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

Certificate of Analysis

Final Report

Laboratory Order ID 24H1444

Client Name:	Spotsylvania County Department of Utilities 10900 HCC Drive Fredericksburg, VA 22408	Date Received:	August 26, 2024 10:30
		Date Issued:	August 28, 2024 13:34
		Project Number:	4H23002
Submitted To:	[redacted]	Purchase Order:	LAB-11532
Client Site I.D.:	Motts Rappahannock		

Enclosed are the results of analyses for samples received by the laboratory on 08/26/2024 10:30. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

[redacted]

[redacted]
Project Manager

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.

TNI Accredited
VELAP ID 460021

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities 10900 HCC Drive Fredericksburg VA, 22408	Date Issued: Project Number: Purchase Order:	August 28, 2024 13:34 4H23002 LAB-11532
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 24H1444

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Motts Rappahannock 1	24H1444 01	Non Potable Water	08/26/2024 08 43	08/26/2024 10 30

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: Spotsylvania County Department of Utilities
10900 HCC Drive

Fredericksburg VA, 22408

Submitted To: [redacted]

Client Site I.D.: Motts Rappahannock

Date Issued: August 28, 2024 13:34
Project Number: 4H23002
Purchase Order: LAB-11532

Laboratory Order ID: 24H1444

Analytical Results

Sample I.D. Motts Rappahannock-1 **Laboratory Sample ID:** 24H1444-01

Grab Date/Time: 08/26/2024 08:43

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									
1,2,4,5-Tetrachlorobenzene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
1,2,4-Trichlorobenzene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
1,2-Dichlorobenzene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
1,2-Diphenylhydrazine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
1,3-Dichlorobenzene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
1,3-Dinitrobenzene	01	SW8270E	<2.50 ug/L		2.50	1	08/27/24 09:00	08/27/24 20:02	BMS
1,4-Dichlorobenzene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
1-Naphthylamine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2,3,4,6-Tetrachlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2,4,5-Trichlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2,4,6-Trichlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2,4-Dichlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2,4-Dimethylphenol	01	SW8270E	<5.00 ug/L		5.00	1	08/27/24 09:00	08/27/24 20:02	BMS
2,4-Dinitrophenol	01	SW8270E	<50.0 ug/L		50.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2,4-Dinitrotoluene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2,6-Dichlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2,6-Dinitrotoluