01

Grab Date/Time: 01/22/2024 12:10

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2,4-Dinitrophenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2,4-Dinitrotoluene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2,6-Dichlorophenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2,6-Dinitrotoluene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2-Chloronaphthalene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2-Chlorophenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2-Methylnaphthalene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2-Naphthylamine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2-Nitroaniline	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2-Nitrophenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
3,3'-Dichlorobenzidine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
3-Methylcholanthrene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
3-Nitroaniline	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
4,6-Dinitro-2-methylphenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
4-Aminobiphenyl	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
4-Bromophenyl phenyl ether	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
4-Chloroaniline	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
4-Chlorophenyl phenyl ether	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
4-Nitroaniline	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
4-Nitrophenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
7,12-Dimethylbenz (a) anthracene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Acenaphthene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Acenaphthylene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Acetophenone	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P.9 Laboratory Sample ID: 24A1607-01

Grab Date/Time: 01/22/2024 12:10

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Aniline	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Anthracene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Benzidine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Benzo (a) anthracene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Benzo (a) pyrene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Benzo (b) fluoranthene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Benzo (g,h,i) perylene	01	SW8270E	<83.3 ug/kg dry	C	83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Benzo (k) fluoranthene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Benzoic acid	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Benzyl alcohol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
bis (2-Chloroethoxy) methane	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
bis (2-Chloroethyl) ether	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
2,2'-Oxybis (1-chloropropane)	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
bis (2-Ethylhexyl) phthalate	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Butyl benzyl phthalate	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Chrysene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Dibenz (a,h) anthracene	01	SW8270E	<83.3 ug/kg dry	C	83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Dibenz (a,j) acridine	01	SW8270E	<83.3 ug/kg dry	C	83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Dibenzofuran	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Diethyl phthalate	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Dimethyl phthalate	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Di-n-butyl phthalate	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Di-n-octyl phthalate	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Diphenylamine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Ethyl methanesulfonate	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Fluoranthene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS



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Certificate of Analysis

Final Report

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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P.9 Laboratory Sample ID: 24A1607-01

Grab Date/Time: 01/22/2024 12:10

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Hexachlorobenzene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Hexachlorobutadiene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Hexachlorocyclopentadiene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Hexachloroethane	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Indeno (1,2,3-cd) pyrene	01	SW8270E	<83.3 ug/kg dry	C	83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Isophorone	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
m+p-Cresols	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Methyl methanesulfonate	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Naphthalene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Nitrobenzene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
n-Nitrosodimethylamine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
n-Nitrosodi-n-butylamine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
n-Nitrosodi-n-propylamine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
n-Nitrosodiphenylamine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
n-Nitrosopiperidine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
o+m+p-Cresols	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
o-Cresol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
p-(Dimethylamino) azobenzene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
p-Chloro-m-cresol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Pentachloronitrobenzene (quintozene)	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Pentachlorophenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Phenacetin	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Phenanthrene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P.9

Laboratory Sample ID: 24A1607-01

Grab Date/Time: 01/22/2024 12:10

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Pronamide	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Pyrene	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Pyridine	01	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:03	BMS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270E	47.9 %		15-96		02/01/24 16:44	02/02/24 13:03	BMS
Surr: 2-Fluorobiphenyl (Surr)	01	SW8270E	54.3 %		19-105		02/01/24 16:44	02/02/24 13:03	BMS
Surr: 2-Fluorophenol (Surr)	01	SW8270E	52.3 %		12-95		02/01/24 16:44	02/02/24 13:03	BMS
Surr: Nitrobenzene-d5 (Surr)	01	SW8270E	51.7 %		21-100		02/01/24 16:44	02/02/24 13:03	BMS
Surr: Phenol-d5 (Surr)	01	SW8270E	44.9 %		13-100		02/01/24 16:44	02/02/24 13:03	BMS
Surr: p-Terphenyl-d14 (Surr)	01	SW8270E	64.6 %		25-125		02/01/24 16:44	02/02/24 13:03	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01	SW8015C	24.4 mg/kg dry		10.0	1	01/31/24 15:35	02/01/24 21:20	LBH2
Surr: n-Triacontane (Surr)	01	SW8015C	61.3 %		50-125		01/31/24 15:35	02/01/24 21:20	LBH2
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	01	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 01:55	ZDR
PCB as Aroclor 1221	01	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 01:55	ZDR
PCB as Aroclor 1232	01	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 01:55	ZDR
PCB as Aroclor 1242	01	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 01:55	ZDR
PCB as Aroclor 1248	01	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 01:55	ZDR
PCB as Aroclor 1254	01	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 01:55	ZDR
PCB as Aroclor 1260	01	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 01:55	ZDR
Surr: DCB	01	SW8082A	56.0 %		30-105		01/31/24 17:09	02/01/24 01:55	ZDR
Surr: TCMX	01	SW8082A	58.9 %		30-105		01/31/24 17:09	02/01/24 01:55	ZDR
4,4'-DDD	01	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 13:42	BMS



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Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P.9		Laboratory Sample ID: 24A1607-01							
Grab Date/Time:		01/22/2024 12:10							
Field Residual CI:		Field pH:							
Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 13:42	BMS
4,4'-DDT	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 13:42	BMS
Aldrin	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 13:42	BMS
alpha-BHC	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 13:42	BMS
beta-BHC	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 13:42	BMS
Chlordane	01	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 13:42	BMS
delta-BHC	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 13:42	BMS
Dieldrin	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 13:42	BMS
Endosulfan I	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 13:42	BMS
Endosulfan II	01	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 13:42	BMS
Endosulfan sulfate	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 13:42	BMS
Endrin	01	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 13:42	BMS
Endrin aldehyde	01	SW8081B	<8.00 ug/kg dry		8.00	1	01/31/24 12:20	02/01/24 13:42	BMS
gamma-BHC (Lindane)	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 13:42	BMS
Heptachlor	01	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 13:42	BMS
Heptachlor epoxide	01	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 13:42	BMS
Methoxychlor	01	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 13:42	BMS
Toxaphene	01	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 13:42	BMS
Surr: TCMX	01	SW8081B	94.5 %		30-105		01/31/24 12:20	02/01/24 13:42	BMS
Surr: DCB	01	SW8081B	93.7 %		30-105		01/31/24 12:20	02/01/24 13:42	BMS
Wet Chemistry Analysis									
Percent Solids	01	SM2540G-2011	83.7 %		0.10	1	01/30/24 09:57	01/30/24 09:57	KJM



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Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P10 Laboratory Sample ID: 24A1607-02

Grab Date/Time: 01/22/2024 09:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010D	<0.961 mg/kg dry		0.961	2	01/30/24 09:45	02/02/24 13:39	ACM
Arsenic	02	SW6010D	7.74 mg/kg dry		1.92	2	01/30/24 09:45	02/02/24 13:39	ACM
Barium	02	SW6010D	91.7 mg/kg dry		0.961	2	01/30/24 09:45	02/02/24 13:39	ACM
Cadmium	02	SW6010D	<0.384 mg/kg dry		0.384	2	01/30/24 09:45	02/02/24 13:39	ACM
Chromium	02	SW6010D	9.68 mg/kg dry		0.961	2	01/30/24 09:45	02/02/24 13:39	ACM
Mercury	02	SW7471B	0.033 mg/kg dry		0.008	1	01/31/24 09:40	01/31/24 13:00	NBT
Lead	02	SW6010D	114 mg/kg dry		0.961	2	01/30/24 09:45	02/02/24 13:39	ACM
Selenium	02	SW6010D	<4.80 mg/kg dry		4.80	2	01/30/24 09:45	02/02/24 13:39	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	02RE1	SW8015C	<0.43 mg/kg dry		0.43	1	01/31/24 06:06	01/31/24 06:06	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	02RE1	SW8015C	116 %		80-120		01/31/24 06:06	01/31/24 06:06	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,1,1-Trichloroethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,1,2,2-Tetrachloroethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,1,2-Trichloroethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,1-Dichloroethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,1-Dichloroethylene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,1-Dichloropropene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,2,3-Trichlorobenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,2,3-Trichloropropane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,2,4-Trichlorobenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,2,4-Trimethylbenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,2-Dibromo-3-chloropropane (DBCP)	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB



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Certificate of Analysis

Final Report

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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P10 Laboratory Sample ID: 24A1607-02

Grab Date/Time: 01/22/2024 09:40

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,2-Dichlorobenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,2-Dichloroethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,2-Dichloropropane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,3,5-Trimethylbenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,3-Dichlorobenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,3-Dichloropropane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
1,4-Dichlorobenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
2,2-Dichloropropane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
2-Butanone (MEK)	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
2-Chlorotoluene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
2-Hexanone (MBK)	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
4-Chlorotoluene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
4-Isopropyltoluene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
4-Methyl-2-pentanone (MIBK)	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Acetone	02	SW8260D	32.8 ug/kg dry		10.0	1	01/30/24 14:00	01/30/24 14:00	RJB
Benzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Bromobenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Bromochloromethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Bromodichloromethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Bromoform	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Bromomethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Carbon disulfide	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Carbon tetrachloride	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Chlorobenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Chloroethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB



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Date Issued: February 02, 2024 17:18
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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P10 Laboratory Sample ID: 24A1607-02

Grab Date/Time: 01/22/2024 09:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Chloromethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
cis-1,2-Dichloroethylene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
cis-1,3-Dichloropropene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Dibromochloromethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Dibromomethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Dichlorodifluoromethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Di-isopropyl ether (DIPE)	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Ethylbenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Hexachlorobutadiene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Iodomethane	02	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 14:00	01/30/24 14:00	RJB
Isopropylbenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
m+p-Xylenes	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Methylene chloride	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Methyl-t-butyl ether (MTBE)	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Naphthalene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
n-Butylbenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
n-Propylbenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
o-Xylene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
sec-Butylbenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Styrene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
tert-Butylbenzene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Tetrachloroethylene (PCE)	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Toluene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
trans-1,2-Dichloroethylene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
trans-1,3-Dichloropropene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P10 Laboratory Sample ID: 24A1607-02

Grab Date/Time: 01/22/2024 09:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Trichlorofluoromethane	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Vinyl acetate	02	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 14:00	01/30/24 14:00	RJB
Vinyl chloride	02	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:00	01/30/24 14:00	RJB
Xylenes, Total	02	SW8260D	<15.0 ug/kg dry		15.0	1	01/30/24 14:00	01/30/24 14:00	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	02	SW8260D	99.0 %		80-120		01/30/24 14:00	01/30/24 14:00	RJB
Surr: 4-Bromofluorobenzene (Surr)	02	SW8260D	101 %		85-120		01/30/24 14:00	01/30/24 14:00	RJB
Surr: Dibromofluoromethane (Surr)	02	SW8260D	92.8 %		80-130		01/30/24 14:00	01/30/24 14:00	RJB
Surr: Toluene-d8 (Surr)	02	SW8260D	101 %		85-115		01/30/24 14:00	01/30/24 14:00	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
1,2,4-Trichlorobenzene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
1,2-Dichlorobenzene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
1,2-Diphenylhydrazine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
1,3-Dichlorobenzene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
1,3-Dinitrobenzene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
1,4-Dichlorobenzene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
1-Chloronaphthalene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
1-Naphthylamine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2,3,4,6-Tetrachlorophenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2,4,5-Trichlorophenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2,4,6-Trichlorophenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2,4-Dichlorophenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS



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Analytical Results

Sample I.D. P10 Laboratory Sample ID: 24A1607-02

Grab Date/Time: 01/22/2024 09:40

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2,4-Dinitrophenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2,4-Dinitrotoluene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2,6-Dichlorophenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2,6-Dinitrotoluene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2-Chloronaphthalene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2-Chlorophenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2-Methylnaphthalene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2-Naphthylamine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2-Nitroaniline	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2-Nitrophenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
3,3'-Dichlorobenzidine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
3-Methylcholanthrene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
3-Nitroaniline	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
4,6-Dinitro-2-methylphenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
4-Aminobiphenyl	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
4-Bromophenyl phenyl ether	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
4-Chloroaniline	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
4-Chlorophenyl phenyl ether	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
4-Nitroaniline	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
4-Nitrophenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
7,12-Dimethylbenz (a) anthracene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Acenaphthene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Acenaphthylene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Acetophenone	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS



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Grab Date/Time: 01/22/2024 09:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Aniline	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Anthracene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Benzidine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Benzo (a) anthracene	02	SW8270E	106 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Benzo (a) pyrene	02	SW8270E	113 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Benzo (b) fluoranthene	02	SW8270E	154 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Benzo (g,h,i) perylene	02	SW8270E	<83.3 ug/kg dry	C	83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Benzo (k) fluoranthene	02	SW8270E	83.5 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Benzoic acid	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Benzyl alcohol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
bis (2-Chloroethoxy) methane	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
bis (2-Chloroethyl) ether	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
2,2'-Oxybis (1-chloropropane)	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
bis (2-Ethylhexyl) phthalate	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Butyl benzyl phthalate	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Chrysene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Dibenz (a,h) anthracene	02	SW8270E	<83.3 ug/kg dry	C	83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Dibenz (a,j) acridine	02	SW8270E	<83.3 ug/kg dry	C	83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Dibenzofuran	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Diethyl phthalate	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Dimethyl phthalate	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Di-n-butyl phthalate	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Di-n-octyl phthalate	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Diphenylamine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Ethyl methanesulfonate	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Fluoranthene	02	SW8270E	121 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310
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Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P10 Laboratory Sample ID: 24A1607-02

Grab Date/Time: 01/22/2024 09:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Hexachlorobenzene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Hexachlorobutadiene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Hexachlorocyclopentadiene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Hexachloroethane	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Indeno (1,2,3-cd) pyrene	02	SW8270E	<83.3 ug/kg dry	C	83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Isophorone	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
m+p-Cresols	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Methyl methanesulfonate	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Naphthalene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Nitrobenzene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
n-Nitrosodimethylamine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
n-Nitrosodi-n-butylamine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
n-Nitrosodi-n-propylamine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
n-Nitrosodiphenylamine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
n-Nitrosopiperidine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
o+m+p-Cresols	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
o-Cresol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
p-(Dimethylamino) azobenzene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
p-Chloro-m-cresol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Pentachloronitrobenzene (quintozene)	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Pentachlorophenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Phenacetin	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Phenanthrene	02	SW8270E	107 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS



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Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P10

Laboratory Sample ID: 24A1607-02

Grab Date/Time: 01/22/2024 09:40

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Pronamide	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Pyrene	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Pyridine	02	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/02/24 13:38	BMS
Surr: 2,4,6-Tribromophenol (Surr)	02	SW8270E	61.6 %		15-96		02/01/24 16:44	02/02/24 13:38	BMS
Surr: 2-Fluorobiphenyl (Surr)	02	SW8270E	69.4 %		19-105		02/01/24 16:44	02/02/24 13:38	BMS
Surr: 2-Fluorophenol (Surr)	02	SW8270E	63.4 %		12-95		02/01/24 16:44	02/02/24 13:38	BMS
Surr: Nitrobenzene-d5 (Surr)	02	SW8270E	63.1 %		21-100		02/01/24 16:44	02/02/24 13:38	BMS
Surr: Phenol-d5 (Surr)	02	SW8270E	55.7 %		13-100		02/01/24 16:44	02/02/24 13:38	BMS
Surr: p-Terphenyl-d14 (Surr)	02	SW8270E	77.8 %		25-125		02/01/24 16:44	02/02/24 13:38	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02	SW8015C	130 mg/kg dry		97.5	10	01/31/24 15:35	02/01/24 23:51	LBH2
Surr: n-Triacontane (Surr)	02	SW8015C	68.6 %		50-125		01/31/24 15:35	02/01/24 23:51	LBH2
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	02	SW8082A	<0.123 mg/kg dry		0.123	1	01/31/24 17:09	02/01/24 02:15	ZDR
PCB as Aroclor 1221	02	SW8082A	<0.123 mg/kg dry		0.123	1	01/31/24 17:09	02/01/24 02:15	ZDR
PCB as Aroclor 1232	02	SW8082A	<0.123 mg/kg dry		0.123	1	01/31/24 17:09	02/01/24 02:15	ZDR
PCB as Aroclor 1242	02	SW8082A	<0.123 mg/kg dry		0.123	1	01/31/24 17:09	02/01/24 02:15	ZDR
PCB as Aroclor 1248	02	SW8082A	<0.123 mg/kg dry		0.123	1	01/31/24 17:09	02/01/24 02:15	ZDR
PCB as Aroclor 1254	02	SW8082A	<0.123 mg/kg dry		0.123	1	01/31/24 17:09	02/01/24 02:15	ZDR
PCB as Aroclor 1260	02	SW8082A	<0.123 mg/kg dry		0.123	1	01/31/24 17:09	02/01/24 02:15	ZDR
Surr: DCB	02	SW8082A	57.0 %		30-105		01/31/24 17:09	02/01/24 02:15	ZDR
Surr: TCMX	02	SW8082A	52.6 %		30-105		01/31/24 17:09	02/01/24 02:15	ZDR
4,4'-DDD	02	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 14:00	BMS



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P10

Laboratory Sample ID: 24A1607-02

Grab Date/Time: 01/22/2024 09:40

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	02	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:00	BMS
4,4'-DDT	02	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:00	BMS
Aldrin	02	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:00	BMS
alpha-BHC	02	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:00	BMS
beta-BHC	02	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:00	BMS
Chlordane	02	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 14:00	BMS
delta-BHC	02	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:00	BMS
Dieldrin	02	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:00	BMS
Endosulfan I	02	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:00	BMS
Endosulfan II	02	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 14:00	BMS
Endosulfan sulfate	02	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:00	BMS
Endrin	02	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:00	BMS
Endrin aldehyde	02	SW8081B	<8.00 ug/kg dry		8.00	1	01/31/24 12:20	02/01/24 14:00	BMS
gamma-BHC (Lindane)	02	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:00	BMS
Heptachlor	02	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:00	BMS
Heptachlor epoxide	02	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 14:00	BMS
Methoxychlor	02	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 14:00	BMS
Toxaphene	02	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 14:00	BMS
Surr: TCMX	02	SW8081B	84.4 %		30-105		01/31/24 12:20	02/01/24 14:00	BMS
Surr: DCB	02	SW8081B	78.7 %		30-105		01/31/24 12:20	02/01/24 14:00	BMS
Wet Chemistry Analysis									
Percent Solids	02	SM2540G-2011	79.8 %		0.10	1	01/30/24 09:57	01/30/24 09:57	KJM



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Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P12

Laboratory Sample ID: 24A1607-03

Grab Date/Time: 01/22/2024 10:45

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03	SW6010D	<0.984 mg/kg dry		0.984	2	01/30/24 09:45	02/02/24 13:44	ACM
Arsenic	03	SW6010D	<1.97 mg/kg dry		1.97	2	01/30/24 09:45	02/02/24 13:44	ACM
Barium	03	SW6010D	31.0 mg/kg dry		0.984	2	01/30/24 09:45	02/02/24 13:44	ACM
Cadmium	03	SW6010D	<0.394 mg/kg dry		0.394	2	01/30/24 09:45	02/02/24 13:44	ACM
Chromium	03	SW6010D	8.34 mg/kg dry		0.984	2	01/30/24 09:45	02/02/24 13:44	ACM
Mercury	03	SW7471B	0.054 mg/kg dry		0.008	1	01/31/24 09:40	01/31/24 13:03	NBT
Lead	03	SW6010D	35.1 mg/kg dry		0.984	2	01/30/24 09:45	02/02/24 13:44	ACM
Selenium	03	SW6010D	<4.92 mg/kg dry		4.92	2	01/30/24 09:45	02/02/24 13:44	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	03	SW8015C	<0.10 mg/kg dry		0.10	1	01/29/24 22:49	01/29/24 22:49	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	03	SW8015C	82.0 %		80-120		01/29/24 22:49	01/29/24 22:49	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,1,1-Trichloroethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,1,2,2-Tetrachloroethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,1,2-Trichloroethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,1-Dichloroethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,1-Dichloroethylene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,1-Dichloropropene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,2,3-Trichlorobenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,2,3-Trichloropropane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,2,4-Trichlorobenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,2,4-Trimethylbenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,2-Dibromo-3-chloropropane (DBCP)	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P12 Laboratory Sample ID: 24A1607-03

Grab Date/Time: 01/22/2024 10:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,2-Dichlorobenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,2-Dichloroethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,2-Dichloropropane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,3,5-Trimethylbenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,3-Dichlorobenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,3-Dichloropropane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
1,4-Dichlorobenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
2,2-Dichloropropane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
2-Butanone (MEK)	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
2-Chlorotoluene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
2-Hexanone (MBK)	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
4-Chlorotoluene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
4-Isopropyltoluene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
4-Methyl-2-pentanone (MIBK)	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Acetone	03	SW8260D	27.4 ug/kg dry		10.0	1	01/30/24 14:24	01/30/24 14:24	RJB
Benzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Bromobenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Bromochloromethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Bromodichloromethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Bromoform	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Bromomethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Carbon disulfide	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Carbon tetrachloride	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Chlorobenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Chloroethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P12 Laboratory Sample ID: 24A1607-03

Grab Date/Time: 01/22/2024 10:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Chloromethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
cis-1,2-Dichloroethylene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
cis-1,3-Dichloropropene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Dibromochloromethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Dibromomethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Dichlorodifluoromethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Di-isopropyl ether (DIPE)	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Ethylbenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Hexachlorobutadiene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Iodomethane	03	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 14:24	01/30/24 14:24	RJB
Isopropylbenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
m+p-Xylenes	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Methylene chloride	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Methyl-t-butyl ether (MTBE)	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Naphthalene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
n-Butylbenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
n-Propylbenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
o-Xylene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
sec-Butylbenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Styrene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
tert-Butylbenzene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Tetrachloroethylene (PCE)	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Toluene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
trans-1,2-Dichloroethylene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
trans-1,3-Dichloropropene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB



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Certificate of Analysis

Final Report

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Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P12 Laboratory Sample ID: 24A1607-03

Grab Date/Time: 01/22/2024 10:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Trichlorofluoromethane	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Vinyl acetate	03	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 14:24	01/30/24 14:24	RJB
Vinyl chloride	03	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:24	01/30/24 14:24	RJB
Xylenes, Total	03	SW8260D	<15.0 ug/kg dry		15.0	1	01/30/24 14:24	01/30/24 14:24	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	03	SW8260D	93.9 %		80-120		01/30/24 14:24	01/30/24 14:24	RJB
Surr: 4-Bromofluorobenzene (Surr)	03	SW8260D	100 %		85-120		01/30/24 14:24	01/30/24 14:24	RJB
Surr: Dibromofluoromethane (Surr)	03	SW8260D	92.9 %		80-130		01/30/24 14:24	01/30/24 14:24	RJB
Surr: Toluene-d8 (Surr)	03	SW8260D	98.2 %		85-115		01/30/24 14:24	01/30/24 14:24	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
1,2,4-Trichlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
1,2-Dichlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
1,2-Diphenylhydrazine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
1,3-Dichlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
1,3-Dinitrobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
1,4-Dichlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
1-Chloronaphthalene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
1-Naphthylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2,3,4,6-Tetrachlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2,4,5-Trichlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2,4,6-Trichlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2,4-Dichlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P12 Laboratory Sample ID: 24A1607-03

Grab Date/Time: 01/22/2024 10:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2,4-Dinitrophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2,4-Dinitrotoluene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2,6-Dichlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2,6-Dinitrotoluene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2-Chloronaphthalene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2-Chlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2-Methylnaphthalene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2-Naphthylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2-Nitroaniline	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2-Nitrophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
3,3'-Dichlorobenzidine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
3-Methylcholanthrene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
3-Nitroaniline	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
4,6-Dinitro-2-methylphenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
4-Aminobiphenyl	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
4-Bromophenyl phenyl ether	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
4-Chloroaniline	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
4-Chlorophenyl phenyl ether	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
4-Nitroaniline	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
4-Nitrophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
7,12-Dimethylbenz (a) anthracene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Acenaphthene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Acenaphthylene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Acetophenone	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS



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Certificate of Analysis

Final Report

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Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P12

Laboratory Sample ID: 24A1607-03

Grab Date/Time: 01/22/2024 10:45

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Aniline	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Anthracene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Benzidine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Benzo (a) anthracene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Benzo (a) pyrene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Benzo (b) fluoranthene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Benzo (g,h,i) perylene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Benzo (k) fluoranthene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Benzoic acid	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Benzyl alcohol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
bis (2-Chloroethoxy) methane	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
bis (2-Chloroethyl) ether	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
2,2'-Oxybis (1-chloropropane)	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
bis (2-Ethylhexyl) phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Butyl benzyl phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Chrysene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Dibenz (a,h) anthracene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Dibenz (a,j) acridine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Dibenzofuran	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Diethyl phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Dimethyl phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Di-n-butyl phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Di-n-octyl phthalate	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Diphenylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Ethyl methanesulfonate	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Fluoranthene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS



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Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P12 Laboratory Sample ID: 24A1607-03

Grab Date/Time: 01/22/2024 10:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Hexachlorobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Hexachlorobutadiene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Hexachlorocyclopentadiene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Hexachloroethane	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Indeno (1,2,3-cd) pyrene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Isophorone	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
m+p-Cresols	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Methyl methanesulfonate	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Naphthalene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Nitrobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
n-Nitrosodimethylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
n-Nitrosodi-n-butylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
n-Nitrosodi-n-propylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
n-Nitrosodiphenylamine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
n-Nitrosopiperidine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
o+m+p-Cresols	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
o-Cresol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
p-(Dimethylamino) azobenzene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
p-Chloro-m-cresol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Pentachloronitrobenzene (quintozene)	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Pentachlorophenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Phenacetin	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Phenanthrene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS



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Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P12

Laboratory Sample ID: 24A1607-03

Grab Date/Time: 01/22/2024 10:45

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Pronamide	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Pyrene	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Pyridine	03	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:14	BMS
Surr: 2,4,6-Tribromophenol (Surr)	03	SW8270E	83.3 %		15-96		02/01/24 16:44	02/01/24 19:14	BMS
Surr: 2-Fluorobiphenyl (Surr)	03	SW8270E	75.8 %		19-105		02/01/24 16:44	02/01/24 19:14	BMS
Surr: 2-Fluorophenol (Surr)	03	SW8270E	69.7 %		12-95		02/01/24 16:44	02/01/24 19:14	BMS
Surr: Nitrobenzene-d5 (Surr)	03	SW8270E	70.4 %		21-100		02/01/24 16:44	02/01/24 19:14	BMS
Surr: Phenol-d5 (Surr)	03	SW8270E	59.9 %		13-100		02/01/24 16:44	02/01/24 19:14	BMS
Surr: p-Terphenyl-d14 (Surr)	03	SW8270E	76.3 %		25-125		02/01/24 16:44	02/01/24 19:14	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	03	SW8015C	14.0 mg/kg dry		10.0	1	01/31/24 15:35	02/01/24 22:03	LBH2
Surr: n-Triacontane (Surr)	03	SW8015C	78.6 %		50-125		01/31/24 15:35	02/01/24 22:03	LBH2
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	03	SW8082A	<0.110 mg/kg dry		0.110	1	01/31/24 17:09	02/01/24 02:34	ZDR
PCB as Aroclor 1221	03	SW8082A	<0.110 mg/kg dry		0.110	1	01/31/24 17:09	02/01/24 02:34	ZDR
PCB as Aroclor 1232	03	SW8082A	<0.110 mg/kg dry		0.110	1	01/31/24 17:09	02/01/24 02:34	ZDR
PCB as Aroclor 1242	03	SW8082A	<0.110 mg/kg dry		0.110	1	01/31/24 17:09	02/01/24 02:34	ZDR
PCB as Aroclor 1248	03	SW8082A	<0.110 mg/kg dry		0.110	1	01/31/24 17:09	02/01/24 02:34	ZDR
PCB as Aroclor 1254	03	SW8082A	<0.110 mg/kg dry		0.110	1	01/31/24 17:09	02/01/24 02:34	ZDR
PCB as Aroclor 1260	03	SW8082A	<0.110 mg/kg dry		0.110	1	01/31/24 17:09	02/01/24 02:34	ZDR
Surr: DCB	03	SW8082A	49.4 %		30-105		01/31/24 17:09	02/01/24 02:34	ZDR
Surr: TCMX	03	SW8082A	56.0 %		30-105		01/31/24 17:09	02/01/24 02:34	ZDR
4,4'-DDD	03	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 14:56	BMS



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P12		Laboratory Sample ID: 24A1607-03							
Grab Date/Time:		01/22/2024 10:45							
Field Residual Cl:		Field pH:							
Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:56	BMS
4,4'-DDT	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:56	BMS
Aldrin	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:56	BMS
alpha-BHC	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:56	BMS
beta-BHC	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:56	BMS
Chlordane	03	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 14:56	BMS
delta-BHC	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:56	BMS
Dieldrin	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:56	BMS
Endosulfan I	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:56	BMS
Endosulfan II	03	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 14:56	BMS
Endosulfan sulfate	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:56	BMS
Endrin	03	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 14:56	BMS
Endrin aldehyde	03	SW8081B	<8.00 ug/kg dry		8.00	1	01/31/24 12:20	02/01/24 14:56	BMS
gamma-BHC (Lindane)	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:56	BMS
Heptachlor	03	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 14:56	BMS
Heptachlor epoxide	03	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 14:56	BMS
Methoxychlor	03	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 14:56	BMS
Toxaphene	03	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 14:56	BMS
Surr: TCMX	03	SW8081B	94.0 %		30-105		01/31/24 12:20	02/01/24 14:56	BMS
Surr: DCB	03	SW8081B	38.6 %		30-105		01/31/24 12:20	02/01/24 14:56	BMS
Wet Chemistry Analysis									
Percent Solids	03	SM2540G-2011	85.8 %		0.10	1	01/30/24 09:57	01/30/24 09:57	KJM



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Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P13 Laboratory Sample ID: 24A1607-04

Grab Date/Time: 01/22/2024 10:00

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04	SW6010D	<2.39 mg/kg dry		2.39	5	01/30/24 09:45	02/02/24 14:18	ACM
Arsenic	04	SW6010D	<4.77 mg/kg dry		4.77	5	01/30/24 09:45	02/02/24 14:18	ACM
Barium	04	SW6010D	33.0 mg/kg dry		2.39	5	01/30/24 09:45	02/02/24 14:18	ACM
Cadmium	04	SW6010D	<0.954 mg/kg dry		0.954	5	01/30/24 09:45	02/02/24 14:18	ACM
Chromium	04	SW6010D	10.3 mg/kg dry		2.39	5	01/30/24 09:45	02/02/24 14:18	ACM
Mercury	04	SW7471B	0.026 mg/kg dry		0.008	1	01/31/24 09:40	01/31/24 13:11	NBT
Lead	04	SW6010D	10.3 mg/kg dry		2.39	5	01/30/24 09:45	02/02/24 14:18	ACM
Selenium	04	SW6010D	<11.9 mg/kg dry		11.9	5	01/30/24 09:45	02/02/24 14:18	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	04RE1	SW8015C	<0.43 mg/kg dry		0.43	1	01/31/24 06:29	01/31/24 06:29	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	04RE1	SW8015C	110 %		80-120		01/31/24 06:29	01/31/24 06:29	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,1,1-Trichloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,1,2,2-Tetrachloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,1,2-Trichloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,1-Dichloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,1-Dichloroethylene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,1-Dichloropropene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,2,3-Trichlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,2,3-Trichloropropane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,2,4-Trichlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,2,4-Trimethylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,2-Dibromo-3-chloropropane (DBCP)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB



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Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P13 Laboratory Sample ID: 24A1607-04

Grab Date/Time: 01/22/2024 10:00

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,2-Dichlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,2-Dichloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,2-Dichloropropane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,3,5-Trimethylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,3-Dichlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,3-Dichloropropane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
1,4-Dichlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
2,2-Dichloropropane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
2-Butanone (MEK)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
2-Chlorotoluene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
2-Hexanone (MBK)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
4-Chlorotoluene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
4-Isopropyltoluene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
4-Methyl-2-pentanone (MIBK)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Acetone	04	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 14:47	01/30/24 14:47	RJB
Benzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Bromobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Bromochloromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Bromodichloromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Bromoform	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Bromomethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Carbon disulfide	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Carbon tetrachloride	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Chlorobenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Chloroethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB



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Certificate of Analysis

Final Report

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Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P13 Laboratory Sample ID: 24A1607-04

Grab Date/Time: 01/22/2024 10:00

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Chloromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
cis-1,2-Dichloroethylene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
cis-1,3-Dichloropropene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Dibromochloromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Dibromomethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Dichlorodifluoromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Di-isopropyl ether (DIPE)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Ethylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Hexachlorobutadiene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Iodomethane	04	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 14:47	01/30/24 14:47	RJB
Isopropylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
m+p-Xylenes	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Methylene chloride	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Methyl-t-butyl ether (MTBE)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Naphthalene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
n-Butylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
n-Propylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
o-Xylene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
sec-Butylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Styrene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
tert-Butylbenzene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Tetrachloroethylene (PCE)	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Toluene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
trans-1,2-Dichloroethylene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
trans-1,3-Dichloropropene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P13 Laboratory Sample ID: 24A1607-04

Grab Date/Time: 01/22/2024 10:00

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Trichlorofluoromethane	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Vinyl acetate	04	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 14:47	01/30/24 14:47	RJB
Vinyl chloride	04	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 14:47	01/30/24 14:47	RJB
Xylenes, Total	04	SW8260D	<15.0 ug/kg dry		15.0	1	01/30/24 14:47	01/30/24 14:47	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	04	SW8260D	93.1 %		80-120		01/30/24 14:47	01/30/24 14:47	RJB
Surr: 4-Bromofluorobenzene (Surr)	04	SW8260D	99.1 %		85-120		01/30/24 14:47	01/30/24 14:47	RJB
Surr: Dibromofluoromethane (Surr)	04	SW8260D	94.4 %		80-130		01/30/24 14:47	01/30/24 14:47	RJB
Surr: Toluene-d8 (Surr)	04	SW8260D	98.5 %		85-115		01/30/24 14:47	01/30/24 14:47	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
1,2,4-Trichlorobenzene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
1,2-Dichlorobenzene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
1,2-Diphenylhydrazine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
1,3-Dichlorobenzene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
1,3-Dinitrobenzene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
1,4-Dichlorobenzene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
1-Chloronaphthalene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
1-Naphthylamine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2,3,4,6-Tetrachlorophenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2,4,5-Trichlorophenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2,4,6-Trichlorophenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2,4-Dichlorophenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS



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Certificate of Analysis

Final Report

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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P13 Laboratory Sample ID: 24A1607-04

Grab Date/Time: 01/22/2024 10:00

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2,4-Dinitrophenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2,4-Dinitrotoluene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2,6-Dichlorophenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2,6-Dinitrotoluene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2-Chloronaphthalene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2-Chlorophenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2-Methylnaphthalene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2-Naphthylamine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2-Nitroaniline	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2-Nitrophenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
3,3'-Dichlorobenzidine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
3-Methylcholanthrene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
3-Nitroaniline	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
4,6-Dinitro-2-methylphenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
4-Aminobiphenyl	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
4-Bromophenyl phenyl ether	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
4-Chloroaniline	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
4-Chlorophenyl phenyl ether	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
4-Nitroaniline	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
4-Nitrophenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
7,12-Dimethylbenz (a) anthracene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Acenaphthene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Acenaphthylene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Acetophenone	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P13 Laboratory Sample ID: 24A1607-04

Grab Date/Time: 01/22/2024 10:00

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Aniline	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Anthracene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Benzidine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Benzo (a) anthracene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Benzo (a) pyrene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Benzo (b) fluoranthene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Benzo (g,h,i) perylene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Benzo (k) fluoranthene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Benzoic acid	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Benzyl alcohol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
bis (2-Chloroethoxy) methane	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
bis (2-Chloroethyl) ether	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
2,2'-Oxybis (1-chloropropane)	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
bis (2-Ethylhexyl) phthalate	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Butyl benzyl phthalate	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Chrysene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Dibenz (a,h) anthracene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Dibenz (a,j) acridine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Dibenzofuran	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Diethyl phthalate	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Dimethyl phthalate	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Di-n-butyl phthalate	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Di-n-octyl phthalate	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Diphenylamine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Ethyl methanesulfonate	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Fluoranthene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS



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Certificate of Analysis

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Date Issued: February 02, 2024 17:18
Project Number: 2202065001
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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P13 Laboratory Sample ID: 24A1607-04

Grab Date/Time: 01/22/2024 10:00

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Hexachlorobenzene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Hexachlorobutadiene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Hexachlorocyclopentadiene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Hexachloroethane	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Indeno (1,2,3-cd) pyrene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Isophorone	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
m+p-Cresols	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Methyl methanesulfonate	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Naphthalene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Nitrobenzene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
n-Nitrosodimethylamine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
n-Nitrosodi-n-butylamine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
n-Nitrosodi-n-propylamine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
n-Nitrosodiphenylamine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
n-Nitrosopiperidine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
o+m+p-Cresols	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
o-Cresol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
p-(Dimethylamino) azobenzene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
p-Chloro-m-cresol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Pentachloronitrobenzene (quintozene)	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Pentachlorophenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Phenacetin	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Phenanthrene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P13

Laboratory Sample ID: 24A1607-04

Grab Date/Time: 01/22/2024 10:00

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Pronamide	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Pyrene	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Pyridine	04	SW8270E	<83.3 ug/kg dry		83.3	1	02/01/24 16:44	02/01/24 19:49	BMS
Surr: 2,4,6-Tribromophenol (Surr)	04	SW8270E	78.0 %		15-96		02/01/24 16:44	02/01/24 19:49	BMS
Surr: 2-Fluorobiphenyl (Surr)	04	SW8270E	75.3 %		19-105		02/01/24 16:44	02/01/24 19:49	BMS
Surr: 2-Fluorophenol (Surr)	04	SW8270E	72.4 %		12-95		02/01/24 16:44	02/01/24 19:49	BMS
Surr: Nitrobenzene-d5 (Surr)	04	SW8270E	73.0 %		21-100		02/01/24 16:44	02/01/24 19:49	BMS
Surr: Phenol-d5 (Surr)	04	SW8270E	61.6 %		13-100		02/01/24 16:44	02/01/24 19:49	BMS
Surr: p-Terphenyl-d14 (Surr)	04	SW8270E	75.6 %		25-125		02/01/24 16:44	02/01/24 19:49	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	04	SW8015C	15.6 mg/kg dry		10.0	1	01/31/24 15:35	02/01/24 22:25	LBH2
Surr: n-Triacontane (Surr)	04	SW8015C	79.5 %		50-125		01/31/24 15:35	02/01/24 22:25	LBH2
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	04	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 02:54	ZDR
PCB as Aroclor 1221	04	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 02:54	ZDR
PCB as Aroclor 1232	04	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 02:54	ZDR
PCB as Aroclor 1242	04	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 02:54	ZDR
PCB as Aroclor 1248	04	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 02:54	ZDR
PCB as Aroclor 1254	04	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 02:54	ZDR
PCB as Aroclor 1260	04	SW8082A	<0.120 mg/kg dry		0.120	1	01/31/24 17:09	02/01/24 02:54	ZDR
Surr: DCB	04	SW8082A	53.8 %		30-105		01/31/24 17:09	02/01/24 02:54	ZDR
Surr: TCMX	04	SW8082A	53.4 %		30-105		01/31/24 17:09	02/01/24 02:54	ZDR
4,4'-DDD	04	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 15:15	BMS



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Grab Date/Time: 01/22/2024 10:00

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Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:15	BMS
4,4'-DDT	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:15	BMS
Aldrin	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:15	BMS
alpha-BHC	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:15	BMS
beta-BHC	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:15	BMS
Chlordane	04	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 15:15	BMS
delta-BHC	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:15	BMS
Dieldrin	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:15	BMS
Endosulfan I	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:15	BMS
Endosulfan II	04	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 15:15	BMS
Endosulfan sulfate	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:15	BMS
Endrin	04	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:15	BMS
Endrin aldehyde	04	SW8081B	<8.00 ug/kg dry		8.00	1	01/31/24 12:20	02/01/24 15:15	BMS
gamma-BHC (Lindane)	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:15	BMS
Heptachlor	04	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:15	BMS
Heptachlor epoxide	04	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 15:15	BMS
Methoxychlor	04	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 15:15	BMS
Toxaphene	04	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 15:15	BMS
Surr: TCMX	04	SW8081B	91.3 %		30-105		01/31/24 12:20	02/01/24 15:15	BMS
Surr: DCB	04	SW8081B	84.9 %		30-105		01/31/24 12:20	02/01/24 15:15	BMS
Wet Chemistry Analysis									
Percent Solids	04	SM2540G-2011	80.2 %		0.10	1	01/30/24 09:57	01/30/24 09:57	KJM



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Certificate of Analysis

Final Report

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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P18 Laboratory Sample ID: 24A1607-05

Grab Date/Time: 01/23/2024 12:35

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05	SW6010D	<0.500 mg/kg dry		0.500	1	01/30/24 09:45	02/02/24 13:32	ACM
Arsenic	05	SW6010D	4.23 mg/kg dry		1.00	1	01/30/24 09:45	02/02/24 13:32	ACM
Barium	05	SW6010D	37.5 mg/kg dry		0.500	1	01/30/24 09:45	02/02/24 13:32	ACM
Cadmium	05	SW6010D	<0.200 mg/kg dry		0.200	1	01/30/24 09:45	02/02/24 13:32	ACM
Chromium	05	SW6010D	3.71 mg/kg dry		0.500	1	01/30/24 09:45	02/02/24 13:32	ACM
Mercury	05	SW7471B	0.279 mg/kg dry		0.015	2	01/31/24 09:40	01/31/24 13:32	NBT
Lead	05	SW6010D	100 mg/kg dry		0.500	1	01/30/24 09:45	02/02/24 13:32	ACM
Selenium	05	SW6010D	<2.50 mg/kg dry		2.50	1	01/30/24 09:45	02/02/24 13:32	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	05RE1	SW8015C	<0.43 mg/kg dry		0.43	1	01/31/24 06:51	01/31/24 06:51	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	05RE1	SW8015C	101 %		80-120		01/31/24 06:51	01/31/24 06:51	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,1,1-Trichloroethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,1,2,2-Tetrachloroethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,1,2-Trichloroethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,1-Dichloroethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,1-Dichloroethylene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,1-Dichloropropene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,2,3-Trichlorobenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,2,3-Trichloropropane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,2,4-Trichlorobenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,2,4-Trimethylbenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,2-Dibromo-3-chloropropane (DBCP)	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P18 Laboratory Sample ID: 24A1607-05

Grab Date/Time: 01/23/2024 12:35

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,2-Dichlorobenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,2-Dichloroethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,2-Dichloropropane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,3,5-Trimethylbenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,3-Dichlorobenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,3-Dichloropropane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
1,4-Dichlorobenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
2,2-Dichloropropane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
2-Butanone (MEK)	05	SW8260D	25.7 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
2-Chlorotoluene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
2-Hexanone (MBK)	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
4-Chlorotoluene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
4-Isopropyltoluene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
4-Methyl-2-pentanone (MIBK)	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Acetone	05	SW8260D	144 ug/kg dry		10.0	1	01/30/24 15:10	01/30/24 15:10	RJB
Benzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Bromobenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Bromochloromethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Bromodichloromethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Bromoform	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Bromomethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Carbon disulfide	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Carbon tetrachloride	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Chlorobenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Chloroethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB



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Grab Date/Time: 01/23/2024 12:35

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Chloromethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
cis-1,2-Dichloroethylene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
cis-1,3-Dichloropropene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Dibromochloromethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Dibromomethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Dichlorodifluoromethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Di-isopropyl ether (DIPE)	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Ethylbenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Hexachlorobutadiene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Iodomethane	05	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 15:10	01/30/24 15:10	RJB
Isopropylbenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
m+p-Xylenes	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Methylene chloride	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Methyl-t-butyl ether (MTBE)	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Naphthalene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
n-Butylbenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
n-Propylbenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
o-Xylene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
sec-Butylbenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Styrene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
tert-Butylbenzene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Tetrachloroethylene (PCE)	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Toluene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
trans-1,2-Dichloroethylene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
trans-1,3-Dichloropropene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P18 Laboratory Sample ID: 24A1607-05
Grab Date/Time: 01/23/2024 12:35
Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Trichlorofluoromethane	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Vinyl acetate	05	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 15:10	01/30/24 15:10	RJB
Vinyl chloride	05	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:10	01/30/24 15:10	RJB
Xylenes, Total	05	SW8260D	<15.0 ug/kg dry		15.0	1	01/30/24 15:10	01/30/24 15:10	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	05	SW8260D	101 %		80-120		01/30/24 15:10	01/30/24 15:10	RJB
Surr: 4-Bromofluorobenzene (Surr)	05	SW8260D	100 %		85-120		01/30/24 15:10	01/30/24 15:10	RJB
Surr: Dibromofluoromethane (Surr)	05	SW8260D	95.8 %		80-130		01/30/24 15:10	01/30/24 15:10	RJB
Surr: Toluene-d8 (Surr)	05	SW8260D	103 %		85-115		01/30/24 15:10	01/30/24 15:10	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
1,2,4-Trichlorobenzene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
1,2-Dichlorobenzene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
1,2-Diphenylhydrazine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
1,3-Dichlorobenzene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
1,3-Dinitrobenzene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
1,4-Dichlorobenzene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
1-Chloronaphthalene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
1-Naphthylamine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2,3,4,6-Tetrachlorophenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2,4,5-Trichlorophenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2,4,6-Trichlorophenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2,4-Dichlorophenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS



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Grab Date/Time: 01/23/2024 12:35

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2,4-Dinitrophenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2,4-Dinitrotoluene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2,6-Dichlorophenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2,6-Dinitrotoluene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2-Chloronaphthalene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2-Chlorophenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2-Methylnaphthalene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2-Naphthylamine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2-Nitroaniline	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2-Nitrophenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
3,3'-Dichlorobenzidine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
3-Methylcholanthrene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
3-Nitroaniline	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
4,6-Dinitro-2-methylphenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
4-Aminobiphenyl	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
4-Bromophenyl phenyl ether	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
4-Chloroaniline	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
4-Chlorophenyl phenyl ether	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
4-Nitroaniline	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
4-Nitrophenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
7,12-Dimethylbenz (a) anthracene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Acenaphthene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Acenaphthylene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Acetophenone	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS



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Field Residual Cl: Field pH:

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Semivolatile Organic Compounds by GCMS									
Aniline	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Anthracene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Benzidine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Benzo (a) anthracene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Benzo (a) pyrene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Benzo (b) fluoranthene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Benzo (g,h,i) perylene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Benzo (k) fluoranthene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Benzoic acid	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Benzyl alcohol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
bis (2-Chloroethoxy) methane	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
bis (2-Chloroethyl) ether	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
2,2'-Oxybis (1-chloropropane)	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
bis (2-Ethylhexyl) phthalate	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Butyl benzyl phthalate	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Chrysene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Dibenz (a,h) anthracene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Dibenz (a,j) acridine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Dibenzofuran	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Diethyl phthalate	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Dimethyl phthalate	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Di-n-butyl phthalate	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Di-n-octyl phthalate	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Diphenylamine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Ethyl methanesulfonate	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Fluoranthene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS



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Certificate of Analysis

Final Report

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Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P18 Laboratory Sample ID: 24A1607-05

Grab Date/Time: 01/23/2024 12:35

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Hexachlorobenzene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Hexachlorobutadiene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Hexachlorocyclopentadiene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Hexachloroethane	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Indeno (1,2,3-cd) pyrene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Isophorone	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
m+p-Cresols	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Methyl methanesulfonate	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Naphthalene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Nitrobenzene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
n-Nitrosodimethylamine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
n-Nitrosodi-n-butylamine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
n-Nitrosodi-n-propylamine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
n-Nitrosodiphenylamine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
n-Nitrosopiperidine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
o+m+p-Cresols	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
o-Cresol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
p-(Dimethylamino) azobenzene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
p-Chloro-m-cresol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Pentachloronitrobenzene (quintozene)	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Pentachlorophenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Phenacetin	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Phenanthrene	05	SW8270E	1070 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS



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Date Issued: February 02, 2024 17:18
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Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P18 Laboratory Sample ID: 24A1607-05

Grab Date/Time: 01/23/2024 12:35

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Pronamide	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Pyrene	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Pyridine	05	SW8270E	<825 ug/kg dry		825	10	02/01/24 16:44	02/01/24 20:25	BMS
Surr: 2,4,6-Tribromophenol (Surr)	05	SW8270E	55.8 %		15-96		02/01/24 16:44	02/01/24 20:25	BMS
Surr: 2-Fluorobiphenyl (Surr)	05	SW8270E	42.4 %		19-105		02/01/24 16:44	02/01/24 20:25	BMS
Surr: 2-Fluorophenol (Surr)	05	SW8270E	62.2 %		12-95		02/01/24 16:44	02/01/24 20:25	BMS
Surr: Nitrobenzene-d5 (Surr)	05	SW8270E	53.4 %		21-100		02/01/24 16:44	02/01/24 20:25	BMS
Surr: Phenol-d5 (Surr)	05	SW8270E	48.6 %		13-100		02/01/24 16:44	02/01/24 20:25	BMS
Surr: p-Terphenyl-d14 (Surr)	05	SW8270E	52.6 %		25-125		02/01/24 16:44	02/01/24 20:25	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	05RE1	SW8015C	861 mg/kg dry		100	10	01/31/24 15:35	02/02/24 11:38	LBH2
Surr: n-Triacontane (Surr)	05RE1	SW8015C	64.2 %		50-125		01/31/24 15:35	02/02/24 11:38	LBH2
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	05	SW8082A	<0.113 mg/kg dry		0.113	1	01/31/24 17:09	02/01/24 03:13	ZDR
PCB as Aroclor 1221	05	SW8082A	<0.113 mg/kg dry		0.113	1	01/31/24 17:09	02/01/24 03:13	ZDR
PCB as Aroclor 1232	05	SW8082A	<0.113 mg/kg dry		0.113	1	01/31/24 17:09	02/01/24 03:13	ZDR
PCB as Aroclor 1242	05	SW8082A	<0.113 mg/kg dry		0.113	1	01/31/24 17:09	02/01/24 03:13	ZDR
PCB as Aroclor 1248	05	SW8082A	<0.113 mg/kg dry		0.113	1	01/31/24 17:09	02/01/24 03:13	ZDR
PCB as Aroclor 1254	05	SW8082A	<0.113 mg/kg dry		0.113	1	01/31/24 17:09	02/01/24 03:13	ZDR
PCB as Aroclor 1260	05	SW8082A	<0.113 mg/kg dry		0.113	1	01/31/24 17:09	02/01/24 03:13	ZDR
Surr: DCB	05	SW8082A	52.0 %		30-105		01/31/24 17:09	02/01/24 03:13	ZDR
Surr: TCMX	05	SW8082A	57.9 %		30-105		01/31/24 17:09	02/01/24 03:13	ZDR
4,4'-DDD	05	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 15:34	BMS



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P18

Laboratory Sample ID: 24A1607-05

Grab Date/Time: 01/23/2024 12:35

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:34	BMS
4,4'-DDT	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:34	BMS
Aldrin	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:34	BMS
alpha-BHC	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:34	BMS
beta-BHC	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:34	BMS
Chlordane	05	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 15:34	BMS
delta-BHC	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:34	BMS
Dieldrin	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:34	BMS
Endosulfan I	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:34	BMS
Endosulfan II	05	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 15:34	BMS
Endosulfan sulfate	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:34	BMS
Endrin	05	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:34	BMS
Endrin aldehyde	05	SW8081B	<8.00 ug/kg dry		8.00	1	01/31/24 12:20	02/01/24 15:34	BMS
gamma-BHC (Lindane)	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:34	BMS
Heptachlor	05	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:34	BMS
Heptachlor epoxide	05	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 15:34	BMS
Methoxychlor	05	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 15:34	BMS
Toxaphene	05	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 15:34	BMS
Surr: TCMX	05	SW8081B	96.0 %		30-105		01/31/24 12:20	02/01/24 15:34	BMS
Surr: DCB	05	SW8081B	93.0 %		30-105		01/31/24 12:20	02/01/24 15:34	BMS
Wet Chemistry Analysis									
Percent Solids	05	SM2540G-2011	86.8 %		0.10	1	01/30/24 09:57	01/30/24 09:57	KJM



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Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P23 Laboratory Sample ID: 24A1607-06

Grab Date/Time: 01/26/2024 12:45

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,1,1-Trichloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,1,2,2-Tetrachloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,1,2-Trichloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,1-Dichloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,1-Dichloroethylene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,1-Dichloropropene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,2,3-Trichlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,2,3-Trichloropropane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,2,4-Trichlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,2,4-Trimethylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,2-Dibromo-3-chloropropane (DBCP)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,2-Dibromoethane (EDB)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,2-Dichlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,2-Dichloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,2-Dichloropropane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,3,5-Trimethylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,3-Dichlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,3-Dichloropropane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
1,4-Dichlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
2,2-Dichloropropane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
2-Butanone (MEK)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
2-Chlorotoluene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
2-Hexanone (MBK)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
4-Chlorotoluene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P23 Laboratory Sample ID: 24A1607-06

Grab Date/Time: 01/26/2024 12:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
4-Isopropyltoluene	06RE1	SW8260D	723 ug/kg dry		23.4	1	02/02/24 13:16	02/02/24 13:16	CGN
4-Methyl-2-pentanone (MIBK)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Acetone	06	SW8260D	174 ug/kg dry		10.0	1	01/30/24 15:34	01/30/24 15:34	RJB
Benzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Bromobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Bromochloromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Bromodichloromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Bromoform	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Bromomethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Carbon disulfide	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Carbon tetrachloride	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Chlorobenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Chloroethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Chloroform	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Chloromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
cis-1,2-Dichloroethylene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
cis-1,3-Dichloropropene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Dibromochloromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Dibromomethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Dichlorodifluoromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Di-isopropyl ether (DIPE)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Ethylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Hexachlorobutadiene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Iodomethane	06	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 15:34	01/30/24 15:34	RJB
Isopropylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
m+p-Xylenes	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P23 Laboratory Sample ID: 24A1607-06

Grab Date/Time: 01/26/2024 12:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Methylene chloride	06	SW8260D	5.81 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Methyl-t-butyl ether (MTBE)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Naphthalene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
n-Butylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
n-Propylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
o-Xylene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
sec-Butylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Styrene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
tert-Butylbenzene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Tetrachloroethylene (PCE)	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Toluene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
trans-1,2-Dichloroethylene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
trans-1,3-Dichloropropene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Trichloroethylene	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Trichlorofluoromethane	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Vinyl acetate	06	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 15:34	01/30/24 15:34	RJB
Vinyl chloride	06	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:34	01/30/24 15:34	RJB
Xylenes, Total	06	SW8260D	<15.0 ug/kg dry		15.0	1	01/30/24 15:34	01/30/24 15:34	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	06	SW8260D	86.0 %		80-120		01/30/24 15:34	01/30/24 15:34	RJB
Surr: 4-Bromofluorobenzene (Surr)	06	SW8260D	97.4 %		85-120		01/30/24 15:34	01/30/24 15:34	RJB
Surr: Dibromofluoromethane (Surr)	06	SW8260D	80.8 %		80-130		01/30/24 15:34	01/30/24 15:34	RJB
Surr: Toluene-d8 (Surr)	06	SW8260D	99.6 %		85-115		01/30/24 15:34	01/30/24 15:34	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	06RE1	SW8260D	90.7 %		80-120		02/02/24 13:16	02/02/24 13:16	CGN



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Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P23

Laboratory Sample ID: 24A1607-06

Grab Date/Time: 01/26/2024 12:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	06RE1	SW8260D	98.6 %		85-120		02/02/24 13:16	02/02/24 13:16	CGN
Surr: Dibromofluoromethane (Surr)	06RE1	SW8260D	89.6 %		80-130		02/02/24 13:16	02/02/24 13:16	CGN
Surr: Toluene-d8 (Surr)	06RE1	SW8260D	99.7 %		85-115		02/02/24 13:16	02/02/24 13:16	CGN
Wet Chemistry Analysis									
Percent Solids	06	SM2540G-2011	72.5 %		0.10	1	01/31/24 15:24	01/31/24 15:24	KJM



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P25

Laboratory Sample ID: 24A1607-07

Grab Date/Time: 01/23/2024 12:05

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	07	SW6010D	<0.928 mg/kg dry		0.928	2	01/30/24 09:45	02/02/24 13:51	ACM
Arsenic	07	SW6010D	1.98 mg/kg dry		1.86	2	01/30/24 09:45	02/02/24 13:51	ACM
Barium	07	SW6010D	58.9 mg/kg dry		0.928	2	01/30/24 09:45	02/02/24 13:51	ACM
Cadmium	07	SW6010D	<0.371 mg/kg dry		0.371	2	01/30/24 09:45	02/02/24 13:51	ACM
Chromium	07	SW6010D	9.51 mg/kg dry		0.928	2	01/30/24 09:45	02/02/24 13:51	ACM
Mercury	07	SW7471B	0.836 mg/kg dry		0.074	10	01/31/24 09:40	01/31/24 13:35	NBT
Lead	07	SW6010D	69.6 mg/kg dry		0.928	2	01/30/24 09:45	02/02/24 13:51	ACM
Selenium	07	SW6010D	<4.64 mg/kg dry		4.64	2	01/30/24 09:45	02/02/24 13:51	ACM
Wet Chemistry Analysis									
Percent Solids	07	SM2540G-2011	58.6 %		0.10	1	01/31/24 15:24	01/31/24 15:24	KJM



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Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P26 Laboratory Sample ID: 24A1607-08

Grab Date/Time: 01/23/2024 11:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	08	SW6010D	<0.500 mg/kg dry		0.500	1	01/30/24 09:45	02/02/24 13:34	ACM
Arsenic	08	SW6010D	<1.00 mg/kg dry		1.00	1	01/30/24 09:45	02/02/24 13:34	ACM
Barium	08	SW6010D	15.4 mg/kg dry		0.500	1	01/30/24 09:45	02/02/24 13:34	ACM
Cadmium	08	SW6010D	<0.200 mg/kg dry		0.200	1	01/30/24 09:45	02/02/24 13:34	ACM
Chromium	08	SW6010D	7.08 mg/kg dry		0.500	1	01/30/24 09:45	02/02/24 13:34	ACM
Mercury	08	SW7471B	0.333 mg/kg dry		0.016	2	01/31/24 09:40	01/31/24 13:27	NBT
Lead	08	SW6010D	2.40 mg/kg dry		0.500	1	01/30/24 09:45	02/02/24 13:34	ACM
Selenium	08	SW6010D	<2.50 mg/kg dry		2.50	1	01/30/24 09:45	02/02/24 13:34	ACM

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	08	SW8015C	<0.10 mg/kg dry		0.10	1	01/29/24 23:56	01/29/24 23:56	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	08	SW8015C	92.2 %		80-120		01/29/24 23:56	01/29/24 23:56	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,1,1-Trichloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,1,2,2-Tetrachloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,1,2-Trichloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,1-Dichloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,1-Dichloroethylene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,1-Dichloropropene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,2,3-Trichlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,2,3-Trichloropropane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,2,4-Trichlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,2,4-Trimethylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,2-Dibromo-3-chloropropane (DBCP)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB



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Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P26 Laboratory Sample ID: 24A1607-08

Grab Date/Time: 01/23/2024 11:40

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2-Dibromoethane (EDB)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,2-Dichlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,2-Dichloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,2-Dichloropropane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,3,5-Trimethylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,3-Dichlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,3-Dichloropropane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
1,4-Dichlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
2,2-Dichloropropane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
2-Butanone (MEK)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
2-Chlorotoluene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
2-Hexanone (MBK)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
4-Chlorotoluene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
4-Isopropyltoluene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
4-Methyl-2-pentanone (MIBK)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Acetone	08	SW8260D	16.3 ug/kg dry		10.0	1	01/30/24 15:57	01/30/24 15:57	RJB
Benzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Bromobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Bromochloromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Bromodichloromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Bromoform	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Bromomethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Carbon disulfide	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Carbon tetrachloride	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Chlorobenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Chloroethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB



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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P26 Laboratory Sample ID: 24A1607-08

Grab Date/Time: 01/23/2024 11:40

Field Residual CI: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroform	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Chloromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
cis-1,2-Dichloroethylene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
cis-1,3-Dichloropropene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Dibromochloromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Dibromomethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Dichlorodifluoromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Di-isopropyl ether (DIPE)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Ethylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Hexachlorobutadiene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Iodomethane	08	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 15:57	01/30/24 15:57	RJB
Isopropylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
m+p-Xylenes	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Methylene chloride	08	SW8260D	5.27 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Methyl-t-butyl ether (MTBE)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Naphthalene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
n-Butylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
n-Propylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
o-Xylene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
sec-Butylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Styrene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
tert-Butylbenzene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Tetrachloroethylene (PCE)	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Toluene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
trans-1,2-Dichloroethylene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
trans-1,3-Dichloropropene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB



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Analytical Results

Sample I.D. P26 Laboratory Sample ID: 24A1607-08

Grab Date/Time: 01/23/2024 11:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Trichloroethylene	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Trichlorofluoromethane	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Vinyl acetate	08	SW8260D	<10.0 ug/kg dry		10.0	1	01/30/24 15:57	01/30/24 15:57	RJB
Vinyl chloride	08	SW8260D	<5.00 ug/kg dry		5.00	1	01/30/24 15:57	01/30/24 15:57	RJB
Xylenes, Total	08	SW8260D	<15.0 ug/kg dry		15.0	1	01/30/24 15:57	01/30/24 15:57	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	08	SW8260D	86.3 %		80-120		01/30/24 15:57	01/30/24 15:57	RJB
Surr: 4-Bromofluorobenzene (Surr)	08	SW8260D	99.3 %		85-120		01/30/24 15:57	01/30/24 15:57	RJB
Surr: Dibromofluoromethane (Surr)	08	SW8260D	80.7 %		80-130		01/30/24 15:57	01/30/24 15:57	RJB
Surr: Toluene-d8 (Surr)	08	SW8260D	103 %		85-115		01/30/24 15:57	01/30/24 15:57	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
1,2,4-Trichlorobenzene	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
1,2-Dichlorobenzene	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
1,2-Diphenylhydrazine	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
1,3-Dichlorobenzene	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
1,3-Dinitrobenzene	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
1,4-Dichlorobenzene	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
1-Chloronaphthalene	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
1-Naphthylamine	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
2,3,4,6-Tetrachlorophenol	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
2,4,5-Trichlorophenol	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
2,4,6-Trichlorophenol	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
2,4-Dichlorophenol	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P26 Laboratory Sample ID: 24A1607-08

Grab Date/Time: 01/23/2024 11:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dimethylphenol	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
2,4-Dinitrophenol	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
2,4-Dinitrotoluene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
2,6-Dichlorophenol	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
2,6-Dinitrotoluene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
2-Chloronaphthalene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
2-Chlorophenol	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
2-Methylnaphthalene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
2-Naphthylamine	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
2-Nitroaniline	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
2-Nitrophenol	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
3,3'-Dichlorobenzidine	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
3-Methylcholanthrene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
3-Nitroaniline	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
4,6-Dinitro-2-methylphenol	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
4-Aminobiphenyl	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
4-Bromophenyl phenyl ether	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
4-Chloroaniline	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
4-Chlorophenyl phenyl ether	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
4-Nitroaniline	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
4-Nitrophenol	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
7,12-Dimethylbenz (a) anthracene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Acenaphthene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Acenaphthylene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Acetophenone	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	



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Date Issued: February 02, 2024 17:18
Project Number: 2202065001
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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P26 Laboratory Sample ID: 24A1607-08

Grab Date/Time: 01/23/2024 11:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Aniline	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Anthracene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Benzidine	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Benzo (a) anthracene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Benzo (a) pyrene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Benzo (b) fluoranthene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Benzo (g,h,i) perylene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Benzo (k) fluoranthene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Benzoic acid	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Benzyl alcohol	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
bis (2-Chloroethoxy) methane	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
bis (2-Chloroethyl) ether	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
2,2'-Oxybis (1-chloropropane)	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
bis (2-Ethylhexyl) phthalate	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Butyl benzyl phthalate	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Chrysene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Dibenz (a,h) anthracene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Dibenz (a,j) acridine	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Dibenzofuran	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Diethyl phthalate	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Dimethyl phthalate	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Di-n-butyl phthalate	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Di-n-octyl phthalate	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Diphenylamine	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Ethyl methanesulfonate	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Fluoranthene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	



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Date Issued: February 02, 2024 17:18
Project Number: 2202065001
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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P26 Laboratory Sample ID: 24A1607-08

Grab Date/Time: 01/23/2024 11:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluorene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Hexachlorobenzene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Hexachlorobutadiene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Hexachlorocyclopentadiene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Hexachloroethane	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Indeno (1,2,3-cd) pyrene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Isophorone	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
m+p-Cresols	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Methyl methanesulfonate	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Naphthalene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Nitrobenzene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
n-Nitrosodimethylamine	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
n-Nitrosodi-n-butylamine	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
n-Nitrosodi-n-propylamine	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
n-Nitrosodiphenylamine	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
n-Nitrosopiperidine	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
o+m+p-Cresols	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
o-Cresol	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
p-(Dimethylamino) azobenzene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
p-Chloro-m-cresol	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Pentachloronitrobenzene (quintozene)	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Pentachlorophenol	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Phenacetin	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	
Phenanthrene	08	SW8270E	<331 ug/kg dry	331	4	02/01/24 16:44	02/01/24 21:02	BMS	



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Project Number: 2202065001
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Laboratory Order ID: 24A1607

Analytical Results

Sample I.D. P26

Laboratory Sample ID: 24A1607-08

Grab Date/Time: 01/23/2024 11:40

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenol	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
Pronamide	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
Pyrene	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
Pyridine	08	SW8270E	<331 ug/kg dry		331	4	02/01/24 16:44	02/01/24 21:02	BMS
Surr: 2,4,6-Tribromophenol (Surr)	08	SW8270E	2.32 %	DS	15-96		02/01/24 16:44	02/01/24 21:02	BMS
Surr: 2-Fluorobiphenyl (Surr)	08	SW8270E	63.4 %		19-105		02/01/24 16:44	02/01/24 21:02	BMS
Surr: 2-Fluorophenol (Surr)	08	SW8270E	51.7 %		12-95		02/01/24 16:44	02/01/24 21:02	BMS
Surr: Nitrobenzene-d5 (Surr)	08	SW8270E	64.4 %		21-100		02/01/24 16:44	02/01/24 21:02	BMS
Surr: Phenol-d5 (Surr)	08	SW8270E	53.1 %		13-100		02/01/24 16:44	02/01/24 21:02	BMS
Surr: p-Terphenyl-d14 (Surr)	08	SW8270E	64.7 %		25-125		02/01/24 16:44	02/01/24 21:02	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	08	SW8015C	442 mg/kg dry		99.8	10	01/31/24 15:35	02/01/24 23:08	LBH2
Surr: n-Triacontane (Surr)	08	SW8015C	86.4 %		50-125		01/31/24 15:35	02/01/24 23:08	LBH2
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	08	SW8082A	<0.124 mg/kg dry		0.124	1	01/31/24 17:09	02/01/24 03:33	ZDR
PCB as Aroclor 1221	08	SW8082A	<0.124 mg/kg dry		0.124	1	01/31/24 17:09	02/01/24 03:33	ZDR
PCB as Aroclor 1232	08	SW8082A	<0.124 mg/kg dry		0.124	1	01/31/24 17:09	02/01/24 03:33	ZDR
PCB as Aroclor 1242	08	SW8082A	<0.124 mg/kg dry		0.124	1	01/31/24 17:09	02/01/24 03:33	ZDR
PCB as Aroclor 1248	08	SW8082A	<0.124 mg/kg dry		0.124	1	01/31/24 17:09	02/01/24 03:33	ZDR
PCB as Aroclor 1254	08	SW8082A	<0.124 mg/kg dry		0.124	1	01/31/24 17:09	02/01/24 03:33	ZDR
PCB as Aroclor 1260	08	SW8082A	<0.124 mg/kg dry		0.124	1	01/31/24 17:09	02/01/24 03:33	ZDR
Surr: DCB	08	SW8082A	56.1 %		30-105		01/31/24 17:09	02/01/24 03:33	ZDR
Surr: TCMX	08	SW8082A	57.4 %		30-105		01/31/24 17:09	02/01/24 03:33	ZDR
4,4'-DDD	08	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 15:53	BMS



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Analytical Results

Sample I.D. P26 Laboratory Sample ID: 24A1607-08

Grab Date/Time: 01/23/2024 11:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:53	BMS
4,4'-DDT	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:53	BMS
Aldrin	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:53	BMS
alpha-BHC	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:53	BMS
beta-BHC	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:53	BMS
Chlordane	08	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 15:53	BMS
delta-BHC	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:53	BMS
Dieldrin	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:53	BMS
Endosulfan I	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:53	BMS
Endosulfan II	08	SW8081B	<6.00 ug/kg dry		6.00	1	01/31/24 12:20	02/01/24 15:53	BMS
Endosulfan sulfate	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:53	BMS
Endrin	08	SW8081B	<4.00 ug/kg dry		4.00	1	01/31/24 12:20	02/01/24 15:53	BMS
Endrin aldehyde	08	SW8081B	<8.00 ug/kg dry		8.00	1	01/31/24 12:20	02/01/24 15:53	BMS
gamma-BHC (Lindane)	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:53	BMS
Heptachlor	08	SW8081B	<2.00 ug/kg dry		2.00	1	01/31/24 12:20	02/01/24 15:53	BMS
Heptachlor epoxide	08	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 15:53	BMS
Methoxychlor	08	SW8081B	<40.0 ug/kg dry		40.0	1	01/31/24 12:20	02/01/24 15:53	BMS
Toxaphene	08	SW8081B	<42.0 ug/kg dry		42.0	1	01/31/24 12:20	02/01/24 15:53	BMS
Surr: TCMX	08	SW8081B	94.2 %		30-105		01/31/24 12:20	02/01/24 15:53	BMS
Surr: DCB	08	SW8081B	85.5 %		30-105		01/31/24 12:20	02/01/24 15:53	BMS
Wet Chemistry Analysis									
Percent Solids	08	SM2540G-2011	79.7 %		0.10	1	01/30/24 09:57	01/30/24 09:57	KJM



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 02, 2024 17:18
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Analytical Summary

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: EPA245.1R3.0/SW7470A			
24A1607-01	0.537 g / 20.0 mL	SW7471B	BHA1113	SHA1008	AA40328
24A1607-02	0.519 g / 20.0 mL	SW7471B	BHA1113	SHA1008	AA40328
24A1607-03	0.535 g / 20.0 mL	SW7471B	BHA1113	SHA1008	AA40328
24A1607-04	0.536 g / 20.0 mL	SW7471B	BHA1113	SHA1008	AA40328
24A1607-05	0.519 g / 20.0 mL	SW7471B	BHA1113	SHA1008	AA40328
24A1607-07	0.543 g / 20.0 mL	SW7471B	BHA1113	SHA1008	AA40328
24A1607-08	0.515 g / 20.0 mL	SW7471B	BHA1113	SHA1008	AA40328

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
24A1607-01	10.0 g / 10.0 mL	SM2540G-2011	BHA1047	SHA0931	
24A1607-02	10.0 g / 10.0 mL	SM2540G-2011	BHA1047	SHA0931	
24A1607-03	10.0 g / 10.0 mL	SM2540G-2011	BHA1047	SHA0931	
24A1607-04	10.0 g / 10.0 mL	SM2540G-2011	BHA1047	SHA0931	
24A1607-05	10.0 g / 10.0 mL	SM2540G-2011	BHA1047	SHA0931	
24A1607-08	10.0 g / 10.0 mL	SM2540G-2011	BHA1047	SHA0931	

Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
24A1607-06	10.0 g / 10.0 mL	SM2540G-2011	BHA1142	SHA1026	
24A1607-07	10.0 g / 10.0 mL	SM2540G-2011	BHA1142	SHA1026	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: SW3050B-ICP			
24A1607-01	1.05 g / 50.0 mL	SW6010D	BHA1039	SHB0084	AB40131
24A1607-02	1.04 g / 50.0 mL	SW6010D	BHA1039	SHB0084	AB40131
24A1607-03	1.02 g / 50.0 mL	SW6010D	BHA1039	SHB0084	AB40131
24A1607-04	1.05 g / 50.0 mL	SW6010D	BHA1039	SHB0084	AB40131
24A1607-05	1.03 g / 50.0 mL	SW6010D	BHA1039	SHB0084	AB40131
24A1607-07	1.08 g / 50.0 mL	SW6010D	BHA1039	SHB0084	AB40131
24A1607-08	1.09 g / 50.0 mL	SW6010D	BHA1039	SHB0084	AB40131



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Organochlorine Pesticides and PCBs by GC/ECD

Preparation Method: SW3550C/EPA600-ECD

24A1607-01	30.0 g / 5.00 mL	SW8082A	BHA1159	SHB0031	AA40218
24A1607-02	30.6 g / 5.00 mL	SW8082A	BHA1159	SHB0031	AA40218
24A1607-03	31.8 g / 5.00 mL	SW8082A	BHA1159	SHB0031	AA40218
24A1607-04	31.1 g / 5.00 mL	SW8082A	BHA1159	SHB0031	AA40218
24A1607-05	30.7 g / 5.00 mL	SW8082A	BHA1159	SHB0031	AA40218
24A1607-08	30.3 g / 5.00 mL	SW8082A	BHA1159	SHB0031	AA40218

Organochlorine Pesticides and PCBs by GC/ECD

Preparation Method: SW3550C/EPA600-ECD

24A1607-01	30.0 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264
24A1607-02	30.6 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264
24A1607-03	31.8 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264
24A1607-04	31.1 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264
24A1607-05	30.7 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264
24A1607-08	30.3 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Semivolatile Hydrocarbons by GC

Preparation Method: SW3550C/EPA600-FID

24A1607-01	51.7 g / 1.00 mL	SW8015C	BHA1165	SHB0056	AL30311
24A1607-02	51.3 g / 1.00 mL	SW8015C	BHA1165	SHB0056	AL30311
24A1607-03	51.1 g / 1.00 mL	SW8015C	BHA1165	SHB0056	AL30311
24A1607-04	51.8 g / 1.00 mL	SW8015C	BHA1165	SHB0056	AL30311
24A1607-05	50.0 g / 1.00 mL	SW8015C	BHA1165	SHB0056	AL30311
24A1607-05RE1	50.0 g / 1.00 mL	SW8015C	BHA1165	SHB0078	AL30311
24A1607-08	50.1 g / 1.00 mL	SW8015C	BHA1165	SHB0056	AL30311

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Semivolatile Organic Compounds by GCMS

Preparation Method: SW3550C/EPA600-MS

24A1607-01	31.5 g / 1.00 mL	SW8270E	BHB0047	SHB0089	AL30202
24A1607-02	30.0 g / 1.00 mL	SW8270E	BHB0047	SHB0089	AL30202
24A1607-03	31.3 g / 1.00 mL	SW8270E	BHB0047	SHB0030	AL30202



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
24A1607-04	30.2 g / 1.00 mL	SW8270E	BHB0047	SHB0030	AL30202
24A1607-05	30.3 g / 1.00 mL	SW8270E	BHB0047	SHB0030	AL30202
24A1607-08	30.2 g / 1.00 mL	SW8270E	BHB0047	SHB0030	AL30202

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC		Preparation Method:	SW5030B-GC		
24A1607-01	5.00 g / 5.00 mL	SW8015C	BHA1028	SHA0917	AA40215
24A1607-02	5.00 g / 5.00 mL	SW8015C	BHA1028	SHA0917	AA40215
24A1607-03	5.00 g / 5.00 mL	SW8015C	BHA1028	SHA0917	AA40215
24A1607-04	5.00 g / 5.00 mL	SW8015C	BHA1028	SHA0917	AA40215
24A1607-05	5.00 g / 5.00 mL	SW8015C	BHA1028	SHA0917	AA40215
24A1607-08	5.00 g / 5.00 mL	SW8015C	BHA1028	SHA0917	AA40215

Volatile Hydrocarbons by GC		Preparation Method:	SW5030B-GC		
24A1607-02RE1	1.16 g / 5.00 mL	SW8015C	BHA1095	SHA1002	AK30331
24A1607-04RE1	1.17 g / 5.00 mL	SW8015C	BHA1095	SHA1002	AK30331
24A1607-05RE1	1.15 g / 5.00 mL	SW8015C	BHA1095	SHA1002	AK30331

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS		Preparation Method:	SW5030B-MS		
24A1607-01	5.08 g / 5.00 mL	SW8260D	BHA1067	SHA0973	AA40197
24A1607-02	5.13 g / 5.00 mL	SW8260D	BHA1067	SHA0973	AA40197
24A1607-03	5.12 g / 5.00 mL	SW8260D	BHA1067	SHA0973	AA40197
24A1607-04	5.14 g / 5.00 mL	SW8260D	BHA1067	SHA0973	AA40197
24A1607-05	5.00 g / 5.00 mL	SW8260D	BHA1067	SHA0973	AA40197
24A1607-06	5.14 g / 5.00 mL	SW8260D	BHA1067	SHA0973	AA40197
24A1607-08	5.15 g / 5.00 mL	SW8260D	BHA1067	SHA0973	AA40197

Volatile Organic Compounds by GCMS		Preparation Method:	SW5030B-MS		
24A1607-06RE1	1.07 g / 5.00 mL	SW8260D	BHB0096	SHB0088	AA40197



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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

QC Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods			Preparation Method: EPA245.1R3.0/SW7470A		
BHA1113-BLK1	0.507 g / 20.0 mL	SW7471B	BHA1113	SHA1008	AA40328
BHA1113-BS1	0.530 g / 20.0 mL	SW7471B	BHA1113	SHA1008	AA40328
BHA1113-MS1	0.521 g / 20.0 mL	SW7471B	BHA1113	SHA1008	AA40328
BHA1113-MSD1	0.504 g / 20.0 mL	SW7471B	BHA1113	SHA1008	AA40328
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis			Preparation Method: No Prep Wet Chem		
BHA1047-BLK1	10.0 g / 10.0 mL	SM2540G-2011	BHA1047	SHA0931	
BHA1047-DUP1	10.0 g / 10.0 mL	SM2540G-2011	BHA1047	SHA0931	
BHA1142-BLK1	10.0 g / 10.0 mL	SM2540G-2011	BHA1142	SHA1026	
BHA1142-DUP1	10.0 g / 10.0 mL	SM2540G-2011	BHA1142	SHA1026	
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods			Preparation Method: SW3050B-ICP		
BHA1039-BLK1	1.02 g / 50.0 mL	SW6010D	BHA1039	SHB0084	AB40131
BHA1039-BS1	1.05 g / 50.0 mL	SW6010D	BHA1039	SHB0084	AB40131
BHA1039-MS1	1.00 g / 50.0 mL	SW6010D	BHA1039	SHB0084	AB40131
BHA1039-MSD1	1.05 g / 50.0 mL	SW6010D	BHA1039	SHB0084	AB40131
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD			Preparation Method: SW3550C/EPA600-ECD		
BHA1159-BLK1	31.3 g / 5.00 mL	SW8082A	BHA1159	SHB0031	AA40218
BHA1159-BS1	30.5 g / 5.00 mL	SW8082A	BHA1159	SHB0031	AA40218
BHA1159-MS1	31.2 g / 5.00 mL	SW8082A	BHA1159	SHB0031	AA40218
BHA1159-MSD1	30.4 g / 5.00 mL	SW8082A	BHA1159	SHB0031	AA40218
BHA1162-BLK1	31.3 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264
BHA1162-BS1	30.0 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD			Preparation Method:	SW3550C/EPA600-ECD	
BHA1162-BS2	30.6 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264
BHA1162-BS3	30.3 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264
BHA1162-MS1	31.0 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264
BHA1162-MSD1	30.1 g / 5.00 mL	SW8081B	BHA1162	SHB0087	AA40264

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Hydrocarbons by GC			Preparation Method:	SW3550C/EPA600-FID	
BHA1165-BLK1	50.1 g / 1.00 mL	SW8015C	BHA1165	SHB0056	AL30311
BHA1165-BS1	50.3 g / 1.00 mL	SW8015C	BHA1165	SHB0056	AL30311
BHA1165-MS1	50.7 g / 1.00 mL	SW8015C	BHA1165	SHB0056	AL30311
BHA1165-MSD1	50.7 g / 1.00 mL	SW8015C	BHA1165	SHB0056	AL30311

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS			Preparation Method:	SW3550C/EPA600-MS	
BHB0047-BLK1	30.0 g / 1.00 mL	SW8270E	BHB0047	SHB0062	AK30271
BHB0047-BS1	31.2 g / 1.00 mL	SW8270E	BHB0047	SHB0062	AK30271
BHB0047-BS2		SW8270E	BHB0047		
BHB0047-MS1	31.1 g / 1.00 mL	SW8270E	BHB0047	SHB0062	AK30271
BHB0047-MSD1	30.4 g / 1.00 mL	SW8270E	BHB0047	SHB0062	AK30271

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC			Preparation Method:	SW5030B-GC	
BHA1028-BLK1	5.00 g / 5.00 mL	SW8015C	BHA1028	SHA0917	AA40215
BHA1028-BS1	5.00 g / 5.00 mL	SW8015C	BHA1028	SHA0917	AA40215
BHA1028-MS1	5.00 g / 5.00 mL	SW8015C	BHA1028	SHA0917	AA40215
BHA1028-MSD1	5.00 g / 5.00 mL	SW8015C	BHA1028	SHA0917	AA40215
BHA1095-BLK1	5.00 g / 5.00 mL	SW8015C	BHA1095	SHA1002	AK30331
BHA1095-BS1	5.00 g / 5.00 mL	SW8015C	BHA1095	SHA1002	AK30331
BHA1095-MS1	5.17 g / 5.00 mL	SW8015C	BHA1095	SHA1002	AK30331
BHA1095-MSD1	5.14 g / 5.00 mL	SW8015C	BHA1095	SHA1002	AK30331

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS			Preparation Method:	SW5030B-MS	
BHA1067-BLK1	5.00 g / 5.00 mL	SW8260D	BHA1067	SHA0973	AA40197
BHA1067-BS1	5.00 g / 5.00 mL	SW8260D	BHA1067	SHA0973	AA40197
BHA1067-MS1	5.07 g / 5.00 mL	SW8260D	BHA1067	SHB0053	AA40197
BHA1067-MSD1	5.04 g / 5.00 mL	SW8260D	BHA1067	SHA0973	AA40197
BHB0096-BLK1	5.00 g / 5.00 mL	SW8260D	BHB0096	SHB0088	AA40197
BHB0096-BS1	5.00 g / 5.00 mL	SW8260D	BHB0096	SHB0088	AA40197
BHB0096-MS1	1.09 g / 5.00 mL	SW8260D	BHB0096	SHB0088	AA40197
BHB0096-MSD1	1.08 g / 5.00 mL	SW8260D	BHB0096	SHB0088	AA40197



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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1039 - SW3050B-ICP

Blank (BHA1039-BLK1)

Prepared: 01/30/2024 Analyzed: 02/02/2024

Barium	<0.500 mg/kg wet	0.500	mg/kg wet
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet
Lead	<0.500 mg/kg wet	0.500	mg/kg wet
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet
Silver	<0.500 mg/kg wet	0.500	mg/kg wet
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet

LCS (BHA1039-BS1)

Prepared: 01/30/2024 Analyzed: 02/02/2024

Lead	90.7 mg/kg wet	0.500	mg/kg wet	94.9	mg/kg wet	95.6	80-120
Selenium	81.5 mg/kg wet	2.50	mg/kg wet	94.9	mg/kg wet	85.9	80-120
Chromium	91.3 mg/kg wet	0.500	mg/kg wet	94.9	mg/kg wet	96.2	80-120
Cadmium	88.8 mg/kg wet	0.200	mg/kg wet	94.9	mg/kg wet	93.6	80-120
Barium	94.2 mg/kg wet	0.500	mg/kg wet	94.9	mg/kg wet	99.2	80-120
Arsenic	87.9 mg/kg wet	1.00	mg/kg wet	94.9	mg/kg wet	92.6	80-120
Silver	4.42 mg/kg wet	0.500	mg/kg wet	4.74	mg/kg wet	93.1	80-120

Matrix Spike (BHA1039-MS1)

Source: 24A1607-04

Prepared: 01/30/2024 Analyzed: 02/02/2024

Arsenic	110 mg/kg dry	4.99	mg/kg dry	124	<4.99 mg/kg	88.8	75-125
Barium	157 mg/kg dry	2.49	mg/kg dry	124	33.0 mg/kg dry	99.5	75-125
Cadmium	110 mg/kg dry	0.997	mg/kg dry	124	<0.997 mg/kg	88.5	75-125
Chromium	127 mg/kg dry	2.49	mg/kg dry	124	10.3 mg/kg dry	94.1	75-125
Lead	121 mg/kg dry	2.49	mg/kg dry	124	10.3 mg/kg dry	89.2	75-125
Selenium	107 mg/kg dry	12.5	mg/kg dry	124	<12.5 mg/kg	85.8	75-125
Silver	5.03 mg/kg dry	2.49	mg/kg dry	6.21	<2.49 mg/kg	81.0	75-125

Matrix Spike Dup (BHA1039-MSD1)

Source: 24A1607-04

Prepared: 01/30/2024 Analyzed: 02/02/2024

Arsenic	107 mg/kg dry	4.76	mg/kg dry	119	<4.76 mg/kg	90.2	75-125	2.99	20
Lead	117 mg/kg dry	2.38	mg/kg dry	119	10.3 mg/kg dry	89.6	75-125	3.74	20
Silver	4.99 mg/kg dry	2.38	mg/kg dry	5.94	<2.38 mg/kg	84.0	75-125	0.943	20
Selenium	104 mg/kg dry	11.9	mg/kg dry	119	<11.9 mg/kg	87.5	75-125	2.59	20
Barium	150 mg/kg dry	2.38	mg/kg dry	119	33.0 mg/kg dry	98.9	75-125	4.08	20
Chromium	120 mg/kg dry	2.38	mg/kg dry	119	10.3 mg/kg dry	92.7	75-125	5.53	20



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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1039 - SW3050B-ICP

Matrix Spike Dup (BHA1039-MSD1) Source: 24A1607-04 Prepared: 01/30/2024 Analyzed: 02/02/2024

Cadmium	106 mg/kg dry	0.952	mg/kg dry	119	<0.952 mg/kg	89.4	75-125	3.51	20

Batch BHA1113 - EPA245.1R3.0/SW7470A

Blank (BHA1113-BLK1) Prepared & Analyzed: 01/31/2024

Mercury	<0.008 mg/kg wet	0.008	mg/kg wet

LCS (BHA1113-BS1) Prepared & Analyzed: 01/31/2024

Mercury	0.091 mg/kg wet	0.008	mg/kg wet	0.0943	mg/kg wet	96.9	80-120

Matrix Spike (BHA1113-MS1) Source: 24A1467-09 Prepared & Analyzed: 01/31/2024

Mercury	0.131 mg/kg dry	0.008	mg/kg dry	0.109	<0.008 mg/kg	120	80-120

Matrix Spike Dup (BHA1113-MSD1) Source: 24A1467-09 Prepared & Analyzed: 01/31/2024

Mercury	0.134 mg/kg dry	0.008	mg/kg dry	0.113	<0.008 mg/kg	118	80-120	2.05	20



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Volatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1028 - SW5030B-GC

Blank (BHA1028-BLK1)

Prepared & Analyzed: 01/29/2024

TPH-Volatiles (GRO)	<0.10 mg/kg wet	0.10	mg/kg wet							
Surr: 2,5-Dibromotoluene (Surr FID)	105		ug/L	100		105	80-120			

LCS (BHA1028-BS1)

Prepared & Analyzed: 01/29/2024

TPH-Volatiles (GRO)	1.01 mg/kg wet	0.10	mg/kg wet	1.00	mg/kg wet	101	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	108		ug/L	100	ug/L	108	80-120			

Matrix Spike (BHA1028-MS1)

Source: 24A1629-07

Prepared & Analyzed: 01/30/2024

TPH-Volatiles (GRO)	0.66 mg/kg wet	0.10	mg/kg wet	1.00	<0.10 mg/kg	66.3	70-130			M
Surr: 2,5-Dibromotoluene (Surr FID)	92.7		ug/L	100	ug/L	92.7	80-120			

Matrix Spike Dup (BHA1028-MSD1)

Source: 24A1629-07

Prepared & Analyzed: 01/30/2024

TPH-Volatiles (GRO)	0.65 mg/kg wet	0.10	mg/kg wet	1.00	<0.10 mg/kg	65.0	70-130	1.90	20	M
Surr: 2,5-Dibromotoluene (Surr FID)	98.1		ug/L	100	ug/L	98.1	80-120			

Batch BHA1095 - SW5030B-GC

Blank (BHA1095-BLK1)

Prepared & Analyzed: 01/31/2024

TPH-Volatiles (GRO)	<0.10 mg/kg wet	0.10	mg/kg wet							
Surr: 2,5-Dibromotoluene (Surr FID)	118		ug/L	100		118	80-120			

LCS (BHA1095-BS1)

Prepared & Analyzed: 01/30/2024

TPH-Volatiles (GRO)	0.99 mg/kg wet	0.10	mg/kg wet	1.00	mg/kg wet	99.4	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	115		ug/L	100	ug/L	115	80-120			

Matrix Spike (BHA1095-MS1)

Source: 24A1658-04

Prepared & Analyzed: 01/31/2024

TPH-Volatiles (GRO)	0.84 mg/kg wet	0.10	mg/kg wet	0.967	<0.10 mg/kg	86.5	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	143		ug/L	100	ug/L	143	80-120			S



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 02, 2024 17:18
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Volatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1095 - SW5030B-GC

Matrix Spike Dup (BHA1095-MSD1)

Source: 24A1658-04

Prepared & Analyzed: 01/31/2024

TPH-Volatiles (GRO)	0.85 mg/kg wet	0.10	mg/kg wet	0.973	<0.10 mg/kg	87.0	70-130	1.21	20
Surr: 2,5-Dibromotoluene (Surr FID)	145		ug/L	100	ug/L	145	80-120		S



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1067 - SW5030B-MS

Blank (BHA1067-BLK1)

Prepared & Analyzed: 01/30/2024

1,1,1,2-Tetrachloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1,1-Trichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1,2,2-Tetrachloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1,2-Trichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1-Dichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
1,1-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,3-Trichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,3-Trichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,4-Trichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,4-Trimethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dibromo-3-chloropropane (DBCP)	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dibromoethane (EDB)	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
1,3,5-Trimethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,3-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,3-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
1,4-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
2,2-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
2-Butanone (MEK)	<5.00 ug/kg wet	5.00	ug/kg wet
2-Chlorotoluene	<5.00 ug/kg wet	5.00	ug/kg wet
2-Hexanone (MBK)	<5.00 ug/kg wet	5.00	ug/kg wet
4-Chlorotoluene	<5.00 ug/kg wet	5.00	ug/kg wet
4-Isopropyltoluene	<5.00 ug/kg wet	5.00	ug/kg wet
4-Methyl-2-pentanone (MIBK)	<5.00 ug/kg wet	5.00	ug/kg wet
Acetone	<10.0 ug/kg wet	10.0	ug/kg wet
Benzene	<5.00 ug/kg wet	5.00	ug/kg wet
Bromobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Bromochloromethane	<5.00 ug/kg wet	5.00	ug/kg wet



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1067 - SW5030B-MS

Blank (BHA1067-BLK1)

Prepared & Analyzed: 01/30/2024

Bromodichloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Bromoform	<5.00 ug/kg wet	5.00	ug/kg wet
Bromomethane	<5.00 ug/kg wet	5.00	ug/kg wet
Carbon disulfide	<5.00 ug/kg wet	5.00	ug/kg wet
Carbon tetrachloride	<5.00 ug/kg wet	5.00	ug/kg wet
Chlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Chloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
Chloroform	<5.00 ug/kg wet	5.00	ug/kg wet
Chloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
cis-1,2-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
cis-1,3-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet
Dibromochloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Dibromomethane	<5.00 ug/kg wet	5.00	ug/kg wet
Dichlorodifluoromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Di-isopropyl ether (DIPE)	<5.00 ug/kg wet	5.00	ug/kg wet
Ethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Hexachlorobutadiene	<5.00 ug/kg wet	5.00	ug/kg wet
Iodomethane	<10.0 ug/kg wet	10.0	ug/kg wet
Isopropylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
m+p-Xylenes	<5.00 ug/kg wet	5.00	ug/kg wet
Methylene chloride	<5.00 ug/kg wet	5.00	ug/kg wet
Methyl-t-butyl ether (MTBE)	<5.00 ug/kg wet	5.00	ug/kg wet
Naphthalene	<5.00 ug/kg wet	5.00	ug/kg wet
n-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
n-Propylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
o-Xylene	<5.00 ug/kg wet	5.00	ug/kg wet
sec-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Styrene	<5.00 ug/kg wet	5.00	ug/kg wet
tert-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Tetrachloroethylene (PCE)	<5.00 ug/kg wet	5.00	ug/kg wet
Toluene	<5.00 ug/kg wet	5.00	ug/kg wet



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Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1067 - SW5030B-MS

Blank (BHA1067-BLK1)

Prepared & Analyzed: 01/30/2024

trans-1,2-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
trans-1,3-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet
Trichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
Trichlorofluoromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Vinyl acetate	<10.0 ug/kg wet	10.0	ug/kg wet
Vinyl chloride	<5.00 ug/kg wet	5.00	ug/kg wet
Xylenes, Total	<15.0 ug/kg wet	15.0	ug/kg wet

Surr: 1,2-Dichloroethane-d4 (Surr)	46.8	ug/L	50.0	93.5	80-120
Surr: 4-Bromofluorobenzene (Surr)	49.5	ug/L	50.0	99.1	85-120
Surr: Dibromofluoromethane (Surr)	48.0	ug/L	50.0	96.0	80-130
Surr: Toluene-d8 (Surr)	50.2	ug/L	50.0	100	85-115

LCS (BHA1067-BS1)

Prepared & Analyzed: 01/30/2024

1,1,1,2-Tetrachloroethane	51.4 ug/L	5	ug/L	50.0	ug/L	103	85-132
1,1,1-Trichloroethane	51.1 ug/L	5	ug/L	50.0	ug/L	102	70-135
1,1,2,2-Tetrachloroethane	49.8 ug/L	5	ug/L	50.0	ug/L	99.6	55-130
1,1,2-Trichloroethane	49.2 ug/L	5	ug/L	50.0	ug/L	98.4	60-125
1,1-Dichloroethane	47.4 ug/L	5	ug/L	50.0	ug/L	94.9	70-136
1,1-Dichloroethylene	45.8 ug/L	5	ug/L	50.0	ug/L	91.6	65-135
1,1-Dichloropropene	49.1 ug/L	5	ug/L	50.0	ug/L	98.2	70-135
1,2,3-Trichlorobenzene	54.0 ug/L	5	ug/L	50.0	ug/L	108	60-135
1,2,3-Trichloropropane	50.5 ug/L	5	ug/L	50.0	ug/L	101	65-130
1,2,4-Trichlorobenzene	51.4 ug/L	5	ug/L	50.0	ug/L	103	65-130
1,2,4-Trimethylbenzene	55.8 ug/L	5	ug/L	50.0	ug/L	112	65-135
1,2-Dibromo-3-chloropropane (DBCP)	52.2 ug/L	5	ug/L	50.0	ug/L	104	40-135
1,2-Dibromoethane (EDB)	51.1 ug/L	5	ug/L	50.0	ug/L	102	70-125
1,2-Dichlorobenzene	52.7 ug/L	5	ug/L	50.0	ug/L	105	75-120
1,2-Dichloroethane	50.0 ug/L	5	ug/L	50.0	ug/L	100	70-135
1,2-Dichloropropane	50.0 ug/L	5	ug/L	50.0	ug/L	99.9	70-120
1,3,5-Trimethylbenzene	54.9 ug/L	5	ug/L	50.0	ug/L	110	65-135
1,3-Dichlorobenzene	52.5 ug/L	5	ug/L	50.0	ug/L	105	70-125
1,3-Dichloropropane	49.5 ug/L	5	ug/L	50.0	ug/L	99.0	75-125



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Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1067 - SW5030B-MS

LCS (BHA1067-BS1)

Prepared & Analyzed: 01/30/2024

1,4-Dichlorobenzene	51.8 ug/L	5	ug/L	50.0	ug/L	104	70-125			
2,2-Dichloropropane	48.8 ug/L	5	ug/L	50.0	ug/L	97.6	65-135			
2-Butanone (MEK)	37.6 ug/L	5	ug/L	50.0	ug/L	75.2	30-160			
2-Chlorotoluene	52.1 ug/L	5	ug/L	50.0	ug/L	104	70-130			
2-Hexanone (MBK)	44.3 ug/L	5	ug/L	50.0	ug/L	88.6	45-145			
4-Chlorotoluene	50.4 ug/L	5	ug/L	50.0	ug/L	101	75-125			
4-Isopropyltoluene	56.6 ug/L	5	ug/L	50.0	ug/L	113	75-135			
4-Methyl-2-pentanone (MIBK)	45.4 ug/L	5	ug/L	50.0	ug/L	90.7	45-145			
Acetone	35.4 ug/L	10	ug/L	50.0	ug/L	70.8	20-160			
Benzene	48.3 ug/L	5	ug/L	50.0	ug/L	96.5	75-125			
Bromobenzene	50.8 ug/L	5	ug/L	50.0	ug/L	102	65-120			
Bromochloromethane	44.5 ug/L	5	ug/L	50.0	ug/L	89.0	70-125			
Bromodichloromethane	51.8 ug/L	5	ug/L	50.0	ug/L	104	70-130			
Bromoform	50.0 ug/L	5	ug/L	50.0	ug/L	99.9	55-135			
Bromomethane	46.2 ug/L	5	ug/L	50.0	ug/L	92.3	30-160			
Carbon disulfide	41.8 ug/L	5	ug/L	50.0	ug/L	83.6	45-160			
Carbon tetrachloride	47.8 ug/L	5	ug/L	50.0	ug/L	95.7	65-135			
Chlorobenzene	51.2 ug/L	5	ug/L	50.0	ug/L	102	75-125			
Chloroethane	48.1 ug/L	5	ug/L	50.0	ug/L	96.3	40-155			
Chloroform	48.5 ug/L	5	ug/L	50.0	ug/L	97.0	70-125			
Chloromethane	54.9 ug/L	5	ug/L	50.0	ug/L	110	50-130			
cis-1,2-Dichloroethylene	47.4 ug/L	5	ug/L	50.0	ug/L	94.8	65-125			
cis-1,3-Dichloropropene	48.2 ug/L	5	ug/L	50.0	ug/L	96.3	70-125			
Dibromochloromethane	48.2 ug/L	5	ug/L	50.0	ug/L	96.4	65-130			
Dibromomethane	51.5 ug/L	5	ug/L	50.0	ug/L	103	75-130			
Dichlorodifluoromethane	93.6 ug/L	5	ug/L	50.0	ug/L	187	35-135			
Ethylbenzene	52.6 ug/L	5	ug/L	50.0	ug/L	105	75-125			
Hexachlorobutadiene	51.8 ug/L	5	ug/L	50.0	ug/L	104	55-140			
Isopropylbenzene	49.1 ug/L	5	ug/L	50.0	ug/L	98.3	75-130			
m+p-Xylenes	102 ug/L	5	ug/L	100	ug/L	102	80-125			
Methylene chloride	43.9 ug/L	5	ug/L	50.0	ug/L	87.8	55-140			



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1067 - SW5030B-MS

LCS (BHA1067-BS1)

Prepared & Analyzed: 01/30/2024

Methyl-t-butyl ether (MTBE)	51.9 ug/L	5	ug/L	50.0	ug/L	104	65-125		
Naphthalene	57.3 ug/L	5	ug/L	50.0	ug/L	115	40-125		
n-Butylbenzene	58.3 ug/L	5	ug/L	50.0	ug/L	117	65-140		
n-Propylbenzene	51.2 ug/L	5	ug/L	50.0	ug/L	102	65-135		
o-Xylene	49.8 ug/L	5	ug/L	50.0	ug/L	99.7	75-125		
sec-Butylbenzene	57.4 ug/L	5	ug/L	50.0	ug/L	115	65-130		
Styrene	49.8 ug/L	5	ug/L	50.0	ug/L	99.5	75-125		
tert-Butylbenzene	53.8 ug/L	5	ug/L	50.0	ug/L	108	65-130		
Tetrachloroethylene (PCE)	49.6 ug/L	5	ug/L	50.0	ug/L	99.1	48.1-219		
Toluene	48.9 ug/L	5	ug/L	50.0	ug/L	97.9	70-125		
trans-1,2-Dichloroethylene	44.9 ug/L	5	ug/L	50.0	ug/L	89.7	65-135		
trans-1,3-Dichloropropene	52.8 ug/L	5	ug/L	50.0	ug/L	106	65-125		
Trichloroethylene	47.9 ug/L	5	ug/L	50.0	ug/L	95.9	75-125		
Trichlorofluoromethane	55.7 ug/L	5	ug/L	50.0	ug/L	111	25-185		
Vinyl chloride	47.2 ug/L	5	ug/L	50.0	ug/L	94.4	60-125		
Surr: 1,2-Dichloroethane-d4 (Surr)	50.5		ug/L	50.0	ug/L	101	80-120		
Surr: 4-Bromofluorobenzene (Surr)	49.3		ug/L	50.0	ug/L	98.6	85-120		
Surr: Dibromofluoromethane (Surr)	49.3		ug/L	50.0	ug/L	98.6	80-130		
Surr: Toluene-d8 (Surr)	49.2		ug/L	50.0	ug/L	98.3	85-115		

Matrix Spike (BHA1067-MS1)

Source: 24A1607-01

Prepared & Analyzed: 02/01/2024

1,1,1,2-Tetrachloroethane	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.8	52-140		
1,1,1-Trichloroethane	44.7 ug/L	5	ug/L	50.0	<5 ug/kg	89.4	70-135		
1,1,2,2-Tetrachloroethane	40.0 ug/L	5	ug/L	50.0	<5 ug/kg	80.0	55-130		
1,1,2-Trichloroethane	40.9 ug/L	5	ug/L	50.0	<5 ug/kg	81.8	60-125		
1,1-Dichloroethane	41.8 ug/L	5	ug/L	50.0	<5 ug/kg	83.6	60-134		
1,1-Dichloroethylene	40.8 ug/L	5	ug/L	50.0	<5 ug/kg	81.5	65-135		
1,1-Dichloropropene	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.9	70-135		
1,2,3-Trichlorobenzene	35.1 ug/L	5	ug/L	50.0	<5 ug/kg	70.3	60-135		
1,2,3-Trichloropropane	40.6 ug/L	5	ug/L	50.0	<5 ug/kg	81.2	65-130		
1,2,4-Trichlorobenzene	34.3 ug/L	5	ug/L	50.0	<5 ug/kg	68.6	65-130		
1,2,4-Trimethylbenzene	46.9 ug/L	5	ug/L	50.0	<5 ug/kg	93.8	65-135		



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1067 - SW5030B-MS

Matrix Spike (BHA1067-MS1)

Source: 24A1607-01

Prepared & Analyzed: 02/01/2024

1,2-Dibromo-3-chloropropane (DBCP)	36.6 ug/L	5	ug/L	50.0	<5 ug/kg	73.3	40-135		
1,2-Dibromoethane (EDB)	43.0 ug/L	5	ug/L	50.0	<5 ug/kg	86.0	70-125		
1,2-Dichlorobenzene	41.0 ug/L	5	ug/L	50.0	<5 ug/kg	81.9	75-120		
1,2-Dichloroethane	40.9 ug/L	5	ug/L	50.0	<5 ug/kg	81.8	70-135		
1,2-Dichloropropane	42.3 ug/L	5	ug/L	50.0	<5 ug/kg	84.7	70-120		
1,3,5-Trimethylbenzene	47.0 ug/L	5	ug/L	50.0	<5 ug/kg	94.0	65-135		
1,3-Dichlorobenzene	41.5 ug/L	5	ug/L	50.0	<5 ug/kg	83.1	70-125		
1,3-Dichloropropane	41.6 ug/L	5	ug/L	50.0	<5 ug/kg	83.2	75-125		
1,4-Dichlorobenzene	39.1 ug/L	5	ug/L	50.0	<5 ug/kg	78.3	70-125		
2,2-Dichloropropane	40.7 ug/L	5	ug/L	50.0	<5 ug/kg	81.3	65-135		
2-Butanone (MEK)	33.4 ug/L	5	ug/L	50.0	<5 ug/kg	66.8	30-160		
2-Chlorotoluene	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.7	70-130		
2-Hexanone (MBK)	37.9 ug/L	5	ug/L	50.0	<5 ug/kg	75.9	45-145		
4-Chlorotoluene	41.1 ug/L	5	ug/L	50.0	<5 ug/kg	82.2	75-125		
4-Isopropyltoluene	46.4 ug/L	5	ug/L	50.0	<5 ug/kg	92.8	75-135		
4-Methyl-2-pentanone (MIBK)	38.3 ug/L	5	ug/L	50.0	<5 ug/kg	76.6	45-145		
Acetone	51.6 ug/L	10	ug/L	50.0	18.3 ug/L	66.5	20-160		
Benzene	43.2 ug/L	5	ug/L	50.0	<5 ug/kg	86.5	75-125		
Bromobenzene	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.2	65-120		
Bromochloromethane	36.6 ug/L	5	ug/L	50.0	<5 ug/kg	73.3	70-125		
Bromodichloromethane	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.1	70-130		
Bromoform	39.9 ug/L	5	ug/L	50.0	<5 ug/kg	79.8	55-135		
Bromomethane	46.3 ug/L	5	ug/L	50.0	<5 ug/kg	92.7	30-160		
Carbon disulfide	41.1 ug/L	5	ug/L	50.0	<5 ug/kg	81.3	45-160		
Carbon tetrachloride	42.2 ug/L	5	ug/L	50.0	<5 ug/kg	84.5	65-135		
Chlorobenzene	44.2 ug/L	5	ug/L	50.0	<5 ug/kg	88.3	75-125		
Chloroethane	47.5 ug/L	5	ug/L	50.0	<5 ug/kg	95.0	40-155		
Chloroform	40.2 ug/L	5	ug/L	50.0	<5 ug/kg	80.5	70-125		
Chloromethane	57.9 ug/L	5	ug/L	50.0	<5 ug/kg	116	50-130		
cis-1,2-Dichloroethylene	38.6 ug/L	5	ug/L	50.0	<5 ug/kg	77.2	65-125		
cis-1,3-Dichloropropene	40.0 ug/L	5	ug/L	50.0	<5 ug/kg	80.0	70-125		



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1067 - SW5030B-MS

Matrix Spike (BHA1067-MS1)		Source: 24A1607-01			Prepared & Analyzed: 02/01/2024				
Dibromochloromethane	38.0 ug/L	5	ug/L	50.0	<5 ug/kg	76.0	65-130		
Dibromomethane	43.0 ug/L	5	ug/L	50.0	<5 ug/kg	85.9	75-130		
Dichlorodifluoromethane	102 ug/L	5	ug/L	50.0	<5 ug/kg	204	35-135		M
Ethylbenzene	46.3 ug/L	5	ug/L	50.0	<5 ug/kg	92.6	75-125		
Hexachlorobutadiene	34.5 ug/L	5	ug/L	50.0	<5 ug/kg	69.0	55-140		
Isopropylbenzene	42.7 ug/L	5	ug/L	50.0	<5 ug/kg	85.4	75-130		
m+p-Xylenes	89.4 ug/L	5	ug/L	100	<5 ug/kg	89.4	80-125		
Methylene chloride	38.0 ug/L	5	ug/L	50.0	<5 ug/kg	66.9	55-140		
Methyl-t-butyl ether (MTBE)	42.8 ug/L	5	ug/L	50.0	<5 ug/kg	85.5	65-125		
Naphthalene	39.7 ug/L	5	ug/L	50.0	<5 ug/kg	79.5	40-125		
n-Butylbenzene	44.4 ug/L	5	ug/L	50.0	<5 ug/kg	88.7	65-140		
n-Propylbenzene	43.1 ug/L	5	ug/L	50.0	<5 ug/kg	86.2	65-135		
o-Xylene	44.1 ug/L	5	ug/L	50.0	<5 ug/kg	88.3	75-125		
sec-Butylbenzene	47.6 ug/L	5	ug/L	50.0	<5 ug/kg	95.2	65-130		
Styrene	41.5 ug/L	5	ug/L	50.0	<5 ug/kg	82.9	75-125		
tert-Butylbenzene	45.7 ug/L	5	ug/L	50.0	<5 ug/kg	91.4	65-130		
Tetrachloroethylene (PCE)	50.6 ug/L	5	ug/L	50.0	<5 ug/kg	101	48.1-219		
Toluene	42.9 ug/L	5	ug/L	50.0	<5 ug/kg	85.9	70-125		
trans-1,2-Dichloroethylene	39.4 ug/L	5	ug/L	50.0	<5 ug/kg	78.7	65-135		
trans-1,3-Dichloropropene	40.9 ug/L	5	ug/L	50.0	<5 ug/kg	81.9	65-125		
Trichloroethylene	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.3	75-125		
Trichlorofluoromethane	51.4 ug/L	5	ug/L	50.0	<5 ug/kg	103	25-185		
Vinyl chloride	49.5 ug/L	5	ug/L	50.0	<5 ug/kg	98.9	60-125		
Surr: 1,2-Dichloroethane-d4 (Surr)	48.5		ug/L	50.0	ug/L	96.9	80-120		
Surr: 4-Bromofluorobenzene (Surr)	49.9		ug/L	50.0	ug/L	99.9	85-120		
Surr: Dibromofluoromethane (Surr)	46.6		ug/L	50.0	ug/L	93.2	80-130		
Surr: Toluene-d8 (Surr)	48.3		ug/L	50.0	ug/L	96.5	85-115		



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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1067 - SW5030B-MS

Matrix Spike Dup (BHA1067-MSD1)		Source: 24A1607-01			Prepared & Analyzed: 01/30/2024					
1,1,1,2-Tetrachloroethane	42.3 ug/L	5	ug/L	50.0	<5 ug/kg	84.6	52-140	2.59	30	
1,1,1-Trichloroethane	42.0 ug/L	5	ug/L	50.0	<5 ug/kg	83.9	70-135	6.37	30	
1,1,2,2-Tetrachloroethane	38.0 ug/L	5	ug/L	50.0	<5 ug/kg	75.9	55-130	5.26	30	
1,1,2-Trichloroethane	39.7 ug/L	5	ug/L	50.0	<5 ug/kg	79.3	60-125	3.08	30	
1,1-Dichloroethane	38.1 ug/L	5	ug/L	50.0	<5 ug/kg	76.1	60-134	9.36	30	
1,1-Dichloroethylene	37.0 ug/L	5	ug/L	50.0	<5 ug/kg	73.9	65-135	9.73	30	
1,1-Dichloropropene	38.5 ug/L	5	ug/L	50.0	<5 ug/kg	77.1	70-135	12.0	30	
1,2,3-Trichlorobenzene	32.7 ug/L	5	ug/L	50.0	<5 ug/kg	65.4	60-135	7.22	30	
1,2,3-Trichloropropane	39.5 ug/L	5	ug/L	50.0	<5 ug/kg	78.9	65-130	2.87	30	
1,2,4-Trichlorobenzene	31.5 ug/L	5	ug/L	50.0	<5 ug/kg	63.0	65-130	8.51	30	M
1,2,4-Trimethylbenzene	45.7 ug/L	5	ug/L	50.0	<5 ug/kg	91.3	65-135	2.66	30	
1,2-Dibromo-3-chloropropane (DBCP)	37.8 ug/L	5	ug/L	50.0	<5 ug/kg	75.5	40-135	3.04	30	
1,2-Dibromoethane (EDB)	40.6 ug/L	5	ug/L	50.0	<5 ug/kg	81.1	70-125	5.89	30	
1,2-Dichlorobenzene	39.5 ug/L	5	ug/L	50.0	<5 ug/kg	78.9	75-120	3.75	30	
1,2-Dichloroethane	38.0 ug/L	5	ug/L	50.0	<5 ug/kg	76.0	70-135	7.35	30	
1,2-Dichloropropane	41.0 ug/L	5	ug/L	50.0	<5 ug/kg	81.9	70-120	3.29	30	
1,3,5-Trimethylbenzene	44.4 ug/L	5	ug/L	50.0	<5 ug/kg	88.8	65-135	5.71	30	
1,3-Dichlorobenzene	39.0 ug/L	5	ug/L	50.0	<5 ug/kg	78.1	70-125	6.21	30	
1,3-Dichloropropane	39.7 ug/L	5	ug/L	50.0	<5 ug/kg	79.4	75-125	4.62	30	
1,4-Dichlorobenzene	37.9 ug/L	5	ug/L	50.0	<5 ug/kg	75.8	70-125	3.22	30	
2,2-Dichloropropane	37.6 ug/L	5	ug/L	50.0	<5 ug/kg	75.1	65-135	7.92	30	
2-Butanone (MEK)	30.4 ug/L	5	ug/L	50.0	<5 ug/kg	60.9	30-160	9.27	30	
2-Chlorotoluene	42.0 ug/L	5	ug/L	50.0	<5 ug/kg	84.1	70-130	3.09	30	
2-Hexanone (MBK)	36.0 ug/L	5	ug/L	50.0	<5 ug/kg	71.9	45-145	5.36	30	
4-Chlorotoluene	39.6 ug/L	5	ug/L	50.0	<5 ug/kg	79.2	75-125	3.82	30	
4-Isopropyltoluene	44.4 ug/L	5	ug/L	50.0	<5 ug/kg	88.8	75-135	4.36	30	
4-Methyl-2-pentanone (MIBK)	37.6 ug/L	5	ug/L	50.0	<5 ug/kg	75.2	45-145	1.90	30	
Acetone	52.4 ug/L	10	ug/L	50.0	18.2 ug/L	68.3	20-160	1.50	30	
Benzene	40.4 ug/L	5	ug/L	50.0	<5 ug/kg	80.8	75-125	6.77	30	
Bromobenzene	39.4 ug/L	5	ug/L	50.0	<5 ug/kg	78.8	65-120	7.78	30	
Bromochloromethane	34.4 ug/L	5	ug/L	50.0	<5 ug/kg	68.7	70-125	6.45	30	M



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Final Report

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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1067 - SW5030B-MS

Matrix Spike Dup (BHA1067-MSD1)

Source: 24A1607-01

Prepared & Analyzed: 01/30/2024

Bromodichloromethane	41.0 ug/L	5	ug/L	50.0	<5 ug/kg	82.0	70-130	3.76	30	
Bromoform	37.1 ug/L	5	ug/L	50.0	<5 ug/kg	74.1	55-135	7.33	30	
Bromomethane	36.7 ug/L	5	ug/L	50.0	<5 ug/kg	73.4	30-160	23.3	30	
Carbon disulfide	30.4 ug/L	5	ug/L	50.0	<5 ug/kg	59.8	45-160	30.1	30	P
Carbon tetrachloride	39.0 ug/L	5	ug/L	50.0	<5 ug/kg	78.0	65-135	7.98	30	
Chlorobenzene	41.5 ug/L	5	ug/L	50.0	<5 ug/kg	83.0	75-125	6.28	30	
Chloroethane	40.6 ug/L	5	ug/L	50.0	<5 ug/kg	81.1	40-155	15.8	30	
Chloroform	38.0 ug/L	5	ug/L	50.0	<5 ug/kg	75.9	70-125	5.80	30	
Chloromethane	45.2 ug/L	5	ug/L	50.0	<5 ug/kg	90.4	50-130	24.7	30	
cis-1,2-Dichloroethylene	36.4 ug/L	5	ug/L	50.0	<5 ug/kg	72.8	65-125	5.87	30	
cis-1,3-Dichloropropene	37.6 ug/L	5	ug/L	50.0	<5 ug/kg	75.1	70-125	6.32	30	
Dibromochloromethane	37.5 ug/L	5	ug/L	50.0	<5 ug/kg	74.9	65-130	1.38	30	
Dibromomethane	40.4 ug/L	5	ug/L	50.0	<5 ug/kg	80.7	75-130	6.22	30	
Dichlorodifluoromethane	77.7 ug/L	5	ug/L	50.0	<5 ug/kg	155	35-135	27.2	30	M
Ethylbenzene	44.1 ug/L	5	ug/L	50.0	<5 ug/kg	88.2	75-125	4.96	30	
Hexachlorobutadiene	33.2 ug/L	5	ug/L	50.0	<5 ug/kg	66.3	55-140	3.99	30	
Isopropylbenzene	40.5 ug/L	5	ug/L	50.0	<5 ug/kg	81.0	75-130	5.22	30	
m+p-Xylenes	83.5 ug/L	5	ug/L	100	<5 ug/kg	83.5	80-125	6.82	30	
Methylene chloride	36.9 ug/L	5	ug/L	50.0	<5 ug/kg	64.8	55-140	2.88	30	
Methyl-t-butyl ether (MTBE)	40.2 ug/L	5	ug/L	50.0	<5 ug/kg	80.4	65-125	6.10	30	
Naphthalene	38.1 ug/L	5	ug/L	50.0	<5 ug/kg	76.3	40-125	4.08	30	
n-Butylbenzene	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.7	65-140	2.33	30	
n-Propylbenzene	41.7 ug/L	5	ug/L	50.0	<5 ug/kg	83.4	65-135	3.35	30	
o-Xylene	41.4 ug/L	5	ug/L	50.0	<5 ug/kg	82.8	75-125	6.36	30	
sec-Butylbenzene	46.1 ug/L	5	ug/L	50.0	<5 ug/kg	92.3	65-130	3.07	30	
Styrene	38.8 ug/L	5	ug/L	50.0	<5 ug/kg	77.5	75-125	6.76	30	
tert-Butylbenzene	44.4 ug/L	5	ug/L	50.0	<5 ug/kg	88.9	65-130	2.82	30	
Tetrachloroethylene (PCE)	48.3 ug/L	5	ug/L	50.0	<5 ug/kg	96.6	48.1-219	4.55	30	
Toluene	40.0 ug/L	5	ug/L	50.0	<5 ug/kg	80.1	70-125	6.96	30	
trans-1,2-Dichloroethylene	33.5 ug/L	5	ug/L	50.0	<5 ug/kg	67.0	65-135	16.1	30	
trans-1,3-Dichloropropene	38.1 ug/L	5	ug/L	50.0	<5 ug/kg	76.1	65-125	7.26	30	



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1067 - SW5030B-MS

Matrix Spike Dup (BHA1067-MSD1)

Source: 24A1607-01

Prepared & Analyzed: 01/30/2024

Trichloroethylene	39.6 ug/L	5	ug/L	50.0	<5 ug/kg	79.3	75-125	7.32	30	
Trichlorofluoromethane	44.5 ug/L	5	ug/L	50.0	<5 ug/kg	89.0	25-185	14.4	30	
Vinyl chloride	39.5 ug/L	5	ug/L	50.0	<5 ug/kg	79.1	60-125	22.3	30	
Surr: 1,2-Dichloroethane-d4 (Surr)	45.0		ug/L	50.0	ug/L	90.1	80-120			
Surr: 4-Bromofluorobenzene (Surr)	48.6		ug/L	50.0	ug/L	97.2	85-120			
Surr: Dibromofluoromethane (Surr)	45.3		ug/L	50.0	ug/L	90.5	80-130			
Surr: Toluene-d8 (Surr)	48.6		ug/L	50.0	ug/L	97.2	85-115			

Batch BHB0096 - SW5030B-MS

Blank (BHB0096-BLK1)

Prepared & Analyzed: 02/02/2024

1,1,1,2-Tetrachloroethane	<5.00 ug/kg wet	5.00	ug/kg wet	
1,1,1-Trichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet	
1,1,1,2,2-Tetrachloroethane	<5.00 ug/kg wet	5.00	ug/kg wet	
1,1,2-Trichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet	
1,1-Dichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet	
1,1-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet	
1,1-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet	
1,2,3-Trichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet	
1,2,3-Trichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet	
1,2,4-Trichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet	
1,2,4-Trimethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet	
1,2-Dibromo-3-chloropropane (DBCP)	<5.00 ug/kg wet	5.00	ug/kg wet	
1,2-Dibromoethane (EDB)	<5.00 ug/kg wet	5.00	ug/kg wet	
1,2-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet	
1,2-Dichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet	
1,2-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet	
1,3,5-Trimethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet	
1,3-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet	
1,3-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet	
1,4-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet	



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Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0096 - SW5030B-MS

Blank (BHB0096-BLK1)

Prepared & Analyzed: 02/02/2024

2,2-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
2-Butanone (MEK)	<5.00 ug/kg wet	5.00	ug/kg wet
2-Chlorotoluene	<5.00 ug/kg wet	5.00	ug/kg wet
2-Hexanone (MBK)	<5.00 ug/kg wet	5.00	ug/kg wet
4-Chlorotoluene	<5.00 ug/kg wet	5.00	ug/kg wet
4-Isopropyltoluene	<5.00 ug/kg wet	5.00	ug/kg wet
4-Methyl-2-pentanone (MIBK)	<5.00 ug/kg wet	5.00	ug/kg wet
Acetone	<10.0 ug/kg wet	10.0	ug/kg wet
Benzene	<5.00 ug/kg wet	5.00	ug/kg wet
Bromobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Bromochloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Bromodichloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Bromoform	<5.00 ug/kg wet	5.00	ug/kg wet
Bromomethane	<5.00 ug/kg wet	5.00	ug/kg wet
Carbon disulfide	<5.00 ug/kg wet	5.00	ug/kg wet
Carbon tetrachloride	<5.00 ug/kg wet	5.00	ug/kg wet
Chlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Chloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
Chloroform	<5.00 ug/kg wet	5.00	ug/kg wet
Chloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
cis-1,2-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
cis-1,3-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet
Dibromochloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Dibromomethane	<5.00 ug/kg wet	5.00	ug/kg wet
Dichlorodifluoromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Di-isopropyl ether (DIPE)	<5.00 ug/kg wet	5.00	ug/kg wet
Ethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Hexachlorobutadiene	<5.00 ug/kg wet	5.00	ug/kg wet
Iodomethane	<10.0 ug/kg wet	10.0	ug/kg wet
Isopropylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
m+p-Xylenes	<5.00 ug/kg wet	5.00	ug/kg wet



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0096 - SW5030B-MS

Blank (BHB0096-BLK1)

Prepared & Analyzed: 02/02/2024

Methylene chloride	<5.00 ug/kg wet	5.00	ug/kg wet
Methyl-t-butyl ether (MTBE)	<5.00 ug/kg wet	5.00	ug/kg wet
Naphthalene	<5.00 ug/kg wet	5.00	ug/kg wet
n-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
n-Propylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
o-Xylene	<5.00 ug/kg wet	5.00	ug/kg wet
sec-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Styrene	<5.00 ug/kg wet	5.00	ug/kg wet
tert-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Tetrachloroethylene (PCE)	<5.00 ug/kg wet	5.00	ug/kg wet
Toluene	<5.00 ug/kg wet	5.00	ug/kg wet
trans-1,2-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
trans-1,3-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet
Trichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
Trichlorofluoromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Vinyl acetate	<10.0 ug/kg wet	10.0	ug/kg wet
Vinyl chloride	<5.00 ug/kg wet	5.00	ug/kg wet
Xylenes, Total	<15.0 ug/kg wet	15.0	ug/kg wet

Surr: 1,2-Dichloroethane-d4 (Surr)	45.6	ug/L	50.0	91.3	80-120
Surr: 4-Bromofluorobenzene (Surr)	50.2	ug/L	50.0	100	85-120
Surr: Dibromofluoromethane (Surr)	44.6	ug/L	50.0	89.1	80-130
Surr: Toluene-d8 (Surr)	48.6	ug/L	50.0	97.3	85-115

LCS (BHB0096-BS1)

Prepared & Analyzed: 02/02/2024

1,1,1,2-Tetrachloroethane	52.9 ug/L	5	ug/L	50.0	ug/L	106	85-132
1,1,1-Trichloroethane	51.1 ug/L	5	ug/L	50.0	ug/L	102	70-135
1,1,2,2-Tetrachloroethane	49.0 ug/L	5	ug/L	50.0	ug/L	98.1	55-130
1,1,2-Trichloroethane	49.3 ug/L	5	ug/L	50.0	ug/L	98.7	60-125
1,1-Dichloroethane	48.3 ug/L	5	ug/L	50.0	ug/L	96.6	70-136
1,1-Dichloroethylene	48.1 ug/L	5	ug/L	50.0	ug/L	96.2	65-135
1,1-Dichloropropene	49.9 ug/L	5	ug/L	50.0	ug/L	99.8	70-135
1,2,3-Trichlorobenzene	56.2 ug/L	5	ug/L	50.0	ug/L	112	60-135



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0096 - SW5030B-MS

LCS (BHB0096-BS1)

Prepared & Analyzed: 02/02/2024

1,2,3-Trichloropropane	49.0 ug/L	5	ug/L	50.0	ug/L	98.1	65-130		
1,2,4-Trichlorobenzene	55.0 ug/L	5	ug/L	50.0	ug/L	110	65-130		
1,2,4-Trimethylbenzene	60.7 ug/L	5	ug/L	50.0	ug/L	121	65-135		
1,2-Dibromo-3-chloropropane (DBCP)	48.5 ug/L	5	ug/L	50.0	ug/L	96.9	40-135		
1,2-Dibromoethane (EDB)	52.7 ug/L	5	ug/L	50.0	ug/L	105	70-125		
1,2-Dichlorobenzene	55.6 ug/L	5	ug/L	50.0	ug/L	111	75-120		
1,2-Dichloroethane	48.3 ug/L	5	ug/L	50.0	ug/L	96.7	70-135		
1,2-Dichloropropane	53.1 ug/L	5	ug/L	50.0	ug/L	106	70-120		
1,3,5-Trimethylbenzene	58.1 ug/L	5	ug/L	50.0	ug/L	116	65-135		
1,3-Dichlorobenzene	55.2 ug/L	5	ug/L	50.0	ug/L	110	70-125		
1,3-Dichloropropane	49.7 ug/L	5	ug/L	50.0	ug/L	99.3	75-125		
1,4-Dichlorobenzene	54.4 ug/L	5	ug/L	50.0	ug/L	109	70-125		
2,2-Dichloropropane	48.6 ug/L	5	ug/L	50.0	ug/L	97.3	65-135		
2-Butanone (MEK)	39.8 ug/L	5	ug/L	50.0	ug/L	79.6	30-160		
2-Chlorotoluene	55.0 ug/L	5	ug/L	50.0	ug/L	110	70-130		
2-Hexanone (MBK)	45.8 ug/L	5	ug/L	50.0	ug/L	91.6	45-145		
4-Chlorotoluene	54.1 ug/L	5	ug/L	50.0	ug/L	108	75-125		
4-Isopropyltoluene	60.6 ug/L	5	ug/L	50.0	ug/L	121	75-135		
4-Methyl-2-pentanone (MIBK)	47.0 ug/L	5	ug/L	50.0	ug/L	93.9	45-145		
Acetone	36.8 ug/L	10	ug/L	50.0	ug/L	73.7	20-160		
Benzene	51.9 ug/L	5	ug/L	50.0	ug/L	104	75-125		
Bromobenzene	53.8 ug/L	5	ug/L	50.0	ug/L	108	65-120		
Bromochloromethane	44.8 ug/L	5	ug/L	50.0	ug/L	89.7	70-125		
Bromodichloromethane	51.8 ug/L	5	ug/L	50.0	ug/L	104	70-130		
Bromoform	50.4 ug/L	5	ug/L	50.0	ug/L	101	55-135		
Bromomethane	50.3 ug/L	5	ug/L	50.0	ug/L	101	30-160		
Carbon disulfide	47.2 ug/L	5	ug/L	50.0	ug/L	94.5	45-160		
Carbon tetrachloride	50.2 ug/L	5	ug/L	50.0	ug/L	100	65-135		
Chlorobenzene	54.3 ug/L	5	ug/L	50.0	ug/L	109	75-125		
Chloroethane	54.1 ug/L	5	ug/L	50.0	ug/L	108	40-155		
Chloroform	47.6 ug/L	5	ug/L	50.0	ug/L	95.3	70-125		



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Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0096 - SW5030B-MS

LCS (BHB0096-BS1)

Prepared & Analyzed: 02/02/2024

Chloromethane	64.9 ug/L	5	ug/L	50.0	ug/L	130	50-130		
cis-1,2-Dichloroethylene	47.8 ug/L	5	ug/L	50.0	ug/L	95.7	65-125		
cis-1,3-Dichloropropene	50.3 ug/L	5	ug/L	50.0	ug/L	101	70-125		
Dibromochloromethane	48.8 ug/L	5	ug/L	50.0	ug/L	97.6	65-130		
Dibromomethane	53.3 ug/L	5	ug/L	50.0	ug/L	107	75-130		
Dichlorodifluoromethane	113 ug/L	5	ug/L	50.0	ug/L	226	35-135		L
Ethylbenzene	55.5 ug/L	5	ug/L	50.0	ug/L	111	75-125		
Hexachlorobutadiene	54.4 ug/L	5	ug/L	50.0	ug/L	109	55-140		
Isopropylbenzene	51.6 ug/L	5	ug/L	50.0	ug/L	103	75-130		
m+p-Xylenes	107 ug/L	5	ug/L	100	ug/L	107	80-125		
Methylene chloride	45.1 ug/L	5	ug/L	50.0	ug/L	90.2	55-140		
Methyl-t-butyl ether (MTBE)	50.0 ug/L	5	ug/L	50.0	ug/L	99.9	65-125		
Naphthalene	55.7 ug/L	5	ug/L	50.0	ug/L	111	40-125		
n-Butylbenzene	62.1 ug/L	5	ug/L	50.0	ug/L	124	65-140		
n-Propylbenzene	54.9 ug/L	5	ug/L	50.0	ug/L	110	65-135		
o-Xylene	52.3 ug/L	5	ug/L	50.0	ug/L	105	75-125		
sec-Butylbenzene	60.9 ug/L	5	ug/L	50.0	ug/L	122	65-130		
Styrene	52.6 ug/L	5	ug/L	50.0	ug/L	105	75-125		
tert-Butylbenzene	57.4 ug/L	5	ug/L	50.0	ug/L	115	65-130		
Tetrachloroethylene (PCE)	53.4 ug/L	5	ug/L	50.0	ug/L	107	48.1-219		
Toluene	52.4 ug/L	5	ug/L	50.0	ug/L	105	70-125		
trans-1,2-Dichloroethylene	47.1 ug/L	5	ug/L	50.0	ug/L	94.2	65-135		
trans-1,3-Dichloropropene	53.5 ug/L	5	ug/L	50.0	ug/L	107	65-125		
Trichloroethylene	50.5 ug/L	5	ug/L	50.0	ug/L	101	75-125		
Trichlorofluoromethane	56.7 ug/L	5	ug/L	50.0	ug/L	113	25-185		
Vinyl chloride	56.0 ug/L	5	ug/L	50.0	ug/L	112	60-125		
Surr: 1,2-Dichloroethane-d4 (Surr)	44.7		ug/L	50.0	ug/L	89.4	80-120		
Surr: 4-Bromofluorobenzene (Surr)	48.6		ug/L	50.0	ug/L	97.2	85-120		
Surr: Dibromofluoromethane (Surr)	45.1		ug/L	50.0	ug/L	90.2	80-130		
Surr: Toluene-d8 (Surr)	49.1		ug/L	50.0	ug/L	98.2	85-115		



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0096 - SW5030B-MS

Matrix Spike (BHB0096-MS1)

Source: 24A1607-06RE1

Prepared & Analyzed: 02/02/2024

1,1,1,2-Tetrachloroethane	47.6 ug/L	5	ug/L	50.0	<5 ug/kg	95.1	52-140			
1,1,1-Trichloroethane	47.3 ug/L	5	ug/L	50.0	<5 ug/kg	94.5	70-135			
1,1,2,2-Tetrachloroethane	19.6 ug/L	5	ug/L	50.0	<5 ug/kg	39.2	55-130			M
1,1,2-Trichloroethane	44.9 ug/L	5	ug/L	50.0	<5 ug/kg	89.8	60-125			
1,1-Dichloroethane	43.5 ug/L	5	ug/L	50.0	<5 ug/kg	87.0	60-134			
1,1-Dichloroethylene	42.5 ug/L	5	ug/L	50.0	<5 ug/kg	85.1	65-135			
1,1-Dichloropropene	42.0 ug/L	5	ug/L	50.0	<5 ug/kg	84.0	70-135			
1,2,3-Trichlorobenzene	33.4 ug/L	5	ug/L	50.0	<5 ug/kg	66.7	60-135			
1,2,3-Trichloropropane	47.9 ug/L	5	ug/L	50.0	<5 ug/kg	95.7	65-130			
1,2,4-Trichlorobenzene	31.7 ug/L	5	ug/L	50.0	<5 ug/kg	63.5	65-130			M
1,2,4-Trimethylbenzene	50.8 ug/L	5	ug/L	50.0	<5 ug/kg	102	65-135			
1,2-Dibromo-3-chloropropane (DBCP)	46.6 ug/L	5	ug/L	50.0	<5 ug/kg	93.2	40-135			
1,2-Dibromoethane (EDB)	45.0 ug/L	5	ug/L	50.0	<5 ug/kg	89.9	70-125			
1,2-Dichlorobenzene	43.6 ug/L	5	ug/L	50.0	<5 ug/kg	87.2	75-120			
1,2-Dichloroethane	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.2	70-135			
1,2-Dichloropropane	48.1 ug/L	5	ug/L	50.0	<5 ug/kg	96.2	70-120			
1,3,5-Trimethylbenzene	49.2 ug/L	5	ug/L	50.0	<5 ug/kg	98.4	65-135			
1,3-Dichlorobenzene	41.8 ug/L	5	ug/L	50.0	<5 ug/kg	83.7	70-125			
1,3-Dichloropropane	45.2 ug/L	5	ug/L	50.0	<5 ug/kg	90.3	75-125			
1,4-Dichlorobenzene	39.4 ug/L	5	ug/L	50.0	<5 ug/kg	78.8	70-125			
2,2-Dichloropropane	44.1 ug/L	5	ug/L	50.0	<5 ug/kg	88.2	65-135			
2-Butanone (MEK)	37.6 ug/L	5	ug/L	50.0	<5 ug/kg	75.2	30-160			
2-Chlorotoluene	46.7 ug/L	5	ug/L	50.0	<5 ug/kg	93.4	70-130			
2-Hexanone (MBK)	48.0 ug/L	5	ug/L	50.0	<5 ug/kg	95.9	45-145			
4-Chlorotoluene	43.0 ug/L	5	ug/L	50.0	<5 ug/kg	86.1	75-125			
4-Isopropyltoluene	279 ug/L	5	ug/L	50.0	114 ug/L	330	75-135			M
4-Methyl-2-pentanone (MIBK)	47.1 ug/L	5	ug/L	50.0	<5 ug/kg	94.2	45-145			
Acetone	63.9 ug/L	10	ug/L	50.0	18.9 ug/L	90.0	20-160			
Benzene	46.3 ug/L	5	ug/L	50.0	<5 ug/kg	92.6	75-125			
Bromobenzene	41.4 ug/L	5	ug/L	50.0	<5 ug/kg	82.7	65-120			
Bromochloromethane	39.3 ug/L	5	ug/L	50.0	<5 ug/kg	78.7	70-125			



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0096 - SW5030B-MS

Matrix Spike (BHB0096-MS1)

Source: 24A1607-06RE1

Prepared & Analyzed: 02/02/2024

Bromodichloromethane	47.3 ug/L	5	ug/L	50.0	<5 ug/kg	94.5	70-130			
Bromoform	44.7 ug/L	5	ug/L	50.0	<5 ug/kg	89.4	55-135			
Bromomethane	47.1 ug/L	5	ug/L	50.0	<5 ug/kg	94.2	30-160			
Carbon disulfide	40.5 ug/L	5	ug/L	50.0	<5 ug/kg	81.0	45-160			
Carbon tetrachloride	44.7 ug/L	5	ug/L	50.0	<5 ug/kg	89.3	65-135			
Chlorobenzene	45.6 ug/L	5	ug/L	50.0	<5 ug/kg	91.2	75-125			
Chloroethane	47.3 ug/L	5	ug/L	50.0	<5 ug/kg	94.6	40-155			
Chloroform	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.9	70-125			
Chloromethane	59.7 ug/L	5	ug/L	50.0	<5 ug/kg	119	50-130			
cis-1,2-Dichloroethylene	39.7 ug/L	5	ug/L	50.0	<5 ug/kg	79.5	65-125			
cis-1,3-Dichloropropene	41.2 ug/L	5	ug/L	50.0	<5 ug/kg	82.4	70-125			
Dibromochloromethane	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.3	65-130			
Dibromomethane	44.6 ug/L	5	ug/L	50.0	<5 ug/kg	89.2	75-130			
Dichlorodifluoromethane	103 ug/L	5	ug/L	50.0	<5 ug/kg	206	35-135			M
Ethylbenzene	47.9 ug/L	5	ug/L	50.0	<5 ug/kg	95.8	75-125			
Hexachlorobutadiene	30.4 ug/L	5	ug/L	50.0	<5 ug/kg	60.7	55-140			
Isopropylbenzene	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.2	75-130			
m+p-Xylenes	91.0 ug/L	5	ug/L	100	<5 ug/kg	91.0	80-125			
Methylene chloride	41.9 ug/L	5	ug/L	50.0	<5 ug/kg	78.8	55-140			
Methyl-t-butyl ether (MTBE)	47.2 ug/L	5	ug/L	50.0	<5 ug/kg	94.4	65-125			
Naphthalene	42.9 ug/L	5	ug/L	50.0	<5 ug/kg	85.7	40-125			
n-Butylbenzene	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.7	65-140			
n-Propylbenzene	45.2 ug/L	5	ug/L	50.0	<5 ug/kg	90.3	65-135			
o-Xylene	45.7 ug/L	5	ug/L	50.0	<5 ug/kg	91.4	75-125			
sec-Butylbenzene	47.2 ug/L	5	ug/L	50.0	<5 ug/kg	94.4	65-130			
Styrene	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.2	75-125			
tert-Butylbenzene	46.6 ug/L	5	ug/L	50.0	<5 ug/kg	93.2	65-130			
Tetrachloroethylene (PCE)	74.8 ug/L	5	ug/L	50.0	<5 ug/kg	150	48.1-219			
Toluene	45.3 ug/L	5	ug/L	50.0	<5 ug/kg	90.5	70-125			
trans-1,2-Dichloroethylene	37.7 ug/L	5	ug/L	50.0	<5 ug/kg	75.4	65-135			
trans-1,3-Dichloropropene	39.8 ug/L	5	ug/L	50.0	<5 ug/kg	79.7	65-125			



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Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0096 - SW5030B-MS

Matrix Spike (BHB0096-MS1)

Source: 24A1607-06RE1

Prepared & Analyzed: 02/02/2024

Trichloroethylene	63.0 ug/L	5	ug/L	50.0	<5 ug/kg	126	75-125			M
Trichlorofluoromethane	52.7 ug/L	5	ug/L	50.0	<5 ug/kg	105	25-185			
Vinyl chloride	47.6 ug/L	5	ug/L	50.0	<5 ug/kg	95.3	60-125			
Surr: 1,2-Dichloroethane-d4 (Surr)	46.2		ug/L	50.0	ug/L	92.4	80-120			
Surr: 4-Bromofluorobenzene (Surr)	48.4		ug/L	50.0	ug/L	96.9	85-120			
Surr: Dibromofluoromethane (Surr)	43.1		ug/L	50.0	ug/L	86.3	80-130			
Surr: Toluene-d8 (Surr)	48.8		ug/L	50.0	ug/L	97.5	85-115			

Matrix Spike Dup (BHB0096-MSD1)

Source: 24A1607-06RE1

Prepared & Analyzed: 02/02/2024

1,1,1,2-Tetrachloroethane	44.6 ug/L	5	ug/L	50.0	<5 ug/kg	89.3	52-140	6.31	30	
1,1,1-Trichloroethane	45.7 ug/L	5	ug/L	50.0	<5 ug/kg	91.4	70-135	3.33	30	
1,1,2,2-Tetrachloroethane	16.6 ug/L	5	ug/L	50.0	<5 ug/kg	33.2	55-130		30	M
1,1,2-Trichloroethane	46.9 ug/L	5	ug/L	50.0	<5 ug/kg	93.8	60-125	4.36	30	
1,1-Dichloroethane	43.7 ug/L	5	ug/L	50.0	<5 ug/kg	87.4	60-134	0.505	30	
1,1-Dichloroethylene	40.2 ug/L	5	ug/L	50.0	<5 ug/kg	80.5	65-135	5.53	30	
1,1-Dichloropropene	40.3 ug/L	5	ug/L	50.0	<5 ug/kg	80.6	70-135	4.16	30	
1,2,3-Trichlorobenzene	36.7 ug/L	5	ug/L	50.0	<5 ug/kg	73.3	60-135	9.40	30	
1,2,3-Trichloropropane	49.6 ug/L	5	ug/L	50.0	<5 ug/kg	99.2	65-130	3.59	30	
1,2,4-Trichlorobenzene	34.6 ug/L	5	ug/L	50.0	<5 ug/kg	69.3	65-130	8.74	30	
1,2,4-Trimethylbenzene	49.0 ug/L	5	ug/L	50.0	<5 ug/kg	97.9	65-135	3.59	30	
1,2-Dibromo-3-chloropropane (DBCP)	47.5 ug/L	5	ug/L	50.0	<5 ug/kg	95.0	40-135	1.91	30	
1,2-Dibromoethane (EDB)	46.7 ug/L	5	ug/L	50.0	<5 ug/kg	93.4	70-125	3.80	30	
1,2-Dichlorobenzene	44.2 ug/L	5	ug/L	50.0	<5 ug/kg	88.4	75-120	1.32	30	
1,2-Dichloroethane	45.5 ug/L	5	ug/L	50.0	<5 ug/kg	91.0	70-135	6.67	30	
1,2-Dichloropropane	48.7 ug/L	5	ug/L	50.0	<5 ug/kg	97.4	70-120	1.18	30	
1,3,5-Trimethylbenzene	47.2 ug/L	5	ug/L	50.0	<5 ug/kg	94.4	65-135	4.17	30	
1,3-Dichlorobenzene	41.9 ug/L	5	ug/L	50.0	<5 ug/kg	83.9	70-125	0.263	30	
1,3-Dichloropropane	47.4 ug/L	5	ug/L	50.0	<5 ug/kg	94.8	75-125	4.90	30	
1,4-Dichlorobenzene	39.6 ug/L	5	ug/L	50.0	<5 ug/kg	79.1	70-125	0.380	30	
2,2-Dichloropropane	42.4 ug/L	5	ug/L	50.0	<5 ug/kg	84.7	65-135	4.00	30	
2-Butanone (MEK)	40.6 ug/L	5	ug/L	50.0	<5 ug/kg	81.2	30-160	7.75	30	
2-Chlorotoluene	45.0 ug/L	5	ug/L	50.0	<5 ug/kg	89.9	70-130	3.82	30	



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Certificate of Analysis

Final Report

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Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0096 - SW5030B-MS

Matrix Spike Dup (BHB0096-MSD1)

Source: 24A1607-06RE1

Prepared & Analyzed: 02/02/2024

2-Hexanone (MBK)	48.0 ug/L	5	ug/L	50.0	<5 ug/kg	96.0	45-145	0.0625	30	
4-Chlorotoluene	41.0 ug/L	5	ug/L	50.0	<5 ug/kg	82.0	75-125	4.90	30	
4-Isopropyltoluene	248 ug/L	5	ug/L	50.0	113 ug/L	269	75-135	11.9	30	M
4-Methyl-2-pentanone (MIBK)	50.6 ug/L	5	ug/L	50.0	<5 ug/kg	101	45-145	7.14	30	
Acetone	74.2 ug/L	10	ug/L	50.0	18.8 ug/L	111	20-160	14.9	30	
Benzene	46.0 ug/L	5	ug/L	50.0	<5 ug/kg	92.0	75-125	0.585	30	
Bromobenzene	41.9 ug/L	5	ug/L	50.0	<5 ug/kg	83.7	65-120	1.20	30	
Bromochloromethane	39.5 ug/L	5	ug/L	50.0	<5 ug/kg	78.9	70-125	0.330	30	
Bromodichloromethane	47.0 ug/L	5	ug/L	50.0	<5 ug/kg	93.9	70-130	0.637	30	
Bromoform	44.8 ug/L	5	ug/L	50.0	<5 ug/kg	89.6	55-135	0.134	30	
Bromomethane	48.5 ug/L	5	ug/L	50.0	<5 ug/kg	97.0	30-160	2.95	30	
Carbon disulfide	40.2 ug/L	5	ug/L	50.0	<5 ug/kg	80.4	45-160	0.793	30	
Carbon tetrachloride	43.6 ug/L	5	ug/L	50.0	<5 ug/kg	87.2	65-135	2.38	30	
Chlorobenzene	43.8 ug/L	5	ug/L	50.0	<5 ug/kg	87.7	75-125	3.93	30	
Chloroethane	47.1 ug/L	5	ug/L	50.0	<5 ug/kg	94.2	40-155	0.508	30	
Chloroform	42.4 ug/L	5	ug/L	50.0	<5 ug/kg	84.9	70-125	2.33	30	
Chloromethane	59.7 ug/L	5	ug/L	50.0	<5 ug/kg	119	50-130	0.00	30	
cis-1,2-Dichloroethylene	40.0 ug/L	5	ug/L	50.0	<5 ug/kg	79.9	65-125	0.577	30	
cis-1,3-Dichloropropene	41.1 ug/L	5	ug/L	50.0	<5 ug/kg	82.2	70-125	0.170	30	
Dibromochloromethane	43.2 ug/L	5	ug/L	50.0	<5 ug/kg	86.4	65-130	1.26	30	
Dibromomethane	48.1 ug/L	5	ug/L	50.0	<5 ug/kg	96.2	75-130	7.53	30	
Dichlorodifluoromethane	101 ug/L	5	ug/L	50.0	<5 ug/kg	202	35-135	1.68	30	M
Ethylbenzene	45.9 ug/L	5	ug/L	50.0	<5 ug/kg	91.7	75-125	4.31	30	
Hexachlorobutadiene	32.4 ug/L	5	ug/L	50.0	<5 ug/kg	64.9	55-140	6.59	30	
Isopropylbenzene	41.2 ug/L	5	ug/L	50.0	<5 ug/kg	82.5	75-130	3.20	30	
m+p-Xylenes	87.2 ug/L	5	ug/L	100	<5 ug/kg	87.2	80-125	4.27	30	
Methylene chloride	42.4 ug/L	5	ug/L	50.0	<5 ug/kg	79.7	55-140	1.09	30	
Methyl-t-butyl ether (MTBE)	49.0 ug/L	5	ug/L	50.0	<5 ug/kg	97.9	65-125	3.60	30	
Naphthalene	47.6 ug/L	5	ug/L	50.0	<5 ug/kg	95.1	40-125	10.4	30	
n-Butylbenzene	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.1	65-140	1.91	30	
n-Propylbenzene	41.9 ug/L	5	ug/L	50.0	<5 ug/kg	83.9	65-135	7.39	30	



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0096 - SW5030B-MS

Matrix Spike Dup (BHB0096-MSD1)

Source: 24A1607-06RE1

Prepared & Analyzed: 02/02/2024

o-Xylene	44.2 ug/L	5	ug/L	50.0	<5 ug/kg	88.4	75-125	3.38	30	
sec-Butylbenzene	45.6 ug/L	5	ug/L	50.0	<5 ug/kg	91.3	65-130	3.40	30	
Styrene	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.3	75-125	0.0939	30	
tert-Butylbenzene	44.2 ug/L	5	ug/L	50.0	<5 ug/kg	88.5	65-130	5.15	30	
Tetrachloroethylene (PCE)	73.3 ug/L	5	ug/L	50.0	<5 ug/kg	147	48.1-219	2.00	30	
Toluene	43.1 ug/L	5	ug/L	50.0	<5 ug/kg	86.2	70-125	4.91	30	
trans-1,2-Dichloroethylene	37.3 ug/L	5	ug/L	50.0	<5 ug/kg	74.6	65-135	1.07	30	
trans-1,3-Dichloropropene	41.8 ug/L	5	ug/L	50.0	<5 ug/kg	83.5	65-125	4.68	30	
Trichloroethylene	64.8 ug/L	5	ug/L	50.0	<5 ug/kg	130	75-125	2.79	30	M
Trichlorofluoromethane	51.5 ug/L	5	ug/L	50.0	<5 ug/kg	103	25-185	2.17	30	
Vinyl chloride	47.2 ug/L	5	ug/L	50.0	<5 ug/kg	94.4	60-125	0.865	30	
Surr: 1,2-Dichloroethane-d4 (Surr)	48.6		ug/L	50.0	ug/L	97.3	80-120			
Surr: 4-Bromofluorobenzene (Surr)	49.2		ug/L	50.0	ug/L	98.4	85-120			
Surr: Dibromofluoromethane (Surr)	45.8		ug/L	50.0	ug/L	91.7	80-130			
Surr: Toluene-d8 (Surr)	49.3		ug/L	50.0	ug/L	98.6	85-115			



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0047 - SW3550C/EPA600-MS

Blank (BHB0047-BLK1)

Prepared & Analyzed: 02/01/2024

1,2,4,5-Tetrachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,2,4-Trichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,2-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,2-Diphenylhydrazine	<83.3 ug/kg wet	83.3	ug/kg wet
1,3-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,3-Dinitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,4-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
1-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet
2,3,4,6-Tetrachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4,5-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4,6-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dimethylphenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dinitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet
2,6-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,6-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet
2-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
2-Chlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2-Methylnaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
2-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet
2-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet
2-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet
3,3'-Dichlorobenzidine	<83.3 ug/kg wet	83.3	ug/kg wet
3-Methylcholanthrene	<83.3 ug/kg wet	83.3	ug/kg wet
3-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet
4,6-Dinitro-2-methylphenol	<83.3 ug/kg wet	83.3	ug/kg wet
4-Aminobiphenyl	<83.3 ug/kg wet	83.3	ug/kg wet
4-Bromophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet
4-Chloroaniline	<83.3 ug/kg wet	83.3	ug/kg wet



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0047 - SW3550C/EPA600-MS

Blank (BHB0047-BLK1)

Prepared & Analyzed: 02/01/2024

4-Chlorophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet
4-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet
4-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet
7,12-Dimethylbenz (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Acenaphthene	<83.3 ug/kg wet	83.3	ug/kg wet
Acenaphthylene	<83.3 ug/kg wet	83.3	ug/kg wet
Acetophenone	<83.3 ug/kg wet	83.3	ug/kg wet
Aniline	<83.3 ug/kg wet	83.3	ug/kg wet
Anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzidine	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (a) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (b) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (g,h,i) perylene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (k) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzoic acid	<83.3 ug/kg wet	83.3	ug/kg wet
Benzyl alcohol	<83.3 ug/kg wet	83.3	ug/kg wet
bis (2-Chloroethoxy) methane	<83.3 ug/kg wet	83.3	ug/kg wet
bis (2-Chloroethyl) ether	<83.3 ug/kg wet	83.3	ug/kg wet
2,2'-Oxybis (1-chloropropane)	<83.3 ug/kg wet	83.3	ug/kg wet
bis (2-Ethylhexyl) phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Butyl benzyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Chrysene	<83.3 ug/kg wet	83.3	ug/kg wet
Dibenz (a,h) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Dibenz (a,j) acridine	<83.3 ug/kg wet	83.3	ug/kg wet
Dibenzofuran	<83.3 ug/kg wet	83.3	ug/kg wet
Diethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Dimethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Di-n-butyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Di-n-octyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Diphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet



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Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0047 - SW3550C/EPA600-MS

Blank (BHB0047-BLK1)

Prepared & Analyzed: 02/01/2024

Ethyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet
Fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet
Fluorene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachlorobutadiene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachlorocyclopentadiene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachloroethane	<83.3 ug/kg wet	83.3	ug/kg wet
Indeno (1,2,3-cd) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet
Isophorone	<83.3 ug/kg wet	83.3	ug/kg wet
m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet
Methyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet
Naphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
Nitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodimethylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodi-n-butylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodi-n-propylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodiphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosopiperidine	<83.3 ug/kg wet	83.3	ug/kg wet
o+m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet
o-Cresol	<83.3 ug/kg wet	83.3	ug/kg wet
p-(Dimethylamino) azobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
p-Chloro-m-cresol	<83.3 ug/kg wet	83.3	ug/kg wet
Pentachloronitrobenzene (quintozene)	<83.3 ug/kg wet	83.3	ug/kg wet
Pentachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
Phenacetin	<83.3 ug/kg wet	83.3	ug/kg wet
Phenanthrene	<83.3 ug/kg wet	83.3	ug/kg wet
Phenol	<83.3 ug/kg wet	83.3	ug/kg wet
Pronamide	<83.3 ug/kg wet	83.3	ug/kg wet
Pyrene	<83.3 ug/kg wet	83.3	ug/kg wet
Pyridine	<83.3 ug/kg wet	83.3	ug/kg wet

Surr: 2,4,6-Tribromophenol (Surr) 2930 ug/kg wet 3330 88.0 15-96



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Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0047 - SW3550C/EPA600-MS

Blank (BHB0047-BLK1)

Prepared & Analyzed: 02/01/2024

Surr: 2-Fluorobiphenyl (Surr)	1400	ug/kg wet	1670	83.8	19-105
Surr: 2-Fluorophenol (Surr)	2310	ug/kg wet	3330	69.4	12-95
Surr: Nitrobenzene-d5 (Surr)	1320	ug/kg wet	1670	79.3	21-100
Surr: Phenol-d5 (Surr)	2520	ug/kg wet	3330	75.8	13-100
Surr: p-Terphenyl-d14 (Surr)	1430	ug/kg wet	1670	85.9	25-125

LCS (BHB0047-BS1)

Prepared & Analyzed: 02/01/2024

1,2,4-Trichlorobenzene	1330 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	82.8	70-130	
1,2-Dichlorobenzene	1070 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	67.0	70-130	L
1,3-Dichlorobenzene	997 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	62.2	70-130	L
1,4-Dichlorobenzene	1180 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	73.8	70-130	
2,4,6-Trichlorophenol	1570 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	97.8	20-115	
2,4-Dichlorophenol	1340 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	83.9	20-111	
2,4-Dimethylphenol	1240 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	77.4	20-110	
2,4-Dinitrophenol	1270 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	79.0	10-169	
2,4-Dinitrotoluene	1370 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	85.4	21-125	
2,6-Dinitrotoluene	1100 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	68.4	15-140	
2-Chloronaphthalene	1260 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	78.7	22-105	
2-Chlorophenol	1080 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	67.6	15-107	
2-Nitrophenol	1090 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	67.7	20-115	
3,3'-Dichlorobenzidine	953 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	59.5	10-110	
4,6-Dinitro-2-methylphenol	1400 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	87.5	40-130	
4-Bromophenyl phenyl ether	1340 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	83.5	20-114	
4-Chlorophenyl phenyl ether	1380 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	86.0	15-110	
4-Nitrophenol	1450 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	90.5	15-110	
Acenaphthene	1270 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	79.1	24-110	
Acenaphthylene	1360 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	84.8	25-106	
Acetophenone	1090 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	67.9	25-106	
Anthracene	1130 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	70.5	25-117	
Benzo (a) anthracene	1330 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	82.9	25-127	
Benzo (a) pyrene	1480 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	92.2	18-127	
Benzo (b) fluoranthene	1400 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	87.6	20-132	



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Enthalpy Analytical

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Batch BHB0047 - SW3550C/EPA600-MS

LCS (BHB0047-BS1)

Prepared & Analyzed: 02/01/2024

Benzo (g,h,i) perylene	1040 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	64.7	10-136
Benzo (k) fluoranthene	1560 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	97.4	14-136
bis (2-Chloroethoxy) methane	1050 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	65.5	20-100
bis (2-Chloroethyl) ether	964 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	60.1	13-100
2,2'-Oxybis (1-chloropropane)	1020 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	63.4	40-125
bis (2-Ethylhexyl) phthalate	884 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	55.2	18-137
Butyl benzyl phthalate	1010 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	62.8	20-141
Chrysene	1140 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	70.9	21-141
Dibenz (a,h) anthracene	1320 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	82.2	10-142
Diethyl phthalate	1420 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	88.4	20-120
Dimethyl phthalate	1200 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	75.1	23-109
Di-n-butyl phthalate	1440 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	89.8	18-136
Di-n-octyl phthalate	1410 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	87.9	10-160
Fluoranthene	1640 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	102	19-138
Fluorene	1510 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	94.0	25-114
Hexachlorobenzene	1280 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	79.7	20-113
Hexachlorobutadiene	1650 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	103	25-125
Hexachlorocyclopentadiene	1140 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	71.1	10-125
Hexachloroethane	1290 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	80.7	25-125
Indeno (1,2,3-cd) pyrene	1250 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	77.8	10-136
Isophorone	721 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	45.0	10-110
Naphthalene	1360 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	84.7	18-109
Nitrobenzene	1290 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	80.5	18-104
n-Nitrosodimethylamine	712 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	44.4	18-110
n-Nitrosodi-n-propylamine	1280 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	80.0	12-102
n-Nitrosodiphenylamine	1120 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	70.0	12-97
p-Chloro-m-cresol	1160 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	72.3	24-120
Pentachlorophenol	899 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	56.1	10-116
Phenanthrene	1500 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	93.3	25-122
Phenol	1050 ug/kg wet	83.3	ug/kg wet	1620	ug/kg wet	64.9	12-115
Pyrene	1090 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	67.8	17-159



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 02, 2024 17:18
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0047 - SW3550C/EPA600-MS

LCS (BHB0047-BS1)

Prepared & Analyzed: 02/01/2024

Pyridine	848 ug/kg wet	83.3	ug/kg wet	1600	ug/kg wet	52.9	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	2950		ug/kg wet	3210	ug/kg wet	92.1	15-96			
Surr: 2-Fluorobiphenyl (Surr)	1380		ug/kg wet	1600	ug/kg wet	86.1	19-105			
Surr: 2-Fluorophenol (Surr)	1540		ug/kg wet	3210	ug/kg wet	48.0	12-95			
Surr: Nitrobenzene-d5 (Surr)	1290		ug/kg wet	1600	ug/kg wet	80.6	21-100			
Surr: Phenol-d5 (Surr)	2540		ug/kg wet	3210	ug/kg wet	79.2	13-100			
Surr: p-Terphenyl-d14 (Surr)	1120		ug/kg wet	1600	ug/kg wet	70.2	25-125			

Matrix Spike (BHB0047-MS1)

Source: 24A1423-09

Prepared & Analyzed: 02/01/2024

1,2,4-Trichlorobenzene	1490 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	78.0	70-130			
1,2-Dichlorobenzene	1210 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	63.5	70-130			M
1,3-Dichlorobenzene	1120 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	58.6	70-130			M
1,4-Dichlorobenzene	1350 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	70.6	70-130			
2,4,6-Trichlorophenol	2130 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	112	10-115			
2,4-Dichlorophenol	1580 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	82.9	10-128			
2,4-Dimethylphenol	1470 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	77.0	10-121			
2,4-Dinitrophenol	1660 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	87.0	10-228			
2,4-Dinitrotoluene	1570 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	82.1	10-141			
2,6-Dinitrotoluene	1290 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	67.5	15-140			
2-Chloronaphthalene	1590 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	83.3	10-108			
2-Chlorophenol	1240 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	65.2	10-117			
2-Nitrophenol	1320 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	69.0	10-131			
3,3'-Dichlorobenzidine	<83.3 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg		10-110			M
4,6-Dinitro-2-methylphenol	1630 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	85.3	10-110			
4-Bromophenyl phenyl ether	1550 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	81.3	10-119			
4-Chlorophenyl phenyl ether	1620 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	85.1	15-110			
4-Nitrophenol	2000 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	105	15-110			
Acenaphthene	1530 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	80.0	10-124			
Acenaphthylene	1610 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	84.5	10-118			
Acetophenone	1120 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	58.9	10-110			
Anthracene	1440 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	75.5	10-143			
Benzo (a) anthracene	1620 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	84.7	10-169			



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Client Site I.D.: Alexandria - Soil

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0047 - SW3550C/EPA600-MS

Matrix Spike (BHB0047-MS1)

Source: 24A1423-09

Prepared & Analyzed: 02/01/2024

Benzo (a) pyrene	1660 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	87.1	10-149		
Benzo (b) fluoranthene	1940 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	101	10-150		
Benzo (g,h,i) perylene	1140 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	59.7	10-123		
Benzo (k) fluoranthene	1830 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	96.1	10-211		
bis (2-Chloroethoxy) methane	1200 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	62.8	10-108		
bis (2-Chloroethyl) ether	1070 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	56.2	10-100		
2,2'-Oxybis (1-chloropropane)	1140 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	60.0	40-125		
bis (2-Ethylhexyl) phthalate	1140 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	59.7	10-210		
Butyl benzyl phthalate	1220 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	63.8	10-165		
Chrysene	1410 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	74.0	10-172		
Dibenz (a,h) anthracene	1440 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	75.7	10-128		
Diethyl phthalate	1610 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	84.3	10-120		
Dimethyl phthalate	1410 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	73.8	10-125		
Di-n-butyl phthalate	1610 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	84.4	10-133		
Di-n-octyl phthalate	2110 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	111	10-196		
Fluoranthene	1750 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	91.6	10-271		
Fluorene	1800 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	94.3	10-124		
Hexachlorobenzene	1410 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	73.7	10-125		
Hexachlorobutadiene	1850 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	96.7	10-125		
Hexachlorocyclopentadiene	869 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	45.5	10-125		
Hexachloroethane	1360 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	71.5	10-220		
Indeno (1,2,3-cd) pyrene	1330 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	69.5	10-127		
Isophorone	826 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	43.3	10-110		
Naphthalene	1560 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	81.5	10-118		
Nitrobenzene	1520 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	79.6	10-126		
n-Nitrosodimethylamine	616 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	32.3	10-110		
n-Nitrosodi-n-propylamine	1480 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	77.8	10-107		
n-Nitrosodiphenylamine	1280 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	67.1	10-107		
p-Chloro-m-cresol	1380 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	72.1	10-131		
Pentachlorophenol	1640 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	86.1	10-151		
Phenanthrene	1890 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	99.2	10-393		



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0047 - SW3550C/EPA600-MS

Matrix Spike (BHB0047-MS1)		Source: 24A1423-09			Prepared & Analyzed: 02/01/2024					
Phenol	1230 ug/kg dry	83.3	ug/kg dry	1930	<83.3 ug/kg	63.6	10-133			
Pyrene	1450 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	75.8	10-212			
Pyridine	763 ug/kg dry	83.3	ug/kg dry	1910	<83.3 ug/kg	40.0	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	3930		ug/kg dry	3820	ug/kg dry	103	15-96			S
Surr: 2-Fluorobiphenyl (Surr)	1650		ug/kg dry	1910	ug/kg dry	86.5	19-105			
Surr: 2-Fluorophenol (Surr)	1970		ug/kg dry	3820	ug/kg dry	51.7	12-95			
Surr: Nitrobenzene-d5 (Surr)	1470		ug/kg dry	1910	ug/kg dry	77.1	21-100			
Surr: Phenol-d5 (Surr)	2910		ug/kg dry	3820	ug/kg dry	76.4	13-100			
Surr: p-Terphenyl-d14 (Surr)	1420		ug/kg dry	1910	ug/kg dry	74.5	25-125			

Matrix Spike Dup (BHB0047-MSD1)		Source: 24A1423-09			Prepared & Analyzed: 02/01/2024					
1,2,4-Trichlorobenzene	1600 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	82.0	70-130	7.27	20	
1,2-Dichlorobenzene	1310 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	67.0	70-130	7.55	20	M
1,3-Dichlorobenzene	1210 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	61.9	70-130	7.65	20	M
1,4-Dichlorobenzene	1450 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	74.4	70-130	7.49	20	
2,4,6-Trichlorophenol	2240 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	115	10-115	4.95	20	
2,4-Dichlorophenol	1720 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	88.0	10-128	8.20	20	
2,4-Dimethylphenol	1590 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	81.5	10-121	7.88	20	
2,4-Dinitrophenol	1880 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	96.4	10-228	12.5	20	
2,4-Dinitrotoluene	1650 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	84.8	10-141	5.51	20	
2,6-Dinitrotoluene	1370 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	70.3	15-140	6.31	20	
2-Chloronaphthalene	1670 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	85.4	10-108	4.74	20	
2-Chlorophenol	1330 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	68.0	10-117	6.48	20	
2-Nitrophenol	1430 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	73.1	10-131	8.04	20	
3,3'-Dichlorobenzidine	<83.3 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg		10-110		20	M
4,6-Dinitro-2-methylphenol	1720 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	88.3	10-110	5.64	20	
4-Bromophenyl phenyl ether	1640 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	84.1	10-119	5.59	20	
4-Chlorophenyl phenyl ether	1700 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	87.2	15-110	4.69	20	
4-Nitrophenol	2370 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	122	15-110	17.1	20	M
Acenaphthene	1540 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	78.9	10-124	0.817	20	
Acenaphthylene	1700 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	87.1	10-118	5.26	20	
Acetophenone	1220 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	62.6	10-110	8.26	20	



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0047 - SW3550C/EPA600-MS

Matrix Spike Dup (BHB0047-MSD1)

Source: 24A1423-09

Prepared & Analyzed: 02/01/2024

Anthracene	1540 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	78.9	10-143	6.73	20	
Benzo (a) anthracene	1640 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	83.9	10-169	1.33	20	
Benzo (a) pyrene	1820 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	93.0	10-149	8.85	20	
Benzo (b) fluoranthene	2040 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	104	10-150	5.04	20	
Benzo (g,h,i) perylene	1360 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	69.6	10-123	17.5	20	
Benzo (k) fluoranthene	1900 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	97.5	10-211	3.66	20	
bis (2-Chloroethoxy) methane	1290 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	66.3	10-108	7.60	20	
bis (2-Chloroethyl) ether	1180 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	60.3	10-100	9.38	20	
2,2'-Oxybis (1-chloropropane)	1220 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	62.7	40-125	6.71	20	
bis (2-Ethylhexyl) phthalate	1170 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	59.9	10-210	2.71	20	
Butyl benzyl phthalate	1300 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	66.7	10-165	6.66	20	
Chrysene	1460 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	75.0	10-172	3.62	20	
Dibenz (a,h) anthracene	1680 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	86.2	10-128	15.3	20	
Diethyl phthalate	1690 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	86.5	10-120	4.88	20	
Dimethyl phthalate	1460 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	74.7	10-125	3.43	20	
Di-n-butyl phthalate	1750 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	89.8	10-133	8.45	20	
Di-n-octyl phthalate	2250 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	115	10-196	6.40	20	
Fluoranthene	1900 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	97.6	10-271	8.53	20	
Fluorene	1850 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	94.8	10-124	2.83	20	
Hexachlorobenzene	1470 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	75.3	10-125	4.48	20	
Hexachlorobutadiene	1980 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	101	10-125	6.86	20	
Hexachlorocyclopentadiene	747 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	38.3	10-125	15.0	20	
Hexachloroethane	1410 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	72.4	10-220	3.47	20	
Indeno (1,2,3-cd) pyrene	1540 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	78.8	10-127	14.9	20	
Isophorone	885 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	45.4	10-110	6.97	20	
Naphthalene	1750 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	89.6	10-118	11.7	20	
Nitrobenzene	1630 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	83.5	10-126	7.03	20	
n-Nitrosodimethylamine	687 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	35.2	10-110	10.8	20	
n-Nitrosodi-n-propylamine	1570 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	80.4	10-107	5.64	20	
n-Nitrosodiphenylamine	1350 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	69.1	10-107	5.12	20	
p-Chloro-m-cresol	1510 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	77.3	10-131	9.13	20	



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 Project Number: 2202065001
 Purchase Order: 2202065001

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0047 - SW3550C/EPA600-MS

Matrix Spike Dup (BHB0047-MSD1)		Source: 24A1423-09			Prepared & Analyzed: 02/01/2024				
Pentachlorophenol	1840 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	94.5	10-151	11.5	20
Phenanthrene	2040 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	104	10-393	7.31	20
Phenol	1430 ug/kg dry	83.3	ug/kg dry	1970	<83.3 ug/kg	72.4	10-133	15.2	20
Pyrene	1530 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	78.6	10-212	5.85	20
Pyridine	744 ug/kg dry	83.3	ug/kg dry	1950	<83.3 ug/kg	38.1	0-200	2.49	20
Surr: 2,4,6-Tribromophenol (Surr)	4170		ug/kg dry	3900	ug/kg dry	107	15-96		S
Surr: 2-Fluorobiphenyl (Surr)	1700		ug/kg dry	1950	ug/kg dry	87.0	19-105		
Surr: 2-Fluorophenol (Surr)	2480		ug/kg dry	3900	ug/kg dry	63.5	12-95		
Surr: Nitrobenzene-d5 (Surr)	1590		ug/kg dry	1950	ug/kg dry	81.4	21-100		
Surr: Phenol-d5 (Surr)	3050		ug/kg dry	3900	ug/kg dry	78.1	13-100		
Surr: p-Terphenyl-d14 (Surr)	1550		ug/kg dry	1950	ug/kg dry	79.7	25-125		



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 02, 2024 17:18
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Semivolatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1165 - SW3550C/EPA600-FID

Blank (BHA1165-BLK1)

Prepared: 01/31/2024 Analyzed: 02/01/2024

TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet							
Surr: n-Triacontane (Surr)	3.33		mg/kg wet	4.99		66.7	50-125			

LCS (BHA1165-BS1)

Prepared: 01/31/2024 Analyzed: 02/01/2024

TPH-Semi-Volatiles (DRO)	71.1 mg/kg wet	10.0	mg/kg wet	99.4	mg/kg wet	71.5	70-130			
Surr: n-Triacontane (Surr)	3.09		mg/kg wet	4.97	mg/kg wet	62.1	50-125			

Matrix Spike (BHA1165-MS1)

Source: 24A1733-01

Prepared: 01/31/2024 Analyzed: 02/02/2024

TPH-Semi-Volatiles (DRO)	80.7 mg/kg wet	10.0	mg/kg wet	98.6	37.1 mg/kg wet	44.2	70-130			M
Surr: n-Triacontane (Surr)	2.27		mg/kg wet	4.93	mg/kg wet	46.1	50-125			S

Matrix Spike Dup (BHA1165-MSD1)

Source: 24A1733-01

Prepared: 01/31/2024 Analyzed: 02/02/2024

TPH-Semi-Volatiles (DRO)	70.5 mg/kg wet	10.0	mg/kg wet	98.6	37.1 mg/kg wet	33.8	70-130	13.5	20	M
Surr: n-Triacontane (Surr)	1.66		mg/kg wet	4.93	mg/kg wet	33.7	50-125			S



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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1159 - SW3550C/EPA600-ECD

Blank (BHA1159-BLK1)

Prepared & Analyzed: 01/31/2024

PCB as Aroclor 1016	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1260	<0.100 mg/kg wet	0.100	mg/kg wet							
Surr: DCB	0.0258		mg/kg wet	0.0319		80.7	30-105			
Surr: TCMX	0.0155		mg/kg wet	0.0319		48.4	30-105			

LCS (BHA1159-BS1)

Prepared & Analyzed: 01/31/2024

PCB as Aroclor 1016	0.140 mg/kg wet	0.100	mg/kg wet	0.164	mg/kg wet	85.6	70-130			
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1260	0.143 mg/kg wet	0.100	mg/kg wet	0.164	mg/kg wet	87.1	70-130			
Surr: DCB	0.0269		mg/kg wet	0.0328	mg/kg wet	82.0	30-105			
Surr: TCMX	0.0190		mg/kg wet	0.0328	mg/kg wet	57.9	30-105			

Matrix Spike (BHA1159-MS1)

Source: 24A1467-06

Prepared & Analyzed: 01/31/2024

PCB as Aroclor 1016	0.166 mg/kg dry	0.112	mg/kg dry	0.186	<0.112 mg/kg	89.3	70-130			
PCB as Aroclor 1221	<0.112 mg/kg dry	0.112	mg/kg dry		<0.112 mg/kg		0-200			
PCB as Aroclor 1232	<0.112 mg/kg dry	0.112	mg/kg dry		<0.112 mg/kg		0-200			
PCB as Aroclor 1242	<0.112 mg/kg dry	0.112	mg/kg dry		<0.112 mg/kg		0-200			
PCB as Aroclor 1248	<0.112 mg/kg dry	0.112	mg/kg dry		<0.112 mg/kg		0-200			
PCB as Aroclor 1254	<0.112 mg/kg dry	0.112	mg/kg dry		<0.112 mg/kg		0-200			
PCB as Aroclor 1260	0.141 mg/kg dry	0.112	mg/kg dry	0.186	<0.112 mg/kg	75.5	70-130			
Surr: DCB	0.0286		mg/kg dry	0.0373	mg/kg dry	76.8	30-105			
Surr: TCMX	0.0256		mg/kg dry	0.0373	mg/kg dry	68.5	30-105			



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Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 02, 2024 17:18
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1159 - SW3550C/EPA600-ECD

Matrix Spike Dup (BHA1159-MSD1)

Source: 24A1467-06

Prepared & Analyzed: 01/31/2024

PCB as Aroclor 1016	0.168 mg/kg dry	0.115	mg/kg dry	0.191	<0.115 mg/kg	87.7	70-130	0.797	20	
PCB as Aroclor 1221	<0.115 mg/kg dry	0.115	mg/kg dry		<0.115 mg/kg		0-200		20	
PCB as Aroclor 1232	<0.115 mg/kg dry	0.115	mg/kg dry		<0.115 mg/kg		0-200		20	
PCB as Aroclor 1242	<0.115 mg/kg dry	0.115	mg/kg dry		<0.115 mg/kg		0-200		20	
PCB as Aroclor 1248	<0.115 mg/kg dry	0.115	mg/kg dry		<0.115 mg/kg		0-200		20	
PCB as Aroclor 1254	<0.115 mg/kg dry	0.115	mg/kg dry		<0.115 mg/kg		0-200		20	
PCB as Aroclor 1260	0.155 mg/kg dry	0.115	mg/kg dry	0.191	<0.115 mg/kg	80.9	70-130	9.41	20	
Surr: DCB	0.0301		mg/kg dry	0.0383	mg/kg dry	78.6	30-105			
Surr: TCMX	0.0272		mg/kg dry	0.0383	mg/kg dry	71.0	30-105			

Batch BHA1162 - SW3550C/EPA600-ECD

Blank (BHA1162-BLK1)

Prepared: 01/31/2024 Analyzed: 02/01/2024

4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet
delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet
Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet



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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1162 - SW3550C/EPA600-ECD

Blank (BHA1162-BLK1)

Prepared: 01/31/2024 Analyzed: 02/01/2024

Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet							
Surr: TCMX	27.7		ug/kg wet	31.9		86.6	30-105			
Surr: DCB	28.4		ug/kg wet	31.9		89.0	30-105			

LCS (BHA1162-BS1)

Prepared: 01/31/2024 Analyzed: 02/01/2024

4,4'-DDD	17.2 ug/kg wet	6.00	ug/kg wet	16.7	ug/kg wet	103	23-134			
4,4'-DDE	19.0 ug/kg wet	4.00	ug/kg wet	16.7	ug/kg wet	114	23-134			
4,4'-DDT	18.4 ug/kg wet	4.00	ug/kg wet	16.7	ug/kg wet	110	23-134			
Aldrin	16.2 ug/kg wet	2.00	ug/kg wet	16.7	ug/kg wet	97.2	23-134			
alpha-BHC	13.7 ug/kg wet	2.00	ug/kg wet	16.7	ug/kg wet	82.2	23-134			
beta-BHC	12.4 ug/kg wet	2.00	ug/kg wet	16.7	ug/kg wet	74.4	23-134			
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet		ug/kg wet		23-134			
delta-BHC	15.1 ug/kg wet	4.00	ug/kg wet	16.7	ug/kg wet	90.9	23-134			
Dieldrin	16.4 ug/kg wet	4.00	ug/kg wet	16.7	ug/kg wet	98.1	23-134			
Endosulfan I	14.8 ug/kg wet	4.00	ug/kg wet	16.7	ug/kg wet	89.0	23-134			
Endosulfan II	16.8 ug/kg wet	6.00	ug/kg wet	16.7	ug/kg wet	101	23-134			
Endosulfan sulfate	18.8 ug/kg wet	2.00	ug/kg wet	16.7	ug/kg wet	113	23-134			
Endrin	16.7 ug/kg wet	4.00	ug/kg wet	16.7	ug/kg wet	100	23-134			
Endrin aldehyde	18.0 ug/kg wet	8.00	ug/kg wet	16.7	ug/kg wet	108	23-134			
Endrin ketone	16.3 ug/kg wet	2.00	ug/kg wet	16.7	ug/kg wet	98.0	23-134			
gamma-BHC (Lindane)	14.4 ug/kg wet	2.00	ug/kg wet	16.7	ug/kg wet	86.1	23-134			
Heptachlor	14.6 ug/kg wet	2.00	ug/kg wet	16.7	ug/kg wet	87.5	23-134			
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet	16.7	ug/kg wet	95.4	23-134			
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet	16.7	ug/kg wet	113	23-134			
Mirex	18.6 ug/kg wet	6.00	ug/kg wet	16.7	ug/kg wet	112	23-134			
Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet		ug/kg wet		23-134			
Surr: TCMX	29.3		ug/kg wet	33.3	ug/kg wet	88.0	30-105			
Surr: DCB	32.4		ug/kg wet	33.3	ug/kg wet	97.3	30-105			



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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1162 - SW3550C/EPA600-ECD

LCS (BHA1162-BS2)

Prepared: 01/31/2024 Analyzed: 02/01/2024

4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet		23-134			
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet		ug/kg wet		23-134			
delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet		23-134			
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet		ug/kg wet		23-134			
Endrin ketone	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet		ug/kg wet		23-134			
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet		ug/kg wet		23-134			
Mirex	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet		23-134			
Toxaphene	305 ug/kg wet	42.0	ug/kg wet	408	ug/kg wet	74.7	23-134			
Surr: TCMX	32.2		ug/kg wet	32.7	ug/kg wet	98.6	30-105			
Surr: DCB	29.0		ug/kg wet	32.7	ug/kg wet	88.7	30-105			

LCS (BHA1162-BS3)

Prepared: 01/31/2024 Analyzed: 02/01/2024

4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet		23-134			
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
Chlordane	303 ug/kg wet	42.0	ug/kg wet	413	ug/kg wet	73.5	23-134			



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Certificate of Analysis

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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1162 - SW3550C/EPA600-ECD

LCS (BHA1162-BS3)

Prepared: 01/31/2024 Analyzed: 02/01/2024

delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet	ug/kg wet	23-134	
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet	ug/kg wet	23-134	
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet	ug/kg wet	23-134	
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet	ug/kg wet	23-134	
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet	ug/kg wet	23-134	
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet	ug/kg wet	23-134	
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet	ug/kg wet	23-134	
Endrin ketone	<2.00 ug/kg wet	2.00	ug/kg wet	ug/kg wet	23-134	
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet	ug/kg wet	23-134	
Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet	ug/kg wet	23-134	
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet	ug/kg wet	23-134	
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet	ug/kg wet	23-134	
Mirex	<6.00 ug/kg wet	6.00	ug/kg wet	ug/kg wet	23-134	
Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet	ug/kg wet	23-134	
Surr: TCMX	31.1	ug/kg wet	33.0	ug/kg wet	94.3	30-105
Surr: DCB	27.8	ua/ka wet	33.0	ua/ka wet	84.1	30-105

Matrix Spike (BHA1162-MS1)

Source: 24A1607-02

Prepared: 01/31/2024 Analyzed: 02/01/2024

4,4'-DDD	18.8 ug/kg dry	6.00	ug/kg dry	20.2	<6.00 ug/kg	92.9	23-134
4,4'-DDE	18.0 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	89.1	23-134
4,4'-DDT	20.3 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	101	23-134
Aldrin	21.0 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	104	23-134
alpha-BHC	16.2 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	80.3	23-134
beta-BHC	17.5 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	86.7	23-134
delta-BHC	18.1 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	89.5	23-134
Dieldrin	19.2 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	95.0	23-134
Endosulfan I	20.4 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	101	23-134
Endosulfan II	18.2 ug/kg dry	6.00	ug/kg dry	20.2	<6.00 ug/kg	90.0	23-134
Endosulfan sulfate	18.2 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	90.1	23-134
Endrin	19.8 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	98.1	23-134
Endrin aldehyde	20.0 ug/kg dry	8.00	ug/kg dry	20.2	<8.00 ug/kg	99.1	23-134
Endrin ketone	18.1 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	89.4	23-134



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1162 - SW3550C/EPA600-ECD

Matrix Spike (BHA1162-MS1)		Source: 24A1607-02			Prepared: 01/31/2024 Analyzed: 02/01/2024					
gamma-BHC (Lindane)	21.4 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	106	23-134			
Heptachlor	19.9 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	98.6	23-134			
Heptachlor epoxide	<40.0 ug/kg dry	40.0	ug/kg dry	20.2	<40.0 ug/kg	106	23-134			
Methoxychlor	<40.0 ug/kg dry	40.0	ug/kg dry	20.2	<40.0 ug/kg	87.6	23-134			
Mirex	22.1 ug/kg dry	6.00	ug/kg dry	20.2	<6.00 ug/kg	110	23-134			
Surr: TCMX	32.8		ug/kg dry	40.4	ug/kg dry	81.2	30-105			
Surr: DCB	32.8		ug/kg dry	40.4	ug/kg dry	81.1	30-105			

Matrix Spike Dup (BHA1162-MSD1)		Source: 24A1607-02			Prepared: 01/31/2024 Analyzed: 02/01/2024					
4,4'-DDD	18.9 ug/kg dry	6.00	ug/kg dry	20.8	<6.00 ug/kg	90.9	23-134	0.792	20	
4,4'-DDE	23.5 ug/kg dry	4.00	ug/kg dry	20.8	<4.00 ug/kg	113	23-134	26.5	20	P
4,4'-DDT	20.7 ug/kg dry	4.00	ug/kg dry	20.8	<4.00 ug/kg	99.3	23-134	1.57	20	
Aldrin	19.2 ug/kg dry	2.00	ug/kg dry	20.8	<2.00 ug/kg	92.4	23-134	8.86	20	
alpha-BHC	17.9 ug/kg dry	2.00	ug/kg dry	20.8	<2.00 ug/kg	86.0	23-134	9.78	20	
beta-BHC	22.6 ug/kg dry	2.00	ug/kg dry	20.8	<2.00 ug/kg	109	23-134	25.3	20	P
delta-BHC	19.5 ug/kg dry	4.00	ug/kg dry	20.8	<4.00 ug/kg	93.6	23-134	7.52	20	
Dieldrin	21.1 ug/kg dry	4.00	ug/kg dry	20.8	<4.00 ug/kg	101	23-134	9.28	20	
Endosulfan I	18.6 ug/kg dry	4.00	ug/kg dry	20.8	<4.00 ug/kg	89.5	23-134	8.97	20	
Endosulfan II	18.0 ug/kg dry	6.00	ug/kg dry	20.8	<6.00 ug/kg	86.7	23-134	0.790	20	
Endosulfan sulfate	19.7 ug/kg dry	2.00	ug/kg dry	20.8	<2.00 ug/kg	94.8	23-134	8.04	20	
Endrin	19.5 ug/kg dry	4.00	ug/kg dry	20.8	<4.00 ug/kg	93.6	23-134	1.71	20	
Endrin aldehyde	19.4 ug/kg dry	8.00	ug/kg dry	20.8	<8.00 ug/kg	93.4	23-134	2.91	20	
Endrin ketone	19.2 ug/kg dry	2.00	ug/kg dry	20.8	<2.00 ug/kg	92.4	23-134	6.24	20	
gamma-BHC (Lindane)	19.5 ug/kg dry	2.00	ug/kg dry	20.8	<2.00 ug/kg	93.8	23-134	8.92	20	
Heptachlor	19.3 ug/kg dry	2.00	ug/kg dry	20.8	<2.00 ug/kg	92.9	23-134	2.98	20	
Heptachlor epoxide	<40.0 ug/kg dry	40.0	ug/kg dry	20.8	<40.0 ug/kg	105	23-134	1.91	20	
Methoxychlor	<40.0 ug/kg dry	40.0	ug/kg dry	20.8	<40.0 ug/kg	107	23-134	23.0	20	P
Mirex	21.9 ug/kg dry	6.00	ug/kg dry	20.8	<6.00 ug/kg	105	23-134	0.877	20	
Surr: TCMX	35.8		ug/kg dry	41.6	ug/kg dry	85.9	30-105			
Surr: DCB	33.5		ug/kg dry	41.6	ug/kg dry	80.5	30-105			



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 02, 2024 17:18
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Wet Chemistry Analysis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1047 - No Prep Wet Chem

Blank (BHA1047-BLK1) Prepared & Analyzed: 01/30/2024

Percent Solids 100 % 0.10 %

Duplicate (BHA1047-DUP1) Source: 24A1423-12 Prepared & Analyzed: 01/30/2024

Percent Solids 90.1 % 0.10 % 89.9 % 0.184 20

Batch BHA1142 - No Prep Wet Chem

Blank (BHA1142-BLK1) Prepared & Analyzed: 01/31/2024

Percent Solids 100 % 0.10 %

Duplicate (BHA1142-DUP1) Source: 24A1423-03 Prepared & Analyzed: 01/31/2024

Percent Solids 94.9 % 0.10 % 94.4 % 0.497 20



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Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 02, 2024 17:18
	9201 Arboretum Parkway Suite 310	Project Number:	2202065001
	Richmond VA, 23236	Purchase Order:	2202065001
Submitted To:	Leo Snead		
Client Site I.D.:	Alexandria - Soil		

Certified Analyses included in this Report

Analyte	Certifications
SW6010D in Solids	
Arsenic	VELAP,WVDEP,PADEP
Barium	VELAP,WVDEP,PADEP
Cadmium	VELAP,WVDEP,PADEP
Chromium	VELAP,WVDEP,PADEP
Lead	VELAP,WVDEP,PADEP
Selenium	VELAP,WVDEP,PADEP
Silver	VELAP,WVDEP,PADEP
SW7471B in Solids	
Mercury	VELAP,PADEP,NCDEQ,WVDEP
SW8015C in Solids	
TPH-Semi-Volatiles (DRO)	VELAP,PADEP,NCDEQ,WVDEP
TPH-Volatiles (GRO)	VELAP,PADEP,NCDEQ,WVDEP
SW8081B in Solids	
4,4'-DDD	VELAP,NCDEQ,WVDEP,PADEP
4,4'-DDE	VELAP,NCDEQ,WVDEP,PADEP
4,4'-DDT	VELAP,NCDEQ,WVDEP,PADEP
Aldrin	VELAP,NCDEQ,WVDEP,PADEP
alpha-BHC	VELAP,NCDEQ,WVDEP,PADEP
beta-BHC	VELAP,NCDEQ,WVDEP,PADEP
Chlordane	VELAP,NCDEQ,WVDEP,PADEP
delta-BHC	VELAP,NCDEQ,WVDEP,PADEP
Dieldrin	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan I	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan II	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan sulfate	VELAP,NCDEQ,WVDEP,PADEP
Endrin	VELAP,NCDEQ,WVDEP,PADEP
Endrin aldehyde	VELAP,NCDEQ,WVDEP,PADEP
gamma-BHC (Lindane)	VELAP,NCDEQ,WVDEP,PADEP
Heptachlor	VELAP,NCDEQ,WVDEP,PADEP
Heptachlor epoxide	VELAP,NCDEQ,WVDEP,PADEP
Methoxychlor	VELAP,NCDEQ,WVDEP,PADEP
Toxaphene	VELAP,NCDEQ,WVDEP,PADEP
SW8082A in Solids	
PCB as Aroclor 1016	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1221	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1232	VELAP,PADEP,NCDEQ,WVDEP



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Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Certified Analyses included in this Report

Analyte	Certifications
PCB as Aroclor 1242	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1248	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1254	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1260	VELAP,PADEP,NCDEQ,WVDEP
SW8260D in Solids	
1,1,1,2-Tetrachloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1,1-Trichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1,2,2-Tetrachloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1,2-Trichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1-Dichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1-Dichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
1,1-Dichloropropene	VELAP,PADEP,NCDEQ,WVDEP
1,2,3-Trichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2,3-Trichloropropane	VELAP,PADEP,NCDEQ,WVDEP
1,2,4-Trichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2,4-Trimethylbenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dibromo-3-chloropropane (DBCP)	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dibromoethane (EDB)	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dichloropropane	VELAP,PADEP,NCDEQ,WVDEP
1,3,5-Trimethylbenzene	VELAP,PADEP,NCDEQ,WVDEP
1,3-Dichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,3-Dichloropropane	VELAP,PADEP,NCDEQ,WVDEP
1,4-Dichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
2,2-Dichloropropane	VELAP,PADEP,NCDEQ,WVDEP
2-Butanone (MEK)	VELAP,PADEP,NCDEQ,WVDEP
2-Chlorotoluene	VELAP,PADEP,NCDEQ,WVDEP
2-Hexanone (MBK)	VELAP,PADEP,NCDEQ,WVDEP
4-Chlorotoluene	VELAP,PADEP,NCDEQ,WVDEP
4-Isopropyltoluene	VELAP,PADEP,NCDEQ,WVDEP
4-Methyl-2-pentanone (MIBK)	VELAP,PADEP,NCDEQ,WVDEP
Acetone	VELAP,PADEP,NCDEQ,WVDEP
Benzene	VELAP,PADEP,NCDEQ,WVDEP
Bromobenzene	VELAP,PADEP,NCDEQ,WVDEP
Bromochloromethane	VELAP,PADEP,NCDEQ,WVDEP
Bromodichloromethane	VELAP,PADEP,NCDEQ,WVDEP
Bromoform	VELAP,PADEP,NCDEQ,WVDEP



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Certified Analyses included in this Report

Analyte	Certifications
Bromomethane	VELAP,PADEP,NCDEQ,WVDEP
Carbon disulfide	VELAP,PADEP,NCDEQ,WVDEP
Carbon tetrachloride	VELAP,PADEP,NCDEQ,WVDEP
Chlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
Chloroethane	VELAP,PADEP,NCDEQ,WVDEP
Chloroform	VELAP,PADEP,NCDEQ,WVDEP
Chloromethane	VELAP,PADEP,NCDEQ,WVDEP
cis-1,2-Dichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
cis-1,3-Dichloropropene	VELAP,PADEP,NCDEQ,WVDEP
Dibromochloromethane	VELAP,PADEP,NCDEQ,WVDEP
Dibromomethane	VELAP,PADEP,NCDEQ,WVDEP
Dichlorodifluoromethane	VELAP,PADEP,NCDEQ,WVDEP
Di-isopropyl ether (DIPE)	VELAP,PADEP,NCDEQ,WVDEP
Ethylbenzene	VELAP,PADEP,NCDEQ,WVDEP
Hexachlorobutadiene	VELAP,PADEP,NCDEQ,WVDEP
Iodomethane	VELAP,PADEP,NCDEQ,WVDEP
Isopropylbenzene	VELAP,PADEP,NCDEQ,WVDEP
m+p-Xylenes	VELAP,PADEP,NCDEQ,WVDEP
Methylene chloride	VELAP,PADEP,NCDEQ,WVDEP
Methyl-t-butyl ether (MTBE)	VELAP,PADEP,NCDEQ,WVDEP
Naphthalene	VELAP,PADEP,NCDEQ,WVDEP
n-Butylbenzene	VELAP,PADEP,NCDEQ,WVDEP
n-Propylbenzene	VELAP,PADEP,NCDEQ,WVDEP
o-Xylene	VELAP,PADEP,NCDEQ,WVDEP
sec-Butylbenzene	VELAP,PADEP,NCDEQ,WVDEP
Styrene	VELAP,PADEP,NCDEQ,WVDEP
tert-Butylbenzene	VELAP,PADEP,NCDEQ,WVDEP
Tetrachloroethylene (PCE)	VELAP,PADEP,NCDEQ,WVDEP
Toluene	VELAP,PADEP,NCDEQ,WVDEP
trans-1,2-Dichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
trans-1,3-Dichloropropene	VELAP,PADEP,NCDEQ,WVDEP
Trichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
Trichlorofluoromethane	VELAP,PADEP,NCDEQ,WVDEP
Vinyl acetate	VELAP,PADEP,NCDEQ,WVDEP
Vinyl chloride	VELAP,PADEP,NCDEQ,WVDEP
Xylenes, Total	VELAP,PADEP,NCDEQ,WVDEP
Dibromofluoromethane (Surr)	VELAP

SW8270E in Solids



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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Certified Analyses included in this Report

Analyte	Certifications
1,2,4,5-Tetrachlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2,4-Trichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2-Diphenylhydrazine	WVDEP,VELAP
1,3-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,3-Dinitrobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,4-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1-Chloronaphthalene	NCDEQ,WVDEP,VELAP,PADEP
1-Naphthylamine	NCDEQ,WVDEP,VELAP,PADEP
2,3,4,6-Tetrachlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4,5-Trichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4,6-Trichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dimethylphenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dinitrophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dinitrotoluene	NCDEQ,WVDEP,VELAP,PADEP
2,6-Dichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,6-Dinitrotoluene	NCDEQ,WVDEP,VELAP,PADEP
2-Chloronaphthalene	NCDEQ,WVDEP,VELAP,PADEP
2-Chlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2-Methylnaphthalene	NCDEQ,WVDEP,VELAP,PADEP
2-Naphthylamine	NCDEQ,WVDEP,VELAP,PADEP
2-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
2-Nitrophenol	NCDEQ,WVDEP,VELAP,PADEP
3,3'-Dichlorobenzidine	NCDEQ,WVDEP,VELAP,PADEP
3-Methylcholanthrene	NCDEQ,WVDEP,VELAP,PADEP
3-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
4,6-Dinitro-2-methylphenol	NCDEQ,WVDEP,VELAP,PADEP
4-Aminobiphenyl	NCDEQ,WVDEP,VELAP,PADEP
4-Bromophenyl phenyl ether	NCDEQ,WVDEP,VELAP,PADEP
4-Chloroaniline	NCDEQ,WVDEP,VELAP,PADEP
4-Chlorophenyl phenyl ether	NCDEQ,WVDEP,VELAP,PADEP
4-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
4-Nitrophenol	NCDEQ,WVDEP,VELAP,PADEP
7,12-Dimethylbenz (a) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Acenaphthene	NCDEQ,WVDEP,VELAP,PADEP
Acenaphthylene	NCDEQ,WVDEP,VELAP,PADEP
Acetophenone	NCDEQ,WVDEP,VELAP,PADEP



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Certified Analyses included in this Report

Analyte	Certifications
Aniline	NCDEQ,WVDEP,VELAP,PADEP
Anthracene	NCDEQ,WVDEP,VELAP,PADEP
Benzidine	NCDEQ,WVDEP,VELAP,PADEP
Benzo (a) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (a) pyrene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (b) fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (g,h,i) perylene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (k) fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Benzoic acid	NCDEQ,WVDEP,VELAP,PADEP
Benzyl alcohol	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Chloroethoxy) methane	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Chloroethyl) ether	NCDEQ,WVDEP,VELAP,PADEP
2,2'-Oxybis (1-chloropropane)	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Ethylhexyl) phthalate	NCDEQ,WVDEP,VELAP,PADEP
Butyl benzyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Chrysene	NCDEQ,WVDEP,VELAP,PADEP
Dibenz (a,h) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Dibenz (a,j) acridine	NCDEQ,WVDEP,VELAP,PADEP
Dibenzofuran	NCDEQ,WVDEP,VELAP,PADEP
Diethyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Dimethyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Di-n-butyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Di-n-octyl phthalate	NCDEQ,WVDEP,VELAP
Diphenylamine	NCDEQ,WVDEP,VELAP,PADEP
Ethyl methanesulfonate	NCDEQ,WVDEP,VELAP,PADEP
Fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Fluorene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorobutadiene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorocyclopentadiene	NCDEQ,WVDEP,VELAP,PADEP
Hexachloroethane	NCDEQ,WVDEP,VELAP,PADEP
Indeno (1,2,3-cd) pyrene	NCDEQ,WVDEP,VELAP,PADEP
Isophorone	NCDEQ,WVDEP,VELAP,PADEP
m+p-Cresols	NCDEQ,WVDEP,VELAP,PADEP
Methyl methanesulfonate	NCDEQ,WVDEP,VELAP,PADEP
Naphthalene	NCDEQ,WVDEP,VELAP,PADEP
Nitrobenzene	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodimethylamine	NCDEQ,WVDEP,VELAP,PADEP



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 02, 2024 17:18
Project Number: 2202065001
Purchase Order: 2202065001

Certified Analyses included in this Report

Analyte	Certifications
n-Nitrosodi-n-butylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodi-n-propylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodiphenylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosopiperidine	NCDEQ,WVDEP,VELAP,PADEP
o+m+p-Cresols	NCDEQ,WVDEP,VELAP,PADEP
o-Cresol	NCDEQ,WVDEP,VELAP,PADEP
p-(Dimethylamino) azobenzene	NCDEQ,WVDEP,VELAP
p-Chloro-m-cresol	NCDEQ,WVDEP,VELAP,PADEP
Pentachloronitrobenzene (quintozene)	NCDEQ,WVDEP
Pentachlorophenol	NCDEQ,WVDEP,VELAP,PADEP
Phenacetin	NCDEQ,WVDEP,VELAP,PADEP
Phenanthrene	NCDEQ,WVDEP,VELAP,PADEP
Phenol	NCDEQ,WVDEP,VELAP,PADEP
Pronamide	NCDEQ,WVDEP,VELAP,PADEP
Pyrene	NCDEQ,WVDEP,VELAP,PADEP
Pyridine	NCDEQ,WVDEP,VELAP,PADEP

Code	Description	Laboratory ID	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2024
NCDEQ	North Carolina DEQ	495	12/31/2024
NCDOH	North Carolina Department of Health	51714	07/31/2024
NYDOH	New York DOH Drinking Water	12069	04/01/2024
PADEP	NELAP-Pennsylvania Certificate #009	68-03503	10/31/2024
SCDHEC	South Carolina Dept of Health and Environmental	93016	06/14/2024
TXCEQ	Texas Comm on Environmental Quality #T104704	T104704576	05/31/2024
VELAP	NELAP-Virginia Certificate #12617	460021	06/14/2024
WVDEP	West Virginia DEP	350	11/30/2024



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Certificate of Analysis

Final Report

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 02, 2024 17:18
	9201 Arboretum Parkway Suite 310	Project Number:	2202065001
	Richmond VA, 23236	Purchase Order:	2202065001
Submitted To:	Leo Snead		
Client Site I.D.:	Alexandria - Soil		

Summary of Data Qualifiers

C	Continuing calibration verification response for this analyte is outside specifications.
DS	Surrogate concentration reflects a dilution factor.
L	LCS recovery is outside of established acceptance limits
M	Matrix spike recovery is outside established acceptance limits
P	Duplicate analysis does not meet the acceptance criteria for precision
S	Surrogate recovery was outside acceptance criteria
RPD	Relative Percent Difference
Qual	Qualifiers
-RE	Denotes sample was re-analyzed
D.F.	Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
PCBs, Total	Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: JMT			INVOICE TO: JMT			PROJECT NAME/Quote #: Alex Water front		
CONTACT: Leo SNOAD			INVOICE CONTACT:			SITE NAME: Alex Water front		
ADDRESS: Richmond VA			INVOICE ADDRESS:			PROJECT NUMBER: 22 02065 001		
PHONE #: 804 539 4964			INVOICE PHONE #:			P.O. #: 22 02065 001		
FAX #:			EMAIL: LSNOAD@JMT.COM			Pretreatment Program:		
Is sample for compliance reporting? YES ☒ NO ☐			Regulatory State: VA			Is sample from a chlorinated supply? YES ☒ NO ☐		
PWS I.D. #:			SAMPLER NAME (PRINT): Grady Moore			SAMPLER SIGNATURE: <i>[Signature]</i>		
						Turn Around Time: Circle 10 ☒ 5 Days or _Day(s)		
Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other								COMMENTS

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)				Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol
											VOCs - 8260	Drugs 8016	PCRA Metals	Pest/PCB/Suoc	
1) P-9	X					1/22/24 12:10			S	4	✓	✓	✓	✓	
2) P-10	X					1/22/24 9:40			S	4	✓	✓	✓	✓	
3) P-12	X					1/22/24 10:45			S	4	✓	✓	✓	✓	
4) P-13	X					1/22/24 10:00			S	4	✓	✓	✓	✓	
5) P-18	X					1/23/24 12:35			S	4	✓	✓	✓	✓	
6) P-23	X					1/23/24 12:45			S	1	✓				
7) P-25	X					1/23/24 12:05			S	1		✓			338
8) P-26	X					1/23/24 11:40			S	4	✓	✓	✓	✓	3.0°C
9)															On ice
10)															Noseal

RELINQUISHED: <i>[Signature]</i>	DATE / TIME: 1/26/24 1711	RECEIVED: <i>[Signature]</i>	DATE / TIME: 1/26/24 1711	QC Data Package	LAB USE ONLY Therm ID: _____	COOLER TEMP _____ °C
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level III ☐	Custody Seals used and intact? (Y / N)	
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level IV ☐	Received on ice? (Y / N)	

JMT-Richmond VA 24A1607

Alexandria - Soil

Recd: 01/26/2024 Due: 02/02/2024



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Certificate of Analysis

Final Report

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 02, 2024 17:18
	9201 Arboretum Parkway Suite 310	Project Number:	2202065001
	Richmond VA, 23236	Purchase Order:	2202065001
Submitted To:	Leo Snead		
Client Site I.D.:	Alexandria - Soil		

Sample Conditions Checklist

Samples Received at:	3.00°C
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits or received on ice, and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis. In addition, field parameters are always received outside holding time and will be marked accordingly.	Yes

Work Order Comments



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Certificate of Analysis

Final Report

Laboratory Order ID 24A1708

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmond, VA	Date Received:	January 30, 2024 13:16
	9201 Arboretum Parkway Suite 310	Date Issued:	February 6, 2024 16:02
	Richmond, VA 23236	Project Number:	2202065001
Submitted To:	Leo Snead	Purchase Order:	2202065001
Client Site I.D.:	Alex Waterfront		

Enclosed are the results of analyses for samples received by the laboratory on 01/30/2024 13:16. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads 'Ted Soyars'.

Ted Soyars
Technical Director

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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Certificate of Analysis

Final Report

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 06, 2024 16:02
	9201 Arboretum Parkway Suite 310	Project Number:	2202065001
	Richmond VA, 23236	Purchase Order:	2202065001
Submitted To:	Leo Snead		
Client Site I.D.:	Alex Waterfront		

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 24A1708

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
P23- MW #1	24A1708-01	Ground Water	01/29/2024 09:45	01/30/2024 13:16
P5- MW #2	24A1708-02	Ground Water	01/29/2024 10:40	01/30/2024 13:16
Trip Blank	24A1708-03	Ground Water	11/21/2023 16:30	01/30/2024 13:16



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 06, 2024 16:02
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P23- MW #1 Laboratory Sample ID: 24A1708-01

Grab Date/Time: 01/29/2024 09:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	01	SW8015C	0.71 mg/L		0.10	1	02/01/24 13:35	02/01/24 13:35	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	01	SW8015C	485 %	S	80-120		02/01/24 13:35	02/01/24 13:35	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	01	SW8260D	<0.40 ug/L		0.40	1	01/31/24 16:35	01/31/24 16:35	RJB
1,1,1-Trichloroethane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,1,2,2-Tetrachloroethane	01	SW8260D	<0.40 ug/L		0.40	1	01/31/24 16:35	01/31/24 16:35	RJB
1,1,2-Trichloroethane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,1-Dichloroethane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,1-Dichloroethylene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,1-Dichloropropene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,2,3-Trichlorobenzene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,2,3-Trichloropropane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,2,4-Trichlorobenzene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,2,4-Trimethylbenzene	01	SW8260D	43.7 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,2-Dibromo-3-chloropropane (DBCP)	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,2-Dibromoethane (EDB)	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,2-Dichlorobenzene	01	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:35	01/31/24 16:35	RJB
1,2-Dichloroethane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,2-Dichloropropane	01	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:35	01/31/24 16:35	RJB
1,3,5-Trimethylbenzene	01	SW8260D	11.9 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,3-Dichlorobenzene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,3-Dichloropropane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
1,4-Dichlorobenzene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
2,2-Dichloropropane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P23- MW #1

Laboratory Sample ID: 24A1708-01

Grab Date/Time: 01/29/2024 09:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	01	SW8260D	<10.0 ug/L		10.0	1	01/31/24 16:35	01/31/24 16:35	RJB
2-Chlorotoluene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
2-Hexanone (MBK)	01	SW8260D	<5.00 ug/L		5.00	1	01/31/24 16:35	01/31/24 16:35	RJB
4-Chlorotoluene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
4-Isopropyltoluene	01	SW8260D	16.8 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
4-Methyl-2-pentanone (MIBK)	01	SW8260D	<5.00 ug/L		5.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Acetone	01	SW8260D	44.4 ug/L		10.0	1	01/31/24 16:35	01/31/24 16:35	RJB
Benzene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Bromobenzene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Bromochloromethane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Bromodichloromethane	01	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:35	01/31/24 16:35	RJB
Bromoform	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Bromomethane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Carbon disulfide	01	SW8260D	<10.0 ug/L		10.0	1	01/31/24 16:35	01/31/24 16:35	RJB
Carbon tetrachloride	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Chlorobenzene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Chloroethane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Chloroform	01	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:35	01/31/24 16:35	RJB
Chloromethane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
cis-1,2-Dichloroethylene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
cis-1,3-Dichloropropene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Dibromochloromethane	01	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:35	01/31/24 16:35	RJB
Dibromomethane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Dichlorodifluoromethane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Di-isopropyl ether (DIPE)	01	SW8260D	<5.00 ug/L		5.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Ethylbenzene	01	SW8260D	1.83 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P23- MW #1

Laboratory Sample ID: 24A1708-01

Grab Date/Time: 01/29/2024 09:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Hexachlorobutadiene	01	SW8260D	<0.80 ug/L		0.80	1	01/31/24 16:35	01/31/24 16:35	RJB
Iodomethane	01	SW8260D	<10.0 ug/L		10.0	1	01/31/24 16:35	01/31/24 16:35	RJB
Isopropylbenzene	01	SW8260D	2.64 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
m+p-Xylenes	01	SW8260D	7.06 ug/L		2.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Methylene chloride	01	SW8260D	<4.00 ug/L		4.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Methyl-t-butyl ether (MTBE)	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Naphthalene	01	SW8260D	8.45 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
n-Butylbenzene	01	SW8260D	6.64 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
n-Propylbenzene	01	SW8260D	5.57 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
o-Xylene	01	SW8260D	6.21 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
sec-Butylbenzene	01	SW8260D	5.38 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Styrene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
tert-Butylbenzene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Tetrachloroethylene (PCE)	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Toluene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
trans-1,2-Dichloroethylene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
trans-1,3-Dichloropropene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Trichloroethylene	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Trichlorofluoromethane	01	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Vinyl acetate	01	SW8260D	<10.0 ug/L		10.0	1	01/31/24 16:35	01/31/24 16:35	RJB
Vinyl chloride	01	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:35	01/31/24 16:35	RJB
Xylenes, Total	01	SW8260D	13.3 ug/L		3.00	1	01/31/24 16:35	01/31/24 16:35	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	01	SW8260D	97.3 %		70-120		01/31/24 16:35	01/31/24 16:35	RJB
Surr: 4-Bromofluorobenzene (Surr)	01	SW8260D	98.0 %		75-120		01/31/24 16:35	01/31/24 16:35	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P23- MW #1

Laboratory Sample ID: 24A1708-01

Grab Date/Time: 01/29/2024 09:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: Dibromofluoromethane (Surr)	01	SW8260D	92.4 %		70-130		01/31/24 16:35	01/31/24 16:35	RJB
Surr: Toluene-d8 (Surr)	01	SW8260D	98.8 %		70-130		01/31/24 16:35	01/31/24 16:35	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
1,2,4-Trichlorobenzene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
1,2-Dichlorobenzene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
1,2-Diphenylhydrazine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
1,3-Dichlorobenzene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
1,3-Dinitrobenzene	01	SW8270E	<2.50 ug/L		2.50	1	02/05/24 09:45	02/05/24 15:09	BMS
1,4-Dichlorobenzene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
1-Naphthylamine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2,3,4,6-Tetrachlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2,4,5-Trichlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2,4,6-Trichlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2,4-Dichlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2,4-Dimethylphenol	01	SW8270E	<5.00 ug/L		5.00	1	02/05/24 09:45	02/05/24 15:09	BMS
2,4-Dinitrophenol	01	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2,4-Dinitrotoluene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2,6-Dichlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2,6-Dinitrotoluene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2-Chloronaphthalene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2-Chlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2-Methylnaphthalene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2-Naphthylamine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 06, 2024 16:02
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P23- MW #1

Laboratory Sample ID: 24A1708-01

Grab Date/Time: 01/29/2024 09:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	01	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2-Nitrophenol	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
3,3'-Dichlorobenzidine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
3-Methylcholanthrene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
3-Nitroaniline	01	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:09	BMS
4,6-Dinitro-2-methylphenol	01	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:09	BMS
4-Aminobiphenyl	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
4-Bromophenyl phenyl ether	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
4-Chloroaniline	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
4-Chlorophenyl phenyl ether	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
4-Nitroaniline	01	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:09	BMS
4-Nitrophenol	01	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:09	BMS
7,12-Dimethylbenz (a) anthracene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Acenaphthene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Acenaphthylene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Acetophenone	01	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Aniline	01	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Anthracene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Benzidine	01	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Benzo (a) anthracene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Benzo (a) pyrene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Benzo (b) fluoranthene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Benzo (g,h,i) perylene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Benzo (k) fluoranthene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Benzoic acid	01	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:09	BMS



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P23- MW #1 Laboratory Sample ID: 24A1708-01

Grab Date/Time: 01/29/2024 09:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	01	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:09	BMS
bis (2-Chloroethoxy) methane	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
bis (2-Chloroethyl) ether	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
2,2'-Oxybis (1-chloropropane)	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
bis (2-Ethylhexyl) phthalate	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Butyl benzyl phthalate	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Chrysene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Dibenz (a,h) anthracene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Dibenz (a,j) acridine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Dibenzofuran	01	SW8270E	<5.00 ug/L		5.00	1	02/05/24 09:45	02/05/24 15:09	BMS
Diethyl phthalate	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Dimethyl phthalate	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Di-n-butyl phthalate	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Di-n-octyl phthalate	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Diphenylamine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Ethyl methanesulfonate	01	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Fluoranthene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Fluorene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Hexachlorobenzene	01	SW8270E	<1.00 ug/L		1.00	1	02/05/24 09:45	02/05/24 15:09	BMS
Hexachlorobutadiene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Hexachlorocyclopentadiene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Hexachloroethane	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Indeno (1,2,3-cd) pyrene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Isophorone	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
m+p-Cresols	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Methyl methanesulfonate	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS



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Certificate of Analysis

Final Report

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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P23- MW #1 Laboratory Sample ID: 24A1708-01

Grab Date/Time: 01/29/2024 09:45

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Naphthalene	01	SW8270E	<5.00 ug/L		5.00	1	02/05/24 09:45	02/05/24 15:09	BMS
Nitrobenzene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
n-Nitrosodimethylamine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
n-Nitrosodi-n-butylamine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
n-Nitrosodi-n-propylamine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
n-Nitrosodiphenylamine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
n-Nitrosopiperidine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
o+m+p-Cresols	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
o-Cresol	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
p-(Dimethylamino) azobenzene	01	SW8270E	<2.50 ug/L		2.50	1	02/05/24 09:45	02/05/24 15:09	BMS
p-Chloro-m-cresol	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Pentachloronitrobenzene (quintozone)	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Pentachlorophenol	01	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Phenacetin	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Phenanthrene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Phenol	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Pronamide	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Pyrene	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Pyridine	01	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:09	BMS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270E	94.5 %		5-136		02/05/24 09:45	02/05/24 15:09	BMS
Surr: 2-Fluorobiphenyl (Surr)	01	SW8270E	67.4 %		9-117		02/05/24 09:45	02/05/24 15:09	BMS
Surr: 2-Fluorophenol (Surr)	01	SW8270E	35.2 %		5-60		02/05/24 09:45	02/05/24 15:09	BMS
Surr: Nitrobenzene-d5 (Surr)	01	SW8270E	83.0 %		5-151		02/05/24 09:45	02/05/24 15:09	BMS
Surr: Phenol-d5 (Surr)	01	SW8270E	21.8 %		5-60		02/05/24 09:45	02/05/24 15:09	BMS



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Final Report

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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P23- MW #1

Laboratory Sample ID: 24A1708-01

Grab Date/Time: 01/29/2024 09:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: <i>p</i> -Terphenyl-d14 (Surr)	01	SW8270E	32.2 %		5-141		02/05/24 09:45	02/05/24 15:09	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01	SW8015C	7.06 mg/L		0.500	1	02/01/24 13:00	02/03/24 02:39	LBH2
Surr: <i>n</i> -Triacontane (Surr)	01	SW8015C	66.5 %		50-125		02/01/24 13:00	02/03/24 02:39	LBH2
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	01	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:24	BMS
PCB as Aroclor 1221	01	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:24	BMS
PCB as Aroclor 1232	01	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:24	BMS
PCB as Aroclor 1242	01	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:24	BMS
PCB as Aroclor 1248	01	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:24	BMS
PCB as Aroclor 1254	01	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:24	BMS
PCB as Aroclor 1260	01	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:24	BMS
Surr: DCB	01	SW8082A	39.7 %		30-105		02/02/24 10:30	02/02/24 19:24	BMS
Surr: TCMX	01	SW8082A	88.3 %		30-105		02/02/24 10:30	02/02/24 19:24	BMS
4,4'-DDD	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
4,4'-DDE	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
4,4'-DDT	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
Aldrin	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
alpha-BHC	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
beta-BHC	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
Chlordane	01	SW8081B	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:24	BMS
delta-BHC	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
Dieldrin	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
Endosulfan I	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
Endosulfan II	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS



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Date Issued: February 06, 2024 16:02
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Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P23- MW #1

Laboratory Sample ID: 24A1708-01

Grab Date/Time: 01/29/2024 09:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Endosulfan sulfate	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
Endrin	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
Endrin aldehyde	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
gamma-BHC (Lindane)	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
Heptachlor	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
Heptachlor epoxide	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
Methoxychlor	01	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:24	BMS
Toxaphene	01	SW8081B	<1.00 ug/L		1.00	1	02/02/24 10:30	02/02/24 19:24	BMS
Surr: TCMX	01	SW8081B	91.0 %		18-112		02/02/24 10:30	02/02/24 19:24	BMS
Surr: DCB	01	SW8081B	61.8 %		27-131		02/02/24 10:30	02/02/24 19:24	BMS



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P5- MW #2 Laboratory Sample ID: 24A1708-02

Grab Date/Time: 01/29/2024 10:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	02RE1	SW8015C	0.18 mg/L		0.10	1	02/02/24 18:08	02/02/24 18:08	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	02RE1	SW8015C	537 %	S	80-120		02/02/24 18:08	02/02/24 18:08	JWR

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	02	SW8260D	<0.40 ug/L		0.40	1	01/31/24 16:57	01/31/24 16:57	RJB
1,1,1-Trichloroethane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,1,2,2-Tetrachloroethane	02	SW8260D	<0.40 ug/L		0.40	1	01/31/24 16:57	01/31/24 16:57	RJB
1,1,2-Trichloroethane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,1-Dichloroethane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,1-Dichloroethylene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,1-Dichloropropene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,2,3-Trichlorobenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,2,3-Trichloropropane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,2,4-Trichlorobenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,2,4-Trimethylbenzene	02	SW8260D	3.50 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,2-Dibromo-3-chloropropane (DBCP)	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,2-Dibromoethane (EDB)	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,2-Dichlorobenzene	02	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:57	01/31/24 16:57	RJB
1,2-Dichloroethane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,2-Dichloropropane	02	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:57	01/31/24 16:57	RJB
1,3,5-Trimethylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,3-Dichlorobenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,3-Dichloropropane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
1,4-Dichlorobenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
2,2-Dichloropropane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P5- MW #2 Laboratory Sample ID: 24A1708-02

Grab Date/Time: 01/29/2024 10:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	02	SW8260D	<10.0 ug/L		10.0	1	01/31/24 16:57	01/31/24 16:57	RJB
2-Chlorotoluene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
2-Hexanone (MBK)	02	SW8260D	<5.00 ug/L		5.00	1	01/31/24 16:57	01/31/24 16:57	RJB
4-Chlorotoluene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
4-Isopropyltoluene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
4-Methyl-2-pentanone (MIBK)	02	SW8260D	<5.00 ug/L		5.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Acetone	02	SW8260D	14.9 ug/L		10.0	1	01/31/24 16:57	01/31/24 16:57	RJB
Benzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Bromobenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Bromochloromethane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Bromodichloromethane	02	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:57	01/31/24 16:57	RJB
Bromoform	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Bromomethane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Carbon disulfide	02	SW8260D	<10.0 ug/L		10.0	1	01/31/24 16:57	01/31/24 16:57	RJB
Carbon tetrachloride	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Chlorobenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Chloroethane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Chloroform	02	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:57	01/31/24 16:57	RJB
Chloromethane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
cis-1,2-Dichloroethylene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
cis-1,3-Dichloropropene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Dibromochloromethane	02	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:57	01/31/24 16:57	RJB
Dibromomethane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Dichlorodifluoromethane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Di-isopropyl ether (DIPE)	02	SW8260D	<5.00 ug/L		5.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Ethylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB



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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P5- MW #2 Laboratory Sample ID: 24A1708-02

Grab Date/Time: 01/29/2024 10:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Hexachlorobutadiene	02	SW8260D	<0.80 ug/L		0.80	1	01/31/24 16:57	01/31/24 16:57	RJB
Iodomethane	02	SW8260D	<10.0 ug/L		10.0	1	01/31/24 16:57	01/31/24 16:57	RJB
Isopropylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
m+p-Xylenes	02	SW8260D	<2.00 ug/L		2.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Methylene chloride	02	SW8260D	<4.00 ug/L		4.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Methyl-t-butyl ether (MTBE)	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Naphthalene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
n-Butylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
n-Propylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
o-Xylene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
sec-Butylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Styrene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
tert-Butylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Tetrachloroethylene (PCE)	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Toluene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
trans-1,2-Dichloroethylene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
trans-1,3-Dichloropropene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Trichloroethylene	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Trichlorofluoromethane	02	SW8260D	<1.00 ug/L		1.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Vinyl acetate	02	SW8260D	<10.0 ug/L		10.0	1	01/31/24 16:57	01/31/24 16:57	RJB
Vinyl chloride	02	SW8260D	<0.50 ug/L		0.50	1	01/31/24 16:57	01/31/24 16:57	RJB
Xylenes, Total	02	SW8260D	<3.00 ug/L		3.00	1	01/31/24 16:57	01/31/24 16:57	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	02	SW8260D	100 %		70-120		01/31/24 16:57	01/31/24 16:57	RJB
Surr: 4-Bromofluorobenzene (Surr)	02	SW8260D	96.6 %		75-120		01/31/24 16:57	01/31/24 16:57	RJB



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Date Issued: February 06, 2024 16:02
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Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P5- MW #2 Laboratory Sample ID: 24A1708-02

Grab Date/Time: 01/29/2024 10:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: Dibromofluoromethane (Surr)	02	SW8260D	93.5 %		70-130		01/31/24 16:57	01/31/24 16:57	RJB
Surr: Toluene-d8 (Surr)	02	SW8260D	98.3 %		70-130		01/31/24 16:57	01/31/24 16:57	RJB
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
1,2,4-Trichlorobenzene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
1,2-Dichlorobenzene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
1,2-Diphenylhydrazine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
1,3-Dichlorobenzene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
1,3-Dinitrobenzene	02	SW8270E	<2.50 ug/L		2.50	1	02/05/24 09:45	02/05/24 15:39	BMS
1,4-Dichlorobenzene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
1-Naphthylamine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2,3,4,6-Tetrachlorophenol	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2,4,5-Trichlorophenol	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2,4,6-Trichlorophenol	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2,4-Dichlorophenol	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2,4-Dimethylphenol	02	SW8270E	<5.00 ug/L		5.00	1	02/05/24 09:45	02/05/24 15:39	BMS
2,4-Dinitrophenol	02	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2,4-Dinitrotoluene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2,6-Dichlorophenol	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2,6-Dinitrotoluene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2-Chloronaphthalene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2-Chlorophenol	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2-Methylnaphthalene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2-Naphthylamine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS



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Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P5- MW #2 Laboratory Sample ID: 24A1708-02

Grab Date/Time: 01/29/2024 10:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	02	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2-Nitrophenol	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
3,3'-Dichlorobenzidine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
3-Methylcholanthrene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
3-Nitroaniline	02	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:39	BMS
4,6-Dinitro-2-methylphenol	02	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:39	BMS
4-Aminobiphenyl	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
4-Bromophenyl phenyl ether	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
4-Chloroaniline	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
4-Chlorophenyl phenyl ether	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
4-Nitroaniline	02	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:39	BMS
4-Nitrophenol	02	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:39	BMS
7,12-Dimethylbenz (a) anthracene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Acenaphthene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Acenaphthylene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Acetophenone	02	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Aniline	02	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Anthracene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Benzidine	02	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Benzo (a) anthracene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Benzo (a) pyrene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Benzo (b) fluoranthene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Benzo (g,h,i) perylene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Benzo (k) fluoranthene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Benzoic acid	02	SW8270E	<50.0 ug/L		50.0	1	02/05/24 09:45	02/05/24 15:39	BMS



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Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P5- MW #2

Laboratory Sample ID: 24A1708-02

Grab Date/Time: 01/29/2024 10:40

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	02	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:39	BMS
bis (2-Chloroethoxy) methane	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
bis (2-Chloroethyl) ether	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
2,2'-Oxybis (1-chloropropane)	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
bis (2-Ethylhexyl) phthalate	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Butyl benzyl phthalate	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Chrysene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Dibenz (a,h) anthracene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Dibenz (a,j) acridine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Dibenzofuran	02	SW8270E	<5.00 ug/L		5.00	1	02/05/24 09:45	02/05/24 15:39	BMS
Diethyl phthalate	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Dimethyl phthalate	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Di-n-butyl phthalate	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Di-n-octyl phthalate	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Diphenylamine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Ethyl methanesulfonate	02	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Fluoranthene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Fluorene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Hexachlorobenzene	02	SW8270E	<1.00 ug/L		1.00	1	02/05/24 09:45	02/05/24 15:39	BMS
Hexachlorobutadiene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Hexachlorocyclopentadiene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Hexachloroethane	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Indeno (1,2,3-cd) pyrene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Isophorone	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
m+p-Cresols	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Methyl methanesulfonate	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS



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Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P5- MW #2 Laboratory Sample ID: 24A1708-02

Grab Date/Time: 01/29/2024 10:40

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Naphthalene	02	SW8270E	<5.00 ug/L		5.00	1	02/05/24 09:45	02/05/24 15:39	BMS
Nitrobenzene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
n-Nitrosodimethylamine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
n-Nitrosodi-n-butylamine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
n-Nitrosodi-n-propylamine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
n-Nitrosodiphenylamine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
n-Nitrosopiperidine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
o+m+p-Cresols	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
o-Cresol	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
p-(Dimethylamino) azobenzene	02	SW8270E	<2.50 ug/L		2.50	1	02/05/24 09:45	02/05/24 15:39	BMS
p-Chloro-m-cresol	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Pentachloronitrobenzene (quintozone)	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Pentachlorophenol	02	SW8270E	<20.0 ug/L		20.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Phenacetin	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Phenanthrene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Phenol	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Pronamide	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Pyrene	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Pyridine	02	SW8270E	<10.0 ug/L		10.0	1	02/05/24 09:45	02/05/24 15:39	BMS
Surr: 2,4,6-Tribromophenol (Surr)	02	SW8270E	101 %		5-136		02/05/24 09:45	02/05/24 15:39	BMS
Surr: 2-Fluorobiphenyl (Surr)	02	SW8270E	78.9 %		9-117		02/05/24 09:45	02/05/24 15:39	BMS
Surr: 2-Fluorophenol (Surr)	02	SW8270E	38.3 %		5-60		02/05/24 09:45	02/05/24 15:39	BMS
Surr: Nitrobenzene-d5 (Surr)	02	SW8270E	80.8 %		5-151		02/05/24 09:45	02/05/24 15:39	BMS
Surr: Phenol-d5 (Surr)	02	SW8270E	25.2 %		5-60		02/05/24 09:45	02/05/24 15:39	BMS



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D.		P5- MW #2		Laboratory Sample ID:			24A1708-02		
Grab Date/Time:		01/29/2024 10:40							
Field Residual Cl:				Field pH:					
Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: p-Terphenyl-d14 (Surr)	02	SW8270E	57.1 %		5-141		02/05/24 09:45	02/05/24 15:39	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02	SW8015C	1.10 mg/L		0.500	1	02/01/24 13:00	02/03/24 03:00	LBH2
Surr: n-Triacontane (Surr)	02	SW8015C	59.7 %		50-125		02/01/24 13:00	02/03/24 03:00	LBH2
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	02	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:43	BMS
PCB as Aroclor 1221	02	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:43	BMS
PCB as Aroclor 1232	02	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:43	BMS
PCB as Aroclor 1242	02	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:43	BMS
PCB as Aroclor 1248	02	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:43	BMS
PCB as Aroclor 1254	02	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:43	BMS
PCB as Aroclor 1260	02	SW8082A	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:43	BMS
Surr: DCB	02	SW8082A	34.6 %		30-105		02/02/24 10:30	02/02/24 19:43	BMS
Surr: TCMX	02	SW8082A	84.0 %		30-105		02/02/24 10:30	02/02/24 19:43	BMS
4,4'-DDD	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
4,4'-DDE	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
4,4'-DDT	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
Aldrin	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
alpha-BHC	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
beta-BHC	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
Chlordane	02	SW8081B	<0.200 ug/L		0.200	1	02/02/24 10:30	02/02/24 19:43	BMS
delta-BHC	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
Dieldrin	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
Endosulfan I	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
Endosulfan II	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS



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Certificate of Analysis

Final Report

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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. P5- MW #2

Laboratory Sample ID: 24A1708-02

Grab Date/Time: 01/29/2024 10:40

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Endosulfan sulfate	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
Endrin	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
Endrin aldehyde	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
gamma-BHC (Lindane)	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
Heptachlor	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
Heptachlor epoxide	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
Methoxychlor	02	SW8081B	<0.050 ug/L		0.050	1	02/02/24 10:30	02/02/24 19:43	BMS
Toxaphene	02	SW8081B	<1.00 ug/L		1.00	1	02/02/24 10:30	02/02/24 19:43	BMS
Surr: TCMX	02	SW8081B	84.0 %		18-112		02/02/24 10:30	02/02/24 19:43	BMS
Surr: DCB	02	SW8081B	34.6 %		27-131		02/02/24 10:30	02/02/24 19:43	BMS



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Purchase Order: 2202065001

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. Trip Blank

Laboratory Sample ID: 24A1708-03

Grab Date/Time: 11/21/2023 16:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	03	SW8015C	<0.10 mg/L		0.10	1	02/01/24 12:25	02/01/24 12:25	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	03	SW8015C	95.2 %		80-120		02/01/24 12:25	02/01/24 12:25	JWR
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	03	SW8260D	<0.40 ug/L		0.40	1	01/31/24 12:28	01/31/24 12:28	RJB
1,1,1-Trichloroethane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,1,2,2-Tetrachloroethane	03	SW8260D	<0.40 ug/L		0.40	1	01/31/24 12:28	01/31/24 12:28	RJB
1,1,2-Trichloroethane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,1-Dichloroethane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,1-Dichloroethylene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,1-Dichloropropene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,2,3-Trichlorobenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,2,3-Trichloropropane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,2,4-Trichlorobenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,2,4-Trimethylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,2-Dibromo-3-chloropropane (DBCP)	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,2-Dibromoethane (EDB)	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,2-Dichlorobenzene	03	SW8260D	<0.50 ug/L		0.50	1	01/31/24 12:28	01/31/24 12:28	RJB
1,2-Dichloroethane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,2-Dichloropropane	03	SW8260D	<0.50 ug/L		0.50	1	01/31/24 12:28	01/31/24 12:28	RJB
1,3,5-Trimethylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,3-Dichlorobenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,3-Dichloropropane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
1,4-Dichlorobenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
2,2-Dichloropropane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB



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Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. Trip Blank

Laboratory Sample ID: 24A1708-03

Grab Date/Time: 11/21/2023 16:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	03	SW8260D	<10.0 ug/L		10.0	1	01/31/24 12:28	01/31/24 12:28	RJB
2-Chlorotoluene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
2-Hexanone (MBK)	03	SW8260D	<5.00 ug/L		5.00	1	01/31/24 12:28	01/31/24 12:28	RJB
4-Chlorotoluene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
4-Isopropyltoluene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
4-Methyl-2-pentanone (MIBK)	03	SW8260D	<5.00 ug/L		5.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Acetone	03	SW8260D	<10.0 ug/L		10.0	1	01/31/24 12:28	01/31/24 12:28	RJB
Benzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Bromobenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Bromochloromethane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Bromodichloromethane	03	SW8260D	<0.50 ug/L		0.50	1	01/31/24 12:28	01/31/24 12:28	RJB
Bromoform	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Bromomethane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Carbon disulfide	03	SW8260D	<10.0 ug/L		10.0	1	01/31/24 12:28	01/31/24 12:28	RJB
Carbon tetrachloride	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Chlorobenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Chloroethane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Chloroform	03	SW8260D	<0.50 ug/L		0.50	1	01/31/24 12:28	01/31/24 12:28	RJB
Chloromethane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
cis-1,2-Dichloroethylene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
cis-1,3-Dichloropropene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Dibromochloromethane	03	SW8260D	<0.50 ug/L		0.50	1	01/31/24 12:28	01/31/24 12:28	RJB
Dibromomethane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Dichlorodifluoromethane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Di-isopropyl ether (DIPE)	03	SW8260D	<5.00 ug/L		5.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Ethylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB



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Analytical Results

Sample I.D. Trip Blank

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Grab Date/Time: 11/21/2023 16:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Hexachlorobutadiene	03	SW8260D	<0.80 ug/L		0.80	1	01/31/24 12:28	01/31/24 12:28	RJB
Iodomethane	03	SW8260D	<10.0 ug/L		10.0	1	01/31/24 12:28	01/31/24 12:28	RJB
Isopropylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
m+p-Xylenes	03	SW8260D	<2.00 ug/L		2.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Methylene chloride	03	SW8260D	<4.00 ug/L		4.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Methyl-t-butyl ether (MTBE)	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Naphthalene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
n-Butylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
n-Propylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
o-Xylene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
sec-Butylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Styrene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
tert-Butylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Tetrachloroethylene (PCE)	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Toluene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
trans-1,2-Dichloroethylene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
trans-1,3-Dichloropropene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Trichloroethylene	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Trichlorofluoromethane	03	SW8260D	<1.00 ug/L		1.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Vinyl acetate	03	SW8260D	<10.0 ug/L		10.0	1	01/31/24 12:28	01/31/24 12:28	RJB
Vinyl chloride	03	SW8260D	<0.50 ug/L		0.50	1	01/31/24 12:28	01/31/24 12:28	RJB
Xylenes, Total	03	SW8260D	<3.00 ug/L		3.00	1	01/31/24 12:28	01/31/24 12:28	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	03	SW8260D	100 %		70-120		01/31/24 12:28	01/31/24 12:28	RJB
Surr: 4-Bromofluorobenzene (Surr)	03	SW8260D	97.6 %		75-120		01/31/24 12:28	01/31/24 12:28	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Laboratory Order ID: 24A1708

Analytical Results

Sample I.D. Trip Blank

Laboratory Sample ID: 24A1708-03

Grab Date/Time: 11/21/2023 16:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst

Volatile Organic Compounds by GCMS

Surr: Dibromofluoromethane (Surr)	03	SW8260D	94.9 %		70-130		01/31/24 12:28	01/31/24 12:28	RJB
Surr: Toluene-d8 (Surr)	03	SW8260D	97.7 %		70-130		01/31/24 12:28	01/31/24 12:28	RJB



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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Analytical Summary

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD		Preparation Method:	SW3510C/EPA600-ECD		
24A1708-01	1070 mL / 1.00 mL	SW8081B	BHB0070	SHB0168	AA40264
24A1708-02	1060 mL / 1.00 mL	SW8081B	BHB0070	SHB0168	AA40264
24A1708-01	1070 mL / 1.00 mL	SW8082A	BHB0070	SHB0169	AA40266
24A1708-02	1060 mL / 1.00 mL	SW8082A	BHB0070	SHB0169	AA40266

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Hydrocarbons by GC		Preparation Method:	SW3510C/EPA600-FID		
24A1708-01	1070 mL / 1.00 mL	SW8015C	BHB0043	SHB0109	AL30311
24A1708-02	1070 mL / 1.00 mL	SW8015C	BHB0043	SHB0109	AL30311

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS		Preparation Method:	SW3510C/EPA600-MS		
24A1708-01	1070 mL / 1.00 mL	SW8270E	BHB0132	SHB0142	AK30271
24A1708-02	1070 mL / 1.00 mL	SW8270E	BHB0132	SHB0142	AK30271

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC		Preparation Method:	SW5030B-GC		
24A1708-01	5.00 mL / 5.00 mL	SW8015C	BHB0026	SHB0033	AB40124
24A1708-02	5.00 mL / 5.00 mL	SW8015C	BHB0026	SHB0033	AB40124
24A1708-03	5.00 mL / 5.00 mL	SW8015C	BHB0026	SHB0033	AB40124

Volatile Hydrocarbons by GC		Preparation Method:	SW5030B-GC		
24A1708-02RE1	5.00 mL / 5.00 mL	SW8015C	BHB0110	SHB0098	AB40128

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS		Preparation Method:	SW5030B-MS		



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	9201 Arboretum Parkway Suite 310	Project Number:	2202065001
	Richmond VA, 23236	Purchase Order:	2202065001
Submitted To:	Leo Snead		
Client Site I.D.:	Alex Waterfront		

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
24A1708-01	5.00 mL / 5.00 mL	SW8260D	BHA1135	SHA1027	AL30322
24A1708-02	5.00 mL / 5.00 mL	SW8260D	BHA1135	SHA1027	AL30322
24A1708-03	5.00 mL / 5.00 mL	SW8260D	BHA1135	SHA1027	AL30322



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Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 06, 2024 16:02
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

QC Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD			Preparation Method: SW3510C/EPA600-ECD		
BHB0070-BLK1	1000 mL / 1.00 mL	SW8081B	BHB0070	SHB0168	AA40264
BHB0070-BLK2		SW8081B	BHB0070	SHB0169	AA40266
BHB0070-BS1	1000 mL / 1.00 mL	SW8081B	BHB0070	SHB0168	AA40264
BHB0070-BS2		SW8081B	BHB0070	SHB0169	AA40266
BHB0070-BS3	1000 mL / 1.00 mL	SW8081B	BHB0070	SHB0168	AA40264
BHB0070-BS4	1000 mL / 1.00 mL	SW8081B	BHB0070	SHB0168	AA40264
BHB0070-BLK1		SW8082A	BHB0070	SHB0168	AA40264
BHB0070-BLK2	1000 mL / 1.00 mL	SW8082A	BHB0070	SHB0169	AA40266
BHB0070-BS1		SW8082A	BHB0070	SHB0168	AA40264
BHB0070-BS2	1000 mL / 1.00 mL	SW8082A	BHB0070	SHB0169	AA40266
BHB0070-BS3		SW8082A	BHB0070	SHB0168	AA40264
BHB0070-BS4		SW8082A	BHB0070	SHB0168	AA40264
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Hydrocarbons by GC			Preparation Method: SW3510C/EPA600-FID		
BHB0043-BLK1	1000 mL / 1.00 mL	SW8015C	BHB0043	SHB0109	AL30311
BHB0043-BS1	1000 mL / 1.00 mL	SW8015C	BHB0043	SHB0109	AL30311
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS			Preparation Method: SW3510C/EPA600-MS		
BHB0132-BLK1	1000 mL / 1.00 mL	SW8270E	BHB0132	SHB0142	AK30271
BHB0132-BLK2		SW8270E	BHB0132	SHB0204	AL30202
BHB0132-BS1	1000 mL / 1.00 mL	SW8270E	BHB0132	SHB0142	AK30271
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC			Preparation Method: SW5030B-GC		
BHB0026-BLK1	5.00 mL / 5.00 mL	SW8015C	BHB0026	SHB0033	AB40124
BHB0026-BS1	5.00 mL / 5.00 mL	SW8015C	BHB0026	SHB0033	AB40124



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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC			Preparation Method:	SW5030B-GC	
BHB0026-MS1	5.00 mL / 5.00 mL	SW8015C	BHB0026	SHB0033	AB40124
BHB0026-MSD1	5.00 mL / 5.00 mL	SW8015C	BHB0026	SHB0033	AB40124
BHB0110-BLK1	5.00 mL / 5.00 mL	SW8015C	BHB0110	SHB0098	AB40128
BHB0110-BS1	5.00 mL / 5.00 mL	SW8015C	BHB0110	SHB0098	AB40128
BHB0110-MS1	5.00 mL / 5.00 mL	SW8015C	BHB0110	SHB0098	AB40128
BHB0110-MSD1	5.00 mL / 5.00 mL	SW8015C	BHB0110	SHB0098	AB40128

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS			Preparation Method:	SW5030B-MS	
BHA1135-BLK1	5.00 mL / 5.00 mL	SW8260D	BHA1135	SHA1027	AL30322
BHA1135-BS1	5.00 mL / 5.00 mL	SW8260D	BHA1135	SHA1027	AL30322
BHA1135-DUP1	5.00 mL / 5.00 mL	SW8260D	BHA1135	SHA1027	AL30322
BHA1135-MS1	5.00 mL / 5.00 mL	SW8260D	BHA1135	SHA1027	AL30322



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Volatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0026 - SW5030B-GC

Blank (BHB0026-BLK1)

Prepared & Analyzed: 02/01/2024

TPH-Volatiles (GRO)	<0.10 mg/L	0.10	mg/L							
Surr: 2,5-Dibromotoluene (Surr FID)	109		ug/L	100		109	80-120			

LCS (BHB0026-BS1)

Prepared & Analyzed: 02/01/2024

TPH-Volatiles (GRO)	0.90 mg/L	0.10	mg/L	1.00	mg/L	90.2	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	97.6		ug/L	100	ug/L	97.6	80-120			

Matrix Spike (BHB0026-MS1)

Source: 24B0033-02

Prepared & Analyzed: 02/01/2024

TPH-Volatiles (GRO)	0.84 mg/L	0.10	mg/L	1.00	<0.10 mg/L	84.0	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	97.4		ug/L	100	ug/L	97.4	80-120			

Matrix Spike Dup (BHB0026-MSD1)

Source: 24B0033-02

Prepared & Analyzed: 02/01/2024

TPH-Volatiles (GRO)	0.86 mg/L	0.10	mg/L	1.00	<0.10 mg/L	86.4	70-130	2.87	20	
Surr: 2,5-Dibromotoluene (Surr FID)	94.7		ug/L	100	ug/L	94.7	80-120			

Batch BHB0110 - SW5030B-GC

Blank (BHB0110-BLK1)

Prepared & Analyzed: 02/02/2024

TPH-Volatiles (GRO)	<0.10 mg/L	0.10	mg/L							
Surr: 2,5-Dibromotoluene (Surr FID)	92.7		ug/L	100		92.7	80-120			

LCS (BHB0110-BS1)

Prepared & Analyzed: 02/02/2024

TPH-Volatiles (GRO)	0.93 mg/L	0.10	mg/L	1.00	mg/L	93.5	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	89.8		ug/L	100	ug/L	89.8	80-120			

Matrix Spike (BHB0110-MS1)

Source: 24A1708-02RE1

Prepared & Analyzed: 02/02/2024

TPH-Volatiles (GRO)	0.97 mg/L	0.10	mg/L	1.00	0.18 mg/L	79.2	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	290		ug/L	100	ug/L	290	80-120			S



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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Volatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0110 - SW5030B-GC

Matrix Spike Dup (BHB0110-MSD1)

Source: 24A1708-02RE1

Prepared & Analyzed: 02/02/2024

TPH-Volatiles (GRO)	0.93 mg/L	0.10	mg/L	1.00	0.18 mg/L	75.1	70-130	4.29	20	
Surr: 2,5-Dibromotoluene (Surr FID)	158		ug/L	100	ug/L	158	80-120			S



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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1135 - SW5030B-MS

Blank (BHA1135-BLK1)

Prepared & Analyzed: 01/31/2024

1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L
1,1,2,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L
1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L
1,2,3-Trichlorobenzene	<1.00 ug/L	1.00	ug/L
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L
1,2,4-Trimethylbenzene	<1.00 ug/L	1.00	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	<1.00 ug/L	1.00	ug/L
1,2-Dibromoethane (EDB)	<1.00 ug/L	1.00	ug/L
1,2-Dichlorobenzene	<0.50 ug/L	0.50	ug/L
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L
1,2-Dichloropropane	<0.50 ug/L	0.50	ug/L
1,3,5-Trimethylbenzene	<1.00 ug/L	1.00	ug/L
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L
2,2-Dichloropropane	<1.00 ug/L	1.00	ug/L
2-Butanone (MEK)	<10.0 ug/L	10.0	ug/L
2-Chlorotoluene	<1.00 ug/L	1.00	ug/L
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L
4-Chlorotoluene	<1.00 ug/L	1.00	ug/L
4-Isopropyltoluene	<1.00 ug/L	1.00	ug/L
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L
Acetone	<10.0 ug/L	10.0	ug/L
Benzene	<1.00 ug/L	1.00	ug/L
Bromobenzene	<1.00 ug/L	1.00	ug/L
Bromochloromethane	<1.00 ug/L	1.00	ug/L



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1135 - SW5030B-MS

Blank (BHA1135-BLK1)

Prepared & Analyzed: 01/31/2024

Bromodichloromethane	<0.50 ug/L	0.50	ug/L
Bromoform	<1.00 ug/L	1.00	ug/L
Bromomethane	<1.00 ug/L	1.00	ug/L
Carbon disulfide	<10.0 ug/L	10.0	ug/L
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L
Chlorobenzene	<1.00 ug/L	1.00	ug/L
Chloroethane	<1.00 ug/L	1.00	ug/L
Chloroform	<0.50 ug/L	0.50	ug/L
Chloromethane	<1.00 ug/L	1.00	ug/L
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L
Dibromochloromethane	<0.50 ug/L	0.50	ug/L
Dibromomethane	<1.00 ug/L	1.00	ug/L
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L
Di-isopropyl ether (DIPE)	<5.00 ug/L	5.00	ug/L
Ethylbenzene	<1.00 ug/L	1.00	ug/L
Hexachlorobutadiene	<0.80 ug/L	0.80	ug/L
Iodomethane	<10.0 ug/L	10.0	ug/L
Isopropylbenzene	<1.00 ug/L	1.00	ug/L
m+p-Xylenes	<2.00 ug/L	2.00	ug/L
Methylene chloride	<4.00 ug/L	4.00	ug/L
Methyl-t-butyl ether (MTBE)	<1.00 ug/L	1.00	ug/L
Naphthalene	<1.00 ug/L	1.00	ug/L
n-Butylbenzene	<1.00 ug/L	1.00	ug/L
n-Propylbenzene	<1.00 ug/L	1.00	ug/L
o-Xylene	<1.00 ug/L	1.00	ug/L
sec-Butylbenzene	<1.00 ug/L	1.00	ug/L
Styrene	<1.00 ug/L	1.00	ug/L
tert-Butylbenzene	<1.00 ug/L	1.00	ug/L
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L
Toluene	<1.00 ug/L	1.00	ug/L



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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1135 - SW5030B-MS

Blank (BHA1135-BLK1)

Prepared & Analyzed: 01/31/2024

trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L							
Trichloroethylene	<1.00 ug/L	1.00	ug/L							
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L							
Vinyl acetate	<10.0 ug/L	10.0	ug/L							
Vinyl chloride	<0.50 ug/L	0.50	ug/L							
Xylenes, Total	<3.00 ug/L	3.00	ug/L							
Surr: 1,2-Dichloroethane-d4 (Surr)	50.0		ug/L	50.0		100	70-120			
Surr: 4-Bromofluorobenzene (Surr)	49.7		ug/L	50.0		99.3	75-120			
Surr: Dibromofluoromethane (Surr)	47.1		ug/L	50.0		94.2	70-130			
Surr: Toluene-d8 (Surr)	49.3		ug/L	50.0		98.7	70-130			

LCS (BHA1135-BS1)

Prepared & Analyzed: 01/31/2024

1,1,1,2-Tetrachloroethane	56.0 ug/L	0.4	ug/L	50.0	ug/L	112	80-130			
1,1,1-Trichloroethane	53.9 ug/L	1	ug/L	50.0	ug/L	108	65-130			
1,1,2,2-Tetrachloroethane	50.7 ug/L	0.4	ug/L	50.0	ug/L	101	65-130			
1,1,2-Trichloroethane	51.5 ug/L	1	ug/L	50.0	ug/L	103	75-125			
1,1-Dichloroethane	49.7 ug/L	1	ug/L	50.0	ug/L	99.4	70-135			
1,1-Dichloroethylene	50.1 ug/L	1	ug/L	50.0	ug/L	100	70-130			
1,1-Dichloropropene	51.6 ug/L	1	ug/L	50.0	ug/L	103	75-135			
1,2,3-Trichlorobenzene	52.5 ug/L	1	ug/L	50.0	ug/L	105	55-140			
1,2,3-Trichloropropane	48.1 ug/L	1	ug/L	50.0	ug/L	96.1	75-125			
1,2,4-Trichlorobenzene	55.4 ug/L	1	ug/L	50.0	ug/L	111	65-135			
1,2,4-Trimethylbenzene	57.0 ug/L	1	ug/L	50.0	ug/L	114	75-130			
1,2-Dibromo-3-chloropropane (DBCP)	44.6 ug/L	1	ug/L	50.0	ug/L	89.3	50-130			
1,2-Dibromoethane (EDB)	54.1 ug/L	1	ug/L	50.0	ug/L	108	80-120			
1,2-Dichlorobenzene	56.2 ug/L	0.5	ug/L	50.0	ug/L	112	70-120			
1,2-Dichloroethane	43.4 ug/L	1	ug/L	50.0	ug/L	86.8	70-130			
1,2-Dichloropropane	50.5 ug/L	0.5	ug/L	50.0	ug/L	101	75-125			
1,3,5-Trimethylbenzene	56.5 ug/L	1	ug/L	50.0	ug/L	113	75-125			
1,3-Dichlorobenzene	56.3 ug/L	1	ug/L	50.0	ug/L	113	75-125			
1,3-Dichloropropane	50.5 ug/L	1	ug/L	50.0	ug/L	101	75-125			



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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1135 - SW5030B-MS

LCS (BHA1135-BS1)

Prepared & Analyzed: 01/31/2024

1,4-Dichlorobenzene	54.8 ug/L	1	ug/L	50.0	ug/L	110	75-125			
2,2-Dichloropropane	55.6 ug/L	1	ug/L	50.0	ug/L	111	70-135			
2-Butanone (MEK)	39.4 ug/L	10	ug/L	50.0	ug/L	78.9	30-150			
2-Chlorotoluene	56.0 ug/L	1	ug/L	50.0	ug/L	112	75-125			
2-Hexanone (MBK)	41.9 ug/L	5	ug/L	50.0	ug/L	83.9	55-130			
4-Chlorotoluene	55.9 ug/L	1	ug/L	50.0	ug/L	112	75-130			
4-Isopropyltoluene	58.4 ug/L	1	ug/L	50.0	ug/L	117	75-130			
4-Methyl-2-pentanone (MIBK)	39.8 ug/L	5	ug/L	50.0	ug/L	79.6	60-135			
Acetone	42.5 ug/L	10	ug/L	50.0	ug/L	85.0	40-140			
Benzene	52.1 ug/L	1	ug/L	50.0	ug/L	104	80-120			
Bromobenzene	54.8 ug/L	1	ug/L	50.0	ug/L	110	75-125			
Bromochloromethane	47.6 ug/L	1	ug/L	50.0	ug/L	95.1	65-130			
Bromodichloromethane	54.6 ug/L	0.5	ug/L	50.0	ug/L	109	75-120			
Bromoform	53.8 ug/L	1	ug/L	50.0	ug/L	108	70-130			
Bromomethane	47.2 ug/L	1	ug/L	50.0	ug/L	94.4	30-145			
Carbon disulfide	43.1 ug/L	10	ug/L	50.0	ug/L	86.1	35-160			
Carbon tetrachloride	55.0 ug/L	1	ug/L	50.0	ug/L	110	65-140			
Chlorobenzene	57.0 ug/L	1	ug/L	50.0	ug/L	114	80-120			
Chloroethane	48.8 ug/L	1	ug/L	50.0	ug/L	97.6	60-135			
Chloroform	48.7 ug/L	0.5	ug/L	50.0	ug/L	97.3	65-135			
Chloromethane	48.4 ug/L	1	ug/L	50.0	ug/L	96.7	40-125			
cis-1,2-Dichloroethylene	50.3 ug/L	1	ug/L	50.0	ug/L	101	70-125			
cis-1,3-Dichloropropene	51.2 ug/L	1	ug/L	50.0	ug/L	102	70-130			
Dibromochloromethane	53.2 ug/L	0.5	ug/L	50.0	ug/L	106	60-135			
Dibromomethane	50.3 ug/L	1	ug/L	50.0	ug/L	101	75-125			
Dichlorodifluoromethane	52.9 ug/L	1	ug/L	50.0	ug/L	106	30-155			
Ethylbenzene	56.6 ug/L	1	ug/L	50.0	ug/L	113	75-125			
Hexachlorobutadiene	59.7 ug/L	0.8	ug/L	50.0	ug/L	119	50-140			
Isopropylbenzene	52.2 ug/L	1	ug/L	50.0	ug/L	104	75-125			
m+p-Xylenes	109 ug/L	2	ug/L	100	ug/L	109	75-130			
Methylene chloride	45.4 ug/L	4	ug/L	50.0	ug/L	90.8	55-140			



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 06, 2024 16:02
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1135 - SW5030B-MS

LCS (BHA1135-BS1)

Prepared & Analyzed: 01/31/2024

Methyl-t-butyl ether (MTBE)	47.8 ug/L	1	ug/L	50.0	ug/L	95.7	65-125
Naphthalene	50.1 ug/L	1	ug/L	50.0	ug/L	100	55-140
n-Butylbenzene	59.0 ug/L	1	ug/L	50.0	ug/L	118	70-135
n-Propylbenzene	56.8 ug/L	1	ug/L	50.0	ug/L	114	70-130
o-Xylene	55.7 ug/L	1	ug/L	50.0	ug/L	111	80-120
sec-Butylbenzene	59.4 ug/L	1	ug/L	50.0	ug/L	119	70-125
Styrene	55.2 ug/L	1	ug/L	50.0	ug/L	110	65-135
tert-Butylbenzene	57.1 ug/L	1	ug/L	50.0	ug/L	114	70-130
Tetrachloroethylene (PCE)	59.1 ug/L	1	ug/L	50.0	ug/L	118	45-150
Toluene	52.4 ug/L	1	ug/L	50.0	ug/L	105	75-120
trans-1,2-Dichloroethylene	50.4 ug/L	1	ug/L	50.0	ug/L	101	60-140
trans-1,3-Dichloropropene	53.4 ug/L	1	ug/L	50.0	ug/L	107	55-140
Trichloroethylene	54.3 ug/L	1	ug/L	50.0	ug/L	109	70-125
Trichlorofluoromethane	52.9 ug/L	1	ug/L	50.0	ug/L	106	60-145
Vinyl chloride	49.3 ug/L	0.5	ug/L	50.0	ug/L	98.5	50-145
Surr: 1,2-Dichloroethane-d4 (Surr)	49.3		ug/L	50.0	ug/L	98.6	70-120
Surr: 4-Bromofluorobenzene (Surr)	48.3		ug/L	50.0	ug/L	96.7	75-120
Surr: Dibromofluoromethane (Surr)	48.7		ug/L	50.0	ug/L	97.5	70-130
Surr: Toluene-d8 (Surr)	48.8		ug/L	50.0	ug/L	97.7	70-130

Duplicate (BHA1135-DUP1)

Source: 24A1739-01

Prepared & Analyzed: 01/31/2024

1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L	<0.40 ug/L		NA	30
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30
1,1,2,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L	<0.40 ug/L		NA	30
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30
1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30
1,2,3-Trichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30
1,2,4-Trimethylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1135 - SW5030B-MS

Duplicate (BHA1135-DUP1)

Source: 24A1739-01

Prepared & Analyzed: 01/31/2024

1,2-Dibromo-3-chloropropane (DBCP)	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
1,2-Dibromoethane (EDB)	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
1,2-Dichlorobenzene	<0.50 ug/L	0.50	ug/L	<0.50 ug/L	NA	30
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
1,2-Dichloropropane	<0.50 ug/L	0.50	ug/L	<0.50 ug/L	NA	30
1,3,5-Trimethylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
2,2-Dichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
2-Butanone (MEK)	<10.0 ug/L	10.0	ug/L	<10.0 ug/L	NA	30
2-Chlorotoluene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L	NA	30
4-Chlorotoluene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
4-Isopropyltoluene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L	NA	30
Acetone	<10.0 ug/L	10.0	ug/L	<10.0 ug/L	NA	30
Benzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
Bromobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
Bromochloromethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
Bromodichloromethane	<0.50 ug/L	0.50	ug/L	<0.50 ug/L	NA	30
Bromoform	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
Bromomethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
Carbon disulfide	<10.0 ug/L	10.0	ug/L	<10.0 ug/L	NA	30
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
Chlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
Chloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
Chloroform	<0.50 ug/L	0.50	ug/L	<0.50 ug/L	NA	30
Chloromethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	NA	30



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1135 - SW5030B-MS

Duplicate (BHA1135-DUP1)

Source: 24A1739-01

Prepared & Analyzed: 01/31/2024

Dibromochloromethane	<0.50 ug/L	0.50	ug/L	<0.50 ug/L			NA	30	
Dibromomethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
Di-isopropyl ether (DIPE)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L			NA	30	
Ethylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
Hexachlorobutadiene	<0.80 ug/L	0.80	ug/L	<0.80 ug/L			NA	30	
Iodomethane	<10.0 ug/L	10.0	ug/L	<10.0 ug/L			NA	30	
Isopropylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
m+p-Xylenes	<2.00 ug/L	2.00	ug/L	<2.00 ug/L			NA	30	
Methylene chloride	<4.00 ug/L	4.00	ug/L	<4.00 ug/L			NA	30	
Methyl-t-butyl ether (MTBE)	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
Naphthalene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
n-Butylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
n-Propylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
o-Xylene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
sec-Butylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
Styrene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
tert-Butylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
Toluene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
Trichloroethylene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L			NA	30	
Vinyl acetate	<10.0 ug/L	10.0	ug/L	<10.0 ug/L			NA	30	
Vinyl chloride	<0.50 ug/L	0.50	ug/L	<0.50 ug/L			NA	30	
Xylenes, Total	<3.00 ug/L	3.00	ug/L	<3.00 ug/L			NA	30	
Tetrahydrofuran	<10.0 ug/L	10.0	ug/L	<10.0 ug/L			NA	30	
Surr: 1,2-Dichloroethane-d4 (Surr)	49.2		ug/L	50.0 ug/L	98.3	70-120			
Surr: 4-Bromofluorobenzene (Surr)	49.2		ug/L	50.0 ug/L	98.4	75-120			
Surr: Dibromofluoromethane (Surr)	47.0		ug/L	50.0 ug/L	94.0	70-130			



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1135 - SW5030B-MS

Duplicate (BHA1135-DUP1)

Source: 24A1739-01

Prepared & Analyzed: 01/31/2024

Surr: Toluene-d8 (Surr) 48.6 ug/L 50.0 ug/L 97.2 70-130

Matrix Spike (BHA1135-MS1)

Source: 24A1575-01

Prepared & Analyzed: 01/31/2024

1,1,1,2-Tetrachloroethane	52.1 ug/L	0.4	ug/L	50.0	<0.4 ug/L	104	80-130
1,1,1-Trichloroethane	50.4 ug/L	1	ug/L	50.0	<1 ug/L	101	65-130
1,1,2,2-Tetrachloroethane	50.3 ug/L	0.4	ug/L	50.0	<0.4 ug/L	101	65-130
1,1,2-Trichloroethane	50.4 ug/L	1	ug/L	50.0	<1 ug/L	101	75-125
1,1-Dichloroethane	46.8 ug/L	1	ug/L	50.0	<1 ug/L	93.6	70-135
1,1-Dichloroethylene	47.3 ug/L	1	ug/L	50.0	<1 ug/L	94.7	50-145
1,1-Dichloropropene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.5	75-135
1,2,3-Trichlorobenzene	52.8 ug/L	1	ug/L	50.0	<1 ug/L	106	55-140
1,2,3-Trichloropropane	49.5 ug/L	1	ug/L	50.0	<1 ug/L	98.9	75-125
1,2,4-Trichlorobenzene	53.6 ug/L	1	ug/L	50.0	<1 ug/L	107	65-135
1,2,4-Trimethylbenzene	53.6 ug/L	1	ug/L	50.0	<1 ug/L	107	75-130
1,2-Dibromo-3-chloropropane (DBCP)	46.4 ug/L	1	ug/L	50.0	<1 ug/L	92.9	50-130
1,2-Dibromoethane (EDB)	51.4 ug/L	1	ug/L	50.0	<1 ug/L	103	80-120
1,2-Dichlorobenzene	53.7 ug/L	0.5	ug/L	50.0	<0.5 ug/L	107	70-120
1,2-Dichloroethane	41.7 ug/L	1	ug/L	50.0	<1 ug/L	83.5	70-130
1,2-Dichloropropane	48.2 ug/L	0.5	ug/L	50.0	<0.5 ug/L	96.4	75-125
1,3,5-Trimethylbenzene	52.4 ug/L	1	ug/L	50.0	<1 ug/L	105	75-124
1,3-Dichlorobenzene	54.3 ug/L	1	ug/L	50.0	<1 ug/L	109	75-125
1,3-Dichloropropane	48.5 ug/L	1	ug/L	50.0	<1 ug/L	96.9	75-125
1,4-Dichlorobenzene	52.2 ug/L	1	ug/L	50.0	<1 ug/L	104	75-125
2,2-Dichloropropane	52.1 ug/L	1	ug/L	50.0	<1 ug/L	104	70-135
2-Butanone (MEK)	41.5 ug/L	10	ug/L	50.0	<10 ug/L	83.1	30-150
2-Chlorotoluene	53.5 ug/L	1	ug/L	50.0	<1 ug/L	107	75-125
2-Hexanone (MBK)	43.6 ug/L	5	ug/L	50.0	<5 ug/L	87.2	55-130
4-Chlorotoluene	53.2 ug/L	1	ug/L	50.0	<1 ug/L	106	75-130
4-Isopropyltoluene	55.3 ug/L	1	ug/L	50.0	<1 ug/L	111	75-130
4-Methyl-2-pentanone (MIBK)	42.6 ug/L	5	ug/L	50.0	<5 ug/L	85.3	60-135
Acetone	40.5 ug/L	10	ug/L	50.0	<10 ug/L	78.8	40-140
Benzene	49.0 ug/L	1	ug/L	50.0	<1 ug/L	98.0	80-120



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Certificate of Analysis

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Date Issued: February 06, 2024 16:02
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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1135 - SW5030B-MS

Matrix Spike (BHA1135-MS1)

Source: 24A1575-01

Prepared & Analyzed: 01/31/2024

Bromobenzene	51.1 ug/L	1	ug/L	50.0	<1 ug/L	102	75-125		
Bromochloromethane	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.3	65-130		
Bromodichloromethane	51.3 ug/L	0.5	ug/L	50.0	<0.5 ug/L	103	75-136		
Bromoform	52.5 ug/L	1	ug/L	50.0	<1 ug/L	105	70-130		
Bromomethane	46.5 ug/L	1	ug/L	50.0	<1 ug/L	93.0	30-145		
Carbon disulfide	41.1 ug/L	10	ug/L	50.0	<10 ug/L	82.2	35-160		
Carbon tetrachloride	51.8 ug/L	1	ug/L	50.0	<1 ug/L	104	65-140		
Chlorobenzene	53.5 ug/L	1	ug/L	50.0	<1 ug/L	107	80-120		
Chloroethane	46.2 ug/L	1	ug/L	50.0	<1 ug/L	92.3	60-135		
Chloroform	45.7 ug/L	0.5	ug/L	50.0	<0.5 ug/L	91.4	65-135		
Chloromethane	46.1 ug/L	1	ug/L	50.0	<1 ug/L	92.1	40-125		
cis-1,2-Dichloroethylene	46.7 ug/L	1	ug/L	50.0	<1 ug/L	93.4	70-125		
cis-1,3-Dichloropropene	49.3 ug/L	1	ug/L	50.0	<1 ug/L	98.7	47-136		
Dibromochloromethane	51.6 ug/L	0.5	ug/L	50.0	<0.5 ug/L	103	60-135		
Dibromomethane	47.6 ug/L	1	ug/L	50.0	<1 ug/L	95.2	75-125		
Dichlorodifluoromethane	52.6 ug/L	1	ug/L	50.0	<1 ug/L	105	30-155		
Ethylbenzene	52.5 ug/L	1	ug/L	50.0	<1 ug/L	105	75-125		
Hexachlorobutadiene	59.3 ug/L	0.8	ug/L	50.0	<0.8 ug/L	119	50-140		
Isopropylbenzene	49.0 ug/L	1	ug/L	50.0	<1 ug/L	97.9	75-125		
m+p-Xylenes	103 ug/L	2	ug/L	100	<2 ug/L	103	75-130		
Methylene chloride	40.8 ug/L	4	ug/L	50.0	<4 ug/L	81.7	55-140		
Methyl-t-butyl ether (MTBE)	46.7 ug/L	1	ug/L	50.0	<1 ug/L	93.4	65-125		
Naphthalene	51.2 ug/L	1	ug/L	50.0	<1 ug/L	102	55-140		
n-Butylbenzene	55.6 ug/L	1	ug/L	50.0	<1 ug/L	111	70-135		
n-Propylbenzene	53.6 ug/L	1	ug/L	50.0	<1 ug/L	107	70-130		
o-Xylene	52.2 ug/L	1	ug/L	50.0	<1 ug/L	104	80-120		
sec-Butylbenzene	56.5 ug/L	1	ug/L	50.0	<1 ug/L	113	70-125		
Styrene	41.0 ug/L	1	ug/L	50.0	<1 ug/L	82.0	65-135		
tert-Butylbenzene	53.5 ug/L	1	ug/L	50.0	<1 ug/L	107	70-130		
Tetrachloroethylene (PCE)	56.6 ug/L	1	ug/L	50.0	1.27 ug/L	111	51-231		
Toluene	49.8 ug/L	1	ug/L	50.0	<1 ug/L	99.7	75-120		



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 06, 2024 16:02
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHA1135 - SW5030B-MS

Matrix Spike (BHA1135-MS1)	Source: 24A1575-01			Prepared & Analyzed: 01/31/2024					
trans-1,2-Dichloroethylene	47.3 ug/L	1	ug/L	50.0	<1 ug/L	94.6	60-140		
trans-1,3-Dichloropropene	51.1 ug/L	1	ug/L	50.0	<1 ug/L	102	55-140		
Trichloroethylene	52.8 ug/L	1	ug/L	50.0	<1 ug/L	106	70-125		
Trichlorofluoromethane	52.2 ug/L	1	ug/L	50.0	<1 ug/L	104	60-145		
Vinyl chloride	46.6 ug/L	0.5	ug/L	50.0	<0.5 ug/L	93.2	50-145		
Surr: 1,2-Dichloroethane-d4 (Surr)	48.9		ug/L	50.0	ug/L	97.8	70-120		
Surr: 4-Bromofluorobenzene (Surr)	47.6		ug/L	50.0	ug/L	95.2	75-120		
Surr: Dibromofluoromethane (Surr)	48.5		ug/L	50.0	ug/L	97.0	70-130		
Surr: Toluene-d8 (Surr)	49.2		ug/L	50.0	ug/L	98.3	70-130		



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Client Site I.D.: Alex Waterfront

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0132 - SW3510C/EPA600-MS

Blank (BHB0132-BLK1)

Prepared & Analyzed: 02/05/2024

1,2,4,5-Tetrachlorobenzene	<10.0 ug/L	10.0	ug/L
1,2,4-Trichlorobenzene	<10.0 ug/L	10.0	ug/L
1,2-Dichlorobenzene	<10.0 ug/L	10.0	ug/L
1,2-Diphenylhydrazine	<10.0 ug/L	10.0	ug/L
1,3-Dichlorobenzene	<10.0 ug/L	10.0	ug/L
1,3-Dinitrobenzene	<2.50 ug/L	2.50	ug/L
1,4-Dichlorobenzene	<10.0 ug/L	10.0	ug/L
1-Naphthylamine	<10.0 ug/L	10.0	ug/L
2,3,4,6-Tetrachlorophenol	<10.0 ug/L	10.0	ug/L
2,4,5-Trichlorophenol	<10.0 ug/L	10.0	ug/L
2,4,6-Trichlorophenol	<10.0 ug/L	10.0	ug/L
2,4-Dichlorophenol	<10.0 ug/L	10.0	ug/L
2,4-Dimethylphenol	<5.00 ug/L	5.00	ug/L
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L
2,4-Dinitrotoluene	<10.0 ug/L	10.0	ug/L
2,6-Dichlorophenol	<10.0 ug/L	10.0	ug/L
2,6-Dinitrotoluene	<10.0 ug/L	10.0	ug/L
2-Chloronaphthalene	<10.0 ug/L	10.0	ug/L
2-Chlorophenol	<10.0 ug/L	10.0	ug/L
2-Methylnaphthalene	<10.0 ug/L	10.0	ug/L
2-Naphthylamine	<10.0 ug/L	10.0	ug/L
2-Nitroaniline	<20.0 ug/L	20.0	ug/L
2-Nitrophenol	<10.0 ug/L	10.0	ug/L
3,3'-Dichlorobenzidine	<10.0 ug/L	10.0	ug/L
3-Methylcholanthrene	<10.0 ug/L	10.0	ug/L
3-Nitroaniline	<20.0 ug/L	20.0	ug/L
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L
4-Aminobiphenyl	<10.0 ug/L	10.0	ug/L
4-Bromophenyl phenyl ether	<10.0 ug/L	10.0	ug/L
4-Chloroaniline	<10.0 ug/L	10.0	ug/L
4-Chlorophenyl phenyl ether	<10.0 ug/L	10.0	ug/L



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0132 - SW3510C/EPA600-MS

Blank (BHB0132-BLK1)

Prepared & Analyzed: 02/05/2024

4-Nitroaniline	<20.0 ug/L	20.0	ug/L
4-Nitrophenol	<50.0 ug/L	50.0	ug/L
7,12-Dimethylbenz (a) anthracene	<10.0 ug/L	10.0	ug/L
Acenaphthene	<10.0 ug/L	10.0	ug/L
Acenaphthylene	<10.0 ug/L	10.0	ug/L
Acetophenone	<20.0 ug/L	20.0	ug/L
Aniline	<50.0 ug/L	50.0	ug/L
Anthracene	<10.0 ug/L	10.0	ug/L
Benzidine	<50.0 ug/L	50.0	ug/L
Benzo (a) anthracene	<10.0 ug/L	10.0	ug/L
Benzo (a) pyrene	<10.0 ug/L	10.0	ug/L
Benzo (b) fluoranthene	<10.0 ug/L	10.0	ug/L
Benzo (g,h,i) perylene	<10.0 ug/L	10.0	ug/L
Benzo (k) fluoranthene	<10.0 ug/L	10.0	ug/L
Benzoic acid	<50.0 ug/L	50.0	ug/L
Benzyl alcohol	<20.0 ug/L	20.0	ug/L
bis (2-Chloroethoxy) methane	<10.0 ug/L	10.0	ug/L
bis (2-Chloroethyl) ether	<10.0 ug/L	10.0	ug/L
2,2'-Oxybis (1-chloropropane)	<10.0 ug/L	10.0	ug/L
bis (2-Ethylhexyl) phthalate	<10.0 ug/L	10.0	ug/L
Butyl benzyl phthalate	<10.0 ug/L	10.0	ug/L
Chrysene	<10.0 ug/L	10.0	ug/L
Dibenz (a,h) anthracene	<10.0 ug/L	10.0	ug/L
Dibenz (a,j) acridine	<10.0 ug/L	10.0	ug/L
Dibenzofuran	<5.00 ug/L	5.00	ug/L
Diethyl phthalate	<10.0 ug/L	10.0	ug/L
Dimethyl phthalate	<10.0 ug/L	10.0	ug/L
Di-n-butyl phthalate	<10.0 ug/L	10.0	ug/L
Di-n-octyl phthalate	<10.0 ug/L	10.0	ug/L
Diphenylamine	<10.0 ug/L	10.0	ug/L
Ethyl methanesulfonate	<20.0 ug/L	20.0	ug/L



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9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0132 - SW3510C/EPA600-MS

Blank (BHB0132-BLK1)

Prepared & Analyzed: 02/05/2024

Fluoranthene	<10.0 ug/L	10.0	ug/L
Fluorene	<10.0 ug/L	10.0	ug/L
Hexachlorobenzene	<1.00 ug/L	1.00	ug/L
Hexachlorobutadiene	<10.0 ug/L	10.0	ug/L
Hexachlorocyclopentadiene	<10.0 ug/L	10.0	ug/L
Hexachloroethane	<10.0 ug/L	10.0	ug/L
Indeno (1,2,3-cd) pyrene	<10.0 ug/L	10.0	ug/L
Isophorone	<10.0 ug/L	10.0	ug/L
m+p-Cresols	<10.0 ug/L	10.0	ug/L
Methyl methanesulfonate	<10.0 ug/L	10.0	ug/L
Naphthalene	<5.00 ug/L	5.00	ug/L
Nitrobenzene	<10.0 ug/L	10.0	ug/L
n-Nitrosodimethylamine	<10.0 ug/L	10.0	ug/L
n-Nitrosodi-n-butylamine	<10.0 ug/L	10.0	ug/L
n-Nitrosodi-n-propylamine	<10.0 ug/L	10.0	ug/L
n-Nitrosodiphenylamine	<10.0 ug/L	10.0	ug/L
n-Nitrosopiperidine	<10.0 ug/L	10.0	ug/L
o+m+p-Cresols	<10.0 ug/L	10.0	ug/L
o-Cresol	<10.0 ug/L	10.0	ug/L
p-(Dimethylamino) azobenzene	<2.50 ug/L	2.50	ug/L
p-Chloro-m-cresol	<10.0 ug/L	10.0	ug/L
Pentachloronitrobenzene (quintozene)	<10.0 ug/L	10.0	ug/L
Pentachlorophenol	<20.0 ug/L	20.0	ug/L
Phenacetin	<10.0 ug/L	10.0	ug/L
Phenanthrene	<10.0 ug/L	10.0	ug/L
Phenol	<10.0 ug/L	10.0	ug/L
Pronamide	<10.0 ug/L	10.0	ug/L
Pyrene	<10.0 ug/L	10.0	ug/L
Pyridine	<10.0 ug/L	10.0	ug/L

Surr: 2,4,6-Tribromophenol (Surr)

26.9

ug/L

100

26.9

5-136

Surr: 2-Fluorobiphenyl (Surr)

13.0

ug/L

50.0

25.9

9-117



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0132 - SW3510C/EPA600-MS

Blank (BHB0132-BLK1)

Prepared & Analyzed: 02/05/2024

Surr: 2-Fluorophenol (Surr)	17.1	ug/L	100	17.1	5-60
Surr: Nitrobenzene-d5 (Surr)	14.8	ug/L	50.0	29.6	5-151
Surr: Phenol-d5 (Surr)	9.61	ug/L	100	9.61	5-60
Surr: p-Terphenyl-d14 (Surr)	30.2	ug/L	50.0	60.4	5-141

LCS (BHB0132-BS1)

Prepared & Analyzed: 02/05/2024

1,2,4-Trichlorobenzene	33.4 ug/L	10.0	ug/L	50.0	ug/L	66.8	57-130
1,2-Dichlorobenzene	26.3 ug/L	10.0	ug/L	50.0	ug/L	52.6	22-115
1,3-Dichlorobenzene	24.2 ug/L	10.0	ug/L	50.0	ug/L	48.4	22-112
1,4-Dichlorobenzene	29.5 ug/L	10.0	ug/L	50.0	ug/L	58.9	13-112
2,4,6-Trichlorophenol	48.0 ug/L	10.0	ug/L	50.0	ug/L	96.1	52-129
2,4-Dichlorophenol	39.2 ug/L	10.0	ug/L	50.0	ug/L	78.4	53-122
2,4-Dimethylphenol	35.8 ug/L	5.00	ug/L	50.0	ug/L	71.5	42-120
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	81.9	48-127
2,4-Dinitrotoluene	41.4 ug/L	10.0	ug/L	50.0	ug/L	82.8	10-173
2,6-Dinitrotoluene	33.2 ug/L	10.0	ug/L	50.0	ug/L	66.4	68-137
2-Chloronaphthalene	34.4 ug/L	10.0	ug/L	50.0	ug/L	68.8	65-120
2-Chlorophenol	30.7 ug/L	10.0	ug/L	50.0	ug/L	61.4	36-120
2-Nitrophenol	32.0 ug/L	10.0	ug/L	50.0	ug/L	63.9	45-167
3,3'-Dichlorobenzidine	35.9 ug/L	10.0	ug/L	50.0	ug/L	71.8	10-213
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	86.2	53-130
4-Bromophenyl phenyl ether	38.8 ug/L	10.0	ug/L	50.0	ug/L	77.6	65-120
4-Chlorophenyl phenyl ether	40.6 ug/L	10.0	ug/L	50.0	ug/L	81.1	38-145
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	30.2	13-129
Acenaphthene	36.4 ug/L	10.0	ug/L	50.0	ug/L	72.8	60-132
Acenaphthylene	37.6 ug/L	10.0	ug/L	50.0	ug/L	75.3	54-126
Acetophenone	36.5 ug/L	20.0	ug/L	50.0	ug/L	73.0	0-200
Anthracene	37.2 ug/L	10.0	ug/L	50.0	ug/L	74.4	43-120
Benzo (a) anthracene	41.2 ug/L	10.0	ug/L	50.0	ug/L	82.4	42-133
Benzo (a) pyrene	46.0 ug/L	10.0	ug/L	50.0	ug/L	91.9	32-148
Benzo (b) fluoranthene	48.3 ug/L	10.0	ug/L	50.0	ug/L	96.5	42-140
Benzo (g,h,i) perylene	32.8 ug/L	10.0	ug/L	50.0	ug/L	65.5	10-195



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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0132 - SW3510C/EPA600-MS

LCS (BHB0132-BS1)

Prepared & Analyzed: 02/05/2024

Benzo (k) fluoranthene	44.1 ug/L	10.0	ug/L	50.0	ug/L	88.2	25-146			
bis (2-Chloroethoxy) methane	31.3 ug/L	10.0	ug/L	50.0	ug/L	62.5	49-165			
bis (2-Chloroethyl) ether	28.6 ug/L	10.0	ug/L	50.0	ug/L	57.2	43-126			
2,2'-Oxybis (1-chloropropane)	29.1 ug/L	10.0	ug/L	50.0	ug/L	58.1	63-139			L
bis (2-Ethylhexyl) phthalate	29.7 ug/L	10.0	ug/L	50.0	ug/L	59.4	29-137			
Butyl benzyl phthalate	31.3 ug/L	10.0	ug/L	50.0	ug/L	62.6	10-140			
Chrysene	35.3 ug/L	10.0	ug/L	50.0	ug/L	70.6	44-140			
Dibenz (a,h) anthracene	41.8 ug/L	10.0	ug/L	50.0	ug/L	83.6	10-200			
Diethyl phthalate	43.4 ug/L	10.0	ug/L	50.0	ug/L	86.8	10-120			
Dimethyl phthalate	36.9 ug/L	10.0	ug/L	50.0	ug/L	73.7	10-120			
Di-n-butyl phthalate	45.9 ug/L	10.0	ug/L	50.0	ug/L	91.9	10-120			
Di-n-octyl phthalate	46.7 ug/L	10.0	ug/L	50.0	ug/L	93.4	19-132			
Fluoranthene	52.3 ug/L	10.0	ug/L	50.0	ug/L	105	43-121			
Fluorene	43.4 ug/L	10.0	ug/L	50.0	ug/L	86.8	70-120			
Hexachlorobenzene	37.0 ug/L	1.00	ug/L	50.0	ug/L	73.9	10-142			
Hexachlorobutadiene	40.1 ug/L	10.0	ug/L	50.0	ug/L	80.2	38-120			
Hexachlorocyclopentadiene	24.2 ug/L	10.0	ug/L	50.0	ug/L	48.4	10-76			
Hexachloroethane	30.6 ug/L	10.0	ug/L	50.0	ug/L	61.2	55-120			
Indeno (1,2,3-cd) pyrene	38.6 ug/L	10.0	ug/L	50.0	ug/L	77.2	10-151			
Isophorone	21.5 ug/L	10.0	ug/L	50.0	ug/L	43.0	47-180			L
Naphthalene	33.5 ug/L	5.00	ug/L	50.0	ug/L	67.1	36-120			
Nitrobenzene	39.5 ug/L	10.0	ug/L	50.0	ug/L	79.0	54-158			
n-Nitrosodimethylamine	15.4 ug/L	10.0	ug/L	50.0	ug/L	30.8	10-85			
n-Nitrosodi-n-propylamine	39.5 ug/L	10.0	ug/L	50.0	ug/L	78.9	14-198			
n-Nitrosodiphenylamine	34.8 ug/L	10.0	ug/L	50.0	ug/L	69.6	12-97			
p-Chloro-m-cresol	33.6 ug/L	10.0	ug/L	50.0	ug/L	67.1	10-142			
Pentachlorophenol	29.7 ug/L	20.0	ug/L	50.0	ug/L	59.4	38-152			
Phenanthrene	56.4 ug/L	10.0	ug/L	50.0	ug/L	113	65-120			
Phenol	13.3 ug/L	10.0	ug/L	50.5	ug/L	26.3	17-120			
Pyrene	34.1 ug/L	10.0	ug/L	50.0	ug/L	68.2	70-120			L
Pyridine	18.5 ug/L	10.0	ug/L	50.0	ug/L	37.0	10-103			



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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0132 - SW3510C/EPA600-MS

LCS (BHB0132-BS1)

Prepared & Analyzed: 02/05/2024

Surr: 2,4,6-Tribromophenol (Surr)	89.4	ug/L	100	ug/L	89.4	5-136
Surr: 2-Fluorobiphenyl (Surr)	39.2	ug/L	50.0	ug/L	78.4	9-117
Surr: 2-Fluorophenol (Surr)	32.8	ug/L	100	ug/L	32.8	5-60
Surr: Nitrobenzene-d5 (Surr)	38.9	ug/L	50.0	ug/L	77.8	5-151
Surr: Phenol-d5 (Surr)	29.7	ug/L	100	ug/L	29.7	5-60
Surr: p-Terphenyl-d14 (Surr)	33.8	ug/L	50.0	ug/L	67.6	5-141



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Semivolatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0043 - SW3510C/EPA600-FID

Blank (BHB0043-BLK1)

Prepared: 02/01/2024 Analyzed: 02/03/2024

TPH-Semi-Volatiles (DRO)	<0.500 mg/L	0.500	mg/L							
Surr: n-Triacontane (Surr)	0.182		mg/L	0.250		72.8	50-125			

LCS (BHB0043-BS1)

Prepared: 02/01/2024 Analyzed: 02/03/2024

TPH-Semi-Volatiles (DRO)	3.6 mg/L	0.500	mg/L	5.00	mg/L	72.8	70-130			
Surr: n-Triacontane (Surr)	0.164		mg/L	0.250	mg/L	65.8	50-125			



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Client Site I.D.: Alex Waterfront

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0070 - SW3510C/EPA600-ECD

Blank (BHB0070-BLK1)

Prepared & Analyzed: 02/02/2024

4,4'-DDD	<0.050 ug/L	0.050	ug/L
4,4'-DDE	<0.050 ug/L	0.050	ug/L
4,4'-DDT	<0.050 ug/L	0.050	ug/L
Aldrin	<0.050 ug/L	0.050	ug/L
alpha-BHC	<0.050 ug/L	0.050	ug/L
beta-BHC	<0.050 ug/L	0.050	ug/L
Chlordane	<0.200 ug/L	0.200	ug/L
delta-BHC	<0.050 ug/L	0.050	ug/L
Dieldrin	<0.050 ug/L	0.050	ug/L
Endosulfan I	<0.050 ug/L	0.050	ug/L
Endosulfan II	<0.050 ug/L	0.050	ug/L
Endosulfan sulfate	<0.050 ug/L	0.050	ug/L
Endrin	<0.050 ug/L	0.050	ug/L
Endrin aldehyde	<0.050 ug/L	0.050	ug/L
gamma-BHC (Lindane)	<0.050 ug/L	0.050	ug/L
Heptachlor	<0.050 ug/L	0.050	ug/L
Heptachlor epoxide	<0.050 ug/L	0.050	ug/L
Methoxychlor	<0.050 ug/L	0.050	ug/L
Toxaphene	<1.00 ug/L	1.00	ug/L

Surr: TCMX

0.196

ug/L

0.200

98.1

18-112

Surr: DCB

0.150

ug/L

0.200

75.2

27-131

Blank (BHB0070-BLK2)

Prepared & Analyzed: 02/02/2024

PCB as Aroclor 1016	<0.200 ug/L	0.200	ug/L
PCB as Aroclor 1221	<0.200 ug/L	0.200	ug/L
PCB as Aroclor 1232	<0.200 ug/L	0.200	ug/L
PCB as Aroclor 1242	<0.200 ug/L	0.200	ug/L
PCB as Aroclor 1248	<0.200 ug/L	0.200	ug/L
PCB as Aroclor 1254	<0.200 ug/L	0.200	ug/L
PCB as Aroclor 1260	<0.200 ug/L	0.200	ug/L

Surr: DCB

0.150

ug/L

0.200

75.2

30-105



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 06, 2024 16:02
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0070 - SW3510C/EPA600-ECD

Blank (BHB0070-BLK2)

Prepared & Analyzed: 02/02/2024

Surr: TCMX 0.196 ug/L 0.200 98.1 30-105

LCS (BHB0070-BS1)

Prepared & Analyzed: 02/02/2024

4,4'-DDD	0.079 ug/L	0.050	ug/L	0.100	ug/L	78.8	23-134
4,4'-DDE	0.087 ug/L	0.050	ug/L	0.100	ug/L	87.3	23-134
4,4'-DDT	0.072 ug/L	0.050	ug/L	0.100	ug/L	71.8	23-134
Aldrin	0.078 ug/L	0.050	ug/L	0.100	ug/L	78.0	23-134
alpha-BHC	0.081 ug/L	0.050	ug/L	0.100	ug/L	81.4	23-134
beta-BHC	0.072 ug/L	0.050	ug/L	0.100	ug/L	72.1	23-134
Chlordane	<0.200 ug/L	0.200	ug/L		ug/L		23-134
delta-BHC	0.084 ug/L	0.050	ug/L	0.100	ug/L	83.6	23-134
Dieldrin	0.079 ug/L	0.050	ug/L	0.100	ug/L	79.1	23-134
Endosulfan I	0.079 ug/L	0.050	ug/L	0.100	ug/L	79.4	23-134
Endosulfan II	0.076 ug/L	0.050	ug/L	0.100	ug/L	76.2	23-134
Endosulfan sulfate	0.091 ug/L	0.050	ug/L	0.100	ug/L	90.6	23-134
Endrin	0.085 ug/L	0.050	ug/L	0.100	ug/L	84.8	23-134
Endrin aldehyde	0.069 ug/L	0.050	ug/L	0.100	ug/L	69.2	23-134
gamma-BHC (Lindane)	0.079 ug/L	0.050	ug/L	0.100	ug/L	79.1	23-134
Heptachlor	0.077 ug/L	0.050	ug/L	0.100	ug/L	77.2	23-134
Heptachlor epoxide	0.076 ug/L	0.050	ug/L	0.100	ug/L	75.6	23-134
Methoxychlor	0.094 ug/L	0.050	ug/L	0.100	ug/L	94.5	23-134
Mirex	0.079 ug/L	0.050	ug/L	0.100	ug/L	79.4	23-134
Toxaphene	<1.00 ug/L	1.00	ug/L		ug/L		23-134

Surr: TCMX 0.174 ug/L 0.200 ug/L 87.2 18-112

Surr: DCB 0.168 ug/L 0.200 ug/L 84.2 27-131

LCS (BHB0070-BS2)

Prepared & Analyzed: 02/02/2024

PCB as Aroclor 1016	0.928 ug/L	0.200	ug/L	1.00	ug/L	92.8	70-130
PCB as Aroclor 1260	0.772 ug/L	0.200	ug/L	1.00	ug/L	77.2	70-130
Surr: DCB	0.179		ug/L	0.200	ug/L	89.5	30-105
Surr: TCMX	0.179		ug/L	0.200	ug/L	89.3	30-105



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Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 06, 2024 16:02
9201 Arboretum Parkway Suite 310 Project Number: 2202065001
Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0070 - SW3510C/EPA600-ECD

LCS (BHB0070-BS3)

Prepared & Analyzed: 02/02/2024

4,4'-DDD	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
4,4'-DDE	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
4,4'-DDT	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Aldrin	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
alpha-BHC	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
beta-BHC	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Chlordane	<0.200 ug/L	0.200	ug/L		ug/L		23-134			
delta-BHC	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Dieldrin	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Endosulfan I	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Endosulfan II	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Endosulfan sulfate	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Endrin	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Endrin aldehyde	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
gamma-BHC (Lindane)	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Heptachlor	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Heptachlor epoxide	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Methoxychlor	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Mirex	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Toxaphene	1.69 ug/L	1.00	ug/L	2.50	ug/L	67.6	23-134			
Surr: TCMX	0.191		ug/L	0.200	ug/L	95.5	18-112			
Surr: DCB	0.185		ug/L	0.200	ug/L	92.5	27-131			

LCS (BHB0070-BS4)

Prepared & Analyzed: 02/02/2024

4,4'-DDD	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
4,4'-DDE	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
4,4'-DDT	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Aldrin	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
alpha-BHC	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
beta-BHC	<0.050 ug/L	0.050	ug/L		ug/L		23-134			
Chlordane	1.61 ug/L	0.200	ug/L	2.50	ug/L	64.2	23-134			
delta-BHC	<0.050 ug/L	0.050	ug/L		ug/L		23-134			



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Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0070 - SW3510C/EPA600-ECD

LCS (BHB0070-BS4)

Prepared & Analyzed: 02/02/2024

Dieldrin	<0.050 ug/L	0.050	ug/L	ug/L	23-134
Endosulfan I	<0.050 ug/L	0.050	ug/L	ug/L	23-134
Endosulfan II	<0.050 ug/L	0.050	ug/L	ug/L	23-134
Endosulfan sulfate	<0.050 ug/L	0.050	ug/L	ug/L	23-134
Endrin	<0.050 ug/L	0.050	ug/L	ug/L	23-134
Endrin aldehyde	<0.050 ug/L	0.050	ug/L	ug/L	23-134
gamma-BHC (Lindane)	<0.050 ug/L	0.050	ug/L	ug/L	23-134
Heptachlor	<0.050 ug/L	0.050	ug/L	ug/L	23-134
Heptachlor epoxide	<0.050 ug/L	0.050	ug/L	ug/L	23-134
Methoxychlor	<0.050 ug/L	0.050	ug/L	ug/L	23-134
Mirex	<0.050 ug/L	0.050	ug/L	ug/L	23-134
Toxaphene	<1.00 ug/L	1.00	ug/L	ug/L	23-134
Surr: TCMX	0.177		ug/L	0.200 ug/L	88.4 18-112
Surr: DCB	0.155		ug/L	0.200 ug/L	77.5 27-131



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Final Report

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 06, 2024 16:02
	9201 Arboretum Parkway Suite 310	Project Number:	2202065001
	Richmond VA, 23236	Purchase Order:	2202065001
Submitted To:	Leo Snead		
Client Site I.D.:	Alex Waterfront		

Certified Analyses included in this Report

Analyte	Certifications
SW8015C in Non-Potable Water	
TPH-Semi-Volatiles (DRO)	VELAP,PADEP,NCDEQ,WVDEP
TPH-Volatiles (GRO)	VELAP,PADEP,NCDEQ,WVDEP
SW8081B in Non-Potable Water	
4,4'-DDD	VELAP,NCDEQ,WVDEP,PADEP
4,4'-DDE	VELAP,NCDEQ,WVDEP,PADEP
4,4'-DDT	VELAP,NCDEQ,WVDEP,PADEP
Aldrin	VELAP,NCDEQ,WVDEP,PADEP
alpha-BHC	VELAP,NCDEQ,WVDEP,PADEP
beta-BHC	VELAP,NCDEQ,WVDEP,PADEP
Chlordane	VELAP,NCDEQ,WVDEP,PADEP
delta-BHC	VELAP,NCDEQ,WVDEP,PADEP
Dieldrin	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan I	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan II	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan sulfate	VELAP,NCDEQ,WVDEP,PADEP
Endrin	VELAP,NCDEQ,WVDEP,PADEP
Endrin aldehyde	VELAP,NCDEQ,WVDEP,PADEP
gamma-BHC (Lindane)	VELAP,NCDEQ,WVDEP,PADEP
Heptachlor	VELAP,NCDEQ,WVDEP,PADEP
Heptachlor epoxide	VELAP,NCDEQ,WVDEP,PADEP
Methoxychlor	VELAP,NCDEQ,WVDEP,PADEP
Toxaphene	VELAP,NCDEQ,WVDEP,PADEP
SW8082A in Non-Potable Water	
PCB as Aroclor 1016	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1221	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1232	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1242	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1248	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1254	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1260	VELAP,PADEP,NCDEQ,WVDEP
SW8260D in Non-Potable Water	
1,1,1,2-Tetrachloroethane	VELAP,NCDEQ,PADEP,WVDEP
1,1,1-Trichloroethane	VELAP,NCDEQ,PADEP,WVDEP
1,1,2,2-Tetrachloroethane	VELAP,NCDEQ,PADEP,WVDEP
1,1,2-Trichloroethane	VELAP,NCDEQ,PADEP,WVDEP
1,1-Dichloroethane	VELAP,NCDEQ,PADEP,WVDEP



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Certified Analyses included in this Report

Analyte	Certifications
1,1-Dichloroethylene	VELAP,NCDEQ,PADEP,WVDEP
1,1-Dichloropropene	VELAP,NCDEQ,PADEP,WVDEP
1,2,3-Trichlorobenzene	VELAP,NCDEQ,PADEP,WVDEP
1,2,3-Trichloropropane	VELAP,NCDEQ,PADEP,WVDEP
1,2,4-Trichlorobenzene	VELAP,NCDEQ,PADEP,WVDEP
1,2,4-Trimethylbenzene	VELAP,NCDEQ,PADEP,WVDEP
1,2-Dibromo-3-chloropropane (DBCP)	VELAP,NCDEQ,PADEP,WVDEP
1,2-Dibromoethane (EDB)	VELAP,NCDEQ,PADEP,WVDEP
1,2-Dichlorobenzene	VELAP,NCDEQ,PADEP,WVDEP
1,2-Dichloroethane	VELAP,NCDEQ,PADEP,WVDEP
1,2-Dichloropropane	VELAP,NCDEQ,PADEP,WVDEP
1,3,5-Trimethylbenzene	VELAP,NCDEQ,PADEP,WVDEP
1,3-Dichlorobenzene	VELAP,NCDEQ,PADEP,WVDEP
1,3-Dichloropropane	VELAP,NCDEQ,PADEP,WVDEP
1,4-Dichlorobenzene	VELAP,NCDEQ,PADEP,WVDEP
2,2-Dichloropropane	VELAP,NCDEQ,PADEP,WVDEP
2-Butanone (MEK)	VELAP,NCDEQ,PADEP,WVDEP
2-Chlorotoluene	VELAP,NCDEQ,PADEP,WVDEP
2-Hexanone (MBK)	VELAP,NCDEQ,PADEP,WVDEP
4-Chlorotoluene	VELAP,NCDEQ,PADEP,WVDEP
4-Isopropyltoluene	VELAP,NCDEQ,PADEP,WVDEP
4-Methyl-2-pentanone (MIBK)	VELAP,NCDEQ,PADEP,WVDEP
Acetone	VELAP,NCDEQ,PADEP,WVDEP
Benzene	VELAP,NCDEQ,PADEP,WVDEP
Bromobenzene	VELAP,NCDEQ,PADEP,WVDEP
Bromochloromethane	VELAP,NCDEQ,PADEP,WVDEP
Bromodichloromethane	VELAP,NCDEQ,PADEP,WVDEP
Bromoform	VELAP,NCDEQ,PADEP,WVDEP
Bromomethane	VELAP,NCDEQ,PADEP,WVDEP
Carbon disulfide	VELAP,NCDEQ,PADEP,WVDEP
Carbon tetrachloride	VELAP,NCDEQ,PADEP,WVDEP
Chlorobenzene	VELAP,NCDEQ,PADEP,WVDEP
Chloroethane	VELAP,NCDEQ,PADEP,WVDEP
Chloroform	VELAP,NCDEQ,PADEP,WVDEP
Chloromethane	VELAP,NCDEQ,PADEP,WVDEP
cis-1,2-Dichloroethylene	VELAP,NCDEQ,PADEP,WVDEP
cis-1,3-Dichloropropene	VELAP,NCDEQ,PADEP,WVDEP
Dibromochloromethane	VELAP,NCDEQ,PADEP,WVDEP



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Certified Analyses included in this Report

Analyte	Certifications
Dibromomethane	VELAP,NCDEQ,PADEP,WVDEP
Dichlorodifluoromethane	VELAP,NCDEQ,PADEP,WVDEP
Di-isopropyl ether (DIPE)	VELAP,NCDEQ,PADEP,WVDEP
Ethylbenzene	VELAP,NCDEQ,PADEP,WVDEP
Hexachlorobutadiene	VELAP,NCDEQ,PADEP,WVDEP
Iodomethane	VELAP,NCDEQ,PADEP,WVDEP
Isopropylbenzene	VELAP,NCDEQ,PADEP,WVDEP
m+p-Xylenes	VELAP,NCDEQ,PADEP,WVDEP
Methylene chloride	VELAP,NCDEQ,PADEP,WVDEP
Methyl-t-butyl ether (MTBE)	VELAP,NCDEQ,PADEP,WVDEP
Naphthalene	VELAP,NCDEQ,PADEP,WVDEP
n-Butylbenzene	VELAP,NCDEQ,PADEP,WVDEP
n-Propylbenzene	VELAP,NCDEQ,PADEP,WVDEP
o-Xylene	VELAP,NCDEQ,PADEP,WVDEP
sec-Butylbenzene	VELAP,NCDEQ,PADEP,WVDEP
Styrene	VELAP,NCDEQ,PADEP,WVDEP
tert-Butylbenzene	VELAP,NCDEQ,PADEP,WVDEP
Tetrachloroethylene (PCE)	VELAP,NCDEQ,PADEP,WVDEP
Toluene	VELAP,NCDEQ,PADEP,WVDEP
trans-1,2-Dichloroethylene	VELAP,NCDEQ,PADEP,WVDEP
trans-1,3-Dichloropropene	VELAP,NCDEQ,PADEP,WVDEP
Trichloroethylene	VELAP,NCDEQ,PADEP,WVDEP
Trichlorofluoromethane	VELAP,NCDEQ,PADEP,WVDEP
Vinyl acetate	VELAP,NCDEQ,PADEP,WVDEP
Vinyl chloride	VELAP,NCDEQ,PADEP,WVDEP
Xylenes, Total	VELAP,NCDEQ,PADEP,WVDEP
SW8270E in Non-Potable Water	
1,2,4,5-Tetrachlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2,4-Trichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2-Diphenylhydrazine	NCDEQ,WVDEP,VELAP,PADEP
1,3-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,3-Dinitrobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,4-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1-Naphthylamine	NCDEQ,WVDEP,VELAP,PADEP
2,3,4,6-Tetrachlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4,5-Trichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4,6-Trichlorophenol	NCDEQ,WVDEP,VELAP,PADEP



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Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Certified Analyses included in this Report

Analyte	Certifications
2,4-Dichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dimethylphenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dinitrophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dinitrotoluene	NCDEQ,WVDEP,VELAP,PADEP
2,6-Dichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,6-Dinitrotoluene	NCDEQ,WVDEP,VELAP,PADEP
2-Chloronaphthalene	NCDEQ,WVDEP,VELAP,PADEP
2-Chlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2-Methylnaphthalene	NCDEQ,WVDEP,VELAP,PADEP
2-Naphthylamine	NCDEQ,WVDEP,VELAP,PADEP
2-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
2-Nitrophenol	NCDEQ,WVDEP,VELAP,PADEP
3,3'-Dichlorobenzidine	NCDEQ,WVDEP,VELAP,PADEP
3-Methylcholanthrene	NCDEQ,WVDEP,VELAP,PADEP
3-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
4,6-Dinitro-2-methylphenol	NCDEQ,WVDEP,VELAP,PADEP
4-Aminobiphenyl	NCDEQ,WVDEP,VELAP,PADEP
4-Bromophenyl phenyl ether	NCDEQ,WVDEP,VELAP,PADEP
4-Chloroaniline	NCDEQ,WVDEP,VELAP,PADEP
4-Chlorophenyl phenyl ether	NCDEQ,WVDEP,VELAP,PADEP
4-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
4-Nitrophenol	NCDEQ,WVDEP,VELAP,PADEP
7,12-Dimethylbenz (a) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Acenaphthene	NCDEQ,WVDEP,VELAP,PADEP
Acenaphthylene	NCDEQ,WVDEP,VELAP,PADEP
Acetophenone	NCDEQ,WVDEP,VELAP,PADEP
Aniline	NCDEQ,WVDEP,VELAP,PADEP
Anthracene	NCDEQ,WVDEP,VELAP,PADEP
Benzidine	NCDEQ,WVDEP,VELAP,PADEP
Benzo (a) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (a) pyrene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (b) fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (g,h,i) perylene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (k) fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Benzoic acid	NCDEQ,WVDEP,VELAP,PADEP
Benzyl alcohol	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Chloroethoxy) methane	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Chloroethyl) ether	NCDEQ,WVDEP,VELAP,PADEP



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Purchase Order: 2202065001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Certified Analyses included in this Report

Analyte	Certifications
2,2'-Oxybis (1-chloropropane)	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Ethylhexyl) phthalate	NCDEQ,WVDEP,VELAP,PADEP
Butyl benzyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Chrysene	NCDEQ,WVDEP,VELAP,PADEP
Dibenz (a,h) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Dibenz (a,j) acridine	NCDEQ,WVDEP,VELAP,PADEP
Dibenzofuran	NCDEQ,WVDEP,VELAP,PADEP
Diethyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Dimethyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Di-n-butyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Di-n-octyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Diphenylamine	NCDEQ,WVDEP,VELAP,PADEP
Ethyl methanesulfonate	NCDEQ,WVDEP,VELAP,PADEP
Fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Fluorene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorobutadiene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorocyclopentadiene	NCDEQ,WVDEP,VELAP,PADEP
Hexachloroethane	NCDEQ,WVDEP,VELAP,PADEP
Indeno (1,2,3-cd) pyrene	NCDEQ,WVDEP,VELAP,PADEP
Isophorone	NCDEQ,WVDEP,VELAP,PADEP
m+p-Cresols	NCDEQ,WVDEP,VELAP,PADEP
Methyl methanesulfonate	NCDEQ,WVDEP,VELAP,PADEP
Naphthalene	NCDEQ,WVDEP,VELAP,PADEP
Nitrobenzene	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodimethylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodi-n-butylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodi-n-propylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodiphenylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosopiperidine	NCDEQ,WVDEP,VELAP,PADEP
o+m+p-Cresols	NCDEQ,WVDEP,VELAP
o-Cresol	NCDEQ,WVDEP,VELAP,PADEP
p-(Dimethylamino) azobenzene	NCDEQ,WVDEP,VELAP,PADEP
p-Chloro-m-cresol	NCDEQ,WVDEP,VELAP,PADEP
Pentachloronitrobenzene (quintozene)	NCDEQ,WVDEP,VELAP,PADEP
Pentachlorophenol	NCDEQ,WVDEP,VELAP,PADEP
Phenacetin	NCDEQ,WVDEP,VELAP,PADEP
Phenanthrene	NCDEQ,WVDEP,VELAP,PADEP



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 06, 2024 16:02
Project Number: 2202065001
Purchase Order: 2202065001

Certified Analyses included in this Report

Analyte		Certifications	
Phenol		NCDEQ,WVDEP,VELAP,PADEP	
Pronamide		NCDEQ,WVDEP,VELAP,PADEP	
Pyrene		NCDEQ,WVDEP,VELAP,PADEP	
Pyridine		NCDEQ,WVDEP,VELAP,PADEP	
Code	Description	Laboratory ID	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2024
NCDEQ	North Carolina DEQ	495	12/31/2024
NCDOH	North Carolina Department of Health	51714	07/31/2024
NYDOH	New York DOH Drinking Water	12069	04/01/2024
PADEP	NELAP-Pennsylvania Certificate #009	68-03503	10/31/2024
SCDHEC	South Carolina Dept of Health and Environmental	93016	06/14/2024
TXCEQ	Texas Comm on Environmental Quality #T104704	T104704576	05/31/2024
VELAP	NELAP-Virginia Certificate #12617	460021	06/14/2024
WVDEP	West Virginia DEP	350	11/30/2024



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Certificate of Analysis

Final Report

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 06, 2024 16:02
	9201 Arboretum Parkway Suite 310	Project Number:	2202065001
	Richmond VA, 23236	Purchase Order:	2202065001
Submitted To:	Leo Snead		
Client Site I.D.:	Alex Waterfront		

Summary of Data Qualifiers

L LCS recovery is outside of established acceptance limits

S Surrogate recovery was outside acceptance criteria

RPD Relative Percent Difference

Qual Qualifiers

-RE Denotes sample was re-analyzed

D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.

TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.

PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: <u>JMT</u>			INVOICE TO: <u>JMT</u>			PROJECT NAME/Quote #: <u>Alex Waterfront</u>		
CONTACT: <u>LED SNEAD</u>			INVOICE CONTACT:			SITE NAME: <u>Alex Waterfront</u>		
ADDRESS: <u>Richmond VA</u>			INVOICE ADDRESS:			PROJECT NUMBER: <u>22 02065 001</u>		
PHONE #: <u>804 539 4964</u>			INVOICE PHONE #:			P.O. #: <u>22 02065 001</u>		
FAX #:		EMAIL: <u>LSNEAD@JMT.COM</u>				Pretreatment Program:		
Is sample for compliance reporting? YES ☐ NO ☒			Regulatory State: <u>VA</u>			Is sample from a chlorinated supply? YES ☐ NO ☒		
PWS I.D. #:			SAMPLER NAME (PRINT): <u>SLT</u>			SAMPLER SIGNATURE: <u>Gachins Mook</u>		
						Turn Around Time: Circle 10 <u>5</u> Days or Day(s)		
Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other								COMMENTS

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)						Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol
											GR0 8015	VOC 8260	Metals TAL	DRO 8015	SUOCs 8210	Pest / PCB	
1) <u>P23-MW #1</u>	<u>X</u>					<u>11/29</u>	<u>945</u>		<u>GW</u>	<u>7</u>	<u>✓</u>	<u>✓</u>	<u>11</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	
2) <u>P5-MW #2</u>	<u>X</u>					<u>11/29</u>	<u>1040</u>		<u>GW</u>	<u>7</u>	<u>✓</u>	<u>✓</u>	<u>11</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	
3)																	
4)																	
5)																	
6)																	
7)																	
8)																	
9)																	
10)																	

RELINQUISHED: <u>[Signature]</u>	DATE / TIME: <u>11/30/24 1516</u>	RECEIVED: <u>[Signature]</u>	DATE / TIME: <u>11/30/24 1316</u>	QC Data Package	LAB USE ONLY Therm ID: <u>338</u>	COOLER TEMP <u>3.1</u> °C
				Custody Seals used and intact? (Y/N) <u>(Y)</u>	Received on ice? (Y/N) <u>(Y)</u>	
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level III ☐	JMT-Richmond VA 24A1708 Alexandria - GW Recd: 01/30/2024 Due: 02/06/2024	
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level IV ☐		

Order ID **24A1708**

Date Performed: 1/30/24

Analyst Performing Check: HEB

[illegible]

NaOH ID: _____ HNO₃ ID: _____ CrVI preserved date/time: _____ Analyst Initials: _____
 * pH must be adjusted between 9.3 - 9.7
 H₂SO₄ ID: _____ Na₂S₂O₃ ID: _____ Ammonia Buffer Sol'n ID: _____
 HCL ID: _____ Na₂SO₃ ID: _____ 5N NaOH ID: _____



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Certificate of Analysis

Final Report

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 06, 2024 16:02
	9201 Arboretum Parkway Suite 310	Project Number:	2202065001
	Richmond VA, 23236	Purchase Order:	2202065001
Submitted To:	Leo Snead		
Client Site I.D.:	Alex Waterfront		

Sample Conditions Checklist

Samples Received at:	3.10°C
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits or received on ice, and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	Yes
Are all volatile organic and TOX containers free of headspace?	Yes
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	Yes
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis. In addition, field parameters are always received outside holding time and will be marked accordingly.	Yes

TAL metals not required per Garry Moore at drop-off. MRS 01/30/24 1330

Trip blanks were added to the work order per the bottle labels (11/21/23 1630). Leo Snead notified via email. MRS 01/30/24 1601



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Certificate of Analysis

Final Report

Laboratory Order ID 24B0351

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmond, VA	Date Received:	February 7, 2024 13:06
	9201 Arboretum Parkway Suite 310	Date Issued:	February 14, 2024 17:03
	Richmond, VA 23236	Project Number:	22-02065.001
Submitted To:	Leo Snead	Purchase Order:	22 02065 001
Client Site I.D.:	Alex Waterfront		

Enclosed are the results of analyses for samples received by the laboratory on 02/07/2024 13:06. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads 'Ted Soyars'.

Ted Soyars
Technical Director

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Enthalpy Analytical.





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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 14, 2024 17:03
9201 Arboretum Parkway Suite 310 Project Number: 22-02065.001
Purchase Order: 22 02065 001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 24B0351

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW #1	24B0351-01	Ground Water	02/06/2024 09:50	02/07/2024 13:06
MW #2	24B0351-02	Ground Water	02/06/2024 14:20	02/07/2024 13:06
Composite #1	24B0351-03	Solids	02/06/2024 15:00	02/07/2024 13:06



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. MW #1

Laboratory Sample ID: 24B0351-01

Grab Date/Time: 02/06/2024 09:50

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Dissolved) by EPA 6000/7000 Series Methods									
Silver, Dissolved	01	SW6010D	<0.0100 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:17	ACM
Aluminum, Dissolved	01	SW6010D	<0.100 mg/L		0.100	1	02/09/24 11:48	02/13/24 14:17	ACM
Arsenic, Dissolved	01	SW6020B	14.8 ug/L		1.00	1	02/09/24 11:45	02/12/24 09:55	AB
Barium, Dissolved	01	SW6010D	0.0847 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:17	ACM
Beryllium, Dissolved	01	SW6010D	<0.0040 mg/L		0.0040	1	02/09/24 11:48	02/13/24 14:17	ACM
Calcium, Dissolved	01RE1	SW6010D	149 mg/L		0.250	5	02/09/24 11:48	02/13/24 15:10	ACM
Cadmium, Dissolved	01	SW6010D	<0.0040 mg/L		0.0040	1	02/09/24 11:48	02/13/24 14:17	ACM
Cobalt, Dissolved	01	SW6010D	<0.0040 mg/L		0.0040	1	02/09/24 11:48	02/13/24 14:17	ACM
Chromium, Dissolved	01	SW6010D	<0.0100 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:17	ACM
Copper, Dissolved	01	SW6010D	<0.0100 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:17	ACM
Iron, Dissolved	01	SW6010D	1.58 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:17	ACM
Mercury, Dissolved	01	SW7470A	<0.0002 mg/L		0.0002	1	02/13/24 09:00	02/13/24 14:41	NBT
Potassium, Dissolved	01	SW6010D	9.00 mg/L		0.50	1	02/09/24 11:48	02/13/24 14:17	ACM
Magnesium, Dissolved	01	SW6010D	11.4 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:17	ACM
Manganese, Dissolved	01	SW6010D	0.188 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:17	ACM
Sodium, Dissolved	01	SW6010D	74.7 mg/L		0.50	1	02/09/24 11:48	02/13/24 14:17	ACM
Nickel, Dissolved	01	SW6010D	<0.0100 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:17	ACM
Lead, Dissolved	01	SW6020B	1.06 ug/L		1.00	1	02/09/24 11:45	02/12/24 09:55	AB
Antimony, Dissolved	01	SW6020B	1.40 ug/L		1.00	1	02/09/24 11:45	02/12/24 09:55	AB
Selenium, Dissolved	01	SW6020B	<1.00 ug/L		1.00	1	02/09/24 11:45	02/12/24 09:55	AB
Thallium, Dissolved	01	SW6020B	<1.00 ug/L		1.00	1	02/09/24 11:45	02/12/24 09:55	AB
Vanadium, Dissolved	01	SW6010D	<0.0100 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:17	ACM
Zinc, Dissolved	01	SW6010D	<0.0100 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:17	ACM



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. MW #2

Laboratory Sample ID: 24B0351-02

Grab Date/Time: 02/06/2024 14:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Dissolved) by EPA 6000/7000 Series Methods									
Silver, Dissolved	02	SW6010D	<0.0100 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:26	ACM
Aluminum, Dissolved	02	SW6010D	<0.100 mg/L		0.100	1	02/09/24 11:48	02/13/24 14:26	ACM
Arsenic, Dissolved	02	SW6020B	1.13 ug/L		1.00	1	02/09/24 11:45	02/12/24 10:04	AB
Barium, Dissolved	02	SW6010D	0.219 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:26	ACM
Beryllium, Dissolved	02	SW6010D	<0.0040 mg/L		0.0040	1	02/09/24 11:48	02/13/24 14:26	ACM
Calcium, Dissolved	02RE1	SW6010D	158 mg/L		0.250	5	02/09/24 11:48	02/13/24 15:15	ACM
Cadmium, Dissolved	02	SW6010D	<0.0040 mg/L		0.0040	1	02/09/24 11:48	02/13/24 14:26	ACM
Cobalt, Dissolved	02	SW6010D	<0.0040 mg/L		0.0040	1	02/09/24 11:48	02/13/24 14:26	ACM
Chromium, Dissolved	02	SW6010D	<0.0100 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:26	ACM
Copper, Dissolved	02	SW6010D	<0.0100 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:26	ACM
Iron, Dissolved	02	SW6010D	12.3 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:26	ACM
Mercury, Dissolved	02	SW7470A	<0.0002 mg/L		0.0002	1	02/13/24 09:00	02/13/24 14:44	NBT
Potassium, Dissolved	02	SW6010D	29.5 mg/L		0.50	1	02/09/24 11:48	02/13/24 14:26	ACM
Magnesium, Dissolved	02	SW6010D	19.2 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:26	ACM
Manganese, Dissolved	02	SW6010D	0.959 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:26	ACM
Sodium, Dissolved	02	SW6010D	84.6 mg/L		0.50	1	02/09/24 11:48	02/13/24 14:26	ACM
Nickel, Dissolved	02	SW6010D	<0.0100 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:26	ACM
Lead, Dissolved	02	SW6020B	<1.00 ug/L		1.00	1	02/09/24 11:45	02/12/24 10:04	AB
Antimony, Dissolved	02	SW6020B	<1.00 ug/L		1.00	1	02/09/24 11:45	02/12/24 10:04	AB
Selenium, Dissolved	02	SW6020B	<1.00 ug/L		1.00	1	02/09/24 11:45	02/12/24 10:04	AB
Thallium, Dissolved	02	SW6020B	<1.00 ug/L		1.00	1	02/09/24 11:45	02/12/24 10:04	AB
Vanadium, Dissolved	02	SW6010D	<0.0100 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:26	ACM
Zinc, Dissolved	02	SW6010D	0.0710 mg/L		0.0100	1	02/09/24 11:48	02/13/24 14:26	ACM



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03	SW6010D	<0.985 mg/kg dry		0.985	2	02/08/24 10:45	02/13/24 16:21	ACM
Arsenic	03	SW6010D	2.21 mg/kg dry		1.97	2	02/08/24 10:45	02/13/24 16:21	ACM
Barium	03	SW6010D	44.6 mg/kg dry		0.985	2	02/08/24 10:45	02/13/24 16:21	ACM
Cadmium	03	SW6010D	<0.394 mg/kg dry		0.394	2	02/08/24 10:45	02/13/24 16:21	ACM
Chromium	03	SW6010D	8.71 mg/kg dry		0.985	2	02/08/24 10:45	02/13/24 16:21	ACM
Mercury	03	SW7471B	0.117 mg/kg dry		0.008	1	02/12/24 10:37	02/12/24 14:07	NBT
Lead	03	SW6010D	18.0 mg/kg dry		0.985	2	02/08/24 10:45	02/13/24 16:21	ACM
Antimony	03	SW6010D	<9.85 mg/kg		9.85	2	02/08/24 10:45	02/13/24 16:21	ACM
Selenium	03	SW6010D	<4.93 mg/kg dry		4.93	2	02/08/24 10:45	02/13/24 16:21	ACM
Titanium	03	SW6010D	71.6 mg/kg		9.85	2	02/08/24 10:45	02/13/24 16:21	ACM
Vanadium	03	SW6010D	10.2 mg/kg dry		0.985	2	02/08/24 10:45	02/13/24 16:21	ACM
Zinc	03RE1	SW6010D	54.2 mg/kg dry		4.93	10	02/08/24 10:45	02/13/24 16:38	ACM

TCLP Metals by 6000/7000 Series Methods

TCLP Silver	03	SW6010D	<0.100 mg/L		0.100	1	02/09/24 09:30	02/09/24 14:24	AB
TCLP Arsenic	03	SW6010D	<0.100 mg/L		0.100	1	02/09/24 09:30	02/09/24 14:24	AB
TCLP Barium	03	SW6010D	<5.00 mg/L		5.00	1	02/09/24 09:30	02/09/24 14:24	AB
TCLP Cadmium	03	SW6010D	<0.0400 mg/L		0.0400	1	02/09/24 09:30	02/09/24 14:24	AB
TCLP Chromium	03	SW6010D	<0.100 mg/L		0.100	1	02/09/24 09:30	02/09/24 14:24	AB
TCLP Mercury	03	SW7470A	<0.008 mg/L		0.008	1	02/12/24 08:47	02/12/24 13:31	NBT
TCLP Lead	03	SW6010D	<0.100 mg/L		0.100	1	02/09/24 09:30	02/09/24 14:24	AB
TCLP Selenium	03	SW6010D	<0.250 mg/L		0.250	1	02/09/24 09:30	02/09/24 14:24	AB
TCLP Extraction Fluid, Metals	03	SW1311	1 #		--	1	02/08/24 15:45	02/08/24 15:45	SCB

TCLP Volatile Organic Compounds by GCMS

TCLP Extraction Fluid, ZHE	03	SW1311	1 #		--	1	02/12/24 14:30	02/13/24 10:38	RJB
TCLP 1,1-Dichloroethylene	03	SW8260D	<0.02 mg/L		0.02	1	02/13/24 00:00	02/13/24 12:43	RJB



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Volatile Organic Compounds by GCMS									
TCLP 1,2-Dichloroethane	03	SW8260D	<0.02 mg/L		0.02	1	02/13/24 00:00	02/13/24 12:43	RJB
TCLP 1,4-Dichlorobenzene	03	SW8260D	<0.02 mg/L		0.02	1	02/13/24 00:00	02/13/24 12:43	RJB
TCLP 2-Butanone (MEK)	03	SW8260D	<0.20 mg/L		0.20	1	02/13/24 00:00	02/13/24 12:43	RJB
TCLP Benzene	03	SW8260D	<0.05 mg/L		0.05	1	02/13/24 00:00	02/13/24 12:43	RJB
TCLP Carbon tetrachloride	03	SW8260D	<0.02 mg/L		0.02	1	02/13/24 00:00	02/13/24 12:43	RJB
TCLP Chlorobenzene	03	SW8260D	<0.02 mg/L		0.02	1	02/13/24 00:00	02/13/24 12:43	RJB
TCLP Chloroform	03	SW8260D	<0.02 mg/L		0.02	1	02/13/24 00:00	02/13/24 12:43	RJB
TCLP Tetrachloroethylene (PCE)	03	SW8260D	<0.05 mg/L		0.05	1	02/13/24 00:00	02/13/24 12:43	RJB
TCLP Trichloroethylene	03	SW8260D	<0.02 mg/L		0.02	1	02/13/24 00:00	02/13/24 12:43	RJB
TCLP Vinyl chloride	03	SW8260D	<0.02 mg/L		0.02	1	02/13/24 00:00	02/13/24 12:43	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	03	SW8260D	97.2 %		70-120		02/13/24 00:00	02/13/24 12:43	RJB
Surr: 4-Bromofluorobenzene (Surr)	03	SW8260D	100 %		75-120		02/13/24 00:00	02/13/24 12:43	RJB
Surr: Dibromofluoromethane (Surr)	03	SW8260D	100 %		80-119		02/13/24 00:00	02/13/24 12:43	RJB
Surr: Toluene-d8 (Surr)	03	SW8260D	98.9 %		85-120		02/13/24 00:00	02/13/24 12:43	RJB
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	03	SW8015C	2.71 mg/kg dry		0.10	1	02/09/24 18:31	02/09/24 18:31	JWR
Surr: 2,5-Dibromotoluene (Surr FID)	03	SW8015C	995 %	S	80-120		02/09/24 18:31	02/09/24 18:31	JWR
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,1,1-Trichloroethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,1,2,2-Tetrachloroethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH



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Certificate of Analysis

Final Report

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Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,1,2-Trichloroethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,1-Dichloroethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,1-Dichloroethylene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,1-Dichloropropene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,2,3-Trichlorobenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,2,3-Trichloropropane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,2,4-Trichlorobenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,2,4-Trimethylbenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,2-Dibromo-3-chloropropane (DBCP)	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,2-Dibromoethane (EDB)	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,2-Dichlorobenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,2-Dichloroethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,2-Dichloropropane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,3,5-Trimethylbenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,3-Dichlorobenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,3-Dichloropropane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
1,4-Dichlorobenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
2,2-Dichloropropane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
2-Butanone (MEK)	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
2-Chlorotoluene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
2-Hexanone (MBK)	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
4-Chlorotoluene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
4-Isopropyltoluene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
4-Methyl-2-pentanone (MIBK)	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Acetone	03	SW8260D	70.6 ug/kg dry		48.5	1	02/08/24 15:03	02/08/24 15:03	TLH



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Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Benzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Bromobenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Bromochloromethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Bromodichloromethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Bromoform	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Bromomethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Carbon disulfide	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Carbon tetrachloride	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Chlorobenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Chloroethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Chloroform	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Chloromethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
cis-1,2-Dichloroethylene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
cis-1,3-Dichloropropene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Dibromochloromethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Dibromomethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Dichlorodifluoromethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Di-isopropyl ether (DIPE)	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Ethylbenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Hexachlorobutadiene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Iodomethane	03	SW8260D	<48.5 ug/kg dry		48.5	1	02/08/24 15:03	02/08/24 15:03	TLH
Isopropylbenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
m+p-Xylenes	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Methylene chloride	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Methyl-t-butyl ether (MTBE)	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Naphthalene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH



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Certificate of Analysis

Final Report

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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
n-Butylbenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
n-Propylbenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
o-Xylene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
sec-Butylbenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Styrene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
tert-Butylbenzene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Tetrachloroethylene (PCE)	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Toluene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
trans-1,2-Dichloroethylene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
trans-1,3-Dichloropropene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Trichloroethylene	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Trichlorofluoromethane	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Vinyl acetate	03	SW8260D	<48.5 ug/kg dry		48.5	1	02/08/24 15:03	02/08/24 15:03	TLH
Vinyl chloride	03	SW8260D	<24.3 ug/kg dry		24.3	1	02/08/24 15:03	02/08/24 15:03	TLH
Xylenes, Total	03	SW8260D	<72.8 ug/kg dry		72.8	1	02/08/24 15:03	02/08/24 15:03	TLH
Surr: 1,2-Dichloroethane-d4 (Surr)	03	SW8260D	93.9 %		80-120		02/08/24 15:03	02/08/24 15:03	TLH
Surr: 4-Bromofluorobenzene (Surr)	03	SW8260D	101 %		85-120		02/08/24 15:03	02/08/24 15:03	TLH
Surr: Dibromofluoromethane (Surr)	03	SW8260D	93.2 %		80-130		02/08/24 15:03	02/08/24 15:03	TLH
Surr: Toluene-d8 (Surr)	03	SW8260D	95.7 %		85-115		02/08/24 15:03	02/08/24 15:03	TLH
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
1,2,4-Trichlorobenzene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
1,2-Dichlorobenzene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS



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Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2-Diphenylhydrazine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
1,3-Dichlorobenzene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
1,3-Dinitrobenzene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
1,4-Dichlorobenzene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
1-Chloronaphthalene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
1-Naphthylamine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2,3,4,6-Tetrachlorophenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2,4,5-Trichlorophenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2,4,6-Trichlorophenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2,4-Dichlorophenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2,4-Dimethylphenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2,4-Dinitrophenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2,4-Dinitrotoluene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2,6-Dichlorophenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2,6-Dinitrotoluene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2-Chloronaphthalene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2-Chlorophenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2-Methylnaphthalene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2-Naphthylamine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2-Nitroaniline	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2-Nitrophenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
3,3'-Dichlorobenzidine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
3-Methylcholanthrene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
3-Nitroaniline	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
4,6-Dinitro-2-methylphenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
4-Aminobiphenyl	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS



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Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
4-Bromophenyl phenyl ether	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
4-Chloroaniline	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
4-Chlorophenyl phenyl ether	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
4-Nitroaniline	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
4-Nitrophenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
7,12-Dimethylbenz (a) anthracene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Acenaphthene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Acenaphthylene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Acetophenone	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Aniline	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Anthracene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Benzidine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Benzo (a) anthracene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Benzo (a) pyrene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Benzo (b) fluoranthene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Benzo (g,h,i) perylene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Benzo (k) fluoranthene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Benzoic acid	03	SW8270E	<333 ug/kg dry	C	333	4	02/09/24 15:02	02/10/24 01:29	BMS
Benzyl alcohol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
bis (2-Chloroethoxy) methane	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
bis (2-Chloroethyl) ether	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
2,2'-Oxybis (1-chloropropane)	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
bis (2-Ethylhexyl) phthalate	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Butyl benzyl phthalate	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Chrysene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Dibenz (a,h) anthracene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Dibenz (a,i) acridine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Dibenzofuran	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Diethyl phthalate	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Dimethyl phthalate	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Di-n-butyl phthalate	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Di-n-octyl phthalate	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Diphenylamine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Ethyl methanesulfonate	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Fluoranthene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Fluorene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Hexachlorobenzene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Hexachlorobutadiene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Hexachlorocyclopentadiene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Hexachloroethane	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Indeno (1,2,3-cd) pyrene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Isophorone	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
m+p-Cresols	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Methyl methanesulfonate	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Naphthalene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Nitrobenzene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
n-Nitrosodimethylamine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
n-Nitrosodi-n-butylamine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
n-Nitrosodi-n-propylamine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
n-Nitrosodiphenylamine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
n-Nitrosopiperidine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS



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Certificate of Analysis

Final Report

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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
o+m+p-Cresols	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
o-Cresol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
p-(Dimethylamino) azobenzene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
p-Chloro-m-cresol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Pentachloronitrobenzene (quintozene)	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Pentachlorophenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Phenacetin	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Phenanthrene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Phenol	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Pronamide	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Pyrene	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Pyridine	03	SW8270E	<333 ug/kg dry		333	4	02/09/24 15:02	02/10/24 01:29	BMS
Surr: 2,4,6-Tribromophenol (Surr)	03	SW8270E	38.0 %		15-96		02/09/24 15:02	02/10/24 01:29	BMS
Surr: 2-Fluorobiphenyl (Surr)	03	SW8270E	44.3 %		19-105		02/09/24 15:02	02/10/24 01:29	BMS
Surr: 2-Fluorophenol (Surr)	03	SW8270E	50.8 %		12-95		02/09/24 15:02	02/10/24 01:29	BMS
Surr: Nitrobenzene-d5 (Surr)	03	SW8270E	43.8 %		21-100		02/09/24 15:02	02/10/24 01:29	BMS
Surr: Phenol-d5 (Surr)	03	SW8270E	41.8 %		13-100		02/09/24 15:02	02/10/24 01:29	BMS
Surr: p-Terphenyl-d14 (Surr)	03	SW8270E	37.8 %		25-125		02/09/24 15:02	02/10/24 01:29	BMS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	03	SW8015C	223 mg/kg dry		98.4	10	02/08/24 14:30	02/09/24 19:12	LBH2
Surr: n-Triacontane (Surr)	03	SW8015C	73.5 %		50-125		02/08/24 14:30	02/09/24 19:12	LBH2
TPH-Semi-Volatiles (ORO)	03	SW8015C	148 mg/kg dry		10.0	1	02/12/24 16:00	02/13/24 13:16	ATG

TCLP Semivolatile Organic Compounds



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Certificate of Analysis

Final Report

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Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Semivolatile Organic Compounds									
TCLP Extraction Fluid, SV Organics	03	SW1311	1 #	--	1		02/08/24 15:45	02/09/24 08:45	JJB
TCLP Semivolatile Organic Compounds by GCMS									
TCLP 2,4,5-Trichlorophenol	03	SW8270E	<0.10 mg/L		0.10	1	02/12/24 09:00	02/12/24 17:23	BMS
TCLP 2,4,6-Trichlorophenol	03	SW8270E	<0.10 mg/L		0.10	1	02/12/24 09:00	02/12/24 17:23	BMS
TCLP 2,4-Dinitrotoluene	03	SW8270E	<0.10 mg/L		0.10	1	02/12/24 09:00	02/12/24 17:23	BMS
TCLP Hexachlorobenzene	03	SW8270E	<0.10 mg/L		0.10	1	02/12/24 09:00	02/12/24 17:23	BMS
TCLP Hexachlorobutadiene	03	SW8270E	<0.10 mg/L		0.10	1	02/12/24 09:00	02/12/24 17:23	BMS
TCLP Hexachloroethane	03	SW8270E	<0.10 mg/L		0.10	1	02/12/24 09:00	02/12/24 17:23	BMS
TCLP m+p-Cresols	03	SW8270E	<0.10 mg/L		0.10	1	02/12/24 09:00	02/12/24 17:23	BMS
TCLP Nitrobenzene	03	SW8270E	<0.10 mg/L		0.10	1	02/12/24 09:00	02/12/24 17:23	BMS
TCLP o+m+p-Cresols	03	SW8270E	<0.50 mg/L		0.50	1	02/12/24 09:00	02/12/24 17:23	BMS
TCLP o-Cresol	03	SW8270E	<0.10 mg/L		0.10	1	02/12/24 09:00	02/12/24 17:23	BMS
TCLP Pentachlorophenol	03	SW8270E	<0.10 mg/L		0.10	1	02/12/24 09:00	02/12/24 17:23	BMS
TCLP Pyridine	03	SW8270E	<0.10 mg/L		0.10	1	02/12/24 09:00	02/12/24 17:23	BMS
Surr: 2,4,6-Tribromophenol (Surr)	03	SW8270E	63.7 %		7-150		02/12/24 09:00	02/12/24 17:23	BMS
Surr: 2-Fluorobiphenyl (Surr)	03	SW8270E	71.1 %		5-125		02/12/24 09:00	02/12/24 17:23	BMS
Surr: 2-Fluorophenol (Surr)	03	SW8270E	38.5 %		5-80		02/12/24 09:00	02/12/24 17:23	BMS
Surr: Nitrobenzene-d5 (Surr)	03	SW8270E	76.4 %		5-117		02/12/24 09:00	02/12/24 17:23	BMS
Surr: Phenol-d5 (Surr)	03	SW8270E	19.2 %		5-60		02/12/24 09:00	02/12/24 17:23	BMS
Surr: p-Terphenyl-d14 (Surr)	03	SW8270E	75.9 %		19.3-150		02/12/24 09:00	02/12/24 17:23	BMS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	03	SW8082A	<0.122 mg/kg dry		0.122	1	02/08/24 09:50	02/09/24 13:52	ZDR
PCB as Aroclor 1221	03	SW8082A	<0.122 mg/kg dry		0.122	1	02/08/24 09:50	02/09/24 13:52	ZDR
PCB as Aroclor 1232	03	SW8082A	<0.122 mg/kg dry		0.122	1	02/08/24 09:50	02/09/24 13:52	ZDR



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Final Report

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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1242	03	SW8082A	<0.122 mg/kg dry		0.122	1	02/08/24 09:50	02/09/24 13:52	ZDR
PCB as Aroclor 1248	03	SW8082A	<0.122 mg/kg dry		0.122	1	02/08/24 09:50	02/09/24 13:52	ZDR
PCB as Aroclor 1254	03	SW8082A	<0.122 mg/kg dry		0.122	1	02/08/24 09:50	02/09/24 13:52	ZDR
PCB as Aroclor 1260	03	SW8082A	<0.122 mg/kg dry		0.122	1	02/08/24 09:50	02/09/24 13:52	ZDR
Surr: DCB	03	SW8082A	52.3 %		30-105		02/08/24 09:50	02/09/24 13:52	ZDR
Surr: TCMX	03	SW8082A	64.1 %		30-105		02/08/24 09:50	02/09/24 13:52	ZDR
4,4'-DDD	03	SW8081B	<6.00 ug/kg dry		6.00	1	02/08/24 09:50	02/09/24 13:56	BMS
4,4'-DDE	03	SW8081B	<4.00 ug/kg dry		4.00	1	02/08/24 09:50	02/09/24 13:56	BMS
4,4'-DDT	03	SW8081B	<4.00 ug/kg dry		4.00	1	02/08/24 09:50	02/09/24 13:56	BMS
Aldrin	03	SW8081B	<2.00 ug/kg dry		2.00	1	02/08/24 09:50	02/09/24 13:56	BMS
alpha-BHC	03	SW8081B	<2.00 ug/kg dry		2.00	1	02/08/24 09:50	02/09/24 13:56	BMS
beta-BHC	03	SW8081B	<2.00 ug/kg dry		2.00	1	02/08/24 09:50	02/09/24 13:56	BMS
Chlordane	03	SW8081B	<42.0 ug/kg dry		42.0	1	02/08/24 09:50	02/09/24 13:56	BMS
delta-BHC	03	SW8081B	<4.00 ug/kg dry		4.00	1	02/08/24 09:50	02/09/24 13:56	BMS
Dieldrin	03	SW8081B	<4.00 ug/kg dry		4.00	1	02/08/24 09:50	02/09/24 13:56	BMS
Endosulfan I	03	SW8081B	<4.00 ug/kg dry		4.00	1	02/08/24 09:50	02/09/24 13:56	BMS
Endosulfan II	03	SW8081B	<6.00 ug/kg dry		6.00	1	02/08/24 09:50	02/09/24 13:56	BMS
Endosulfan sulfate	03	SW8081B	<2.00 ug/kg dry		2.00	1	02/08/24 09:50	02/09/24 13:56	BMS
Endrin	03	SW8081B	<4.00 ug/kg dry		4.00	1	02/08/24 09:50	02/09/24 13:56	BMS
Endrin aldehyde	03	SW8081B	<8.00 ug/kg dry		8.00	1	02/08/24 09:50	02/09/24 13:56	BMS
gamma-BHC (Lindane)	03	SW8081B	<2.00 ug/kg dry		2.00	1	02/08/24 09:50	02/09/24 13:56	BMS
Heptachlor	03	SW8081B	<2.00 ug/kg dry		2.00	1	02/08/24 09:50	02/09/24 13:56	BMS
Heptachlor epoxide	03	SW8081B	<40.0 ug/kg dry		40.0	1	02/08/24 09:50	02/09/24 13:56	BMS
Methoxychlor	03	SW8081B	<40.0 ug/kg dry		40.0	1	02/08/24 09:50	02/09/24 13:56	BMS
Toxaphene	03	SW8081B	<42.0 ug/kg dry		42.0	1	02/08/24 09:50	02/09/24 13:56	BMS



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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual CI:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Surr: TCMX	03	SW8081B	81.5 %		30-105		02/08/24 09:50	02/09/24 13:56	BMS
Surr: DCB	03	SW8081B	92.1 %		30-105		02/08/24 09:50	02/09/24 13:56	BMS
TCLP Organochlorine Herbicides by GC/ECD									
TCLP 2,4,5-TP (Silvex)	03	SW8151A	<0.0005 mg/L		0.0005	1	02/12/24 13:20	02/14/24 04:33	BMS
TCLP 2,4-D	03	SW8151A	<0.001 mg/L		0.001	1	02/12/24 13:20	02/14/24 04:33	BMS
Surr: DCAA (Surr)	03	SW8151A	85.5 %		48.5-134		02/12/24 13:20	02/14/24 04:33	BMS
TCLP Organochlorine Pesticides and PCBs by GC/ECD									
TCLP Chlordane	03	SW8081B	<0.030 mg/L		0.030	1	02/12/24 13:20	02/13/24 04:45	BMS
TCLP Endrin	03	SW8081B	<0.005 mg/L		0.005	1	02/12/24 13:20	02/13/24 04:45	BMS
TCLP gamma-BHC (Lindane)	03	SW8081B	<0.005 mg/L		0.005	1	02/12/24 13:20	02/13/24 04:45	BMS
TCLP Heptachlor	03	SW8081B	<0.005 mg/L		0.005	1	02/12/24 13:20	02/13/24 04:45	BMS
TCLP Heptachlor Epoxide	03	SW8081B	<0.005 mg/L		0.005	1	02/12/24 13:20	02/13/24 04:45	BMS
TCLP Methoxychlor	03	SW8081B	<0.005 mg/L		0.005	1	02/12/24 13:20	02/13/24 04:45	BMS
TCLP Toxaphene	03	SW8081B	<0.500 mg/L		0.500	1	02/12/24 13:20	02/13/24 04:45	BMS
Surr: TCMX	03	SW8081B	97.5 %		18-112		02/12/24 13:20	02/13/24 04:45	BMS
Surr: DCB	03	SW8081B	97.4 %		27-131		02/12/24 13:20	02/13/24 04:45	BMS
Wet Chemistry Analysis									
Cyanide	03	SW9012B	<1.00 mg/kg dry	CI	1.00	1	02/13/24 15:13	02/13/24 15:13	MGC
Corrosivity	03	SW7.2	NonCorrosive		--	1	02/12/24 12:15	02/12/24 12:15	TEG
Extractable Organic Halides (EOX)	03	SW9023	<10.0 mg/kg dry		10.0	1	02/09/24 11:15	02/09/24 11:15	ZDR
Ignitability	03	SW1010B	> 65 °C		15	1	02/14/24 08:10	02/14/24 08:10	JJB
Percent Solids	03	SM2540G-2011	80.8 %		0.10	1	02/12/24 09:15	02/12/24 09:15	KJM
Reactive Cyanide as Total Cyanide	03	SW9012B	<1.00 mg/kg dry	CI	1.00	1	02/13/24 15:13	02/13/24 15:13	MGC



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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Laboratory Order ID: 24B0351

Analytical Results

Sample I.D. Composite #1

Laboratory Sample ID: 24B0351-03

Composite Start-End Date/Time: 02/06/2024 15:00 - 02/06/2024 15:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Reactive Sulfide as Total Sulfide	03	SW9215	<97.9 mg/kg dry		97.9	1	02/13/24 16:26	02/13/24 16:26	AAL
Sulfide	03	SW9215	<97.9 mg/kg dry		97.9	1	02/13/24 16:26	02/13/24 16:26	AAL
TOC (Min)	03	SW9060A	5440 mg/kg dry		2060	100	02/09/24 12:30	02/12/24 10:37	LBH2
TOC (Max)	03	SW9060A	5550 mg/kg dry		2060	100	02/09/24 12:30	02/12/24 10:37	LBH2
TOC (Mean)	03	SW9060A	5470 mg/kg dry		2060	100	02/09/24 12:30	02/12/24 10:37	LBH2



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Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Dissolved) by EPA 6000/7000 Series Methods		Preparation Method: EPA200.7/R4.4			
24B0351-01	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
24B0351-01RE1	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
24B0351-02	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
24B0351-02RE1	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Dissolved) by EPA 6000/7000 Series Methods		Preparation Method: EPA200.8 R5.4			
24B0351-01	50.0 mL / 50.0 mL	SW6020B	BHB0369	SHB0409	AB40197
24B0351-02	50.0 mL / 50.0 mL	SW6020B	BHB0369	SHB0409	AB40197

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Metals by 6000/7000 Series Methods		Preparation Method: EPA245.1R3.0/SW7470A			
24B0351-03	1.00 mL / 20.0 mL	SW7470A	BHB0408	SHB0416	AB40194
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: EPA245.1R3.0/SW7470A			
24B0351-03	0.548 g / 20.0 mL	SW7471B	BHB0419	SHB0418	AB40193
Metals (Dissolved) by EPA 6000/7000 Series Methods		Preparation Method: EPA245.1R3.0/SW7470A			
24B0351-01	20.0 mL / 20.0 mL	SW7470A	BHB0471	SHB0458	AB40204
24B0351-02	20.0 mL / 20.0 mL	SW7470A	BHB0471	SHB0458	AB40204

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		Preparation Method: No Prep Halides			
24B0351-03	10.0 g / 10.0 mL	SW9023	BHB0379	SHB0438	AK30251
Wet Chemistry Analysis		Preparation Method: No Prep Halides			
24B0351-03	2.42 g / 50.0 mL	SW9060A	BHB0417	SHB0407	AK30328



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis					
24B0351-03	10.0 g / 10.0 mL	SM2540G-2011	BHB0414	SHB0399	
Wet Chemistry Analysis					
24B0351-03	20.1 g / 50.0 mL	SW7.2	BHB0462	SHB0446	
Wet Chemistry Analysis					
24B0351-03	1.00 g / 100 mL	SW9012B	BHB0499	SHB0483	AB40208
Wet Chemistry Analysis					
24B0351-03	1.02 g / 100 mL	SW9215	BHB0510	SHB0488	
Wet Chemistry Analysis					
24B0351-03	1.00 g / 1.00 mL	SW1010B	BHB0541	SHB0510	
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Metals by 6000/7000 Series Methods					
24B0351-03	100 g / 2000 mL	SW1311	BHB0333	SHB0329	
TCLP Metals by 6000/7000 Series Methods					
24B0351-03	10.0 mL / 50.0 mL	SW6010D	BHB0355	SHB0365	AB40181
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Volatile Organic Compounds by GCMS					
24B0351-03	15.0 g / 300 mL	SW1311	BHB0438	SHB0434	
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods					
24B0351-03	1.02 g / 50.0 mL	SW6010D	BHB0302	SHB0471	AB40200
24B0351-03RE1	1.02 g / 50.0 mL	SW6010D	BHB0302	SHB0471	AB40200
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Organochlorine Pesticides and PCBs by GC/ECD					
24B0351-03	100 mL / 1.00 mL	SW8081B	BHB0439	SHB0473	AA40264



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

TCLP Semivolatile Organic Compounds by GCMS		Preparation Method:	SW3510C/EPA600-MS		
24B0351-03	100 mL / 1.00 mL	SW8270E	BHB0420	SHB0454	AL30202

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Organochlorine Pesticides and PCBs by GC/ECD		Preparation Method:	SW3550C/EPA600-ECD		
24B0351-03	30.5 g / 5.00 mL	SW8081B	BHB0264	SHB0447	AA40264

Organochlorine Pesticides and PCBs by GC/ECD		Preparation Method:	SW3550C/EPA600-ECD		
24B0351-03	30.5 g / 5.00 mL	SW8082A	BHB0266	SHB0402	AA40218

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Semivolatile Hydrocarbons by GC		Preparation Method:	SW3550C/EPA600-FID		
24B0351-03	50.8 g / 1.00 mL	SW8015C	BHB0340	SHB0397	AB40152

Semivolatile Hydrocarbons by GC		Preparation Method:	SW3550C/EPA600-FID		
24B0351-03	50.8 g / 1.00 mL	SW8015C	BHB0468	SHB0500	AB40139

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

Semivolatile Organic Compounds by GCMS		Preparation Method:	SW3550C/EPA600-MS		
24B0351-03	30.0 g / 1.00 mL	SW8270E	BHB0394	SHB0414	AK30271

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

TCLP Semivolatile Organic Compounds		Preparation Method:	SW3580A-MS		
24B0351-03	100 g / 2000 mL	SW1311	BHB0384	SHB0371	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID



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	Richmond VA, 23236	Purchase Order:	22 02065 001
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Client Site I.D.:	Alex Waterfront		

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC		Preparation Method:	SW5030B-GC		
24B0351-03	5.09 g / 5.00 mL	SW8015C	BHB0393	SHB0394	AB40191
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS		Preparation Method:	SW5030B-MS		
24B0351-03	1.03 g / 5.00 mL	SW8260D	BHB0322	SHB0332	AA40197
TCLP Volatile Organic Compounds by GCMS		Preparation Method:	SW5030B-MS		
24B0351-03	0.250 mL / 5.00 mL	SW8260D	BHB0488	SHB0476	AA40197
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Organochlorine Herbicides by GC/ECD		Preparation Method:	SW8151A/EPA600		
24B0351-03	100 mL / 5.00 mL	SW8151A	BHB0440	SHB0525	AA40190



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QC Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Dissolved) by EPA 6000/7000 Series Methods			Preparation Method: EPA200.7/R4.4		
BHB0368-BLK1	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
BHB0368-BS1	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
BHB0368-MS1	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
BHB0368-MS2	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
BHB0368-MS3	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
BHB0368-MS4	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
BHB0368-MSD1	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
BHB0368-MSD2	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
BHB0368-MSD3	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200
BHB0368-MSD4	50.0 mL / 50.0 mL	SW6010D	BHB0368	SHB0471	AB40200

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Dissolved) by EPA 6000/7000 Series Methods			Preparation Method: EPA200.8 R5.4		
BHB0369-BLK1	50.0 mL / 50.0 mL	SW6020B	BHB0369	SHB0409	AB40197
BHB0369-BS1	50.0 mL / 50.0 mL	SW6020B	BHB0369	SHB0409	AB40197
BHB0369-MS1	50.0 mL / 50.0 mL	SW6020B	BHB0369	SHB0409	AB40197
BHB0369-MS2	50.0 mL / 50.0 mL	SW6020B	BHB0369	SHB0409	AB40197
BHB0369-MSD1	50.0 mL / 50.0 mL	SW6020B	BHB0369	SHB0409	AB40197
BHB0369-MSD2	50.0 mL / 50.0 mL	SW6020B	BHB0369	SHB0409	AB40197

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Metals by 6000/7000 Series Methods			Preparation Method: EPA245.1R3.0/SW7470A		
BHB0408-BLK1	1.00 mL / 20.0 mL	SW7470A	BHB0408	SHB0416	AB40194
BHB0408-BS1	1.00 mL / 20.0 mL	SW7470A	BHB0408	SHB0416	AB40194
BHB0408-MS1	1.00 mL / 20.0 mL	SW7470A	BHB0408	SHB0416	AB40194
BHB0408-MSD1	1.00 mL / 20.0 mL	SW7470A	BHB0408	SHB0416	AB40194
BHB0419-BLK1	0.555 g / 20.0 mL	SW7471B	BHB0419	SHB0418	AB40193
BHB0419-BS1	0.502 g / 20.0 mL	SW7471B	BHB0419	SHB0418	AB40193
BHB0419-MS1	0.544 g / 20.0 mL	SW7471B	BHB0419	SHB0418	AB40193



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods			Preparation Method: EPA245.1R3.0/SW7470A		
BHB0419-MSD1	0.543 g / 20.0 mL	SW7471B	BHB0419	SHB0418	AB40193
BHB0471-BLK1	20.0 mL / 20.0 mL	SW7470A	BHB0471	SHB0458	AB40204
BHB0471-BS1	20.0 mL / 20.0 mL	SW7470A	BHB0471	SHB0458	AB40204
BHB0471-MS1	20.0 mL / 20.0 mL	SW7470A	BHB0471	SHB0458	AB40204
BHB0471-MS2	20.0 mL / 20.0 mL	SW7470A	BHB0471	SHB0458	AB40204
BHB0471-MSD1	20.0 mL / 20.0 mL	SW7470A	BHB0471	SHB0458	AB40204
BHB0471-MSD2	20.0 mL / 20.0 mL	SW7470A	BHB0471	SHB0458	AB40204
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis			Preparation Method: No Prep Halides		
BHB0379-BLK1	10.0 g / 10.0 mL	SW9023	BHB0379	SHB0438	AK30251
BHB0379-BS1	10.0 g / 10.0 mL	SW9023	BHB0379	SHB0438	AK30251
BHB0379-DUP1	10.0 g / 10.0 mL	SW9023	BHB0379	SHB0438	AK30251
BHB0379-MS1	10.0 g / 10.0 mL	SW9023	BHB0379	SHB0438	AK30251
BHB0417-BLK1	2.03 g / 50.0 mL	SW9060A	BHB0417	SHB0407	AK30328
BHB0417-BS1	2.28 g / 50.0 mL	SW9060A	BHB0417	SHB0407	AK30328
BHB0417-MS1	0.0224 g / 50.0 mL	SW9060A	BHB0417	SHB0407	AK30328
BHB0417-MSD1	0.0239 g / 50.0 mL	SW9060A	BHB0417	SHB0407	AK30328
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis			Preparation Method: No Prep Wet Chem		
BHB0414-BLK1	10.0 g / 10.0 mL	SM2540G-2011	BHB0414	SHB0399	
BHB0414-DUP1	10.0 g / 10.0 mL	SM2540G-2011	BHB0414	SHB0399	
BHB0462-DUP1	20.0 g / 20.0 mL	SW7.2	BHB0462	SHB0446	
BHB0499-BLK1	6.00 g / 6.00 mL	SW9012B	BHB0499	SHB0483	AB40208
BHB0499-BS1	6.00 g / 6.00 mL	SW9012B	BHB0499	SHB0483	AB40208
BHB0499-MS1	0.0601 g / 6.00 mL	SW9012B	BHB0499	SHB0483	AB40208
BHB0499-MSD1	0.0613 g / 6.00 mL	SW9012B	BHB0499	SHB0483	AB40208
BHB0510-BLK1	6.00 g / 6.00 mL	SW9215	BHB0510	SHB0488	
BHB0510-BS1	6.00 g / 6.00 mL	SW9215	BHB0510	SHB0488	
BHB0510-MS1	0.0603 g / 6.00 mL	SW9215	BHB0510	SHB0488	
BHB0510-MSD1	0.0607 g / 6.00 mL	SW9215	BHB0510	SHB0488	



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Metals by 6000/7000 Series Methods			Preparation Method:	SW1311 Metals	
BHB0333-BLK1	100 g / 2000 mL	SW1311	BHB0333	SHB0329	
BHB0355-BLK1		SW6010D	BHB0355		
BHB0355-BS1		SW6010D	BHB0355		
BHB0355-MS1		SW6010D	BHB0355		
BHB0355-MSD1		SW6010D	BHB0355		

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Volatile Organic Compounds by GCMS			Preparation Method:	SW1311 ZHE	
BHB0438-BLK1	15.0 g / 300 mL	SW1311	BHB0438	SHB0434	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods			Preparation Method:	SW3050B-ICP	
BHB0302-BLK1	1.03 g / 50.0 mL	SW6010D	BHB0302	SHB0471	AB40200
BHB0302-BS1	1.03 g / 50.0 mL	SW6010D	BHB0302	SHB0471	AB40200
BHB0302-MS1	1.08 g / 50.0 mL	SW6010D	BHB0302	SHB0471	AB40200
BHB0302-MSD1	1.07 g / 50.0 mL	SW6010D	BHB0302	SHB0471	AB40200

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Organochlorine Pesticides and PCBs by GC/ECD			Preparation Method:	SW3510C/EPA600-ECD	
BHB0439-BLK1	100 mL / 1.00 mL	SW8081B	BHB0439	SHB0473	AA40264
BHB0439-BS1	100 mL / 1.00 mL	SW8081B	BHB0439	SHB0473	AA40264
BHB0439-BS2	100 mL / 1.00 mL	SW8081B	BHB0439	SHB0473	AA40264
BHB0439-BS3	100 mL / 1.00 mL	SW8081B	BHB0439	SHB0473	AA40264
BHB0439-MS1	100 mL / 1.00 mL	SW8081B	BHB0439	SHB0473	AA40264
BHB0439-MSD1	100 mL / 1.00 mL	SW8081B	BHB0439	SHB0473	AA40264

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Semivolatile Organic Compounds by GCMS			Preparation Method:	SW3510C/EPA600-MS	
BHB0420-BLK1	100 mL / 1.00 mL	SW8270E	BHB0420	SHB0454	AL30202
BHB0420-BS1	100 mL / 1.00 mL	SW8270E	BHB0420	SHB0454	AL30202
BHB0420-MS1	100 mL / 1.00 mL	SW8270E	BHB0420	SHB0454	AL30202
BHB0420-MSD1	100 mL / 1.00 mL	SW8270E	BHB0420	SHB0454	AL30202



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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD			Preparation Method: SW3550C/EPA600-ECD		
BHB0264-BLK1	30.1 g / 5.00 mL	SW8081B	BHB0264	SHB0264	AA40206
BHB0264-BS1	30.3 g / 5.00 mL	SW8081B	BHB0264	SHB0264	AA40206
BHB0264-BS2	30.1 g / 5.00 mL	SW8081B	BHB0264	SHB0264	AA40206
BHB0264-BS3	30.2 g / 5.00 mL	SW8081B	BHB0264	SHB0264	AA40206
BHB0264-MS1	30.4 g / 5.00 mL	SW8081B	BHB0264	SHB0264	AA40206
BHB0264-MSD1	30.3 g / 5.00 mL	SW8081B	BHB0264	SHB0264	AA40206
BHB0266-BLK1	30.1 g / 5.00 mL	SW8082A	BHB0266	SHB0343	AA40218
BHB0266-BS1	30.4 g / 5.00 mL	SW8082A	BHB0266	SHB0343	AA40218
BHB0266-MS1	30.8 g / 5.00 mL	SW8082A	BHB0266	SHB0343	AA40218
BHB0266-MSD1	30.5 g / 5.00 mL	SW8082A	BHB0266	SHB0343	AA40218

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Hydrocarbons by GC			Preparation Method: SW3550C/EPA600-FID		
BHB0340-BLK1	50.2 g / 1.00 mL	SW8015C	BHB0340	SHB0397	AB40152
BHB0340-BS1	50.3 g / 1.00 mL	SW8015C	BHB0340	SHB0397	AB40152
BHB0340-MS1	50.7 g / 1.00 mL	SW8015C	BHB0340	SHB0397	AB40152
BHB0340-MSD1	50.6 g / 1.00 mL	SW8015C	BHB0340	SHB0397	AB40152
BHB0468-BLK1	51.9 g / 1.00 mL	SW8015C	BHB0468	SHB0500	AB40139
BHB0468-BS1	50.8 g / 1.00 mL	SW8015C	BHB0468	SHB0500	AB40139
BHB0468-MS1	50.6 g / 5.00 mL	SW8015C	BHB0468	SHB0500	AB40139
BHB0468-MSD1	51.2 g / 5.00 mL	SW8015C	BHB0468	SHB0500	AB40139

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS			Preparation Method: SW3550C/EPA600-MS		
BHB0394-BLK1	30.0 g / 1.00 mL	SW8270E	BHB0394	SHB0406	AL30202
BHB0394-BS1	30.1 g / 1.00 mL	SW8270E	BHB0394	SHB0406	AL30202
BHB0394-MS1	30.5 g / 1.00 mL	SW8270E	BHB0394	SHB0406	AL30202
BHB0394-MSD1	30.3 g / 1.00 mL	SW8270E	BHB0394	SHB0406	AL30202

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Semivolatile Organic Compounds			Preparation Method: SW3580A-MS		
BHB0384-BLK1	100 g / 2000 mL	SW1311	BHB0384	SHB0371	



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC			Preparation Method:	SW5030B-GC	
BHB0393-BLK1	5.00 g / 5.00 mL	SW8015C	BHB0393	SHB0394	AB40191
BHB0393-BS1	5.00 g / 5.00 mL	SW8015C	BHB0393	SHB0394	AB40191
BHB0393-MS1	5.03 g / 5.00 mL	SW8015C	BHB0393	SHB0394	AB40191
BHB0393-MSD1	5.09 g / 5.00 mL	SW8015C	BHB0393	SHB0394	AB40191

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS			Preparation Method:	SW5030B-MS	
BHB0322-BLK1	5.00 g / 5.00 mL	SW8260D	BHB0322	SHB0332	AA40197
BHB0322-BS1	5.00 g / 5.00 mL	SW8260D	BHB0322	SHB0332	AA40197
BHB0322-MS1	5.10 g / 5.00 mL	SW8260D	BHB0322	SHB0332	AA40197
BHB0322-MSD1	5.03 g / 5.00 mL	SW8260D	BHB0322	SHB0332	AA40197
BHB0488-BLK1	5.00 mL / 5.00 mL	SW8260D	BHB0488	SHB0476	AA40197
BHB0488-BS1	5.00 mL / 5.00 mL	SW8260D	BHB0488	SHB0476	AA40197
BHB0488-MRL1	5.00 mL / 5.00 mL	SW8260D	BHB0488	SHB0476	AA40197
BHB0488-MS1	0.250 mL / 5.00 mL	SW8260D	BHB0488	SHB0476	AA40197
BHB0488-MSD1	0.250 mL / 5.00 mL	SW8260D	BHB0488	SHB0476	AA40197

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Organochlorine Herbicides by GC/ECD			Preparation Method:	SW8151A/EPA600	
BHB0440-BLK1	100 mL / 5.00 mL	SW8151A	BHB0440	SHB0525	AA40190
BHB0440-BS1	100 mL / 5.00 mL	SW8151A	BHB0440	SHB0525	AA40190
BHB0440-MS1	100 mL / 5.00 mL	SW8151A	BHB0440	SHB0525	AA40190
BHB0440-MSD1	100 mL / 5.00 mL	SW8151A	BHB0440	SHB0525	AA40190



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0302 - SW3050B-ICP

Blank (BHB0302-BLK1)

Prepared: 02/08/2024 Analyzed: 02/13/2024

Selenium	<2.50 mg/kg wet	2.50	mg/kg wet
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet
Silver	<0.500 mg/kg wet	0.500	mg/kg wet
Lead	<0.500 mg/kg wet	0.500	mg/kg wet
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet
Barium	<0.500 mg/kg wet	0.500	mg/kg wet
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet
Antimony	<5.00 mg/kg	5.00	mg/kg
Titanium	<5.00 mg/kg	5.00	mg/kg

LCS (BHB0302-BS1)

Prepared: 02/08/2024 Analyzed: 02/13/2024

Cadmium	89.9 mg/kg wet	0.200	mg/kg wet	97.5	mg/kg wet	92.2	80-120
Selenium	82.2 mg/kg wet	2.50	mg/kg wet	97.5	mg/kg wet	84.3	80-120
Zinc	90.6 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	93.0	80-120
Vanadium	89.0 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	91.3	80-120
Titanium	93.4 mg/kg	5.00	mg/kg	97.5	mg/kg	95.8	80-120
Silver	4.34 mg/kg wet	0.500	mg/kg wet	4.87	mg/kg wet	89.1	80-120
Chromium	90.3 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	92.7	80-120
Barium	89.2 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	91.6	80-120
Arsenic	88.9 mg/kg wet	1.00	mg/kg wet	97.5	mg/kg wet	91.2	80-120
Antimony	90.0 mg/kg	5.00	mg/kg	97.5	mg/kg	92.4	80-120
Lead	91.6 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	94.0	80-120

Matrix Spike (BHB0302-MS1)

Source: 24B0300-06

Prepared: 02/08/2024 Analyzed: 02/13/2024

Zinc	167 mg/kg wet	0.500	mg/kg wet	93.0	16.4 mg/kg wet	162	75-125	M
Titanium	135 mg/kg	5.00	mg/kg	93.0	63.3 mg/kg	76.7	75-125	
Antimony	29.7 mg/kg	5.00	mg/kg	93.0	<5.00 mg/kg	32.0	75-125	M
Arsenic	68.0 mg/kg wet	1.00	mg/kg wet	93.0	2.45 mg/kg wet	70.5	75-125	M
Barium	78.3 mg/kg wet	0.500	mg/kg wet	93.0	5.00 mg/kg wet	78.8	75-125	
Cadmium	63.5 mg/kg wet	0.200	mg/kg wet	93.0	<0.200 mg/kg	68.3	75-125	M



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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0302 - SW3050B-ICP

Matrix Spike (BHB0302-MS1)		Source: 24B0300-06			Prepared: 02/08/2024 Analyzed: 02/13/2024					
Chromium	70.1 mg/kg wet	0.500	mg/kg wet	93.0	4.68 mg/kg wet	70.4	75-125			M
Lead	65.5 mg/kg wet	0.500	mg/kg wet	93.0	1.35 mg/kg wet	69.0	75-125			M
Silver	3.45 mg/kg wet	0.500	mg/kg wet	4.65	<0.500 mg/kg	74.1	75-125			M
Vanadium	71.7 mg/kg wet	0.500	mg/kg wet	93.0	6.48 mg/kg wet	70.1	75-125			M
Selenium	60.1 mg/kg wet	2.50	mg/kg wet	93.0	<2.50 mg/kg	64.6	75-125			M

Matrix Spike Dup (BHB0302-MSD1)		Source: 24B0300-06			Prepared: 02/08/2024 Analyzed: 02/13/2024					
Selenium	63.0 mg/kg wet	2.50	mg/kg wet	93.5	<2.50 mg/kg	67.4	75-125	4.73	20	M
Antimony	30.2 mg/kg	5.00	mg/kg	93.5	<5.00 mg/kg	32.3	75-125	1.70	20	M
Arsenic	70.6 mg/kg wet	1.00	mg/kg wet	93.5	2.45 mg/kg wet	72.9	75-125	3.82	20	M
Barium	80.0 mg/kg wet	0.500	mg/kg wet	93.5	5.00 mg/kg wet	80.2	75-125	2.19	20	
Cadmium	66.9 mg/kg wet	0.200	mg/kg wet	93.5	<0.200 mg/kg	71.5	75-125	5.12	20	M
Lead	69.2 mg/kg wet	0.500	mg/kg wet	93.5	1.35 mg/kg wet	72.5	75-125	5.39	20	M
Silver	3.57 mg/kg wet	0.500	mg/kg wet	4.68	<0.500 mg/kg	76.4	75-125	3.62	20	
Titanium	131 mg/kg	5.00	mg/kg	93.5	63.3 mg/kg	72.6	75-125	2.56	20	M
Vanadium	74.3 mg/kg wet	0.500	mg/kg wet	93.5	6.48 mg/kg wet	72.5	75-125	3.59	20	M
Zinc	219 mg/kg wet	0.500	mg/kg wet	93.5	16.4 mg/kg wet	216	75-125	26.7	20	M
Chromium	72.8 mg/kg wet	0.500	mg/kg wet	93.5	4.68 mg/kg wet	72.8	75-125	3.68	20	M

Batch BHB0419 - EPA245.1R3.0/SW7470A

Blank (BHB0419-BLK1)		Prepared & Analyzed: 02/12/2024								
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet							
LCS (BHB0419-BS1)		Prepared & Analyzed: 02/12/2024								
Mercury	0.098 mg/kg wet	0.008	mg/kg wet	0.0996	mg/kg wet	98.5	80-120			



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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0419 - EPA245.1R3.0/SW7470A

Matrix Spike (BHB0419-MS1)		Source: 24B0462-05		Prepared & Analyzed: 02/12/2024						
Mercury	0.307 mg/kg dry	0.008	mg/kg dry	0.101	0.160 mg/kg dry	144	80-120			M
Matrix Spike Dup (BHB0419-MSD1)		Source: 24B0462-05		Prepared & Analyzed: 02/12/2024						
Mercury	0.269 mg/kg dry	0.008	mg/kg dry	0.102	0.160 mg/kg dry	107	80-120	13.1	20	



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TCLP Metals by 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0333 - SW1311 Metals

Blank (BHB0333-BLK1)

Prepared & Analyzed: 02/08/2024

Extraction Fluid, Metals <0 # 0 #

Batch BHB0408 - EPA245.1R3.0/SW7470A

Blank (BHB0408-BLK1)

Prepared & Analyzed: 02/12/2024

Mercury <0.008 mg/L 0.008 mg/L

LCS (BHB0408-BS1)

Prepared & Analyzed: 02/12/2024

Mercury 0.050 mg/L 0.008 mg/L 0.0500 mg/L 101 80-120

Matrix Spike (BHB0408-MS1)

Source: 24B0269-01

Prepared & Analyzed: 02/12/2024

Mercury 0.050 mg/L 0.008 mg/L 0.0500 <0.008 mg/L 99.6 80-120

Matrix Spike Dup (BHB0408-MSD1)

Source: 24B0269-01

Prepared & Analyzed: 02/12/2024

Mercury 0.050 mg/L 0.008 mg/L 0.0500 <0.008 mg/L 100 80-120 0.800 20



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Metals (Dissolved) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0368 - EPA200.7/R4.4

Blank (BHB0368-BLK1)

Prepared: 02/09/2024 Analyzed: 02/13/2024

Aluminum	<0.100 mg/L	0.100	mg/L
Barium	<0.0100 mg/L	0.0100	mg/L
Beryllium	<0.0040 mg/L	0.0040	mg/L
Cadmium	<0.0040 mg/L	0.0040	mg/L
Calcium	<0.0500 mg/L	0.0500	mg/L
Chromium	<0.0100 mg/L	0.0100	mg/L
Cobalt	<0.0040 mg/L	0.0040	mg/L
Copper	<0.0100 mg/L	0.0100	mg/L
Iron	<0.0100 mg/L	0.0100	mg/L
Magnesium	<0.0100 mg/L	0.0100	mg/L
Manganese	<0.0100 mg/L	0.0100	mg/L
Nickel	<0.0100 mg/L	0.0100	mg/L
Potassium	<0.50 mg/L	0.50	mg/L
Silver	<0.0100 mg/L	0.0100	mg/L
Sodium	<0.50 mg/L	0.50	mg/L
Vanadium	<0.0100 mg/L	0.0100	mg/L
Zinc	<0.0100 mg/L	0.0100	mg/L

B

LCS (BHB0368-BS1)

Prepared: 02/09/2024 Analyzed: 02/13/2024

Aluminum	0.534 mg/L	0.100	mg/L	0.500	mg/L	107	80-120
Barium	0.528 mg/L	0.0100	mg/L	0.500	mg/L	106	80-120
Beryllium	0.514 mg/L	0.0040	mg/L	0.500	mg/L	103	80-120
Cadmium	0.516 mg/L	0.0040	mg/L	0.500	mg/L	103	80-120
Calcium	0.512 mg/L	0.0500	mg/L	0.500	mg/L	102	80-120
Chromium	0.519 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120
Cobalt	0.520 mg/L	0.0040	mg/L	0.500	mg/L	104	80-120
Copper	0.523 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120
Iron	0.533 mg/L	0.0100	mg/L	0.500	mg/L	107	80-120
Magnesium	0.536 mg/L	0.0100	mg/L	0.500	mg/L	107	80-120
Manganese	0.537 mg/L	0.0100	mg/L	0.500	mg/L	107	80-120
Nickel	0.522 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120
Potassium	5.10 mg/L	0.50	mg/L	5.00	mg/L	102	80-120



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Metals (Dissolved) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0368 - EPA200.7/R4.4

LCS (BHB0368-BS1)

Prepared: 02/09/2024 Analyzed: 02/13/2024

Silver	0.101 mg/L	0.0100	mg/L	0.100	mg/L	101	80-120			E
Sodium	5.34 mg/L	0.50	mg/L	5.00	mg/L	107	80-120			
Vanadium	0.504 mg/L	0.0100	mg/L	0.500	mg/L	101	80-120			
Zinc	0.526 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120			

Matrix Spike (BHB0368-MS1)

Source: 24B0351-01

Prepared: 02/09/2024 Analyzed: 02/13/2024

Aluminum	0.558 mg/L	0.100	mg/L	0.500	<0.100 mg/L	112	75-125			
Barium	0.630 mg/L	0.0100	mg/L	0.500	0.0847 mg/L	109	75-125			
Beryllium	0.521 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	104	75-125			
Cadmium	0.487 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	97.5	75-125			
Chromium	0.507 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Cobalt	0.500 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	99.9	75-125			
Copper	0.504 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Iron	2.20 mg/L	0.0100	mg/L	0.500	1.58 mg/L	124	75-125			
Magnesium	12.6 mg/L	0.0100	mg/L	0.500	11.4 mg/L	231	75-125			M
Manganese	0.731 mg/L	0.0100	mg/L	0.500	0.188 mg/L	109	75-125			
Nickel	0.499 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.8	75-125			
Potassium	14.9 mg/L	0.50	mg/L	5.00	9.00 mg/L	119	75-125			
Silver	0.102 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	102	75-125			E
Sodium	84.6 mg/L	0.50	mg/L	5.00	74.7 mg/L	197	75-125			M
Vanadium	0.507 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Zinc	0.511 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125			

Matrix Spike (BHB0368-MS2)

Source: 24B0351-02

Prepared: 02/09/2024 Analyzed: 02/13/2024

Aluminum	0.545 mg/L	0.100	mg/L	0.500	<0.100 mg/L	109	75-125			
Barium	0.743 mg/L	0.0100	mg/L	0.500	0.219 mg/L	105	75-125			
Beryllium	0.518 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	104	75-125			
Cadmium	0.485 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	97.0	75-125			
Chromium	0.502 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	100	75-125			
Cobalt	0.494 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	98.8	75-125			
Copper	0.484 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	96.8	75-125			
Iron	12.8 mg/L	0.0100	mg/L	0.500	12.3 mg/L	86.1	75-125			



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Metals (Dissolved) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0368 - EPA200.7/R4.4

Matrix Spike (BHB0368-MS2)		Source: 24B0351-02			Prepared: 02/09/2024 Analyzed: 02/13/2024					
Magnesium	19.5 mg/L	0.0100	mg/L	0.500	19.2 mg/L	61.5	75-125			M
Manganese	1.48 mg/L	0.0100	mg/L	0.500	0.959 mg/L	105	75-125			
Nickel	0.491 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	98.3	75-125			
Potassium	34.5 mg/L	0.50	mg/L	5.00	29.5 mg/L	99.1	75-125			
Silver	0.100 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	100	75-125			E
Sodium	89.0 mg/L	0.50	mg/L	5.00	84.6 mg/L	88.6	75-125			
Vanadium	0.502 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	100	75-125			
Zinc	0.581 mg/L	0.0100	mg/L	0.500	0.0710 mg/L	102	75-125			

Matrix Spike (BHB0368-MS3)		Source: 24B0351-01RE1			Prepared: 02/09/2024 Analyzed: 02/13/2024					
Aluminum	<0.500 mg/L	0.500	mg/L	0.500	<0.500 mg/L	99.5	75-125			
Barium	0.609 mg/L	0.0500	mg/L	0.500	0.0847 mg/L	105	75-125			
Beryllium	0.514 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	103	75-125			
Cadmium	0.501 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	100	75-125			
Calcium	152 mg/L	0.250	mg/L	0.500	149 mg/L	630	75-125			M2
Chromium	0.512 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	102	75-125			
Cobalt	0.511 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	102	75-125			
Copper	0.515 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	103	75-125			
Iron	2.15 mg/L	0.0500	mg/L	0.500	1.58 mg/L	114	75-125			
Magnesium	12.6 mg/L	0.0500	mg/L	0.500	11.4 mg/L	235	75-125			M2
Manganese	0.720 mg/L	0.0500	mg/L	0.500	0.188 mg/L	106	75-125			
Nickel	0.514 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	103	75-125			
Potassium	14.0 mg/L	2.50	mg/L	5.00	9.00 mg/L	99.9	75-125			
Silver	0.102 mg/L	0.0500	mg/L	0.100	<0.0500 mg/L	102	75-125			
Sodium	83.4 mg/L	2.50	mg/L	5.00	74.7 mg/L	175	75-125			M2
Vanadium	0.507 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	101	75-125			
Zinc	0.492 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	98.4	75-125			



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Certificate of Analysis

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Purchase Order: 22 02065 001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Metals (Dissolved) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0368 - EPA200.7/R4.4

Matrix Spike (BHB0368-MS4)		Source: 24B0351-02RE1			Prepared: 02/09/2024 Analyzed: 02/13/2024					
Aluminum	0.529 mg/L	0.500	mg/L	0.500	<0.500 mg/L	106	75-125			
Barium	0.736 mg/L	0.0500	mg/L	0.500	0.219 mg/L	104	75-125			
Beryllium	0.515 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	103	75-125			
Cadmium	0.502 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	100	75-125			
Calcium	158 mg/L	0.250	mg/L	0.500	158 mg/L	-97.4	75-125			M2
Chromium	0.510 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	102	75-125			
Cobalt	0.510 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	102	75-125			
Copper	0.510 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	102	75-125			
Iron	12.7 mg/L	0.0500	mg/L	0.500	12.3 mg/L	72.5	75-125			M2
Magnesium	20.1 mg/L	0.0500	mg/L	0.500	19.2 mg/L	186	75-125			M2
Manganese	1.48 mg/L	0.0500	mg/L	0.500	0.959 mg/L	105	75-125			
Nickel	0.512 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	102	75-125			
Potassium	33.5 mg/L	2.50	mg/L	5.00	29.5 mg/L	80.9	75-125			
Silver	0.0980 mg/L	0.0500	mg/L	0.100	<0.0500 mg/L	98.0	75-125			
Sodium	89.9 mg/L	2.50	mg/L	5.00	84.6 mg/L	106	75-125			
Vanadium	0.508 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	102	75-125			
Zinc	0.562 mg/L	0.0500	mg/L	0.500	0.0710 mg/L	98.2	75-125			

Matrix Spike Dup (BHB0368-MSD1)		Source: 24B0351-01			Prepared: 02/09/2024 Analyzed: 02/13/2024					
Aluminum	0.540 mg/L	0.100	mg/L	0.500	<0.100 mg/L	108	75-125	3.22	20	
Barium	0.620 mg/L	0.0100	mg/L	0.500	0.0847 mg/L	107	75-125	1.54	20	
Beryllium	0.524 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	105	75-125	0.575	20	
Cadmium	0.490 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	98.0	75-125	0.553	20	
Chromium	0.509 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125	0.394	20	
Cobalt	0.501 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	100	75-125	0.280	20	
Copper	0.506 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125	0.357	20	
Iron	2.19 mg/L	0.0100	mg/L	0.500	1.58 mg/L	122	75-125	0.593	20	
Magnesium	12.5 mg/L	0.0100	mg/L	0.500	11.4 mg/L	214	75-125	0.667	20	M
Manganese	0.738 mg/L	0.0100	mg/L	0.500	0.188 mg/L	110	75-125	0.858	20	
Nickel	0.501 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	100	75-125	0.520	20	
Potassium	14.8 mg/L	0.50	mg/L	5.00	9.00 mg/L	115	75-125	1.23	20	
Silver	0.100 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	100	75-125	1.68	20	E



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Client Site I.D.: Alex Waterfront

Metals (Dissolved) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0368 - EPA200.7/R4.4

Matrix Spike Dup (BHB0368-MSD1)

Source: 24B0351-01

Prepared: 02/09/2024 Analyzed: 02/13/2024

Sodium	83.8 mg/L	0.50	mg/L	5.00	74.7 mg/L	183	75-125	0.843	20	M
Vanadium	0.509 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125	0.374	20	
Zinc	0.527 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	105	75-125	3.01	20	

Matrix Spike Dup (BHB0368-MSD2)

Source: 24B0351-02

Prepared: 02/09/2024 Analyzed: 02/13/2024

Aluminum	0.558 mg/L	0.100	mg/L	0.500	<0.100 mg/L	112	75-125	2.32	20	
Barium	0.761 mg/L	0.0100	mg/L	0.500	0.219 mg/L	108	75-125	2.49	20	
Beryllium	0.523 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	105	75-125	1.02	20	
Cadmium	0.489 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	97.8	75-125	0.801	20	
Chromium	0.508 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125	1.09	20	
Cobalt	0.500 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	99.9	75-125	1.09	20	
Copper	0.490 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	98.0	75-125	1.27	20	
Iron	13.2 mg/L	0.0100	mg/L	0.500	12.3 mg/L	171	75-125	3.29	20	M
Magnesium	20.1 mg/L	0.0100	mg/L	0.500	19.2 mg/L	188	75-125	3.19	20	M
Manganese	1.52 mg/L	0.0100	mg/L	0.500	0.959 mg/L	112	75-125	2.44	20	
Nickel	0.495 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	98.9	75-125	0.649	20	
Potassium	35.6 mg/L	0.50	mg/L	5.00	29.5 mg/L	121	75-125	3.17	20	
Silver	0.102 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	102	75-125	1.48	20	E
Sodium	91.8 mg/L	0.50	mg/L	5.00	84.6 mg/L	144	75-125	3.07	20	M
Vanadium	0.508 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125	1.05	20	
Zinc	0.592 mg/L	0.0100	mg/L	0.500	0.0710 mg/L	104	75-125	1.98	20	

Matrix Spike Dup (BHB0368-MSD3)

Source: 24B0351-01RE1

Prepared: 02/09/2024 Analyzed: 02/13/2024

Aluminum	<0.500 mg/L	0.500	mg/L	0.500	<0.500 mg/L	97.1	75-125	2.44	20	
Barium	0.602 mg/L	0.0500	mg/L	0.500	0.0847 mg/L	103	75-125	1.16	20	
Beryllium	0.514 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	103	75-125	0.0973	20	
Cadmium	0.502 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	100	75-125	0.299	20	
Calcium	152 mg/L	0.250	mg/L	0.500	149 mg/L	587	75-125	0.142	20	M2
Chromium	0.513 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	103	75-125	0.195	20	
Cobalt	0.509 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	102	75-125	0.392	20	
Copper	0.513 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	103	75-125	0.389	20	
Iron	2.14 mg/L	0.0500	mg/L	0.500	1.58 mg/L	113	75-125	0.210	20	



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Metals (Dissolved) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0368 - EPA200.7/R4.4

Matrix Spike Dup (BHB0368-MSD3)		Source: 24B0351-01RE1			Prepared: 02/09/2024 Analyzed: 02/13/2024					
Magnesium	12.6 mg/L	0.0500	mg/L	0.500	11.4 mg/L	228	75-125	0.282	20	M2
Manganese	0.724 mg/L	0.0500	mg/L	0.500	0.188 mg/L	107	75-125	0.485	20	
Nickel	0.516 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	103	75-125	0.194	20	
Potassium	13.8 mg/L	2.50	mg/L	5.00	9.00 mg/L	96.8	75-125	1.10	20	
Silver	0.0965 mg/L	0.0500	mg/L	0.100	<0.0500 mg/L	96.5	75-125	5.05	20	
Sodium	82.9 mg/L	2.50	mg/L	5.00	74.7 mg/L	165	75-125	0.601	20	M2
Vanadium	0.508 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	102	75-125	0.295	20	
Zinc	0.496 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	99.2	75-125	0.810	20	

Matrix Spike Dup (BHB0368-MSD4)		Source: 24B0351-02RE1			Prepared: 02/09/2024 Analyzed: 02/13/2024					
Aluminum	0.534 mg/L	0.500	mg/L	0.500	<0.500 mg/L	107	75-125	1.03	20	
Barium	0.741 mg/L	0.0500	mg/L	0.500	0.219 mg/L	104	75-125	0.609	20	
Beryllium	0.520 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	104	75-125	0.870	20	
Cadmium	0.506 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	101	75-125	0.794	20	
Calcium	160 mg/L	0.250	mg/L	0.500	158 mg/L	480	75-125	1.81	20	M2
Chromium	0.517 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	103	75-125	1.27	20	
Cobalt	0.517 mg/L	0.0200	mg/L	0.500	<0.0200 mg/L	103	75-125	1.27	20	
Copper	0.513 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	103	75-125	0.685	20	
Iron	12.9 mg/L	0.0500	mg/L	0.500	12.3 mg/L	120	75-125	1.87	20	
Magnesium	20.5 mg/L	0.0500	mg/L	0.500	19.2 mg/L	262	75-125	1.88	20	M2
Manganese	1.50 mg/L	0.0500	mg/L	0.500	0.959 mg/L	109	75-125	1.34	20	
Nickel	0.514 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	103	75-125	0.389	20	
Potassium	33.6 mg/L	2.50	mg/L	5.00	29.5 mg/L	82.0	75-125	0.171	20	
Silver	0.100 mg/L	0.0500	mg/L	0.100	<0.0500 mg/L	100	75-125	2.52	20	
Sodium	91.2 mg/L	2.50	mg/L	5.00	84.6 mg/L	132	75-125	1.45	20	M2
Vanadium	0.511 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	102	75-125	0.589	20	
Zinc	0.590 mg/L	0.0500	mg/L	0.500	0.0710 mg/L	104	75-125	4.86	20	



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Metals (Dissolved) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0369 - EPA200.8 R5.4

Blank (BHB0369-BLK1)

Prepared: 02/09/2024 Analyzed: 02/12/2024

Antimony	<1.00 ug/L	1.00	ug/L
Arsenic	<1.00 ug/L	1.00	ug/L
Lead	<1.00 ug/L	1.00	ug/L
Selenium	<1.00 ug/L	1.00	ug/L
Thallium	<1.00 ug/L	1.00	ug/L

LCS (BHB0369-BS1)

Prepared: 02/09/2024 Analyzed: 02/12/2024

Antimony	52.6 ug/L	1.00	ug/L	50.0	ug/L	105	80-120
Arsenic	51.4 ug/L	1.00	ug/L	50.0	ug/L	103	80-120
Lead	53.3 ug/L	1.00	ug/L	50.0	ug/L	107	80-120
Selenium	51.6 ug/L	1.00	ug/L	50.0	ug/L	103	80-120
Thallium	52.0 ug/L	1.00	ug/L	50.0	ug/L	104	80-120

Matrix Spike (BHB0369-MS1)

Source: 24B0351-01

Prepared: 02/09/2024 Analyzed: 02/12/2024

Antimony	53.1 ug/L	1.00	ug/L	50.0	1.40 ug/L	103	75-125
Arsenic	67.2 ug/L	1.00	ug/L	50.0	14.8 ug/L	105	75-125
Lead	52.7 ug/L	1.00	ug/L	50.0	1.06 ug/L	103	75-125
Selenium	53.9 ug/L	1.00	ug/L	50.0	<1.00 ug/L	108	75-125
Thallium	51.1 ug/L	1.00	ug/L	50.0	<1.00 ug/L	102	75-125

Matrix Spike (BHB0369-MS2)

Source: 24B0351-02

Prepared: 02/09/2024 Analyzed: 02/12/2024

Antimony	52.9 ug/L	1.00	ug/L	50.0	<1.00 ug/L	106	75-125
Arsenic	51.9 ug/L	1.00	ug/L	50.0	1.13 ug/L	101	75-125
Lead	51.7 ug/L	1.00	ug/L	50.0	<1.00 ug/L	103	75-125
Selenium	51.7 ug/L	1.00	ug/L	50.0	<1.00 ug/L	103	75-125
Thallium	51.0 ug/L	1.00	ug/L	50.0	<1.00 ug/L	102	75-125

Matrix Spike Dup (BHB0369-MSD1)

Source: 24B0351-01

Prepared: 02/09/2024 Analyzed: 02/12/2024

Antimony	52.9 ug/L	1.00	ug/L	50.0	1.40 ug/L	103	75-125	0.428	20
Arsenic	66.3 ug/L	1.00	ug/L	50.0	14.8 ug/L	103	75-125	1.33	20
Lead	52.3 ug/L	1.00	ug/L	50.0	1.06 ug/L	102	75-125	0.861	20
Selenium	53.0 ug/L	1.00	ug/L	50.0	<1.00 ug/L	106	75-125	1.59	20
Thallium	50.8 ug/L	1.00	ug/L	50.0	<1.00 ug/L	102	75-125	0.510	20



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Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0369 - EPA200.8 R5.4

Matrix Spike Dup (BHB0369-MSD2)		Source: 24B0351-02		Prepared: 02/09/2024 Analyzed: 02/12/2024						
Antimony	52.7 ug/L	1.00	ug/L	50.0	<1.00 ug/L	105	75-125	0.360	20	
Arsenic	52.2 ug/L	1.00	ug/L	50.0	1.13 ug/L	102	75-125	0.682	20	
Lead	51.3 ug/L	1.00	ug/L	50.0	<1.00 ug/L	103	75-125	0.693	20	
Selenium	51.8 ug/L	1.00	ug/L	50.0	<1.00 ug/L	104	75-125	0.0937	20	
Thallium	50.6 ug/L	1.00	ug/L	50.0	<1.00 ug/L	101	75-125	0.830	20	

Batch BHB0471 - EPA245.1R3.0/SW7470A

Blank (BHB0471-BLK1)		Prepared & Analyzed: 02/13/2024								
Mercury	<0.0002 mg/L	0.0002	mg/L							
LCS (BHB0471-BS1)		Prepared & Analyzed: 02/13/2024								
Mercury	0.0025 mg/L	0.0002	mg/L	0.00250 mg/L		98.4	80-120			
Matrix Spike (BHB0471-MS1)		Source: 24B0434-05		Prepared & Analyzed: 02/13/2024						
Mercury	0.0026 mg/L	0.0002	mg/L	0.00250	<0.0002 mg/L	102	80-120			
Matrix Spike (BHB0471-MS2)		Source: 24B0531-03		Prepared & Analyzed: 02/13/2024						
Mercury	0.0016 mg/L	0.0002	mg/L	0.00250	<0.0002 mg/L	63.6	80-120			M
Matrix Spike Dup (BHB0471-MSD1)		Source: 24B0434-05		Prepared & Analyzed: 02/13/2024						
Mercury	0.0025 mg/L	0.0002	mg/L	0.00250	<0.0002 mg/L	98.8	80-120	3.19	20	
Matrix Spike Dup (BHB0471-MSD2)		Source: 24B0531-03		Prepared & Analyzed: 02/13/2024						
Mercury	0.0019 mg/L	0.0002	mg/L	0.00250	<0.0002 mg/L	75.6	80-120	17.2	20	M



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TCLP Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0438 - SW1311 ZHE

Blank (BHB0438-BLK1)

Prepared: 02/12/2024 Analyzed: 02/13/2024

Extraction Fluid, ZHE 1 # 0 #

Batch BHB0488 - SW5030B-MS

Blank (BHB0488-BLK1)

Prepared & Analyzed: 02/13/2024

1,1-Dichloroethylene	<0.02 mg/L	0.02	mg/L						
1,2-Dichloroethane	<0.02 mg/L	0.02	mg/L						
1,4-Dichlorobenzene	<0.02 mg/L	0.02	mg/L						
2-Butanone (MEK)	<0.20 mg/L	0.20	mg/L						
Benzene	<0.05 mg/L	0.05	mg/L						
Carbon tetrachloride	<0.02 mg/L	0.02	mg/L						
Chlorobenzene	<0.02 mg/L	0.02	mg/L						
Chloroform	<0.02 mg/L	0.02	mg/L						
Tetrachloroethylene (PCE)	<0.05 mg/L	0.05	mg/L						
Trichloroethylene	<0.02 mg/L	0.02	mg/L						
Vinyl chloride	<0.02 mg/L	0.02	mg/L						
Surr: 1,2-Dichloroethane-d4 (Surr)	52.9		ug/L	50.0		106	70-120		
Surr: 4-Bromofluorobenzene (Surr)	51.0		ug/L	50.0		102	75-120		
Surr: Dibromofluoromethane (Surr)	51.0		ug/L	50.0		102	80-119		
Surr: Toluene-d8 (Surr)	49.8		ug/L	50.0		99.5	85-120		

LCS (BHB0488-BS1)

Prepared & Analyzed: 02/13/2024

1,1-Dichloroethylene	49.3 ug/L	20	ug/L	50.0	ug/L	98.6	70-130
1,2-Dichloroethane	53.3 ug/L	20	ug/L	50.0	ug/L	107	70-130
1,4-Dichlorobenzene	52.5 ug/L	20	ug/L	50.0	ug/L	105	75-125
2-Butanone (MEK)	< 200 ug/L	200	ug/L	50.0	ug/L	81.4	30-150
Benzene	51.3 ug/L	50	ug/L	50.0	ug/L	103	80-120
Carbon tetrachloride	49.5 ug/L	20	ug/L	50.0	ug/L	99.1	65-140
Chlorobenzene	53.0 ug/L	20	ug/L	50.0	ug/L	106	80-120
Chloroform	52.4 ug/L	20	ug/L	50.0	ug/L	105	65-135
Tetrachloroethylene (PCE)	50.3 ug/L	50	ug/L	50.0	ug/L	101	45-150
Trichloroethylene	51.0 ug/L	20	ug/L	50.0	ug/L	102	70-125



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 14, 2024 17:03
9201 Arboretum Parkway Suite 310 Project Number: 22-02065.001
Purchase Order: 22 02065 001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

TCLP Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0488 - SW5030B-MS

LCS (BHB0488-BS1)

Prepared & Analyzed: 02/13/2024

Vinyl chloride	50.8 ug/L	20	ug/L	50.0	ug/L	102	50-145			
Surr: 1,2-Dichloroethane-d4 (Surr)	51.9		ug/L	50.0	ug/L	104	70-120			
Surr: 4-Bromofluorobenzene (Surr)	49.0		ug/L	50.0	ug/L	97.9	75-120			
Surr: Dibromofluoromethane (Surr)	50.4		ug/L	50.0	ug/L	101	80-119			
Surr: Toluene-d8 (Surr)	49.5		ug/L	50.0	ug/L	99.0	85-120			

Matrix Spike (BHB0488-MS1)

Source: 24B0564-01

Prepared & Analyzed: 02/13/2024

1,1-Dichloroethylene	48.4 ug/L	20	ug/L	50.0	< 20 mg/L	96.8	70-130			
1,2-Dichloroethane	51.1 ug/L	20	ug/L	50.0	< 20 mg/L	102	70-130			
1,4-Dichlorobenzene	51.7 ug/L	20	ug/L	50.0	< 20 mg/L	103	75-125			
2-Butanone (MEK)	< 200 ug/L	200	ug/L	50.0	< 200 mg/L	78.8	30-150			
Benzene	< 50 ug/L	50	ug/L	50.0	< 50 mg/L	99.5	80-120			
Carbon tetrachloride	48.6 ug/L	20	ug/L	50.0	< 20 mg/L	97.1	65-140			
Chlorobenzene	50.9 ug/L	20	ug/L	50.0	< 20 mg/L	102	80-120			
Chloroform	50.0 ug/L	20	ug/L	50.0	< 20 mg/L	100	65-135			
Tetrachloroethylene (PCE)	< 50 ug/L	50	ug/L	50.0	< 50 mg/L	98.0	45-150			
Trichloroethylene	47.8 ug/L	20	ug/L	50.0	< 20 mg/L	95.7	70-125			
Vinyl chloride	52.1 ug/L	20	ug/L	50.0	< 20 mg/L	104	50-145			
Surr: 1,2-Dichloroethane-d4 (Surr)	49.7		ug/L	50.0	ug/L	99.4	70-120			
Surr: 4-Bromofluorobenzene (Surr)	49.6		ug/L	50.0	ug/L	99.2	75-120			
Surr: Dibromofluoromethane (Surr)	51.2		ug/L	50.0	ug/L	102	80-119			
Surr: Toluene-d8 (Surr)	49.7		ug/L	50.0	ug/L	99.5	85-120			

Matrix Spike Dup (BHB0488-MSD1)

Source: 24B0564-01

Prepared & Analyzed: 02/13/2024

1,1-Dichloroethylene	48.5 ug/L	20	ug/L	50.0	< 20 mg/L	97.0	70-130	0.227	30	
1,2-Dichloroethane	51.5 ug/L	20	ug/L	50.0	< 20 mg/L	103	70-130	0.877	30	
1,4-Dichlorobenzene	52.1 ug/L	20	ug/L	50.0	< 20 mg/L	104	75-125	0.732	30	
2-Butanone (MEK)	< 200 ug/L	200	ug/L	50.0	< 200 mg/L	86.6	30-150	9.38	30	
Benzene	< 50 ug/L	50	ug/L	50.0	< 50 mg/L	99.4	80-120	0.101	30	
Carbon tetrachloride	48.5 ug/L	20	ug/L	50.0	< 20 mg/L	96.9	65-140	0.165	30	
Chlorobenzene	51.8 ug/L	20	ug/L	50.0	< 20 mg/L	104	80-120	1.68	30	
Chloroform	50.9 ug/L	20	ug/L	50.0	< 20 mg/L	102	65-135	1.78	30	



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Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

TCLP Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0488 - SW5030B-MS

Matrix Spike Dup (BHB0488-MSD1)

Source: 24B0564-01

Prepared & Analyzed: 02/13/2024

Tetrachloroethylene (PCE)	< 50 ug/L	50	ug/L	50.0	< 50 mg/L	97.5	45-150	0.511	30
Trichloroethylene	49.1 ug/L	20	ug/L	50.0	< 20 mg/L	98.1	70-125	2.54	30
Vinyl chloride	52.5 ug/L	20	ug/L	50.0	< 20 mg/L	105	50-145	0.803	30
Surr: 1,2-Dichloroethane-d4 (Surr)	50.8		ug/L	50.0	ug/L	102	70-120		
Surr: 4-Bromofluorobenzene (Surr)	49.6		ug/L	50.0	ug/L	99.2	75-120		
Surr: Dibromofluoromethane (Surr)	51.0		ug/L	50.0	ug/L	102	80-119		
Surr: Toluene-d8 (Surr)	49.4		ug/L	50.0	ug/L	98.8	85-120		



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Volatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0393 - SW5030B-GC

Blank (BHB0393-BLK1)

Prepared & Analyzed: 02/09/2024

TPH-Volatiles (GRO)	<0.10 mg/kg wet	0.10	mg/kg wet							
Surr: 2,5-Dibromotoluene (Surr FID)	96.3		ug/L	100		96.3	80-120			

LCS (BHB0393-BS1)

Prepared & Analyzed: 02/09/2024

TPH-Volatiles (GRO)	1.07 mg/kg wet	0.10	mg/kg wet	1.00	mg/kg wet	107	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	98.7		ug/L	100	ug/L	98.7	80-120			

Matrix Spike (BHB0393-MS1)

Source: 24B0356-12

Prepared & Analyzed: 02/09/2024

TPH-Volatiles (GRO)	1.09 mg/kg wet	0.10	mg/kg wet	0.994	0.14 mg/kg wet	95.9	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	248		ug/L	100	ug/L	248	80-120			S

Matrix Spike Dup (BHB0393-MSD1)

Source: 24B0356-12

Prepared & Analyzed: 02/09/2024

TPH-Volatiles (GRO)	1.18 mg/kg wet	0.10	mg/kg wet	0.982	0.14 mg/kg wet	106	70-130	7.44	20	
Surr: 2,5-Dibromotoluene (Surr FID)	427		ug/L	100	ug/L	427	80-120			S



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0322 - SW5030B-MS

Blank (BHB0322-BLK1)

Prepared & Analyzed: 02/08/2024

1,1,1,2-Tetrachloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1,1-Trichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1,2,2-Tetrachloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1,2-Trichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1-Dichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,1-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
1,1-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,3-Trichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,3-Trichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,4-Trichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2,4-Trimethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dibromo-3-chloropropane (DBCP)	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dibromoethane (EDB)	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dichloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
1,2-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
1,3,5-Trimethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,3-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
1,3-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
1,4-Dichlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
2,2-Dichloropropane	<5.00 ug/kg wet	5.00	ug/kg wet
2-Butanone (MEK)	<5.00 ug/kg wet	5.00	ug/kg wet
2-Chlorotoluene	<5.00 ug/kg wet	5.00	ug/kg wet
2-Hexanone (MBK)	<5.00 ug/kg wet	5.00	ug/kg wet
4-Chlorotoluene	<5.00 ug/kg wet	5.00	ug/kg wet
4-Isopropyltoluene	<5.00 ug/kg wet	5.00	ug/kg wet
4-Methyl-2-pentanone (MIBK)	<5.00 ug/kg wet	5.00	ug/kg wet
Acetone	<10.0 ug/kg wet	10.0	ug/kg wet
Benzene	<5.00 ug/kg wet	5.00	ug/kg wet
Bromobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Bromochloromethane	<5.00 ug/kg wet	5.00	ug/kg wet



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0322 - SW5030B-MS

Blank (BHB0322-BLK1)

Prepared & Analyzed: 02/08/2024

Bromodichloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Bromoform	<5.00 ug/kg wet	5.00	ug/kg wet
Bromomethane	<5.00 ug/kg wet	5.00	ug/kg wet
Carbon disulfide	<5.00 ug/kg wet	5.00	ug/kg wet
Carbon tetrachloride	<5.00 ug/kg wet	5.00	ug/kg wet
Chlorobenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Chloroethane	<5.00 ug/kg wet	5.00	ug/kg wet
Chloroform	<5.00 ug/kg wet	5.00	ug/kg wet
Chloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
cis-1,2-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
cis-1,3-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet
Dibromochloromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Dibromomethane	<5.00 ug/kg wet	5.00	ug/kg wet
Dichlorodifluoromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Di-isopropyl ether (DIPE)	<5.00 ug/kg wet	5.00	ug/kg wet
Ethylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Hexachlorobutadiene	<5.00 ug/kg wet	5.00	ug/kg wet
Iodomethane	<10.0 ug/kg wet	10.0	ug/kg wet
Isopropylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
m+p-Xylenes	<5.00 ug/kg wet	5.00	ug/kg wet
Methylene chloride	<5.00 ug/kg wet	5.00	ug/kg wet
Methyl-t-butyl ether (MTBE)	<5.00 ug/kg wet	5.00	ug/kg wet
Naphthalene	<5.00 ug/kg wet	5.00	ug/kg wet
n-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
n-Propylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
o-Xylene	<5.00 ug/kg wet	5.00	ug/kg wet
sec-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Styrene	<5.00 ug/kg wet	5.00	ug/kg wet
tert-Butylbenzene	<5.00 ug/kg wet	5.00	ug/kg wet
Tetrachloroethylene (PCE)	<5.00 ug/kg wet	5.00	ug/kg wet
Toluene	<5.00 ug/kg wet	5.00	ug/kg wet



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0322 - SW5030B-MS

Blank (BHB0322-BLK1)

Prepared & Analyzed: 02/08/2024

trans-1,2-Dichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
trans-1,3-Dichloropropene	<5.00 ug/kg wet	5.00	ug/kg wet
Trichloroethylene	<5.00 ug/kg wet	5.00	ug/kg wet
Trichlorofluoromethane	<5.00 ug/kg wet	5.00	ug/kg wet
Vinyl acetate	<10.0 ug/kg wet	10.0	ug/kg wet
Vinyl chloride	<5.00 ug/kg wet	5.00	ug/kg wet
Xylenes, Total	<15.0 ug/kg wet	15.0	ug/kg wet

Surr: 1,2-Dichloroethane-d4 (Surr)	45.8	ug/L	50.0	91.6	80-120
Surr: 4-Bromofluorobenzene (Surr)	50.0	ug/L	50.0	100	85-120
Surr: Dibromofluoromethane (Surr)	46.3	ug/L	50.0	92.5	80-130
Surr: Toluene-d8 (Surr)	48.5	ug/L	50.0	97.0	85-115

LCS (BHB0322-BS1)

Prepared & Analyzed: 02/08/2024

1,1,1,2-Tetrachloroethane	57.2 ug/L	5	ug/L	50.0 ug/L	114	85-132
1,1,1-Trichloroethane	56.0 ug/L	5	ug/L	50.0 ug/L	112	70-135
1,1,2,2-Tetrachloroethane	55.3 ug/L	5	ug/L	50.0 ug/L	111	55-130
1,1,2-Trichloroethane	55.8 ug/L	5	ug/L	50.0 ug/L	112	60-125
1,1-Dichloroethane	53.0 ug/L	5	ug/L	50.0 ug/L	106	70-136
1,1-Dichloroethylene	51.4 ug/L	5	ug/L	50.0 ug/L	103	65-135
1,1-Dichloropropene	53.8 ug/L	5	ug/L	50.0 ug/L	108	70-135
1,2,3-Trichlorobenzene	59.2 ug/L	5	ug/L	50.0 ug/L	118	60-135
1,2,3-Trichloropropane	55.4 ug/L	5	ug/L	50.0 ug/L	111	65-130
1,2,4-Trichlorobenzene	58.1 ug/L	5	ug/L	50.0 ug/L	116	65-130
1,2,4-Trimethylbenzene	65.0 ug/L	5	ug/L	50.0 ug/L	130	65-135
1,2-Dibromo-3-chloropropane (DBCP)	53.4 ug/L	5	ug/L	50.0 ug/L	107	40-135
1,2-Dibromoethane (EDB)	57.2 ug/L	5	ug/L	50.0 ug/L	114	70-125
1,2-Dichlorobenzene	59.4 ug/L	5	ug/L	50.0 ug/L	119	75-120
1,2-Dichloroethane	53.7 ug/L	5	ug/L	50.0 ug/L	107	70-135
1,2-Dichloropropane	56.3 ug/L	5	ug/L	50.0 ug/L	113	70-120
1,3,5-Trimethylbenzene	62.2 ug/L	5	ug/L	50.0 ug/L	124	65-135
1,3-Dichlorobenzene	59.3 ug/L	5	ug/L	50.0 ug/L	119	70-125
1,3-Dichloropropane	55.9 ug/L	5	ug/L	50.0 ug/L	112	75-125



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0322 - SW5030B-MS

LCS (BHB0322-BS1)

Prepared & Analyzed: 02/08/2024

1,4-Dichlorobenzene	58.2 ug/L	5	ug/L	50.0	ug/L	116	70-125		
2,2-Dichloropropane	52.3 ug/L	5	ug/L	50.0	ug/L	105	65-135		
2-Butanone (MEK)	36.0 ug/L	5	ug/L	50.0	ug/L	72.1	30-160		
2-Chlorotoluene	58.7 ug/L	5	ug/L	50.0	ug/L	117	70-130		
2-Hexanone (MBK)	49.3 ug/L	5	ug/L	50.0	ug/L	98.5	45-145		
4-Chlorotoluene	57.1 ug/L	5	ug/L	50.0	ug/L	114	75-125		
4-Isopropyltoluene	64.5 ug/L	5	ug/L	50.0	ug/L	129	75-135		
4-Methyl-2-pentanone (MIBK)	48.7 ug/L	5	ug/L	50.0	ug/L	97.4	45-145		
Acetone	37.5 ug/L	10	ug/L	50.0	ug/L	75.0	20-160		
Benzene	56.0 ug/L	5	ug/L	50.0	ug/L	112	75-125		
Bromobenzene	57.9 ug/L	5	ug/L	50.0	ug/L	116	65-120		
Bromochloromethane	48.0 ug/L	5	ug/L	50.0	ug/L	96.0	70-125		
Bromodichloromethane	58.2 ug/L	5	ug/L	50.0	ug/L	116	70-130		
Bromoform	54.6 ug/L	5	ug/L	50.0	ug/L	109	55-135		
Bromomethane	53.9 ug/L	5	ug/L	50.0	ug/L	108	30-160		
Carbon disulfide	47.3 ug/L	5	ug/L	50.0	ug/L	94.7	45-160		
Carbon tetrachloride	54.9 ug/L	5	ug/L	50.0	ug/L	110	65-135		
Chlorobenzene	58.0 ug/L	5	ug/L	50.0	ug/L	116	75-125		
Chloroethane	55.2 ug/L	5	ug/L	50.0	ug/L	110	40-155		
Chloroform	51.5 ug/L	5	ug/L	50.0	ug/L	103	70-125		
Chloromethane	66.3 ug/L	5	ug/L	50.0	ug/L	133	50-130		L
cis-1,2-Dichloroethylene	50.6 ug/L	5	ug/L	50.0	ug/L	101	65-125		
cis-1,3-Dichloropropene	54.1 ug/L	5	ug/L	50.0	ug/L	108	70-125		
Dibromochloromethane	53.6 ug/L	5	ug/L	50.0	ug/L	107	65-130		
Dibromomethane	59.3 ug/L	5	ug/L	50.0	ug/L	119	75-130		
Dichlorodifluoromethane	115 ug/L	5	ug/L	50.0	ug/L	229	35-135		L
Ethylbenzene	60.6 ug/L	5	ug/L	50.0	ug/L	121	75-125		
Hexachlorobutadiene	57.2 ug/L	5	ug/L	50.0	ug/L	114	55-140		
Isopropylbenzene	55.8 ug/L	5	ug/L	50.0	ug/L	112	75-130		
m+p-Xylenes	116 ug/L	5	ug/L	100	ug/L	116	80-125		
Methylene chloride	48.9 ug/L	5	ug/L	50.0	ug/L	97.8	55-140		



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Enthalpy Analytical

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Batch BHB0322 - SW5030B-MS

LCS (BHB0322-BS1)

Prepared & Analyzed: 02/08/2024

Methyl-t-butyl ether (MTBE)	56.1 ug/L	5	ug/L	50.0	ug/L	112	65-125		
Naphthalene	61.8 ug/L	5	ug/L	50.0	ug/L	124	40-125		
n-Butylbenzene	66.2 ug/L	5	ug/L	50.0	ug/L	132	65-140		
n-Propylbenzene	57.7 ug/L	5	ug/L	50.0	ug/L	115	65-135		
o-Xylene	56.7 ug/L	5	ug/L	50.0	ug/L	113	75-125		
sec-Butylbenzene	65.2 ug/L	5	ug/L	50.0	ug/L	130	65-130		L
Styrene	57.1 ug/L	5	ug/L	50.0	ug/L	114	75-125		
tert-Butylbenzene	60.3 ug/L	5	ug/L	50.0	ug/L	121	65-130		
Tetrachloroethylene (PCE)	59.7 ug/L	5	ug/L	50.0	ug/L	119	48.1-219		
Toluene	55.7 ug/L	5	ug/L	50.0	ug/L	111	70-125		
trans-1,2-Dichloroethylene	49.9 ug/L	5	ug/L	50.0	ug/L	99.7	65-135		
trans-1,3-Dichloropropene	58.5 ug/L	5	ug/L	50.0	ug/L	117	65-125		
Trichloroethylene	55.0 ug/L	5	ug/L	50.0	ug/L	110	75-125		
Trichlorofluoromethane	62.1 ug/L	5	ug/L	50.0	ug/L	124	25-185		
Vinyl chloride	55.7 ug/L	5	ug/L	50.0	ug/L	111	60-125		
Surr: 1,2-Dichloroethane-d4 (Surr)	47.1		ug/L	50.0	ug/L	94.3	80-120		
Surr: 4-Bromofluorobenzene (Surr)	49.0		ug/L	50.0	ug/L	98.1	85-120		
Surr: Dibromofluoromethane (Surr)	45.5		ug/L	50.0	ug/L	91.1	80-130		
Surr: Toluene-d8 (Surr)	48.7		ug/L	50.0	ug/L	97.3	85-115		

Matrix Spike (BHB0322-MS1)

Source: 24B0355-01

Prepared & Analyzed: 02/08/2024

1,1,1,2-Tetrachloroethane	44.6 ug/L	5	ug/L	50.0	<5 ug/kg	89.3	52-140		
1,1,1-Trichloroethane	44.8 ug/L	5	ug/L	50.0	<5 ug/kg	89.5	70-135		
1,1,2,2-Tetrachloroethane	40.8 ug/L	5	ug/L	50.0	<5 ug/kg	81.7	55-130		
1,1,2-Trichloroethane	41.5 ug/L	5	ug/L	50.0	<5 ug/kg	83.0	60-125		
1,1-Dichloroethane	42.0 ug/L	5	ug/L	50.0	<5 ug/kg	83.9	60-134		
1,1-Dichloroethylene	40.3 ug/L	5	ug/L	50.0	<5 ug/kg	80.6	65-135		
1,1-Dichloropropene	42.2 ug/L	5	ug/L	50.0	<5 ug/kg	84.4	70-135		
1,2,3-Trichlorobenzene	39.0 ug/L	5	ug/L	50.0	<5 ug/kg	78.0	60-135		
1,2,3-Trichloropropane	41.2 ug/L	5	ug/L	50.0	<5 ug/kg	82.3	65-130		
1,2,4-Trichlorobenzene	37.2 ug/L	5	ug/L	50.0	<5 ug/kg	74.4	65-130		
1,2,4-Trimethylbenzene	49.8 ug/L	5	ug/L	50.0	<5 ug/kg	99.5	65-135		



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0322 - SW5030B-MS

Matrix Spike (BHB0322-MS1)

Source: 24B0355-01

Prepared & Analyzed: 02/08/2024

1,2-Dibromo-3-chloropropane (DBCP)	37.8 ug/L	5	ug/L	50.0	<5 ug/kg	75.6	40-135		
1,2-Dibromoethane (EDB)	44.0 ug/L	5	ug/L	50.0	<5 ug/kg	88.1	70-125		
1,2-Dichlorobenzene	43.0 ug/L	5	ug/L	50.0	<5 ug/kg	86.0	75-120		
1,2-Dichloroethane	41.5 ug/L	5	ug/L	50.0	<5 ug/kg	83.0	70-135		
1,2-Dichloropropane	44.4 ug/L	5	ug/L	50.0	<5 ug/kg	88.7	70-120		
1,3,5-Trimethylbenzene	48.3 ug/L	5	ug/L	50.0	<5 ug/kg	96.7	65-135		
1,3-Dichlorobenzene	43.7 ug/L	5	ug/L	50.0	<5 ug/kg	87.4	70-125		
1,3-Dichloropropane	42.2 ug/L	5	ug/L	50.0	<5 ug/kg	84.4	75-125		
1,4-Dichlorobenzene	41.8 ug/L	5	ug/L	50.0	<5 ug/kg	83.6	70-125		
2,2-Dichloropropane	40.7 ug/L	5	ug/L	50.0	<5 ug/kg	81.3	65-135		
2-Butanone (MEK)	29.6 ug/L	5	ug/L	50.0	<5 ug/kg	59.2	30-160		
2-Chlorotoluene	45.0 ug/L	5	ug/L	50.0	<5 ug/kg	89.9	70-130		
2-Hexanone (MBK)	37.8 ug/L	5	ug/L	50.0	<5 ug/kg	75.5	45-145		
4-Chlorotoluene	43.0 ug/L	5	ug/L	50.0	<5 ug/kg	86.1	75-125		
4-Isopropyltoluene	48.8 ug/L	5	ug/L	50.0	<5 ug/kg	97.6	75-135		
4-Methyl-2-pentanone (MIBK)	38.5 ug/L	5	ug/L	50.0	<5 ug/kg	77.0	45-145		
Acetone	42.6 ug/L	10	ug/L	50.0	<10 ug/kg	69.8	20-160		
Benzene	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.8	75-125		
Bromobenzene	43.3 ug/L	5	ug/L	50.0	<5 ug/kg	86.7	65-120		
Bromochloromethane	36.9 ug/L	5	ug/L	50.0	<5 ug/kg	73.7	70-125		
Bromodichloromethane	44.3 ug/L	5	ug/L	50.0	<5 ug/kg	88.6	70-130		
Bromoform	38.4 ug/L	5	ug/L	50.0	<5 ug/kg	76.8	55-135		
Bromomethane	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.8	30-160		
Carbon disulfide	36.0 ug/L	5	ug/L	50.0	<5 ug/kg	71.9	45-160		
Carbon tetrachloride	41.8 ug/L	5	ug/L	50.0	<5 ug/kg	83.6	65-135		
Chlorobenzene	44.8 ug/L	5	ug/L	50.0	<5 ug/kg	89.5	75-125		
Chloroethane	44.8 ug/L	5	ug/L	50.0	<5 ug/kg	89.7	40-155		
Chloroform	41.2 ug/L	5	ug/L	50.0	<5 ug/kg	82.5	70-125		
Chloromethane	52.0 ug/L	5	ug/L	50.0	<5 ug/kg	104	50-130		
cis-1,2-Dichloroethylene	39.4 ug/L	5	ug/L	50.0	<5 ug/kg	78.9	65-125		
cis-1,3-Dichloropropene	40.9 ug/L	5	ug/L	50.0	<5 ug/kg	81.7	70-125		



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0322 - SW5030B-MS

Matrix Spike (BHB0322-MS1)		Source: 24B0355-01			Prepared & Analyzed: 02/08/2024				
Dibromochloromethane	39.3 ug/L	5	ug/L	50.0	<5 ug/kg	78.7	65-130		
Dibromomethane	44.1 ug/L	5	ug/L	50.0	<5 ug/kg	88.2	75-130		
Dichlorodifluoromethane	91.4 ug/L	5	ug/L	50.0	<5 ug/kg	183	35-135		M
Ethylbenzene	47.3 ug/L	5	ug/L	50.0	<5 ug/kg	94.7	75-125		
Hexachlorobutadiene	36.7 ug/L	5	ug/L	50.0	<5 ug/kg	73.4	55-140		
Isopropylbenzene	43.1 ug/L	5	ug/L	50.0	<5 ug/kg	86.3	75-130		
m+p-Xylenes	88.8 ug/L	5	ug/L	100	<5 ug/kg	88.8	80-125		
Methylene chloride	37.6 ug/L	5	ug/L	50.0	<5 ug/kg	73.4	55-140		
Methyl-t-butyl ether (MTBE)	42.4 ug/L	5	ug/L	50.0	<5 ug/kg	84.9	65-125		
Naphthalene	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.2	40-125		
n-Butylbenzene	47.6 ug/L	5	ug/L	50.0	<5 ug/kg	95.3	65-140		
n-Propylbenzene	45.6 ug/L	5	ug/L	50.0	<5 ug/kg	91.2	65-135		
o-Xylene	44.0 ug/L	5	ug/L	50.0	<5 ug/kg	88.0	75-125		
sec-Butylbenzene	50.0 ug/L	5	ug/L	50.0	<5 ug/kg	99.9	65-130		
Styrene	42.5 ug/L	5	ug/L	50.0	<5 ug/kg	85.0	75-125		
tert-Butylbenzene	47.6 ug/L	5	ug/L	50.0	<5 ug/kg	95.2	65-130		
Tetrachloroethylene (PCE)	44.0 ug/L	5	ug/L	50.0	<5 ug/kg	87.9	48.1-219		
Toluene	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.8	70-125		
trans-1,2-Dichloroethylene	38.7 ug/L	5	ug/L	50.0	<5 ug/kg	77.4	65-135		
trans-1,3-Dichloropropene	42.1 ug/L	5	ug/L	50.0	<5 ug/kg	84.3	65-125		
Trichloroethylene	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.8	75-125		
Trichlorofluoromethane	49.6 ug/L	5	ug/L	50.0	<5 ug/kg	99.2	25-185		
Vinyl chloride	45.5 ug/L	5	ug/L	50.0	<5 ug/kg	91.0	60-125		
Surr: 1,2-Dichloroethane-d4 (Surr)	47.3		ug/L	50.0	ug/L	94.7	80-120		
Surr: 4-Bromofluorobenzene (Surr)	48.7		ug/L	50.0	ug/L	97.5	85-120		
Surr: Dibromofluoromethane (Surr)	45.6		ug/L	50.0	ug/L	91.2	80-130		
Surr: Toluene-d8 (Surr)	48.5		ug/L	50.0	ug/L	97.1	85-115		



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Client Site I.D.: Alex Waterfront

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0322 - SW5030B-MS

Matrix Spike Dup (BHB0322-MSD1)

Source: 24B0355-01

Prepared & Analyzed: 02/08/2024

1,1,1,2-Tetrachloroethane	45.4 ug/L	5	ug/L	50.0	<5 ug/kg	90.8	52-140	1.73	30	
1,1,1-Trichloroethane	44.2 ug/L	5	ug/L	50.0	<5 ug/kg	88.4	70-135	1.21	30	
1,1,2,2-Tetrachloroethane	42.5 ug/L	5	ug/L	50.0	<5 ug/kg	85.0	55-130	3.94	30	
1,1,2-Trichloroethane	42.6 ug/L	5	ug/L	50.0	<5 ug/kg	85.2	60-125	2.54	30	
1,1-Dichloroethane	42.0 ug/L	5	ug/L	50.0	<5 ug/kg	84.1	60-134	0.190	30	
1,1-Dichloroethylene	39.9 ug/L	5	ug/L	50.0	<5 ug/kg	79.9	65-135	0.922	30	
1,1-Dichloropropene	42.2 ug/L	5	ug/L	50.0	<5 ug/kg	84.5	70-135	0.118	30	
1,2,3-Trichlorobenzene	39.5 ug/L	5	ug/L	50.0	<5 ug/kg	79.1	60-135	1.40	30	
1,2,3-Trichloropropane	42.8 ug/L	5	ug/L	50.0	<5 ug/kg	85.6	65-130	3.91	30	
1,2,4-Trichlorobenzene	37.9 ug/L	5	ug/L	50.0	<5 ug/kg	75.7	65-130	1.76	30	
1,2,4-Trimethylbenzene	49.1 ug/L	5	ug/L	50.0	<5 ug/kg	98.2	65-135	1.31	30	
1,2-Dibromo-3-chloropropane (DBCP)	41.7 ug/L	5	ug/L	50.0	<5 ug/kg	83.3	40-135	9.74	30	
1,2-Dibromoethane (EDB)	45.2 ug/L	5	ug/L	50.0	<5 ug/kg	90.4	70-125	2.62	30	
1,2-Dichlorobenzene	44.0 ug/L	5	ug/L	50.0	<5 ug/kg	88.0	75-120	2.30	30	
1,2-Dichloroethane	42.7 ug/L	5	ug/L	50.0	<5 ug/kg	85.4	70-135	2.92	30	
1,2-Dichloropropane	45.3 ug/L	5	ug/L	50.0	<5 ug/kg	90.6	70-120	2.10	30	
1,3,5-Trimethylbenzene	48.1 ug/L	5	ug/L	50.0	<5 ug/kg	96.2	65-135	0.477	30	
1,3-Dichlorobenzene	43.5 ug/L	5	ug/L	50.0	<5 ug/kg	87.0	70-125	0.482	30	
1,3-Dichloropropane	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.8	75-125	2.80	30	
1,4-Dichlorobenzene	42.0 ug/L	5	ug/L	50.0	<5 ug/kg	84.1	70-125	0.548	30	
2,2-Dichloropropane	40.0 ug/L	5	ug/L	50.0	<5 ug/kg	80.0	65-135	1.66	30	
2-Butanone (MEK)	26.9 ug/L	5	ug/L	50.0	<5 ug/kg	53.9	30-160	9.38	30	
2-Chlorotoluene	44.3 ug/L	5	ug/L	50.0	<5 ug/kg	88.6	70-130	1.52	30	
2-Hexanone (MBK)	38.7 ug/L	5	ug/L	50.0	<5 ug/kg	77.4	45-145	2.49	30	
4-Chlorotoluene	43.1 ug/L	5	ug/L	50.0	<5 ug/kg	86.2	75-125	0.116	30	
4-Isopropyltoluene	48.5 ug/L	5	ug/L	50.0	<5 ug/kg	97.0	75-135	0.596	30	
4-Methyl-2-pentanone (MIBK)	39.1 ug/L	5	ug/L	50.0	<5 ug/kg	78.1	45-145	1.47	30	
Acetone	45.9 ug/L	10	ug/L	50.0	<10 ug/kg	76.7	20-160	7.52	30	
Benzene	43.2 ug/L	5	ug/L	50.0	<5 ug/kg	86.3	75-125	0.555	30	
Bromobenzene	43.7 ug/L	5	ug/L	50.0	<5 ug/kg	87.4	65-120	0.850	30	
Bromochloromethane	38.0 ug/L	5	ug/L	50.0	<5 ug/kg	76.0	70-125	3.07	30	



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0322 - SW5030B-MS

Matrix Spike Dup (BHB0322-MSD1)

Source: 24B0355-01

Prepared & Analyzed: 02/08/2024

Bromodichloromethane	45.7 ug/L	5	ug/L	50.0	<5 ug/kg	91.3	70-130	3.07	30	
Bromoform	41.1 ug/L	5	ug/L	50.0	<5 ug/kg	82.2	55-135	6.79	30	
Bromomethane	43.4 ug/L	5	ug/L	50.0	<5 ug/kg	86.8	30-160	0.0230	30	
Carbon disulfide	33.2 ug/L	5	ug/L	50.0	<5 ug/kg	66.3	45-160	8.07	30	
Carbon tetrachloride	42.3 ug/L	5	ug/L	50.0	<5 ug/kg	84.6	65-135	1.19	30	
Chlorobenzene	45.0 ug/L	5	ug/L	50.0	<5 ug/kg	90.0	75-125	0.535	30	
Chloroethane	45.8 ug/L	5	ug/L	50.0	<5 ug/kg	91.5	40-155	2.05	30	
Chloroform	41.5 ug/L	5	ug/L	50.0	<5 ug/kg	82.9	70-125	0.556	30	
Chloromethane	52.7 ug/L	5	ug/L	50.0	<5 ug/kg	105	50-130	1.24	30	
cis-1,2-Dichloroethylene	39.8 ug/L	5	ug/L	50.0	<5 ug/kg	79.6	65-125	0.984	30	
cis-1,3-Dichloropropene	40.6 ug/L	5	ug/L	50.0	<5 ug/kg	81.3	70-125	0.564	30	
Dibromochloromethane	40.2 ug/L	5	ug/L	50.0	<5 ug/kg	80.5	65-130	2.29	30	
Dibromomethane	46.0 ug/L	5	ug/L	50.0	<5 ug/kg	92.0	75-130	4.19	30	
Dichlorodifluoromethane	90.6 ug/L	5	ug/L	50.0	<5 ug/kg	181	35-135	0.912	30	M
Ethylbenzene	47.3 ug/L	5	ug/L	50.0	<5 ug/kg	94.5	75-125	0.169	30	
Hexachlorobutadiene	37.6 ug/L	5	ug/L	50.0	<5 ug/kg	75.1	55-140	2.37	30	
Isopropylbenzene	43.0 ug/L	5	ug/L	50.0	<5 ug/kg	86.1	75-130	0.186	30	
m+p-Xylenes	89.4 ug/L	5	ug/L	100	<5 ug/kg	89.4	80-125	0.752	30	
Methylene chloride	38.4 ug/L	5	ug/L	50.0	<5 ug/kg	74.9	55-140	1.92	30	
Methyl-t-butyl ether (MTBE)	44.0 ug/L	5	ug/L	50.0	<5 ug/kg	88.0	65-125	3.59	30	
Naphthalene	44.4 ug/L	5	ug/L	50.0	<5 ug/kg	88.7	40-125	4.03	30	
n-Butylbenzene	47.8 ug/L	5	ug/L	50.0	<5 ug/kg	95.6	65-140	0.356	30	
n-Propylbenzene	44.1 ug/L	5	ug/L	50.0	<5 ug/kg	88.2	65-135	3.32	30	
o-Xylene	44.0 ug/L	5	ug/L	50.0	<5 ug/kg	87.9	75-125	0.0227	30	
sec-Butylbenzene	49.1 ug/L	5	ug/L	50.0	<5 ug/kg	98.1	65-130	1.80	30	
Styrene	42.9 ug/L	5	ug/L	50.0	<5 ug/kg	85.7	75-125	0.820	30	
tert-Butylbenzene	46.9 ug/L	5	ug/L	50.0	<5 ug/kg	93.9	65-130	1.42	30	
Tetrachloroethylene (PCE)	43.5 ug/L	5	ug/L	50.0	<5 ug/kg	87.1	48.1-219	0.983	30	
Toluene	42.7 ug/L	5	ug/L	50.0	<5 ug/kg	85.3	70-125	1.67	30	
trans-1,2-Dichloroethylene	39.3 ug/L	5	ug/L	50.0	<5 ug/kg	78.6	65-135	1.44	30	
trans-1,3-Dichloropropene	43.6 ug/L	5	ug/L	50.0	<5 ug/kg	87.2	65-125	3.36	30	



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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0322 - SW5030B-MS

Matrix Spike Dup (BHB0322-MSD1)

Source: 24B0355-01

Prepared & Analyzed: 02/08/2024

Trichloroethylene	42.9 ug/L	5	ug/L	50.0	<5 ug/kg	85.8	75-125	1.14	30
Trichlorofluoromethane	50.8 ug/L	5	ug/L	50.0	<5 ug/kg	102	25-185	2.45	30
Vinyl chloride	44.4 ug/L	5	ug/L	50.0	<5 ug/kg	88.8	60-125	2.40	30
Surr: 1,2-Dichloroethane-d4 (Surr)	46.8		ug/L	50.0	ug/L	93.5	80-120		
Surr: 4-Bromofluorobenzene (Surr)	49.7		ug/L	50.0	ug/L	99.4	85-120		
Surr: Dibromofluoromethane (Surr)	45.8		ug/L	50.0	ug/L	91.6	80-130		
Surr: Toluene-d8 (Surr)	48.8		ug/L	50.0	ug/L	97.6	85-115		



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0394 - SW3550C/EPA600-MS

Blank (BHB0394-BLK1)

Prepared & Analyzed: 02/09/2024

1,2,4,5-Tetrachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,2,4-Trichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,2-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,2-Diphenylhydrazine	<83.3 ug/kg wet	83.3	ug/kg wet
1,3-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,3-Dinitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1,4-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
1-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
1-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet
2,3,4,6-Tetrachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4,5-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4,6-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dimethylphenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dinitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,4-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet
2,6-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2,6-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet
2-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
2-Chlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
2-Methylnaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
2-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet
2-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet
2-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet
3,3'-Dichlorobenzidine	<83.3 ug/kg wet	83.3	ug/kg wet
3-Methylcholanthrene	<83.3 ug/kg wet	83.3	ug/kg wet
3-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet
4,6-Dinitro-2-methylphenol	<83.3 ug/kg wet	83.3	ug/kg wet
4-Aminobiphenyl	<83.3 ug/kg wet	83.3	ug/kg wet
4-Bromophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet
4-Chloroaniline	<83.3 ug/kg wet	83.3	ug/kg wet



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Certificate of Analysis

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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

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Batch BHB0394 - SW3550C/EPA600-MS

Blank (BHB0394-BLK1)

Prepared & Analyzed: 02/09/2024

4-Chlorophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet
4-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet
4-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet
7,12-Dimethylbenz (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Acenaphthene	<83.3 ug/kg wet	83.3	ug/kg wet
Acenaphthylene	<83.3 ug/kg wet	83.3	ug/kg wet
Acetophenone	<83.3 ug/kg wet	83.3	ug/kg wet
Aniline	<83.3 ug/kg wet	83.3	ug/kg wet
Anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzidine	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (a) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (b) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (g,h,i) perylene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzo (k) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet
Benzoic acid	<83.3 ug/kg wet	83.3	ug/kg wet
Benzyl alcohol	<83.3 ug/kg wet	83.3	ug/kg wet
bis (2-Chloroethoxy) methane	<83.3 ug/kg wet	83.3	ug/kg wet
bis (2-Chloroethyl) ether	<83.3 ug/kg wet	83.3	ug/kg wet
2,2'-Oxybis (1-chloropropane)	<83.3 ug/kg wet	83.3	ug/kg wet
bis (2-Ethylhexyl) phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Butyl benzyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Chrysene	<83.3 ug/kg wet	83.3	ug/kg wet
Dibenz (a,h) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet
Dibenz (a,j) acridine	<83.3 ug/kg wet	83.3	ug/kg wet
Dibenzofuran	<83.3 ug/kg wet	83.3	ug/kg wet
Diethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Dimethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Di-n-butyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Di-n-octyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet
Diphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0394 - SW3550C/EPA600-MS

Blank (BHB0394-BLK1)

Prepared & Analyzed: 02/09/2024

Ethyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet
Fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet
Fluorene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachlorobutadiene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachlorocyclopentadiene	<83.3 ug/kg wet	83.3	ug/kg wet
Hexachloroethane	<83.3 ug/kg wet	83.3	ug/kg wet
Indeno (1,2,3-cd) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet
Isophorone	<83.3 ug/kg wet	83.3	ug/kg wet
m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet
Methyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet
Naphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
Nitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodimethylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodi-n-butylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodi-n-propylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodiphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosopiperidine	<83.3 ug/kg wet	83.3	ug/kg wet
o+m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet
o-Cresol	<83.3 ug/kg wet	83.3	ug/kg wet
p-(Dimethylamino) azobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
p-Chloro-m-cresol	<83.3 ug/kg wet	83.3	ug/kg wet
Pentachloronitrobenzene (quintozene)	<83.3 ug/kg wet	83.3	ug/kg wet
Pentachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
Phenacetin	<83.3 ug/kg wet	83.3	ug/kg wet
Phenanthrene	<83.3 ug/kg wet	83.3	ug/kg wet
Phenol	<83.3 ug/kg wet	83.3	ug/kg wet
Pronamide	<83.3 ug/kg wet	83.3	ug/kg wet
Pyrene	<83.3 ug/kg wet	83.3	ug/kg wet
Pyridine	<83.3 ug/kg wet	83.3	ug/kg wet

Surr: 2,4,6-Tribromophenol (Surr) 1990 ug/kg wet 3330 59.8 15-96



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0394 - SW3550C/EPA600-MS

Blank (BHB0394-BLK1)

Prepared & Analyzed: 02/09/2024

Surr: 2-Fluorobiphenyl (Surr)	1270	ug/kg wet	1670	76.3	19-105
Surr: 2-Fluorophenol (Surr)	2210	ug/kg wet	3330	66.4	12-95
Surr: Nitrobenzene-d5 (Surr)	1180	ug/kg wet	1670	71.0	21-100
Surr: Phenol-d5 (Surr)	1910	ug/kg wet	3330	57.4	13-100
Surr: p-Terphenyl-d14 (Surr)	1170	ug/kg wet	1670	70.0	25-125

LCS (BHB0394-BS1)

Prepared & Analyzed: 02/09/2024

1,2,4-Trichlorobenzene	1100 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	66.2	70-130	L
1,2-Dichlorobenzene	924 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	55.6	70-130	L
1,3-Dichlorobenzene	932 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	56.1	70-130	L
1,4-Dichlorobenzene	1120 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	67.5	70-130	L
2,4,6-Trichlorophenol	1400 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	84.3	20-115	
2,4-Dichlorophenol	966 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	58.2	20-111	
2,4-Dimethylphenol	848 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	51.1	20-110	
2,4-Dinitrophenol	1390 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	83.7	10-169	
2,4-Dinitrotoluene	1100 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	66.0	21-125	
2,6-Dinitrotoluene	1100 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	66.0	15-140	
2-Chloronaphthalene	1160 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	69.8	22-105	
2-Chlorophenol	967 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	58.2	15-107	
2-Nitrophenol	1000 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	60.4	20-115	
3,3'-Dichlorobenzidine	716 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	43.1	10-110	
4,6-Dinitro-2-methylphenol	1460 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	88.1	40-130	
4-Bromophenyl phenyl ether	1000 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	60.4	20-114	
4-Chlorophenyl phenyl ether	1250 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	75.2	15-110	
4-Nitrophenol	1570 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	94.3	15-110	
Acenaphthene	1260 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	76.1	24-110	
Acenaphthylene	1190 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	71.5	25-106	
Acetophenone	925 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	55.7	25-106	
Anthracene	1220 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	73.6	25-117	
Benzo (a) anthracene	1150 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	69.2	25-127	
Benzo (a) pyrene	1300 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	78.3	18-127	
Benzo (b) fluoranthene	1250 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	75.1	20-132	



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0394 - SW3550C/EPA600-MS

LCS (BHB0394-BS1)

Prepared & Analyzed: 02/09/2024

Benzo (g,h,i) perylene	823 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	49.5	10-136		
Benzo (k) fluoranthene	1330 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	80.0	14-136		
bis (2-Chloroethoxy) methane	694 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	41.8	20-100		
bis (2-Chloroethyl) ether	712 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	42.8	13-100		
2,2'-Oxybis (1-chloropropane)	761 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	45.8	40-125		
bis (2-Ethylhexyl) phthalate	789 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	47.5	18-137		
Butyl benzyl phthalate	1680 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	101	20-141		
Chrysene	1090 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	65.7	21-141		
Dibenz (a,h) anthracene	1060 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	64.1	10-142		
Diethyl phthalate	1120 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	67.6	20-120		
Dimethyl phthalate	1040 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	62.4	23-109		
Di-n-butyl phthalate	1530 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	91.8	18-136		
Di-n-octyl phthalate	1450 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	87.0	10-160		
Fluoranthene	1560 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	93.9	19-138		
Fluorene	1140 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	68.3	25-114		
Hexachlorobenzene	1080 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	64.8	20-113		
Hexachlorobutadiene	1580 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	95.4	25-125		
Hexachlorocyclopentadiene	1240 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	74.4	10-125		
Hexachloroethane	1090 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	65.4	25-125		
Indeno (1,2,3-cd) pyrene	924 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	55.6	10-136		
Isophorone	499 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	30.1	10-110		
Naphthalene	1320 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	79.3	18-109		
Nitrobenzene	1080 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	64.9	18-104		
n-Nitrosodimethylamine	696 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	41.9	18-110		
n-Nitrosodi-n-propylamine	951 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	57.3	12-102		
n-Nitrosodiphenylamine	816 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	49.1	12-97		
p-Chloro-m-cresol	868 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	52.3	24-120		
Pentachlorophenol	853 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	51.4	10-116		
Phenanthrene	1160 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	69.8	25-122		
Phenol	966 ug/kg wet	83.3	ug/kg wet	1680	ug/kg wet	57.6	12-115		
Pyrene	776 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	46.7	17-159		



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Batch BHB0394 - SW3550C/EPA600-MS

LCS (BHB0394-BS1)

Prepared & Analyzed: 02/09/2024

Pyridine	625 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	37.6	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	2550		ug/kg wet	3320	ug/kg wet	76.8	15-96			
Surr: 2-Fluorobiphenyl (Surr)	1350		ug/kg wet	1660	ug/kg wet	81.3	19-105			
Surr: 2-Fluorophenol (Surr)	2250		ug/kg wet	3320	ug/kg wet	67.6	12-95			
Surr: Nitrobenzene-d5 (Surr)	1140		ug/kg wet	1660	ug/kg wet	68.5	21-100			
Surr: Phenol-d5 (Surr)	1950		ug/kg wet	3320	ug/kg wet	58.7	13-100			
Surr: p-Terphenyl-d14 (Surr)	1020		ug/kg wet	1660	ug/kg wet	61.1	25-125			

Matrix Spike (BHB0394-MS1)

Source: 24B0266-05

Prepared & Analyzed: 02/09/2024

1,2,4-Trichlorobenzene	959 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	37.4	70-130			M
1,2-Dichlorobenzene	833 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	32.5	70-130			M
1,3-Dichlorobenzene	729 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	28.4	70-130			M
1,4-Dichlorobenzene	917 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	35.8	70-130			M
2,4,6-Trichlorophenol	1740 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	67.9	10-115			
2,4-Dichlorophenol	1100 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	42.8	10-128			
2,4-Dimethylphenol	1100 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	42.8	10-121			
2,4-Dinitrophenol	1570 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	61.3	10-228			
2,4-Dinitrotoluene	1280 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	49.8	10-141			
2,6-Dinitrotoluene	1280 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	49.8	15-140			
2-Chloronaphthalene	1040 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	40.7	10-108			
2-Chlorophenol	1200 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	46.9	10-117			
2-Nitrophenol	1130 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	44.0	10-131			
3,3'-Dichlorobenzidine	832 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	32.4	10-110			
4,6-Dinitro-2-methylphenol	2020 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	78.6	10-110			
4-Bromophenyl phenyl ether	1070 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	41.6	10-119			
4-Chlorophenyl phenyl ether	1260 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	49.2	15-110			
4-Nitrophenol	1970 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	76.6	15-110			
Acenaphthene	1160 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	45.2	10-124			
Acenaphthylene	1140 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	44.6	10-118			
Acetophenone	1040 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	40.5	10-110			
Anthracene	1140 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	44.3	10-143			
Benzo (a) anthracene	1290 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	50.3	10-169			



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Batch BHB0394 - SW3550C/EPA600-MS

Matrix Spike (BHB0394-MS1)

Source: 24B0266-05

Prepared & Analyzed: 02/09/2024

Benzo (a) pyrene	1350 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	52.5	10-149			
Benzo (b) fluoranthene	1360 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	53.1	10-150			
Benzo (g,h,i) perylene	812 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	31.7	10-123			
Benzo (k) fluoranthene	1480 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	57.8	10-211			
bis (2-Chloroethoxy) methane	802 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	31.3	10-108			
bis (2-Chloroethyl) ether	873 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	34.0	10-100			
2,2'-Oxybis (1-chloropropane)	882 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	34.4	40-125			M
bis (2-Ethylhexyl) phthalate	877 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	34.2	10-210			
Butyl benzyl phthalate	1680 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	65.3	10-165			
Chrysene	1240 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	48.4	10-172			
Dibenz (a,h) anthracene	1110 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	43.4	10-128			
Diethyl phthalate	1170 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	45.6	10-120			
Dimethyl phthalate	1320 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	51.6	10-125			
Di-n-butyl phthalate	1380 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	53.7	10-133			
Di-n-octyl phthalate	1550 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	60.6	10-196			
Fluoranthene	1630 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	63.4	10-271			
Fluorene	1100 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	43.0	10-124			
Hexachlorobenzene	1110 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	43.2	10-125			
Hexachlorobutadiene	1240 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	48.5	10-125			
Hexachlorocyclopentadiene	966 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	37.6	10-125			
Hexachloroethane	843 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	32.9	10-220			
Indeno (1,2,3-cd) pyrene	947 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	36.9	10-127			
Isophorone	631 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	24.6	10-110			
Naphthalene	1140 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	44.5	10-118			
Nitrobenzene	1420 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	55.3	10-126			
n-Nitrosodimethylamine	935 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	36.4	10-110			
n-Nitrosodi-n-propylamine	1160 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	45.1	10-107			
n-Nitrosodiphenylamine	870 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	33.9	10-107			
p-Chloro-m-cresol	1040 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	40.4	10-131			
Pentachlorophenol	969 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	37.8	10-151			
Phenanthrene	1160 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	45.1	10-393			



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Client Site I.D.: Alex Waterfront

Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0394 - SW3550C/EPA600-MS

Matrix Spike (BHB0394-MS1)

Source: 24B0266-05

Prepared & Analyzed: 02/09/2024

Phenol	1230 ug/kg dry	83.3	ug/kg dry	2590	<83.3 ug/kg	47.7	10-133			
Pyrene	829 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	32.3	10-212			
Pyridine	1250 ug/kg dry	83.3	ug/kg dry	2570	<83.3 ug/kg	48.8	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	2820		ug/kg dry	5130	ug/kg dry	55.0	15-96			
Surr: 2-Fluorobiphenyl (Surr)	1050		ug/kg dry	2570	ug/kg dry	41.0	19-105			
Surr: 2-Fluorophenol (Surr)	2070		ug/kg dry	5130	ug/kg dry	40.4	12-95			
Surr: Nitrobenzene-d5 (Surr)	1530		ug/kg dry	2570	ug/kg dry	59.5	21-100			
Surr: Phenol-d5 (Surr)	2620		ug/kg dry	5130	ug/kg dry	51.1	13-100			
Surr: p-Terphenyl-d14 (Surr)	1060		ug/kg dry	2570	ug/kg dry	41.4	25-125			

Matrix Spike Dup (BHB0394-MSD1)

Source: 24B0266-05

Prepared & Analyzed: 02/09/2024

1,2,4-Trichlorobenzene	986 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	38.2	70-130	2.78	20	M
1,2-Dichlorobenzene	897 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	34.7	70-130	7.39	20	M
1,3-Dichlorobenzene	885 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	34.3	70-130	19.3	20	M
1,4-Dichlorobenzene	1000 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	38.7	70-130	8.61	20	M
2,4,6-Trichlorophenol	1720 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	66.5	10-115	1.34	20	
2,4-Dichlorophenol	1120 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	43.4	10-128	2.05	20	
2,4-Dimethylphenol	1110 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	42.8	10-121	0.705	20	
2,4-Dinitrophenol	1630 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	63.0	10-228	3.43	20	
2,4-Dinitrotoluene	1260 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	48.8	10-141	1.49	20	
2,6-Dinitrotoluene	1260 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	48.8	15-140	1.49	20	
2-Chloronaphthalene	988 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	38.3	10-108	5.37	20	
2-Chlorophenol	1220 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	47.3	10-117	1.38	20	
2-Nitrophenol	1180 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	45.6	10-131	4.23	20	
3,3'-Dichlorobenzidine	719 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	27.9	10-110	14.5	20	
4,6-Dinitro-2-methylphenol	1920 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	74.5	10-110	4.78	20	
4-Bromophenyl phenyl ether	931 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	36.0	10-119	13.6	20	
4-Chlorophenyl phenyl ether	1120 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	43.5	15-110	11.6	20	
4-Nitrophenol	2020 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	78.2	15-110	2.78	20	
Acenaphthene	1100 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	42.6	10-124	5.13	20	
Acenaphthylene	1080 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	42.0	10-118	5.35	20	
Acetophenone	991 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	38.4	10-110	4.72	20	



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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0394 - SW3550C/EPA600-MS

Matrix Spike Dup (BHB0394-MSD1)		Source: 24B0266-05			Prepared & Analyzed: 02/09/2024					
Anthracene	957 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	37.1	10-143	17.1	20	
Benzo (a) anthracene	1090 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	42.4	10-169	16.5	20	
Benzo (a) pyrene	1220 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	47.4	10-149	9.60	20	
Benzo (b) fluoranthene	1270 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	49.3	10-150	6.72	20	
Benzo (g,h,i) perylene	690 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	26.7	10-123	16.2	20	
Benzo (k) fluoranthene	1240 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	48.0	10-211	17.8	20	
bis (2-Chloroethoxy) methane	800 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	31.0	10-108	0.306	20	
bis (2-Chloroethyl) ether	848 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	32.8	10-100	2.93	20	
2,2'-Oxybis (1-chloropropane)	815 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	31.6	40-125	7.90	20	M
bis (2-Ethylhexyl) phthalate	755 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	29.2	10-210	15.0	20	
Butyl benzyl phthalate	1500 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	58.1	10-165	11.0	20	
Chrysene	1170 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	45.4	10-172	5.70	20	
Dibenz (a,h) anthracene	986 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	38.2	10-128	12.2	20	
Diethyl phthalate	1110 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	43.0	10-120	5.30	20	
Dimethyl phthalate	1310 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	50.8	10-125	0.982	20	
Di-n-butyl phthalate	1170 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	45.5	10-133	16.0	20	
Di-n-octyl phthalate	1400 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	54.3	10-196	10.2	20	
Fluoranthene	1340 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	52.1	10-271	19.0	20	
Fluorene	1010 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	39.3	10-124	8.44	20	
Hexachlorobenzene	968 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	37.5	10-125	13.5	20	
Hexachlorobutadiene	1290 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	50.1	10-125	3.99	20	
Hexachlorocyclopentadiene	818 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	31.7	10-125	16.6	20	
Hexachloroethane	893 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	34.6	10-220	5.76	20	
Indeno (1,2,3-cd) pyrene	859 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	33.3	10-127	9.72	20	
Isophorone	624 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	24.2	10-110	1.06	20	
Naphthalene	1140 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	44.1	10-118	0.200	20	
Nitrobenzene	1420 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	54.8	10-126	0.177	20	
n-Nitrosodimethylamine	925 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	35.8	10-110	1.00	20	
n-Nitrosodi-n-propylamine	1150 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	44.5	10-107	0.591	20	
n-Nitrosodiphenylamine	807 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	31.3	10-107	7.45	20	
p-Chloro-m-cresol	1030 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	40.0	10-131	0.338	20	



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Certificate of Analysis

Final Report

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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0394 - SW3550C/EPA600-MS

Matrix Spike Dup (BHB0394-MSD1)		Source: 24B0266-05			Prepared & Analyzed: 02/09/2024				
Pentachlorophenol	953 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	36.9	10-151	1.65	20
Phenanthrene	1010 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	39.3	10-393	13.2	20
Phenol	1230 ug/kg dry	83.3	ug/kg dry	2610	<83.3 ug/kg	47.2	10-133	0.386	20
Pyrene	680 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	26.3	10-212	19.8	20
Pyridine	1120 ug/kg dry	83.3	ug/kg dry	2580	<83.3 ug/kg	43.5	0-200	10.7	20
Surr: 2,4,6-Tribromophenol (Surr)	2920		ug/kg dry	5160	ug/kg dry	56.6	15-96		
Surr: 2-Fluorobiphenyl (Surr)	1070		ug/kg dry	2580	ug/kg dry	41.3	19-105		
Surr: 2-Fluorophenol (Surr)	2720		ug/kg dry	5160	ug/kg dry	52.6	12-95		
Surr: Nitrobenzene-d5 (Surr)	1510		ug/kg dry	2580	ug/kg dry	58.6	21-100		
Surr: Phenol-d5 (Surr)	2500		ug/kg dry	5160	ug/kg dry	48.3	13-100		
Surr: p-Terphenyl-d14 (Surr)	969		ug/kg dry	2580	ug/kg dry	37.5	25-125		



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Semivolatile Hydrocarbons by GC - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0340 - SW3550C/EPA600-FID

Blank (BHB0340-BLK1)

Prepared: 02/08/2024 Analyzed: 02/09/2024

TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet							
Surr: n-Triacontane (Surr)	3.55		mg/kg wet	4.98		71.3	50-125			

LCS (BHB0340-BS1)

Prepared: 02/08/2024 Analyzed: 02/09/2024

TPH-Semi-Volatiles (DRO)	81.0 mg/kg wet	10.0	mg/kg wet	99.4	mg/kg wet	81.5	70-130			
Surr: n-Triacontane (Surr)	4.21		mg/kg wet	4.97	mg/kg wet	84.8	50-125			

Matrix Spike (BHB0340-MS1)

Source: 24B0266-05

Prepared: 02/08/2024 Analyzed: 02/09/2024

TPH-Semi-Volatiles (DRO)	136 mg/kg dry	10.0	mg/kg dry	154	26.9 mg/kg dry	70.7	70-130			
Surr: n-Triacontane (Surr)	6.27		mg/kg dry	7.72	mg/kg dry	81.2	50-125			

Matrix Spike Dup (BHB0340-MSD1)

Source: 24B0266-05

Prepared: 02/08/2024 Analyzed: 02/09/2024

TPH-Semi-Volatiles (DRO)	126 mg/kg dry	10.0	mg/kg dry	155	26.9 mg/kg dry	64.2	70-130	7.55	20	M
Surr: n-Triacontane (Surr)	6.08		mg/kg dry	7.73	mg/kg dry	78.7	50-125			

Batch BHB0468 - SW3550C/EPA600-FID

Blank (BHB0468-BLK1)

Prepared: 02/12/2024 Analyzed: 02/13/2024

TPH-Semi-Volatiles (ORO)	<10.0 mg/kg wet	10.0	mg/kg wet							

LCS (BHB0468-BS1)

Prepared: 02/12/2024 Analyzed: 02/13/2024

TPH-Semi-Volatiles (ORO)	79.1 mg/kg wet	10.0	mg/kg wet	98.4	mg/kg wet	80.3	70-130			

Matrix Spike (BHB0468-MS1)

Source: 24B0492-01

Prepared: 02/12/2024 Analyzed: 02/13/2024

TPH-Semi-Volatiles (ORO)	400 mg/kg wet	49.4	mg/kg wet	98.8	218 mg/kg wet	185	70-130			M

Matrix Spike Dup (BHB0468-MSD1)

Source: 24B0492-01

Prepared: 02/12/2024 Analyzed: 02/13/2024

TPH-Semi-Volatiles (ORO)	320 mg/kg wet	48.8	mg/kg wet	97.7	218 mg/kg wet	104	70-130	22.3	20	P



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TCLP Semivolatile Organic Compounds - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0384 - SW3580A-MS

Blank (BHB0384-BLK1)

Prepared: 02/08/2024 Analyzed: 02/09/2024

Extraction Fluid, SV Organics

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TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0420 - SW3510C/EPA600-MS

Blank (BHB0420-BLK1)

Prepared & Analyzed: 02/12/2024

2,4,5-Trichlorophenol	<0.10 mg/L	0.10	mg/L						
2,4,6-Trichlorophenol	<0.10 mg/L	0.10	mg/L						
2,4-Dinitrotoluene	<0.10 mg/L	0.10	mg/L						
Hexachlorobenzene	<0.10 mg/L	0.10	mg/L						
Hexachlorobutadiene	<0.10 mg/L	0.10	mg/L						
Hexachloroethane	<0.10 mg/L	0.10	mg/L						
m+p-Cresols	<0.10 mg/L	0.10	mg/L						
Nitrobenzene	<0.10 mg/L	0.10	mg/L						
o+m+p-Cresols	<0.50 mg/L	0.50	mg/L						
o-Cresol	<0.10 mg/L	0.10	mg/L						
Pentachlorophenol	<0.10 mg/L	0.10	mg/L						
Pyridine	<0.10 mg/L	0.10	mg/L						
Surr: 2,4,6-Tribromophenol (Surr)	0.269		mg/L	1.00		26.9	7-150		
Surr: 2-Fluorobiphenyl (Surr)	0.158		mg/L	0.500		31.6	5-125		
Surr: 2-Fluorophenol (Surr)	0.200		mg/L	1.00		20.0	5-80		
Surr: Nitrobenzene-d5 (Surr)	0.208		mg/L	0.500		41.7	5-117		
Surr: Phenol-d5 (Surr)	0.108		mg/L	1.00		10.8	5-60		
Surr: p-Terphenyl-d14 (Surr)	0.326		mg/L	0.500		65.2	19.3-150		

LCS (BHB0420-BS1)

Prepared & Analyzed: 02/12/2024

1,2,4-Trichlorobenzene	0.13 mg/L	0.10	mg/L	0.500	mg/L	26.5	8-120		
1,2-Dichlorobenzene	0.11 mg/L	0.10	mg/L	0.500	mg/L	22.3	3-97		
1,3-Dichlorobenzene	0.12 mg/L	0.10	mg/L	0.500	mg/L	24.7	3-112		
1,4-Dichlorobenzene	0.14 mg/L	0.10	mg/L	0.500	mg/L	28.4	3-112		
2,4,6-Trichlorophenol	0.19 mg/L	0.10	mg/L	0.500	mg/L	38.4	11-145		
2,4-Dichlorophenol	<0.25 mg/L	0.25	mg/L	0.500	mg/L	27.7	11-75		
2,4-Dimethylphenol	<0.25 mg/L	0.25	mg/L	0.500	mg/L	25.5	11-121		
2,4-Dinitrophenol	0.30 mg/L	0.25	mg/L	0.500	mg/L	59.7	11-165		
2,4-Dinitrotoluene	0.19 mg/L	0.10	mg/L	0.500	mg/L	38.6	17-155		
2,6-Dinitrotoluene	<0.25 mg/L	0.25	mg/L	0.500	mg/L	38.6	15-125		
2-Chloronaphthalene	<0.25 mg/L	0.25	mg/L	0.500	mg/L	24.2	12-113		
2-Chlorophenol	<0.25 mg/L	0.25	mg/L	0.500	mg/L	29.3	15-110		



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0420 - SW3510C/EPA600-MS

LCS (BHB0420-BS1)

Prepared & Analyzed: 02/12/2024

2-Nitrophenol	<0.25 mg/L	0.25	mg/L	0.500	mg/L	26.1	11-125			
3,3'-Dichlorobenzidine	<0.25 mg/L	0.25	mg/L	0.500	mg/L	37.6	25-95			
4,6-Dinitro-2-methylphenol	0.34 mg/L	0.25	mg/L	0.500	mg/L	67.7	25-153			
4-Bromophenyl phenyl ether	<0.25 mg/L	0.25	mg/L	0.500	mg/L	35.6	15-113			
4-Chlorophenyl phenyl ether	<0.25 mg/L	0.25	mg/L	0.500	mg/L	37.0	15-110			
4-Nitrophenol	<0.25 mg/L	0.25	mg/L	0.500	mg/L	35.1	12-70			
Acenaphthene	<0.25 mg/L	0.25	mg/L	0.500	mg/L	26.6	18-119			
Acenaphthylene	<0.25 mg/L	0.25	mg/L	0.500	mg/L	27.2	20-117			
Acetophenone	<0.25 mg/L	0.25	mg/L	0.500	mg/L	30.1	0-200			
Anthracene	<0.25 mg/L	0.25	mg/L	0.500	mg/L	47.4	16-118			
Benzo (a) anthracene	0.28 mg/L	0.25	mg/L	0.500	mg/L	55.7	28-129			
Benzo (a) pyrene	0.32 mg/L	0.25	mg/L	0.500	mg/L	64.9	23-131			
Benzo (b) fluoranthene	0.32 mg/L	0.25	mg/L	0.500	mg/L	64.9	20-141			
Benzo (g,h,i) perylene	<0.25 mg/L	0.25	mg/L	0.500	mg/L	43.3	9-138			
Benzo (k) fluoranthene	0.34 mg/L	0.25	mg/L	0.500	mg/L	68.0	21-138			
bis (2-Chloroethoxy) methane	<0.25 mg/L	0.25	mg/L	0.500	mg/L	19.1	25-110			L
bis (2-Chloroethyl) ether	<0.25 mg/L	0.25	mg/L	0.500	mg/L	19.3	8-107			
2,2'-Oxybis (1-chloropropane)	<0.25 mg/L	0.25	mg/L	0.500	mg/L	20.3	8-112			
bis (2-Ethylhexyl) phthalate	<0.25 mg/L	0.25	mg/L	0.500	mg/L	38.0	14-147			
Butyl benzyl phthalate	0.40 mg/L	0.25	mg/L	0.500	mg/L	80.2	20-146			
Chrysene	0.27 mg/L	0.25	mg/L	0.500	mg/L	54.7	21-136			
Dibenz (a,h) anthracene	0.26 mg/L	0.25	mg/L	0.500	mg/L	51.9	14-142			
Diethyl phthalate	<0.25 mg/L	0.25	mg/L	0.500	mg/L	45.2	11-121			
Dimethyl phthalate	<0.25 mg/L	0.25	mg/L	0.500	mg/L	39.3	3-125			
Di-n-butyl phthalate	0.36 mg/L	0.25	mg/L	0.500	mg/L	72.9	35-115			
Di-n-octyl phthalate	0.36 mg/L	0.25	mg/L	0.500	mg/L	72.5	25-175			
Fluoranthene	0.40 mg/L	0.25	mg/L	0.500	mg/L	79.7	25-135			
Fluorene	<0.25 mg/L	0.25	mg/L	0.500	mg/L	31.0	15-122			
Hexachlorobenzene	0.15 mg/L	0.10	mg/L	0.500	mg/L	30.6	25-125			
Hexachlorobutadiene	0.18 mg/L	0.10	mg/L	0.500	mg/L	36.3	25-125			
Hexachlorocyclopentadiene	0.10 mg/L	0.10	mg/L	0.500	mg/L	19.4	25-125			L



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TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0420 - SW3510C/EPA600-MS

LCS (BHB0420-BS1)

Prepared & Analyzed: 02/12/2024

Hexachloroethane	0.14 mg/L	0.10	mg/L	0.500	mg/L	27.4	3-125			
Indeno (1,2,3-cd) pyrene	0.23 mg/L	0.10	mg/L	0.500	mg/L	45.8	16-137			
Isophorone	<0.10 mg/L	0.10	mg/L	0.500	mg/L	15.3	6-110			
Naphthalene	0.13 mg/L	0.10	mg/L	0.500	mg/L	25.9	12-105			
Nitrobenzene	0.19 mg/L	0.10	mg/L	0.500	mg/L	39.0	9-119			
n-Nitrosodimethylamine	<0.25 mg/L	0.25	mg/L	0.500	mg/L		10-85			L
n-Nitrosodi-n-propylamine	<0.25 mg/L	0.25	mg/L	0.500	mg/L	29.1	8-108			
n-Nitrosodiphenylamine	<0.25 mg/L	0.25	mg/L	0.500	mg/L	32.9	12-97			
p-Chloro-m-cresol	0.12 mg/L	0.10	mg/L	0.500	mg/L	23.3	10-128			
Pentachlorophenol	0.20 mg/L	0.10	mg/L	0.500	mg/L	39.1	11-117			
Phenanthrene	0.27 mg/L	0.25	mg/L	0.500	mg/L	54.8	17-128			
Phenol	<0.25 mg/L	0.25	mg/L	0.505	mg/L		3-80			L
Pyrene	<0.25 mg/L	0.25	mg/L	0.500	mg/L	37.8	15-141			
Pyridine	0.12 mg/L	0.10	mg/L	0.500	mg/L	23.8	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	0.468		mg/L	1.00	mg/L	46.8	7-150			
Surr: 2-Fluorobiphenyl (Surr)	0.182		mg/L	0.500	mg/L	36.4	5-125			
Surr: 2-Fluorophenol (Surr)	0.212		mg/L	1.00	mg/L	21.2	5-80			
Surr: Nitrobenzene-d5 (Surr)	0.205		mg/L	0.500	mg/L	41.0	5-117			
Surr: Phenol-d5 (Surr)	0.108		mg/L	1.00	mg/L	10.8	5-60			
Surr: p-Terphenyl-d14 (Surr)	0.264		mg/L	0.500	mg/L	52.9	19.3-150			

Matrix Spike (BHB0420-MS1)

Source: 24B0351-03

Prepared & Analyzed: 02/12/2024

1,2,4-Trichlorobenzene	0.23 mg/L	0.10	mg/L	0.500	<0.10 mg/L	46.9	9-104			
1,2-Dichlorobenzene	0.20 mg/L	0.10	mg/L	0.500	<0.10 mg/L	40.7	3-105			
1,3-Dichlorobenzene	0.19 mg/L	0.10	mg/L	0.500	<0.10 mg/L	38.7	6-108			
1,4-Dichlorobenzene	0.24 mg/L	0.10	mg/L	0.500	<0.10 mg/L	48.0	3-90			
2,4,6-Trichlorophenol	0.39 mg/L	0.10	mg/L	0.500	<0.10 mg/L	78.0	17-123			
2,4-Dichlorophenol	0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	50.2	35-128			
2,4-Dimethylphenol	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	46.6	30-114			
2,4-Dinitrophenol	0.41 mg/L	0.25	mg/L	0.500	<0.25 mg/L	82.0	15-190			
2,4-Dinitrotoluene	0.31 mg/L	0.10	mg/L	0.500	<0.10 mg/L	61.3	17-141			
2,6-Dinitrotoluene	0.31 mg/L	0.25	mg/L	0.500	<0.25 mg/L	61.3	15-127			



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TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0420 - SW3510C/EPA600-MS

Matrix Spike (BHB0420-MS1)

Source: 24B0351-03

Prepared & Analyzed: 02/12/2024

2-Chloronaphthalene	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	46.4	27-121			
2-Chlorophenol	0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	49.3	19-116			
2-Nitrophenol	0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	49.8	10-133			
3,3'-Dichlorobenzidine	0.28 mg/L	0.25	mg/L	0.500	<0.25 mg/L	55.7	10-110			
4,6-Dinitro-2-methylphenol	0.44 mg/L	0.25	mg/L	0.500	<0.25 mg/L	88.9	15-157			
4-Bromophenyl phenyl ether	0.27 mg/L	0.25	mg/L	0.500	<0.25 mg/L	53.4	15-123			
4-Chlorophenyl phenyl ether	0.31 mg/L	0.25	mg/L	0.500	<0.25 mg/L	61.9	15-114			
4-Nitrophenol	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	39.9	12-70			
Acenaphthene	0.27 mg/L	0.25	mg/L	0.500	<0.25 mg/L	54.4	24-128			
Acenaphthylene	0.26 mg/L	0.25	mg/L	0.500	<0.25 mg/L	51.7	16-121			
Acetophenone	0.29 mg/L	0.25	mg/L	0.500	<0.25 mg/L	57.3	0-200			
Anthracene	0.35 mg/L	0.25	mg/L	0.500	<0.25 mg/L	69.6	11-128			
Benzo (a) anthracene	0.34 mg/L	0.25	mg/L	0.500	<0.25 mg/L	68.0	18-139			
Benzo (a) pyrene	0.38 mg/L	0.25	mg/L	0.500	<0.25 mg/L	76.3	15-175			
Benzo (b) fluoranthene	0.41 mg/L	0.25	mg/L	0.500	<0.25 mg/L	82.1	1-167			
Benzo (g,h,i) perylene	0.26 mg/L	0.25	mg/L	0.500	<0.25 mg/L	52.4	40-142			
Benzo (k) fluoranthene	0.38 mg/L	0.25	mg/L	0.500	<0.25 mg/L	75.0	45-209			
bis (2-Chloroethoxy) methane	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	34.4	11-115			
bis (2-Chloroethyl) ether	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	37.5	6-117			
2,2'-Oxybis (1-chloropropane)	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	36.2	8-119			
bis (2-Ethylhexyl) phthalate	0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	50.1	4-156			
Butyl benzyl phthalate	0.48 mg/L	0.25	mg/L	0.500	<0.25 mg/L	95.2	15-151			
Chrysene	0.33 mg/L	0.25	mg/L	0.500	<0.25 mg/L	66.0	11-146			
Dibenz (a,h) anthracene	0.34 mg/L	0.25	mg/L	0.500	<0.25 mg/L	68.2	10-149			
Diethyl phthalate	0.33 mg/L	0.25	mg/L	0.500	<0.25 mg/L	65.5	9-128			
Dimethyl phthalate	0.30 mg/L	0.25	mg/L	0.500	<0.25 mg/L	60.2	3-125			
Di-n-butyl phthalate	0.45 mg/L	0.25	mg/L	0.500	<0.25 mg/L	90.6	6-152			
Di-n-octyl phthalate	0.41 mg/L	0.25	mg/L	0.500	<0.25 mg/L	82.7	9-214			
Fluoranthene	0.47 mg/L	0.25	mg/L	0.500	<0.25 mg/L	93.0	3-154			
Fluorene	0.28 mg/L	0.25	mg/L	0.500	<0.25 mg/L	56.2	10-132			
Hexachlorobenzene	0.21 mg/L	0.10	mg/L	0.500	<0.10 mg/L	41.6	10-125			



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TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0420 - SW3510C/EPA600-MS

Matrix Spike (BHB0420-MS1)

Source: 24B0351-03

Prepared & Analyzed: 02/12/2024

Hexachlorobutadiene	0.33 mg/L	0.10	mg/L	0.500	<0.10 mg/L	66.6	7-125			
Hexachlorocyclopentadiene	0.19 mg/L	0.10	mg/L	0.500	<0.10 mg/L	37.5	10-90			
Hexachloroethane	0.24 mg/L	0.10	mg/L	0.500	<0.10 mg/L	48.1	3-125			
Indeno (1,2,3-cd) pyrene	0.31 mg/L	0.10	mg/L	0.500	<0.10 mg/L	62.4	4-142			
Isophorone	0.13 mg/L	0.10	mg/L	0.500	<0.10 mg/L	26.7	6-110			
Naphthalene	0.27 mg/L	0.10	mg/L	0.500	<0.10 mg/L	54.2	7-117			
Nitrobenzene	0.31 mg/L	0.10	mg/L	0.500	<0.10 mg/L	62.1	10-121			
n-Nitrosodimethylamine	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	25.6	10-90			
n-Nitrosodi-n-propylamine	0.30 mg/L	0.25	mg/L	0.500	<0.25 mg/L	59.2	7-116			
n-Nitrosodiphenylamine	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	46.2	7-102			
p-Chloro-m-cresol	0.23 mg/L	0.10	mg/L	0.500	<0.10 mg/L	46.4	10-135			
Pentachlorophenol	0.28 mg/L	0.10	mg/L	0.500	<0.10 mg/L	55.4	7-138			
Phenanthrene	0.38 mg/L	0.25	mg/L	0.500	<0.25 mg/L	75.3	5-139			
Phenol	<0.25 mg/L	0.25	mg/L	0.505	<0.25 mg/L	18.4	3-70			
Pyrene	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	44.5	8-152			
Pyridine	0.16 mg/L	0.10	mg/L	0.500	<0.10 mg/L	31.7	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	0.708		mg/L	1.00	mg/L	70.8	7-150			
Surr: 2-Fluorobiphenyl (Surr)	0.349		mg/L	0.500	mg/L	69.9	5-125			
Surr: 2-Fluorophenol (Surr)	0.356		mg/L	1.00	mg/L	35.6	5-80			
Surr: Nitrobenzene-d5 (Surr)	0.351		mg/L	0.500	mg/L	70.1	5-117			
Surr: Phenol-d5 (Surr)	0.188		mg/L	1.00	mg/L	18.8	5-60			
Surr: p-Terphenyl-d14 (Surr)	0.302		mg/L	0.500	mg/L	60.5	19.3-150			

Matrix Spike Dup (BHB0420-MSD1)

Source: 24B0351-03

Prepared & Analyzed: 02/12/2024

1,2,4-Trichlorobenzene	0.22 mg/L	0.10	mg/L	0.500	<0.10 mg/L	44.7	9-104	4.76	20	
1,2-Dichlorobenzene	0.19 mg/L	0.10	mg/L	0.500	<0.10 mg/L	38.5	3-105	5.45	20	
1,3-Dichlorobenzene	0.19 mg/L	0.10	mg/L	0.500	<0.10 mg/L	38.6	6-108	0.310	20	
1,4-Dichlorobenzene	0.22 mg/L	0.10	mg/L	0.500	<0.10 mg/L	44.9	3-90	6.80	20	
2,4,6-Trichlorophenol	0.37 mg/L	0.10	mg/L	0.500	<0.10 mg/L	73.7	17-123	5.64	20	
2,4-Dichlorophenol	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	47.9	35-128	4.53	20	
2,4-Dimethylphenol	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	41.7	30-114		20	
2,4-Dinitrophenol	0.39 mg/L	0.25	mg/L	0.500	<0.25 mg/L	77.7	15-190	5.39	20	



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Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0420 - SW3510C/EPA600-MS

Matrix Spike Dup (BHB0420-MSD1)

Source: 24B0351-03

Prepared & Analyzed: 02/12/2024

2,4-Dinitrotoluene	0.29 mg/L	0.10	mg/L	0.500	<0.10 mg/L	58.9	17-141	3.93	20	
2,6-Dinitrotoluene	0.29 mg/L	0.25	mg/L	0.500	<0.25 mg/L	58.9	15-127	3.93	20	
2-Chloronaphthalene	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	47.6	27-121		20	
2-Chlorophenol	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	45.6	19-116		20	
2-Nitrophenol	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	46.9	10-133		20	
3,3'-Dichlorobenzidine	0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	51.0	10-110	8.85	20	
4,6-Dinitro-2-methylphenol	0.43 mg/L	0.25	mg/L	0.500	<0.25 mg/L	85.3	15-157	4.16	20	
4-Bromophenyl phenyl ether	0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	50.9	15-123	4.72	20	
4-Chlorophenyl phenyl ether	0.30 mg/L	0.25	mg/L	0.500	<0.25 mg/L	60.8	15-114	1.79	20	
4-Nitrophenol	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	39.0	12-70		20	
Acenaphthene	0.28 mg/L	0.25	mg/L	0.500	<0.25 mg/L	55.8	24-128	2.54	20	
Acenaphthylene	0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	51.0	16-121	1.40	20	
Acetophenone	0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	50.5	0-200	12.8	20	
Anthracene	0.32 mg/L	0.25	mg/L	0.500	<0.25 mg/L	64.1	11-128	8.32	20	
Benzo (a) anthracene	0.33 mg/L	0.25	mg/L	0.500	<0.25 mg/L	66.6	18-139	2.05	20	
Benzo (a) pyrene	0.40 mg/L	0.25	mg/L	0.500	<0.25 mg/L	80.0	15-175	4.68	20	
Benzo (b) fluoranthene	0.40 mg/L	0.25	mg/L	0.500	<0.25 mg/L	79.7	1-167	3.02	20	
Benzo (g,h,i) perylene	0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	49.8	40-142	5.20	20	
Benzo (k) fluoranthene	0.44 mg/L	0.25	mg/L	0.500	<0.25 mg/L	88.4	45-209	16.4	20	
bis (2-Chloroethoxy) methane	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	33.8	11-115		20	
bis (2-Chloroethyl) ether	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	34.5	6-117		20	
2,2'-Oxybis (1-chloropropane)	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	37.3	8-119		20	
bis (2-Ethylhexyl) phthalate	0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	49.9	4-156	0.560	20	
Butyl benzyl phthalate	0.48 mg/L	0.25	mg/L	0.500	<0.25 mg/L	95.1	15-151	0.0631	20	
Chrysene	0.33 mg/L	0.25	mg/L	0.500	<0.25 mg/L	66.6	11-146	0.845	20	
Dibenz (a,h) anthracene	0.32 mg/L	0.25	mg/L	0.500	<0.25 mg/L	63.1	10-149	7.74	20	
Diethyl phthalate	0.32 mg/L	0.25	mg/L	0.500	<0.25 mg/L	64.9	9-128	0.921	20	
Dimethyl phthalate	0.29 mg/L	0.25	mg/L	0.500	<0.25 mg/L	58.7	3-125	2.52	20	
Di-n-butyl phthalate	0.44 mg/L	0.25	mg/L	0.500	<0.25 mg/L	88.6	6-152	2.19	20	
Di-n-octyl phthalate	0.49 mg/L	0.25	mg/L	0.500	<0.25 mg/L	98.7	9-214	17.7	20	
Fluoranthene	0.45 mg/L	0.25	mg/L	0.500	<0.25 mg/L	90.9	3-154	2.35	20	



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0420 - SW3510C/EPA600-MS

Matrix Spike Dup (BHB0420-MSD1)

Source: 24B0351-03

Prepared & Analyzed: 02/12/2024

Fluorene	0.28 mg/L	0.25	mg/L	0.500	<0.25 mg/L	55.6	10-132	0.966	20
Hexachlorobenzene	0.20 mg/L	0.10	mg/L	0.500	<0.10 mg/L	39.4	10-125	5.58	20
Hexachlorobutadiene	0.32 mg/L	0.10	mg/L	0.500	<0.10 mg/L	63.7	7-125	4.51	20
Hexachlorocyclopentadiene	0.17 mg/L	0.10	mg/L	0.500	<0.10 mg/L	34.9	10-90	7.24	20
Hexachloroethane	0.23 mg/L	0.10	mg/L	0.500	<0.10 mg/L	46.7	3-125	2.95	20
Indeno (1,2,3-cd) pyrene	0.28 mg/L	0.10	mg/L	0.500	<0.10 mg/L	56.7	4-142	9.67	20
Isophorone	0.13 mg/L	0.10	mg/L	0.500	<0.10 mg/L	25.8	6-110	3.66	20
Naphthalene	0.26 mg/L	0.10	mg/L	0.500	<0.10 mg/L	51.7	7-117	4.72	20
Nitrobenzene	0.29 mg/L	0.10	mg/L	0.500	<0.10 mg/L	58.1	10-121	6.66	20
n-Nitrosodimethylamine	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	24.6	10-90		20
n-Nitrosodi-n-propylamine	0.27 mg/L	0.25	mg/L	0.500	<0.25 mg/L	54.1	7-116	8.93	20
n-Nitrosodiphenylamine	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	44.3	7-102		20
p-Chloro-m-cresol	0.21 mg/L	0.10	mg/L	0.500	<0.10 mg/L	42.0	10-135	10.0	20
Pentachlorophenol	0.25 mg/L	0.10	mg/L	0.500	<0.10 mg/L	49.6	7-138	11.0	20
Phenanthrene	0.35 mg/L	0.25	mg/L	0.500	<0.25 mg/L	70.6	5-139	6.42	20
Phenol	<0.25 mg/L	0.25	mg/L	0.505	<0.25 mg/L	16.6	3-70		20
Pyrene	<0.25 mg/L	0.25	mg/L	0.500	<0.25 mg/L	44.4	8-152		20
Pyridine	0.15 mg/L	0.10	mg/L	0.500	<0.10 mg/L	30.7	0-200	3.33	20
Surr: 2,4,6-Tribromophenol (Surr)	0.681		mg/L	1.00	mg/L	68.1	7-150		
Surr: 2-Fluorobiphenyl (Surr)	0.349		mg/L	0.500	mg/L	69.8	5-125		
Surr: 2-Fluorophenol (Surr)	0.336		mg/L	1.00	mg/L	33.6	5-80		
Surr: Nitrobenzene-d5 (Surr)	0.335		mg/L	0.500	mg/L	67.0	5-117		
Surr: Phenol-d5 (Surr)	0.174		mg/L	1.00	mg/L	17.4	5-60		
Surr: p-Terphenyl-d14 (Surr)	0.303		mg/L	0.500	mg/L	60.6	19.3-150		



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Client Site I.D.: Alex Waterfront

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Purchase Order: 22 02065 001

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0264 - SW3550C/EPA600-ECD

Blank (BHB0264-BLK1)

Prepared & Analyzed: 02/07/2024

4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet
delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet
Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet
Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet

Surr: TCMX

26.9

ug/kg wet

33.2

81.0

30-105

Surr: DCB

27.7

ug/kg wet

33.2

83.4

30-105

LCS (BHB0264-BS1)

Prepared & Analyzed: 02/07/2024

4,4'-DDD	16.9 ug/kg wet	6.00	ug/kg wet	16.5	ug/kg wet	103	23-134
4,4'-DDE	20.4 ug/kg wet	4.00	ug/kg wet	16.5	ug/kg wet	124	23-134
4,4'-DDT	14.4 ug/kg wet	4.00	ug/kg wet	16.5	ug/kg wet	87.5	23-134
Aldrin	13.4 ug/kg wet	2.00	ug/kg wet	16.5	ug/kg wet	81.1	23-134
alpha-BHC	13.7 ug/kg wet	2.00	ug/kg wet	16.5	ug/kg wet	83.2	23-134
beta-BHC	13.0 ug/kg wet	2.00	ug/kg wet	16.5	ug/kg wet	79.0	23-134
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet		ug/kg wet		23-134
delta-BHC	12.9 ug/kg wet	4.00	ug/kg wet	16.5	ug/kg wet	78.1	23-134
Dieldrin	14.1 ug/kg wet	4.00	ug/kg wet	16.5	ug/kg wet	85.4	23-134



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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0264 - SW3550C/EPA600-ECD

LCS (BHB0264-BS1)

Prepared & Analyzed: 02/07/2024

Endosulfan I	12.1 ug/kg wet	4.00	ug/kg wet	16.5	ug/kg wet	73.4	23-134
Endosulfan II	15.1 ug/kg wet	6.00	ug/kg wet	16.5	ug/kg wet	91.4	23-134
Endosulfan sulfate	12.7 ug/kg wet	2.00	ug/kg wet	16.5	ug/kg wet	77.1	23-134
Endrin	16.1 ug/kg wet	4.00	ug/kg wet	16.5	ug/kg wet	97.8	23-134
Endrin aldehyde	12.4 ug/kg wet	8.00	ug/kg wet	16.5	ug/kg wet	75.4	23-134
Endrin ketone	13.7 ug/kg wet	2.00	ug/kg wet	16.5	ug/kg wet	83.3	23-134
gamma-BHC (Lindane)	13.8 ug/kg wet	2.00	ug/kg wet	16.5	ug/kg wet	83.8	23-134
Heptachlor	13.8 ug/kg wet	2.00	ug/kg wet	16.5	ug/kg wet	83.6	23-134
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet	16.5	ug/kg wet	94.6	23-134
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet	16.5	ug/kg wet	86.0	23-134
Mirex	15.9 ug/kg wet	6.00	ug/kg wet	16.5	ug/kg wet	96.1	23-134
Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet		ug/kg wet		23-134
Surr: TCMX	26.0		ug/kg wet	33.0	ug/kg wet	78.8	30-105
Surr: DCB	26.6		ug/kg wet	33.0	ug/kg wet	80.5	30-105

LCS (BHB0264-BS2)

Prepared & Analyzed: 02/07/2024

4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet		23-134
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet		ug/kg wet		23-134
delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet		23-134
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet		ug/kg wet		23-134
Endrin ketone	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134



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Purchase Order: 22 02065 001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0264 - SW3550C/EPA600-ECD

LCS (BHB0264-BS2)

Prepared & Analyzed: 02/07/2024

Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet		ug/kg wet		23-134			
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet		ug/kg wet		23-134			
Mirex	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet		23-134			
Toxaphene	395 ug/kg wet	42.0	ug/kg wet	415	ug/kg wet	95.0	23-134			
Surr: TCMX	26.6		ug/kg wet	33.2	ug/kg wet	80.1	30-105			
Surr: DCB	30.4		ug/kg wet	33.2	ug/kg wet	91.6	30-105			

LCS (BHB0264-BS3)

Prepared & Analyzed: 02/07/2024

4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet		23-134			
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
Chlordane	378 ug/kg wet	42.0	ug/kg wet	414	ug/kg wet	91.3	23-134			
delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet		23-134			
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet		ug/kg wet		23-134			
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet		ug/kg wet		23-134			
Endrin ketone	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet		ug/kg wet		23-134			
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet		ug/kg wet		23-134			
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet		ug/kg wet		23-134			
Mirex	<6.00 ug/kg wet	6.00	ug/kg wet		ug/kg wet		23-134			
Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet		ug/kg wet		23-134			
Surr: TCMX	31.4		ug/kg wet	33.1	ug/kg wet	94.8	30-105			



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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0264 - SW3550C/EPA600-ECD

LCS (BHB0264-BS3)

Prepared & Analyzed: 02/07/2024

Surr: DCB 32.4 ug/kg wet 33.1 ug/kg wet 97.9 30-105

Matrix Spike (BHB0264-MS1)

Source: 24B0266-04

Prepared & Analyzed: 02/07/2024

4,4'-DDD	11.5 ug/kg dry	6.00	ug/kg dry	20.1	<6.00 ug/kg	57.3	23-134
4,4'-DDE	12.6 ug/kg dry	4.00	ug/kg dry	20.1	<4.00 ug/kg	62.5	23-134
4,4'-DDT	10.2 ug/kg dry	4.00	ug/kg dry	20.1	<4.00 ug/kg	50.7	23-134
Aldrin	10.3 ug/kg dry	2.00	ug/kg dry	20.1	<2.00 ug/kg	51.3	23-134
alpha-BHC	15.2 ug/kg dry	2.00	ug/kg dry	20.1	<2.00 ug/kg	75.6	23-134
beta-BHC	15.5 ug/kg dry	2.00	ug/kg dry	20.1	<2.00 ug/kg	77.1	23-134
delta-BHC	14.1 ug/kg dry	4.00	ug/kg dry	20.1	<4.00 ug/kg	69.9	23-134
Dieldrin	10.2 ug/kg dry	4.00	ug/kg dry	20.1	<4.00 ug/kg	50.7	23-134
Endosulfan I	10.0 ug/kg dry	4.00	ug/kg dry	20.1	<4.00 ug/kg	49.7	23-134
Endosulfan II	11.6 ug/kg dry	6.00	ug/kg dry	20.1	<6.00 ug/kg	57.6	23-134
Endosulfan sulfate	9.80 ug/kg dry	2.00	ug/kg dry	20.1	<2.00 ug/kg	48.7	23-134
Endrin	11.7 ug/kg dry	4.00	ug/kg dry	20.1	<4.00 ug/kg	58.1	23-134
Endrin aldehyde	10.1 ug/kg dry	8.00	ug/kg dry	20.1	<8.00 ug/kg	50.2	23-134
Endrin ketone	11.0 ug/kg dry	2.00	ug/kg dry	20.1	<2.00 ug/kg	54.6	23-134
gamma-BHC (Lindane)	14.7 ug/kg dry	2.00	ug/kg dry	20.1	<2.00 ug/kg	73.1	23-134
Heptachlor	11.0 ug/kg dry	2.00	ug/kg dry	20.1	<2.00 ug/kg	54.8	23-134
Heptachlor epoxide	<40.0 ug/kg dry	40.0	ug/kg dry	20.1	<40.0 ug/kg	58.3	23-134
Methoxychlor	<40.0 ug/kg dry	40.0	ug/kg dry	20.1	<40.0 ug/kg	50.4	23-134
Mirex	8.41 ug/kg dry	6.00	ug/kg dry	20.1	<6.00 ug/kg	41.8	23-134

Surr: TCMX 22.0 ug/kg dry 40.3 ug/kg dry 54.7 30-105

Surr: DCB 16.8 ug/kg dry 40.3 ug/kg dry 41.7 30-105

Matrix Spike Dup (BHB0264-MSD1)

Source: 24B0266-04

Prepared & Analyzed: 02/07/2024

4,4'-DDD	10.8 ug/kg dry	6.00	ug/kg dry	20.2	<6.00 ug/kg	53.5	23-134	6.53	20
4,4'-DDE	11.8 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	58.4	23-134	6.45	20
4,4'-DDT	8.54 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	42.3	23-134	17.7	20
Aldrin	9.33 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	46.2	23-134	10.1	20
alpha-BHC	14.1 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	69.8	23-134	7.58	20
beta-BHC	11.9 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	58.9	23-134	26.5	20 P



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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0264 - SW3550C/EPA600-ECD

Matrix Spike Dup (BHB0264-MSD1)

Source: 24B0266-04

Prepared & Analyzed: 02/07/2024

delta-BHC	12.5 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	62.1	23-134	11.5	20	
Dieldrin	9.48 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	47.0	23-134	7.27	20	
Endosulfan I	8.20 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	40.6	23-134	19.9	20	
Endosulfan II	10.8 ug/kg dry	6.00	ug/kg dry	20.2	<6.00 ug/kg	53.3	23-134	7.46	20	
Endosulfan sulfate	9.09 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	45.0	23-134	7.48	20	
Endrin	10.8 ug/kg dry	4.00	ug/kg dry	20.2	<4.00 ug/kg	53.6	23-134	7.66	20	
Endrin aldehyde	9.32 ug/kg dry	8.00	ug/kg dry	20.2	<8.00 ug/kg	46.1	23-134	8.02	20	
Endrin ketone	10.3 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	50.8	23-134	6.80	20	
gamma-BHC (Lindane)	13.8 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	68.2	23-134	6.70	20	
Heptachlor	10.1 ug/kg dry	2.00	ug/kg dry	20.2	<2.00 ug/kg	49.8	23-134	9.13	20	
Heptachlor epoxide	<40.0 ug/kg dry	40.0	ug/kg dry	20.2	<40.0 ug/kg	53.9	23-134	7.53	20	
Methoxychlor	<40.0 ug/kg dry	40.0	ug/kg dry	20.2	<40.0 ug/kg	65.2	23-134	25.9	20	P
Mirex	8.03 ug/kg dry	6.00	ug/kg dry	20.2	<6.00 ug/kg	39.7	23-134	4.68	20	
Surr: TCMX	16.8		ug/kg dry	40.4	ug/kg dry	41.6	30-105			
Surr: DCB	10.1		ug/kg dry	40.4	ug/kg dry	25.0	30-105			S

Batch BHB0266 - SW3550C/EPA600-ECD

Blank (BHB0266-BLK1)

Prepared: 02/07/2024 Analyzed: 02/08/2024

PCB as Aroclor 1016	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1260	<0.100 mg/kg wet	0.100	mg/kg wet							
Surr: DCB	0.0255		mg/kg wet	0.0332		76.8	30-105			
Surr: TCMX	0.0268		mg/kg wet	0.0332		80.6	30-105			



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 14, 2024 17:03
9201 Arboretum Parkway Suite 310 Project Number: 22-02065.001
Purchase Order: 22 02065 001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0266 - SW3550C/EPA600-ECD

LCS (BHB0266-BS1)

Prepared: 02/07/2024 Analyzed: 02/08/2024

PCB as Aroclor 1016	0.151 mg/kg wet	0.100	mg/kg wet	0.164	mg/kg wet	92.1	70-130			
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet		mg/kg wet		0-200			
PCB as Aroclor 1260	0.168 mg/kg wet	0.100	mg/kg wet	0.164	mg/kg wet	102	70-130			
Surr: DCB	0.0312		mg/kg wet	0.0329	mg/kg wet	95.0	30-105			
Surr: TCMX	0.0274		mg/kg wet	0.0329	mg/kg wet	83.3	30-105			

Matrix Spike (BHB0266-MS1)

Source: 24B0266-05

Prepared: 02/07/2024 Analyzed: 02/08/2024

PCB as Aroclor 1016	0.239 mg/kg dry	0.152	mg/kg dry	0.254	<0.152 mg/kg	94.2	70-130			
PCB as Aroclor 1221	<0.152 mg/kg dry	0.152	mg/kg dry		<0.152 mg/kg		0-200			
PCB as Aroclor 1232	<0.152 mg/kg dry	0.152	mg/kg dry		<0.152 mg/kg		0-200			
PCB as Aroclor 1242	<0.152 mg/kg dry	0.152	mg/kg dry		<0.152 mg/kg		0-200			
PCB as Aroclor 1248	<0.152 mg/kg dry	0.152	mg/kg dry		<0.152 mg/kg		0-200			
PCB as Aroclor 1254	<0.152 mg/kg dry	0.152	mg/kg dry		<0.152 mg/kg		0-200			
PCB as Aroclor 1260	<0.152 mg/kg dry	0.152	mg/kg dry	0.254	<0.152 mg/kg	34.4	70-130			M
Surr: DCB	0.0197		mg/kg dry	0.0508	mg/kg dry	38.8	30-105			
Surr: TCMX	0.0244		mg/kg dry	0.0508	mg/kg dry	48.1	30-105			

Matrix Spike Dup (BHB0266-MSD1)

Source: 24B0266-05

Prepared: 02/07/2024 Analyzed: 02/08/2024

PCB as Aroclor 1016	0.204 mg/kg dry	0.154	mg/kg dry	0.257	<0.154 mg/kg	79.4	70-130	16.1	20	
PCB as Aroclor 1221	<0.154 mg/kg dry	0.154	mg/kg dry		<0.154 mg/kg		0-200		20	
PCB as Aroclor 1232	<0.154 mg/kg dry	0.154	mg/kg dry		<0.154 mg/kg		0-200		20	
PCB as Aroclor 1242	<0.154 mg/kg dry	0.154	mg/kg dry		<0.154 mg/kg		0-200		20	
PCB as Aroclor 1248	<0.154 mg/kg dry	0.154	mg/kg dry		<0.154 mg/kg		0-200		20	
PCB as Aroclor 1254	<0.154 mg/kg dry	0.154	mg/kg dry		<0.154 mg/kg		0-200		20	
PCB as Aroclor 1260	<0.154 mg/kg dry	0.154	mg/kg dry	0.257	<0.154 mg/kg	22.1	70-130	42.6	20	M
Surr: DCB	0.0110		mg/kg dry	0.0513	mg/kg dry	21.4	30-105			S
Surr: TCMX	0.0194		mg/kg dry	0.0513	mg/kg dry	37.7	30-105			



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Certificate of Analysis

Final Report

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9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

TCLP Organochlorine Herbicides by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0440 - SW8151A/EPA600

Blank (BHB0440-BLK1)

Prepared: 02/12/2024 Analyzed: 02/14/2024

2,4,5-TP (Silvex)	<0.0005 mg/L	0.0005	mg/L							
2,4-D	<0.001 mg/L	0.001	mg/L							
Surr: DCAA (Surr)	0.00892		mg/L	0.0100		89.2	48.5-134			

LCS (BHB0440-BS1)

Prepared: 02/12/2024 Analyzed: 02/14/2024

2,4,5-TP (Silvex)	0.005 mg/L	0.0005	mg/L	0.00500 mg/L		99.8	62-132			
2,4-D	0.005 mg/L	0.001	mg/L	0.00500 mg/L		108	74-139			
Dinoseb	0.005 mg/L	0.005	mg/L	0.00500 mg/L		100	59-136			
Surr: DCAA (Surr)	0.0100		mg/L	0.0100 mg/L		100	48.5-134			

Matrix Spike (BHB0440-MS1)

Source: 24B0351-03

Prepared: 02/12/2024 Analyzed: 02/14/2024

2,4,5-TP (Silvex)	0.005 mg/L	0.0005	mg/L	0.00500 <0.0005 mg/L		102	52-129			
2,4-D	0.005 mg/L	0.001	mg/L	0.00500 <0.001 mg/L		103	53-126			
Dinoseb	<0.005 mg/L	0.005	mg/L	0.00500 <0.005 mg/L		85.2	60-137			
Surr: DCAA (Surr)	0.00942		mg/L	0.0100 mg/L		94.2	48.5-134			

Matrix Spike Dup (BHB0440-MSD1)

Source: 24B0351-03

Prepared: 02/12/2024 Analyzed: 02/14/2024

2,4,5-TP (Silvex)	0.005 mg/L	0.0005	mg/L	0.00500 <0.0005 mg/L	90.8	52-129	11.4	20		
2,4-D	0.005 mg/L	0.001	mg/L	0.00500 <0.001 mg/L	107	53-126	4.45	20		
Dinoseb	0.005 mg/L	0.005	mg/L	0.00500 <0.005 mg/L	99.6	60-137	15.5	20		
Surr: DCAA (Surr)	0.00896		mg/L	0.0100 mg/L	89.6	48.5-134				



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Purchase Order: 22 02065 001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

TCLP Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0439 - SW3510C/EPA600-ECD

Blank (BHB0439-BLK1)

Prepared: 02/12/2024 Analyzed: 02/13/2024

Chlordane	<0.030 mg/L	0.030	mg/L							
Endrin	<0.005 mg/L	0.005	mg/L							
gamma-BHC (Lindane)	<0.005 mg/L	0.005	mg/L							
Heptachlor	<0.005 mg/L	0.005	mg/L							
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L							
Methoxychlor	<0.005 mg/L	0.005	mg/L							
Toxaphene	<0.500 mg/L	0.500	mg/L							
Surr: TCMX	0.00182		mg/L	0.00200		91.1	18-112			
Surr: DCB	0.00161		mg/L	0.00200		80.5	27-131			

LCS (BHB0439-BS1)

Prepared: 02/12/2024 Analyzed: 02/13/2024

Chlordane	<0.030 mg/L	0.030	mg/L	mg/L		23-134				
Endrin	<0.005 mg/L	0.005	mg/L	0.00100 mg/L	86.1	23-134				
Heptachlor	<0.005 mg/L	0.005	mg/L	0.00100 mg/L	65.1	23-134				
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L	0.00100 mg/L	74.8	23-134				
Methoxychlor	<0.005 mg/L	0.005	mg/L	0.00100 mg/L	80.5	23-134				
Toxaphene	<0.500 mg/L	0.500	mg/L	mg/L		23-134				
Surr: TCMX	0.00160		mg/L	0.00200 mg/L	79.9	18-112				
Surr: DCB	0.00186		mg/L	0.00200 mg/L	92.8	27-131				

LCS (BHB0439-BS2)

Prepared: 02/12/2024 Analyzed: 02/13/2024

Chlordane	<0.030 mg/L	0.030	mg/L	mg/L		23-134				
Endrin	<0.005 mg/L	0.005	mg/L	mg/L		23-134				
Heptachlor	<0.005 mg/L	0.005	mg/L	mg/L		23-134				
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L	mg/L		23-134				
Methoxychlor	<0.005 mg/L	0.005	mg/L	mg/L		23-134				
Toxaphene	<0.500 mg/L	0.500	mg/L	0.0250 mg/L	63.6	23-134				
Surr: TCMX	0.00170		mg/L	0.00200 mg/L	84.9	18-112				
Surr: DCB	0.00138		mg/L	0.00200 mg/L	68.9	27-131				



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

TCLP Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0439 - SW3510C/EPA600-ECD

LCS (BHB0439-BS3)

Prepared: 02/12/2024 Analyzed: 02/13/2024

Chlordane	<0.030 mg/L	0.030	mg/L	0.0250	mg/L	57.1	23-134		
Endrin	<0.005 mg/L	0.005	mg/L		mg/L		23-134		
Heptachlor	<0.005 mg/L	0.005	mg/L		mg/L		23-134		
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L		mg/L		23-134		
Methoxychlor	<0.005 mg/L	0.005	mg/L		mg/L		23-134		
Toxaphene	<0.500 mg/L	0.500	mg/L		mg/L		23-134		
Surr: TCMX	0.00165		mg/L	0.00200	mg/L	82.4	18-112		
Surr: DCB	0.00165		mg/L	0.00200	mg/L	82.5	27-131		

Matrix Spike (BHB0439-MS1)

Source: 24B0351-03

Prepared: 02/12/2024 Analyzed: 02/13/2024

Endrin	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	84.4	23-134		
Heptachlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	78.4	23-134		
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	63.2	23-134		
Methoxychlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	95.9	23-134		
Surr: TCMX	0.00153		mg/L	0.00200	mg/L	76.6	18-112		
Surr: DCB	0.00192		mg/L	0.00200	mg/L	95.8	27-131		

Matrix Spike Dup (BHB0439-MSD1)

Source: 24B0351-03

Prepared: 02/12/2024 Analyzed: 02/13/2024

Endrin	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	88.8	23-134	5.09	20	
Heptachlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	63.1	23-134	21.6	20	P
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	66.0	23-134	4.47	20	
Methoxychlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	82.8	23-134	14.6	20	
Surr: TCMX	0.00158		mg/L	0.00200	mg/L	79.0	18-112			
Surr: DCB	0.00182		mg/L	0.00200	mg/L	91.0	27-131			



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9201 Arboretum Parkway Suite 310 Project Number: 22-02065.001
Purchase Order: 22 02065 001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Wet Chemistry Analysis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0379 - No Prep Halides

Blank (BHB0379-BLK1) Prepared & Analyzed: 02/09/2024

Extractable Organic Halides (EOX) <10.0 mg/kg wet 10.0 mg/kg wet

LCS (BHB0379-BS1) Prepared & Analyzed: 02/09/2024

Extractable Organic Halides (EOX) 109 mg/kg wet 10.0 mg/kg wet 100 mg/kg wet 109 80-120

Duplicate (BHB0379-DUP1) Source: 24B0351-03 Prepared & Analyzed: 02/09/2024

Extractable Organic Halides (EOX) <10.0 mg/kg dry 10.0 mg/kg dry <10.0 mg/kg NA 20

Matrix Spike (BHB0379-MS1) Source: 24B0351-03 Prepared & Analyzed: 02/09/2024

Extractable Organic Halides (EOX) 133 mg/kg dry 10.0 mg/kg dry 124 <10.0 mg/kg 108 70-130

Batch BHB0414 - No Prep Wet Chem

Blank (BHB0414-BLK1) Prepared & Analyzed: 02/12/2024

Percent Solids 100 % 0.10 %

Duplicate (BHB0414-DUP1) Source: 24B0462-01 Prepared & Analyzed: 02/12/2024

Percent Solids 91.6 % 0.10 % 90.5 % 1.23 20

Batch BHB0417 - No Prep Halides

Blank (BHB0417-BLK1) Prepared: 02/09/2024 Analyzed: 02/12/2024

TOC (Min) <24.6 mg/kg wet 24.6 mg/kg wet

TOC (Max) <24.6 mg/kg wet 24.6 mg/kg wet

TOC (Mean) <24.6 mg/kg wet 24.6 mg/kg wet



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Wet Chemistry Analysis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0417 - No Prep Halides

LCS (BHB0417-BS1)

Prepared: 02/09/2024 Analyzed: 02/12/2024

TOC (Min)	219 mg/kg wet	22.0	mg/kg wet	220	mg/kg wet	99.7	80-120			
TOC (Max)	224 mg/kg wet	22.0	mg/kg wet	220	mg/kg wet	102	80-120			
TOC (Mean)	221 mg/kg wet	22.0	mg/kg wet	220	mg/kg wet	101	80-120			

Matrix Spike (BHB0417-MS1)

Source: 24B0351-03

Prepared: 02/09/2024 Analyzed: 02/12/2024

TOC (Min)	6530 mg/kg dry	2230	mg/kg dry	27600	5440 mg/kg dry	3.93	80-120			M
TOC (Max)	6800 mg/kg dry	2230	mg/kg dry	27600	5550 mg/kg dry	4.53	80-120			M
TOC (Mean)	6690 mg/kg dry	2230	mg/kg dry	27600	5470 mg/kg dry	4.41	80-120			M

Matrix Spike Dup (BHB0417-MSD1)

Source: 24B0351-03

Prepared: 02/09/2024 Analyzed: 02/12/2024

TOC (Min)	5400 mg/kg dry	2090	mg/kg dry	25900	5440 mg/kg dry	-0.174	80-120	18.9	15	M, P
TOC (Max)	5480 mg/kg dry	2090	mg/kg dry	25900	5550 mg/kg dry	-0.268	80-120	21.5	15	M, P
TOC (Mean)	5430 mg/kg dry	2090	mg/kg dry	25900	5470 mg/kg dry	-0.173	80-120	20.9	15	M, P

Batch BHB0462 - No Prep Wet Chem

Duplicate (BHB0462-DUP1)

Source: 24B0543-01

Prepared & Analyzed: 02/12/2024

Corrosivity	5.20 --	0.00	--	5.38 --				3.40	20	

Batch BHB0499 - No Prep Wet Chem

Blank (BHB0499-BLK1)

Prepared & Analyzed: 02/13/2024

Cyanide	<0.01 mg/kg wet	0.01	mg/kg wet							
Reactive Cyanide as Total Cyanide	<0.01 mg/kg wet	0.01	mg/kg wet							

LCS (BHB0499-BS1)

Prepared & Analyzed: 02/13/2024

Cyanide	0.25 mg/L	0.01	mg/L	0.250	mg/L	100	80-120			
Reactive Cyanide as Total Cyanide	0.25 mg/L	0.01	mg/L	0.250	mg/L	100	80-120			



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Certificate of Analysis

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9201 Arboretum Parkway Suite 310 Project Number: 22-02065.001
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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Wet Chemistry Analysis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0499 - No Prep Wet Chem

Matrix Spike (BHB0499-MS1)		Source: 24B0351-03			Prepared & Analyzed: 02/13/2024					
Cyanide	31.3 mg/kg dry	1.00	mg/kg dry	30.9	<1.00 mg/kg	101	75-125			
Reactive Cyanide as Total Cyanide	31.3 mg/kg dry	1.00	mg/kg dry	30.9	<1.00 mg/kg	101	75-125			
Matrix Spike Dup (BHB0499-MSD1)		Source: 24B0351-03			Prepared & Analyzed: 02/13/2024					
Cyanide	29.3 mg/kg dry	0.98	mg/kg dry	30.3	<0.98 mg/kg	96.7	75-125	6.73	20	
Reactive Cyanide as Total Cyanide	29.3 mg/kg dry	0.98	mg/kg dry	30.3	<0.98 mg/kg	96.7	75-125	6.73	20	

Batch BHB0510 - No Prep Wet Chem

Blank (BHB0510-BLK1)		Prepared & Analyzed: 02/13/2024								
Sulfide	<1.00 mg/kg wet	1.00	mg/kg wet							
Reactive Sulfide as Total Sulfide	<1.00 mg/kg wet	1.00	mg/kg wet							
LCS (BHB0510-BS1)		Prepared & Analyzed: 02/13/2024								
Sulfide	4.58 mg/kg	1	mg/kg	5.00	mg/kg	91.6	80-120			
Reactive Sulfide as Total Sulfide	4.58 mg/kg	1	mg/kg	5.00	mg/kg	91.6	80-120			
Matrix Spike (BHB0510-MS1)		Source: 24B0555-01			Prepared & Analyzed: 02/13/2024					
Sulfide	478 mg/kg wet	99.6	mg/kg wet	498	<99.6 mg/kg	96.0	75-125			
Reactive Sulfide as Total Sulfide	478 mg/kg wet	99.6	mg/kg wet	498	<99.6 mg/kg	96.0	75-125			
Matrix Spike Dup (BHB0510-MSD1)		Source: 24B0555-01			Prepared & Analyzed: 02/13/2024					
Sulfide	453 mg/kg wet	98.9	mg/kg wet	494	<98.9 mg/kg	91.6	75-125	5.38	20	
Reactive Sulfide as Total Sulfide	453 mg/kg wet	98.9	mg/kg wet	494	<98.9 mg/kg	91.6	75-125	5.38	20	



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Certificate of Analysis

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	Richmond VA, 23236	Purchase Order:	22 02065 001
Submitted To:	Leo Snead		
Client Site I.D.:	Alex Waterfront		

Certified Analyses included in this Report

Analyte	Certifications
SW1010B in Solids	
Ignitability	VELAP
SW1311 in Solids	
Extraction Fluid, Metals	VELAP
Extraction Fluid, SV Organics	VELAP
Extraction Fluid, ZHE	VELAP
SW6010D in Non-Potable Water	
Aluminum	VELAP,WVDEP
Arsenic	VELAP,WVDEP
Barium	VELAP,WVDEP
Barium	VELAP,WVDEP,PADEP
Beryllium	VELAP,WVDEP
Cadmium	VELAP,WVDEP
Cadmium	VELAP,WVDEP,PADEP
Calcium	VELAP,WVDEP,PADEP
Chromium	VELAP,WVDEP
Cobalt	VELAP,WVDEP
Copper	VELAP,WVDEP
Iron	VELAP,WVDEP
Lead	VELAP,WVDEP
Magnesium	VELAP,WVDEP
Manganese	VELAP,WVDEP
Nickel	VELAP,WVDEP
Potassium	VELAP,WVDEP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Silver	VELAP,WVDEP,PADEP
Sodium	VELAP,WVDEP
Vanadium	VELAP,WVDEP
Zinc	VELAP,WVDEP
SW6010D in Solids	
Antimony	VELAP,WVDEP,PADEP
Arsenic	VELAP,WVDEP,PADEP
Barium	VELAP,WVDEP,PADEP
Cadmium	VELAP,WVDEP,PADEP
Chromium	VELAP,WVDEP,PADEP
Lead	VELAP,WVDEP,PADEP



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 14, 2024 17:03
9201 Arboretum Parkway Suite 310 Project Number: 22-02065.001
Purchase Order: 22 02065 001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Certified Analyses included in this Report

Analyte	Certifications
Selenium	VELAP,WVDEP,PADEP
Silver	VELAP,WVDEP,PADEP
Titanium	VELAP,WVDEP,PADEP
Vanadium	VELAP,WVDEP,PADEP
Zinc	VELAP,WVDEP,PADEP
SW6020B in Non-Potable Water	
Antimony	VELAP,NCDEQ,WVDEP
Arsenic	VELAP,WVDEP
Lead	VELAP,WVDEP
Selenium	VELAP,WVDEP
Thallium	VELAP,WVDEP
SW7470A in Non-Potable Water	
Mercury	VELAP,NCDEQ,WVDEP
Mercury	VELAP,WVDEP
SW7471B in Solids	
Mercury	VELAP,PADEP,NCDEQ,WVDEP
SW8015C in Solids	
TPH-Semi-Volatiles (DRO)	VELAP,PADEP,NCDEQ,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP
TPH-Volatiles (GRO)	VELAP,PADEP,NCDEQ,WVDEP
SW8081B in Non-Potable Water	
Chlordane	VELAP,NCDEQ,WVDEP,PADEP
Endrin	VELAP,NCDEQ,WVDEP,PADEP
gamma-BHC (Lindane)	VELAP,NCDEQ,WVDEP,PADEP
Heptachlor	VELAP,NCDEQ,WVDEP,PADEP
Heptachlor Epoxide	VELAP,NCDEQ,WVDEP,PADEP
Methoxychlor	VELAP,NCDEQ,WVDEP,PADEP
Toxaphene	VELAP,NCDEQ,WVDEP,PADEP
SW8081B in Solids	
4,4'-DDD	VELAP,NCDEQ,WVDEP,PADEP
4,4'-DDE	VELAP,NCDEQ,WVDEP,PADEP
4,4'-DDT	VELAP,NCDEQ,WVDEP,PADEP
Aldrin	VELAP,NCDEQ,WVDEP,PADEP
alpha-BHC	VELAP,NCDEQ,WVDEP,PADEP
beta-BHC	VELAP,NCDEQ,WVDEP,PADEP
Chlordane	VELAP,NCDEQ,WVDEP,PADEP



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Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 14, 2024 17:03
	9201 Arboretum Parkway Suite 310	Project Number:	22-02065.001
	Richmond VA, 23236	Purchase Order:	22 02065 001
Submitted To:	Leo Snead		
Client Site I.D.:	Alex Waterfront		

Certified Analyses included in this Report

Analyte	Certifications
delta-BHC	VELAP,NCDEQ,WVDEP,PADEP
Dieldrin	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan I	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan II	VELAP,NCDEQ,WVDEP,PADEP
Endosulfan sulfate	VELAP,NCDEQ,WVDEP,PADEP
Endrin	VELAP,NCDEQ,WVDEP,PADEP
Endrin aldehyde	VELAP,NCDEQ,WVDEP,PADEP
gamma-BHC (Lindane)	VELAP,NCDEQ,WVDEP,PADEP
Heptachlor	VELAP,NCDEQ,WVDEP,PADEP
Heptachlor epoxide	VELAP,NCDEQ,WVDEP,PADEP
Methoxychlor	VELAP,NCDEQ,WVDEP,PADEP
Toxaphene	VELAP,NCDEQ,WVDEP,PADEP
SW8082A in Solids	
PCB as Aroclor 1016	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1221	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1232	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1242	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1248	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1254	VELAP,PADEP,NCDEQ,WVDEP
PCB as Aroclor 1260	VELAP,PADEP,NCDEQ,WVDEP
SW8151A in Non-Potable Water	
2,4,5-TP (Silvex)	VELAP,PADEP,NCDEQ,WVDEP
2,4-D	VELAP,PADEP,NCDEQ,WVDEP
SW8260D in Non-Potable Water	
1,1-Dichloroethylene	VELAP,NCDEQ
1,2-Dichloroethane	VELAP,NCDEQ
1,4-Dichlorobenzene	VELAP,NCDEQ
2-Butanone (MEK)	VELAP,NCDEQ
Benzene	VELAP,NCDEQ
Carbon tetrachloride	VELAP,NCDEQ
Chlorobenzene	VELAP,NCDEQ
Chloroform	VELAP,NCDEQ
Tetrachloroethylene (PCE)	VELAP,NCDEQ
Trichloroethylene	VELAP,NCDEQ
Vinyl chloride	VELAP,NCDEQ
SW8260D in Solids	
1,1,1,2-Tetrachloroethane	VELAP,PADEP,NCDEQ,WVDEP



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9201 Arboretum Parkway Suite 310 Project Number: 22-02065.001
Purchase Order: 22 02065 001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Certified Analyses included in this Report

Analyte	Certifications
1,1,1-Trichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1,2,2-Tetrachloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1,2-Trichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1-Dichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,1-Dichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
1,1-Dichloropropene	VELAP,PADEP,NCDEQ,WVDEP
1,2,3-Trichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2,3-Trichloropropane	VELAP,PADEP,NCDEQ,WVDEP
1,2,4-Trichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2,4-Trimethylbenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dibromo-3-chloropropane (DBCP)	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dibromoethane (EDB)	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dichloroethane	VELAP,PADEP,NCDEQ,WVDEP
1,2-Dichloropropane	VELAP,PADEP,NCDEQ,WVDEP
1,3,5-Trimethylbenzene	VELAP,PADEP,NCDEQ,WVDEP
1,3-Dichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
1,3-Dichloropropane	VELAP,PADEP,NCDEQ,WVDEP
1,4-Dichlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
2,2-Dichloropropane	VELAP,PADEP,NCDEQ,WVDEP
2-Butanone (MEK)	VELAP,PADEP,NCDEQ,WVDEP
2-Chlorotoluene	VELAP,PADEP,NCDEQ,WVDEP
2-Hexanone (MBK)	VELAP,PADEP,NCDEQ,WVDEP
4-Chlorotoluene	VELAP,PADEP,NCDEQ,WVDEP
4-Isopropyltoluene	VELAP,PADEP,NCDEQ,WVDEP
4-Methyl-2-pentanone (MIBK)	VELAP,PADEP,NCDEQ,WVDEP
Acetone	VELAP,PADEP,NCDEQ,WVDEP
Benzene	VELAP,PADEP,NCDEQ,WVDEP
Bromobenzene	VELAP,PADEP,NCDEQ,WVDEP
Bromochloromethane	VELAP,PADEP,NCDEQ,WVDEP
Bromodichloromethane	VELAP,PADEP,NCDEQ,WVDEP
Bromoform	VELAP,PADEP,NCDEQ,WVDEP
Bromomethane	VELAP,PADEP,NCDEQ,WVDEP
Carbon disulfide	VELAP,PADEP,NCDEQ,WVDEP
Carbon tetrachloride	VELAP,PADEP,NCDEQ,WVDEP
Chlorobenzene	VELAP,PADEP,NCDEQ,WVDEP
Chloroethane	VELAP,PADEP,NCDEQ,WVDEP
Chloroform	VELAP,PADEP,NCDEQ,WVDEP



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Certified Analyses included in this Report

Analyte	Certifications
Chloromethane	VELAP,PADEP,NCDEQ,WVDEP
cis-1,2-Dichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
cis-1,3-Dichloropropene	VELAP,PADEP,NCDEQ,WVDEP
Dibromochloromethane	VELAP,PADEP,NCDEQ,WVDEP
Dibromomethane	VELAP,PADEP,NCDEQ,WVDEP
Dichlorodifluoromethane	VELAP,PADEP,NCDEQ,WVDEP
Di-isopropyl ether (DIPE)	VELAP,PADEP,NCDEQ,WVDEP
Ethylbenzene	VELAP,PADEP,NCDEQ,WVDEP
Hexachlorobutadiene	VELAP,PADEP,NCDEQ,WVDEP
Iodomethane	VELAP,PADEP,NCDEQ,WVDEP
Isopropylbenzene	VELAP,PADEP,NCDEQ,WVDEP
m+p-Xylenes	VELAP,PADEP,NCDEQ,WVDEP
Methylene chloride	VELAP,PADEP,NCDEQ,WVDEP
Methyl-t-butyl ether (MTBE)	VELAP,PADEP,NCDEQ,WVDEP
Naphthalene	VELAP,PADEP,NCDEQ,WVDEP
n-Butylbenzene	VELAP,PADEP,NCDEQ,WVDEP
n-Propylbenzene	VELAP,PADEP,NCDEQ,WVDEP
o-Xylene	VELAP,PADEP,NCDEQ,WVDEP
sec-Butylbenzene	VELAP,PADEP,NCDEQ,WVDEP
Styrene	VELAP,PADEP,NCDEQ,WVDEP
tert-Butylbenzene	VELAP,PADEP,NCDEQ,WVDEP
Tetrachloroethylene (PCE)	VELAP,PADEP,NCDEQ,WVDEP
Toluene	VELAP,PADEP,NCDEQ,WVDEP
trans-1,2-Dichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
trans-1,3-Dichloropropene	VELAP,PADEP,NCDEQ,WVDEP
Trichloroethylene	VELAP,PADEP,NCDEQ,WVDEP
Trichlorofluoromethane	VELAP,PADEP,NCDEQ,WVDEP
Vinyl acetate	VELAP,PADEP,NCDEQ,WVDEP
Vinyl chloride	VELAP,PADEP,NCDEQ,WVDEP
Xylenes, Total	VELAP,PADEP,NCDEQ,WVDEP
Dibromofluoromethane (Surr)	VELAP
SW8270E in Non-Potable Water	
2,4,5-Trichlorophenol	WVDEP
2,4,6-Trichlorophenol	VELAP,WVDEP
2,4-Dinitrotoluene	VELAP,WVDEP
Hexachlorobenzene	VELAP,WVDEP
Hexachlorobutadiene	VELAP,WVDEP
Hexachloroethane	VELAP,WVDEP



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Certificate of Analysis

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Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 14, 2024 17:03
9201 Arboretum Parkway Suite 310 Project Number: 22-02065.001
Purchase Order: 22 02065 001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Certified Analyses included in this Report

Analyte	Certifications
m+p-Cresols	WVDEP
Nitrobenzene	VELAP,WVDEP
o+m+p-Cresols	WVDEP
o-Cresol	VELAP,WVDEP
Pentachlorophenol	VELAP,WVDEP
Pyridine	WVDEP
SW8270E in Solids	
1,2,4,5-Tetrachlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2,4-Trichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,2-Diphenylhydrazine	WVDEP,VELAP
1,3-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,3-Dinitrobenzene	NCDEQ,WVDEP,VELAP,PADEP
1,4-Dichlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
1-Chloronaphthalene	NCDEQ,WVDEP,VELAP,PADEP
1-Naphthylamine	NCDEQ,WVDEP,VELAP,PADEP
2,3,4,6-Tetrachlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4,5-Trichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4,6-Trichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dimethylphenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dinitrophenol	NCDEQ,WVDEP,VELAP,PADEP
2,4-Dinitrotoluene	NCDEQ,WVDEP,VELAP,PADEP
2,6-Dichlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2,6-Dinitrotoluene	NCDEQ,WVDEP,VELAP,PADEP
2-Chloronaphthalene	NCDEQ,WVDEP,VELAP,PADEP
2-Chlorophenol	NCDEQ,WVDEP,VELAP,PADEP
2-Methylnaphthalene	NCDEQ,WVDEP,VELAP,PADEP
2-Naphthylamine	NCDEQ,WVDEP,VELAP,PADEP
2-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
2-Nitrophenol	NCDEQ,WVDEP,VELAP,PADEP
3,3'-Dichlorobenzidine	NCDEQ,WVDEP,VELAP,PADEP
3-Methylcholanthrene	NCDEQ,WVDEP,VELAP,PADEP
3-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
4,6-Dinitro-2-methylphenol	NCDEQ,WVDEP,VELAP,PADEP
4-Aminobiphenyl	NCDEQ,WVDEP,VELAP,PADEP
4-Bromophenyl phenyl ether	NCDEQ,WVDEP,VELAP,PADEP
4-Chloroaniline	NCDEQ,WVDEP,VELAP,PADEP



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Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 14, 2024 17:03
9201 Arboretum Parkway Suite 310 Project Number: 22-02065.001
Purchase Order: 22 02065 001
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Certified Analyses included in this Report

Analyte	Certifications
4-Chlorophenyl phenyl ether	NCDEQ,WVDEP,VELAP,PADEP
4-Nitroaniline	NCDEQ,WVDEP,VELAP,PADEP
4-Nitrophenol	NCDEQ,WVDEP,VELAP,PADEP
7,12-Dimethylbenz (a) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Acenaphthene	NCDEQ,WVDEP,VELAP,PADEP
Acenaphthylene	NCDEQ,WVDEP,VELAP,PADEP
Acetophenone	NCDEQ,WVDEP,VELAP,PADEP
Aniline	NCDEQ,WVDEP,VELAP,PADEP
Anthracene	NCDEQ,WVDEP,VELAP,PADEP
Benzidine	NCDEQ,WVDEP,VELAP,PADEP
Benzo (a) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (a) pyrene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (b) fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (g,h,i) perylene	NCDEQ,WVDEP,VELAP,PADEP
Benzo (k) fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Benzoic acid	NCDEQ,WVDEP,VELAP,PADEP
Benzyl alcohol	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Chloroethoxy) methane	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Chloroethyl) ether	NCDEQ,WVDEP,VELAP,PADEP
2,2'-Oxybis (1-chloropropane)	NCDEQ,WVDEP,VELAP,PADEP
bis (2-Ethylhexyl) phthalate	NCDEQ,WVDEP,VELAP,PADEP
Butyl benzyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Chrysene	NCDEQ,WVDEP,VELAP,PADEP
Dibenz (a,h) anthracene	NCDEQ,WVDEP,VELAP,PADEP
Dibenz (a,j) acridine	NCDEQ,WVDEP,VELAP,PADEP
Dibenzofuran	NCDEQ,WVDEP,VELAP,PADEP
Diethyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Dimethyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Di-n-butyl phthalate	NCDEQ,WVDEP,VELAP,PADEP
Di-n-octyl phthalate	NCDEQ,WVDEP,VELAP
Diphenylamine	NCDEQ,WVDEP,VELAP,PADEP
Ethyl methanesulfonate	NCDEQ,WVDEP,VELAP,PADEP
Fluoranthene	NCDEQ,WVDEP,VELAP,PADEP
Fluorene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorobenzene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorobutadiene	NCDEQ,WVDEP,VELAP,PADEP
Hexachlorocyclopentadiene	NCDEQ,WVDEP,VELAP,PADEP
Hexachloroethane	NCDEQ,WVDEP,VELAP,PADEP



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	9201 Arboretum Parkway Suite 310	Project Number:	22-02065.001
		Purchase Order:	22 02065 001
	Richmond VA, 23236		
Submitted To:	Leo Snead		
Client Site I.D.:	Alex Waterfront		

Certified Analyses included in this Report

Analyte	Certifications
Indeno (1,2,3-cd) pyrene	NCDEQ,WVDEP,VELAP,PADEP
Isophorone	NCDEQ,WVDEP,VELAP,PADEP
m+p-Cresols	NCDEQ,WVDEP,VELAP,PADEP
Methyl methanesulfonate	NCDEQ,WVDEP,VELAP,PADEP
Naphthalene	NCDEQ,WVDEP,VELAP,PADEP
Nitrobenzene	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodimethylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodi-n-butylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodi-n-propylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosodiphenylamine	NCDEQ,WVDEP,VELAP,PADEP
n-Nitrosopiperidine	NCDEQ,WVDEP,VELAP,PADEP
o+m+p-Cresols	NCDEQ,WVDEP,VELAP,PADEP
o-Cresol	NCDEQ,WVDEP,VELAP,PADEP
p-(Dimethylamino) azobenzene	NCDEQ,WVDEP,VELAP
p-Chloro-m-cresol	NCDEQ,WVDEP,VELAP,PADEP
Pentachloronitrobenzene (quintozene)	NCDEQ,WVDEP
Pentachlorophenol	NCDEQ,WVDEP,VELAP,PADEP
Phenacetin	NCDEQ,WVDEP,VELAP,PADEP
Phenanthrene	NCDEQ,WVDEP,VELAP,PADEP
Phenol	NCDEQ,WVDEP,VELAP,PADEP
Pronamide	NCDEQ,WVDEP,VELAP,PADEP
Pyrene	NCDEQ,WVDEP,VELAP,PADEP
Pyridine	NCDEQ,WVDEP,VELAP,PADEP
SW9012B in Solids	
Cyanide	VELAP,NCDEQ
SW9023 in Solids	
Extractable Organic Halides (EOX)	VELAP,PADEP
SW9060A in Solids	
TOC (Min)	VELAP
TOC (Max)	VELAP
TOC (Mean)	VELAP
SW9215 in Solids	
Sulfide	VELAP



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Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alex Waterfront

Date Issued: February 14, 2024 17:03
Project Number: 22-02065.001
Purchase Order: 22 02065 001

Code	Description	Laboratory ID	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2024
NCDEQ	North Carolina DEQ	495	12/31/2024
NCDOH	North Carolina Department of Health	51714	07/31/2024
NYDOH	New York DOH Drinking Water	12069	04/01/2024
PADEP	NELAP-Pennsylvania Certificate #009	68-03503	10/31/2024
SCDHEC	South Carolina Dept of Health and Environmental	93016	06/14/2024
TXCEQ	Texas Comm on Environmental Quality #T104704	T104704576	05/31/2024
VELAP	NELAP-Virginia Certificate #12617	460021	06/14/2024
WVDEP	West Virginia DEP	350	11/30/2024



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	Richmond VA, 23236	Purchase Order:	22 02065 001
Submitted To:	Leo Snead		
Client Site I.D.:	Alex Waterfront		

Summary of Data Qualifiers

B	Blank contamination. The recorded result is associated with a contaminated blank.
C	Continuing calibration verification response for this analyte is outside specifications.
Cl	Residual Chlorine or other oxidizing agent was detected in the container used to analyze this sample.
E	Estimated concentration, outside calibration range
L	LCS recovery is outside of established acceptance limits
M	Matrix spike recovery is outside established acceptance limits
M2	Sample was diluted due to matrix interference.
No Flash	> 65
NonCorr	NonCorrosive
P	Duplicate analysis does not meet the acceptance criteria for precision
S	Surrogate recovery was outside acceptance criteria
RPD	Relative Percent Difference
Qual	Qualifiers
-RE	Denotes sample was re-analyzed
D.F.	Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
PCBs, Total	Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: JMT	INVOICE TO: JMT	PROJECT NAME/Quote #: Alexandria W+T
CONTACT: Leo SNEAD	INVOICE CONTACT:	SITE NAME: Alex Waterfront
ADDRESS: 9201 Arborvitae Plancy	INVOICE ADDRESS:	PROJECT NUMBER: 22-02065-001
PHONE #: 804 539 4964	INVOICE PHONE #:	P.O. #: 22 02065 001
FAX #:	EMAIL: LSNEAD@JMT.COM	Pretreatment Program:

Is sample for compliance reporting? YES ☒ NO ☐	Regulatory State:	Is sample from a chlorinated supply? YES ☒ NO ☐	PWS I.D. #:
SAMPLER NAME (PRINT): Garry Moore		SAMPLER SIGNATURE: <i>[Signature]</i>	
		Turn Around Time: Circle 10 5 Days or _Day(s)	

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE I.D.												ANALYSIS / (PRESERVATIVE)										Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol
	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers												
											Metals	TP/LP - full	Metals - Arsenic Solids + SS, Ti, V, Zn	DRO/GRO/CRO	PAH, Pest/PCB	SUOC, TOC	CN - total sulfide	CN - Reactive	Ig, nit, Pb, Co, B, Cr, Ni, Cu, Fe, Mn, Se, V, Zn	EOX		
1)	✓	✓	✓			2/6	9:50		GW	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2)	✓	✓	✓			2/6	2:20		GW	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3)		✓		2/6	3:00	2/6	3:00		S	5		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4)																						
5)																						
6)																						
7)																						
8)																						
9)																						
10)																						

Preservative Codes: N=Nitric Acid
C=Hydrochloric Acid S=Sulfuric Acid
H=Sodium Hydroxide A=Ascorbic
Acid Z=Zinc Acetate T=Sodium
Thiosulfate M=Methanol

PLEASE NOTE PRESERVATIVE(S),
INTERFERENCE CHECKS or PUMP
RATE (L/min)

RELINQUISHED: <i>[Signature]</i>	DATE / TIME: 2/7/24 1306	RECEIVED: <i>[Signature]</i>	DATE / TIME: 2/7/24 1306	QC Data Package	LAB USE ONLY Therm ID: 338	COOLER TEMP 4.4 °C
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level III ☐	Custody Seals used and intact? (Y/N) ☒	
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level IV ☐		

JMT-Richmond VA 24B0351
Alexandria Groundwater and Soil

Recd: 02/07/2024 Due: 02/14/2024



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Certificate of Analysis

Final Report

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 14, 2024 17:03
	9201 Arboretum Parkway Suite 310	Project Number:	22-02065.001
	Richmond VA, 23236	Purchase Order:	22 02065 001
Submitted To:	Leo Snead		
Client Site I.D.:	Alex Waterfront		

Sample Conditions Checklist

Samples Received at:	4.40°C
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	No
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits or received on ice, and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis. In addition, field parameters are always received outside holding time and will be marked accordingly.	Yes

Per Garry Moore, "Metals" is to be logged as Metals TAL ICP. 02/07/24 1701 DLJ
Per Garry Moore via email, samples 1: "MW #1" and 2: "MW #2" are dissolved field filtered metals. Sample 3: "Composite #1" to be analyzed for VOC 8260. CSB 2/8/24, 1016

Reactive Sulfide added to work order for Reactivity analysis per Garry Moore MNM
02/09/2024



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Certificate of Analysis

Final Report

Laboratory Order ID 24B1048

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmond, VA	Date Received:	February 20, 2024 10:48
	9201 Arboretum Parkway Suite 310	Date Issued:	February 22, 2024 15:21
	Richmond, VA 23236	Project Number:	[none]
Submitted To:	Leo Snead	Purchase Order:	
Client Site I.D.:	Alexandria - Soil		

Enclosed are the results of analyses for samples received by the laboratory on 02/20/2024 10:48. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads 'Ted Soyars'.

Ted Soyars
Technical Director

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 22, 2024 15:21
Project Number: [none]
Purchase Order:

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 24B1048

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
P-5	24B1048-01	Solids	01/18/2024 12:30	02/20/2024 10:48
P-10	24B1048-02	Solids	01/22/2024 09:40	02/20/2024 10:48
P-18	24B1048-03	Solids	01/23/2024 12:35	02/20/2024 10:48
P-27	24B1048-04	Solids	01/17/2024 12:20	02/20/2024 10:48
P-17	24B1048-05	Solids	01/18/2024 12:00	02/20/2024 10:48



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Date Issued: February 22, 2024 15:21
Project Number: [none]
Purchase Order:
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Laboratory Order ID: 24B1048

Analytical Results

Sample I.D. P-5

Laboratory Sample ID: 24B1048-01

Grab Date/Time: 01/18/2024 12:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Metals by 6000/7000 Series Methods									
TCLP Lead	01	SW6010D	0.116 mg/L		0.100	1	02/21/24 08:45	02/21/24 14:38	ACM
TCLP Extraction Fluid, Metals	01	SW1311	1 #	H	--	1	02/20/24 15:50	02/20/24 15:50	ESW



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 22, 2024 15:21
Project Number: [none]
Purchase Order:

Laboratory Order ID: 24B1048

Analytical Results

Sample I.D. P-10

Laboratory Sample ID: 24B1048-02

Grab Date/Time: 01/22/2024 09:40

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Metals by 6000/7000 Series Methods									
TCLP Lead	02	SW6010D	<0.100 mg/L		0.100	1	02/21/24 08:45	02/21/24 14:44	ACM
TCLP Extraction Fluid, Metals	02	SW1311	1 #	H	--	1	02/20/24 15:50	02/20/24 15:50	ESW



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 22, 2024 15:21
Project Number: [none]
Purchase Order:

Laboratory Order ID: 24B1048

Analytical Results

Sample I.D. P-18

Laboratory Sample ID: 24B1048-03

Grab Date/Time: 01/23/2024 12:35

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Metals by 6000/7000 Series Methods									
TCLP Lead	03	SW6010D	<0.100 mg/L		0.100	1	02/21/24 08:45	02/21/24 14:45	ACM
TCLP Extraction Fluid, Metals	03	SW1311	1 #		--	1	02/20/24 15:50	02/20/24 15:50	ESW



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 22, 2024 15:21
Project Number: [none]
Purchase Order:

Laboratory Order ID: 24B1048

Analytical Results

Sample I.D. P-27

Laboratory Sample ID: 24B1048-04

Grab Date/Time: 01/17/2024 12:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Metals by 6000/7000 Series Methods									
TCLP Lead	04	SW6010D	<0.100 mg/L		0.100	1	02/21/24 08:45	02/21/24 14:47	ACM
TCLP Extraction Fluid, Metals	04	SW1311	1 #	H	--	1	02/20/24 15:50	02/20/24 15:50	ESW



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 22, 2024 15:21
Project Number: [none]
Purchase Order:

Laboratory Order ID: 24B1048

Analytical Results

Sample I.D. P-17 Laboratory Sample ID: 24B1048-05

Grab Date/Time: 01/18/2024 12:00

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst

TCLP Metals by 6000/7000 Series Methods

TCLP Selenium	05	SW6010D	<0.250 mg/L		0.250	1	02/21/24 08:45	02/21/24 14:49	ACM
TCLP Extraction Fluid, Metals	05	SW1311	1 #	H	--	1	02/20/24 15:50	02/20/24 15:50	ESW

Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

TCLP Metals by 6000/7000 Series Methods

Preparation Method: SW1311 Metals

24B1048-01	100 g / 2000 mL	SW1311	BHB0808	SHB0767	
24B1048-02	100 g / 2000 mL	SW1311	BHB0808	SHB0767	
24B1048-03	100 g / 2000 mL	SW1311	BHB0808	SHB0767	
24B1048-04	100 g / 2000 mL	SW1311	BHB0808	SHB0767	
24B1048-05	100 g / 2000 mL	SW1311	BHB0808	SHB0767	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID

TCLP Metals by 6000/7000 Series Methods

Preparation Method: SW3010A

24B1048-01	10.0 mL / 50.0 mL	SW6010D	BHB0816	SHB0812	AB40253
24B1048-02	10.0 mL / 50.0 mL	SW6010D	BHB0816	SHB0812	AB40253
24B1048-03	10.0 mL / 50.0 mL	SW6010D	BHB0816	SHB0812	AB40253
24B1048-04	10.0 mL / 50.0 mL	SW6010D	BHB0816	SHB0812	AB40253
24B1048-05	10.0 mL / 50.0 mL	SW6010D	BHB0816	SHB0812	AB40253



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 22, 2024 15:21
Project Number: [none]
Purchase Order:

QC Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Metals by 6000/7000 Series Methods			Preparation Method: SW1311 Metals		
BHB0808-BLK1	100 g / 2000 mL	SW1311	BHB0808	SHB0767	
BHB0808-BLK2	100 g / 2000 mL	SW1311	BHB0808	SHB0767	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Metals by 6000/7000 Series Methods			Preparation Method: SW3010A		
BHB0816-BLK1	10.0 mL / 50.0 mL	SW6010D	BHB0816	SHB0812	AB40253
BHB0816-BS1	10.0 mL / 50.0 mL	SW6010D	BHB0816	SHB0812	AB40253
BHB0816-MS1	10.0 mL / 50.0 mL	SW6010D	BHB0816	SHB0812	AB40253
BHB0816-MSD1	10.0 mL / 50.0 mL	SW6010D	BHB0816	SHB0812	AB40253



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo Date Issued: February 22, 2024 15:21
9201 Arboretum Parkway Suite 310 Project Number: [none]
Purchase Order:
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

TCLP Metals by 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual

Batch BHB0808 - SW1311 Metals

Blank (BHB0808-BLK1) Prepared & Analyzed: 02/20/2024

Extraction Fluid, Metals 1 # 0 #

Blank (BHB0808-BLK2) Prepared & Analyzed: 02/20/2024

Extraction Fluid, Metals 2 # 0 #

Batch BHB0816 - SW3010A

Blank (BHB0816-BLK1) Prepared & Analyzed: 02/21/2024

Lead <0.100 mg/L 0.100 mg/L

Selenium <0.250 mg/L 0.250 mg/L

LCS (BHB0816-BS1) Prepared & Analyzed: 02/21/2024

Lead 2.61 mg/L 0.100 mg/L 2.50 mg/L 104 80-120

Selenium 2.42 mg/L 0.250 mg/L 2.50 mg/L 96.8 80-120

Matrix Spike (BHB0816-MS1) Source: 24B1048-01 Prepared & Analyzed: 02/21/2024

Lead 2.54 mg/L 0.100 mg/L 2.50 0.116 mg/L 97.1 75-125

Selenium 2.31 mg/L 0.250 mg/L 2.50 <0.250 mg/L 92.4 75-125

Matrix Spike Dup (BHB0816-MSD1) Source: 24B1048-01 Prepared & Analyzed: 02/21/2024

Lead 2.65 mg/L 0.100 mg/L 2.50 0.116 mg/L 101 75-125 4.20 20

Selenium 2.40 mg/L 0.250 mg/L 2.50 <0.250 mg/L 96.1 75-125 3.86 20



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Certificate of Analysis

Final Report

Client Name: Johnson, Mirmiran & Thompson, Inc - Richmo
9201 Arboretum Parkway Suite 310
Richmond VA, 23236
Submitted To: Leo Snead
Client Site I.D.: Alexandria - Soil

Date Issued: February 22, 2024 15:21
Project Number: [none]
Purchase Order:

Certified Analyses included in this Report

Analyte	Certifications
SW1311 in Solids	
Extraction Fluid, Metals	VELAP
SW6010D in Non-Potable Water	
Lead	VELAP,WVDEP
Selenium	VELAP,WVDEP

Code	Description	Laboratory ID	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2024
NCDEQ	North Carolina DEQ	495	12/31/2024
NCDOH	North Carolina Department of Health	51714	07/31/2024
NYDOH	New York DOH Drinking Water	12069	04/01/2024
PADEP	NELAP-Pennsylvania Certificate #009	68-03503	10/31/2024
SCDHEC	South Carolina Dept of Health and Environmental	93016	06/14/2024
TXCEQ	Texas Comm on Environmental Quality #T104704	T104704576	05/31/2024
VELAP	NELAP-Virginia Certificate #12617	460021	06/14/2024
WVDEP	West Virginia DEP	350	11/30/2024



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Certificate of Analysis

Final Report

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 22, 2024 15:21
	9201 Arboretum Parkway Suite 310	Project Number:	[none]
		Purchase Order:	
	Richmond VA, 23236		
Submitted To:	Leo Snead		
Client Site I.D.:	Alexandria - Soil		

Summary of Data Qualifiers

H	Analysis was performed outside of the method prescribed holding time.
RPD	Relative Percent Difference
Qual	Qualifiers
-RE	Denotes sample was re-analyzed
D.F.	Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
PCBs, Total	Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: JMT	INVOICE TO: JMT	PROJECT NAME/Quote #: Alex Water front
CONTACT: Leo Sneed	INVOICE CONTACT:	SITE NAME: Alex Water front
ADDRESS: Richmond VA	INVOICE ADDRESS:	PROJECT NUMBER: 22 07065001
PHONE #: 804 539 4964	INVOICE PHONE #:	P.O. #: 2202065001
FAX #:	EMAIL: LSNEED@JMT.COM	Pretreatment Program:
Is sample for compliance reporting? YES ☒ NO ☐ Regulatory State: VA Is sample from a chlorinated supply? YES ☒ NO ☐ PWS I.D. #:		
SAMPLER NAME (PRINT): Grady Moore	SAMPLER SIGNATURE: <i>[Signature]</i>	Turn Around Time: Circle 10 5 Days or _Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other										COMMENTS								
CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)				24B1048	JMT-Richmond VA 24B1048 Alexandria - Soil Recd: 02/20/2024 Due: 02/27/2024 v130325002		
											VOCs - 8260	Drugs 8016	PCRA Metals	Pest/PCB/Sec				
1) P9	X					1/22/24 12:10			S	4	✓	✓	✓	✓				
2) P10	X					1/22/24 9:40			S	4	✓	✓	✓	✓				
3) P12	X					1/22/24 10:45			S	4	✓	✓	✓	✓				
4) P13	X					1/22/24 10:00			S	4	✓	✓	✓	✓				
5) P18	X					1/23/24 12:35			S	4	✓	✓	✓	✓				
6) P23	X					1/23/24 12:45			S	1	✓							
7) P25	X					1/23/24 12:05			S	1			✓					
8) P26	X					1/23/24 11:40			S	4	✓	✓	✓	✓				
9)																338		
10)																3.00C		
RELINQUISHED: <i>[Signature]</i> DATE / TIME: 1/26/24 17:11											RECEIVED: <i>[Signature]</i> DATE / TIME: 1/26/24 17:11		QC Data Package		LAB USE ONLY Therm ID: _____ COOLER TEMP _____ °C Custody Seals used and intact? (Y/N)		Received on ice? (Y/N)	
RELINQUISHED:											RECEIVED:		Level III ☐		JMT-Richmond VA 24A1607		Alexandria - Soil	
RELINQUISHED:											RECEIVED:		Level IV ☐		Recd: 01/26/2024 Due: 02/02/2024			

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: <u>JMT</u>		INVOICE TO: <u>JMT</u>		PROJECT NAME/Quote #: <u>Alex Water front</u>	
CONTACT: <u>GARY MOORE</u>		INVOICE CONTACT:		SITE NAME: <u>Alex Water front</u>	
ADDRESS: <u>9701 Applegate Pkwy, Ste 310</u>		INVOICE ADDRESS:		PROJECT NUMBER: <u>22-02065 001</u>	
PHONE #: <u>804 357 1811</u>		INVOICE PHONE #:		P.O. #:	
FAX #:		EMAIL: <u>ghmoores044@gmail.com</u>		Pretreatment Program:	
Is sample for compliance reporting? YES ☒ NO ☐		Regulatory State: <u>VA</u>		Is sample from a chlorinated supply? YES ☒ NO ☐	
PWS I.D. #:		SAMPLER NAME (PRINT): <u>Graham Moore</u>		SAMPLER SIGNATURE: <u>[Signature]</u>	
Turn Around Time: Circle 10 <u>5 Days</u> or _Day(s)					
Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other					
COMMENTS					
Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol					
PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)					
CLIENT SAMPLE I.D.		ANALYSIS / (PRESERVATIVE)			
		Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date
					Composite Start Time
					Grab Date or Composite Stop Date
					Grab Time or Composite Stop Time
					Time Preserved
					Matrix (See Codes)
					Number of Containers
					DRD 1620 8205
					UUCS 8260
					PCPA Metals
					Pest/PCB/SVOC
1)	P 27	X			1/17 1220
2)	P 28	X			1/17 1250
3)	P 29	X			1/17 1030
4)	P 30	X			1/17 1110
5)	P 5	X			1/18 1230
6)	P 15	X			1/18 1020
7)	S 14	X			1/18 945
8)	P 16	X			1/18 1115
9)	P 17	X			1/18 1200
10)					
RELINQUISHED: <u>[Signature]</u>		DATE / TIME: <u>1/17/24 1645</u>		RECEIVED: <u>[Signature]</u>	
RELINQUISHED:		DATE / TIME:		RECEIVED:	
RELINQUISHED:		DATE / TIME:		RECEIVED:	
QC Data Package		LAB USE ONLY		Therm ID: <u>938</u>	
Level III ☐		Custody Seals used and intact? (Y/N)		COOLER TEMP <u>3.5</u> °C	
Level <u>24A1221</u>				Received on Ice? (Y/N)	
JMT-Richmond VA 24B1048		Alexandria - Soil		Recd: 02/20/2024 Due: 02/27/2024	
JMT-Richmond VA 24A1221		2023 Alexandria - Soil		Recd: 01/19/2024 Due: 01/26/2024	



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Certificate of Analysis

Final Report

Client Name:	Johnson, Mirmiran & Thompson, Inc - Richmo	Date Issued:	February 22, 2024 15:21
	9201 Arboretum Parkway Suite 310	Project Number:	[none]
		Purchase Order:	
	Richmond VA, 23236		
Submitted To:	Leo Snead		
Client Site I.D.:	Alexandria - Soil		

Sample Conditions Checklist

Samples Received at:	3.50°C
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits or received on ice, and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis. In addition, field parameters are always received outside holding time and will be marked accordingly.	Yes

Work Order Comments

Samples relogged from work order 24A1221 and 24A1607 on 02/20/2024 per phone call request from Leo Snead. The samples are logged as following.
P-5, P-10, P-18 and P-27 have been logged for TCLP Pb and P-17 logged for TCLP Se. Samples have been logged on a 2 day TAT. Leo Snead has approved TAT surcharge.
MNM 02/20/24 1101

TCLP predetermination out of holding time. Leo Snead notified via email. MNM 02/21/24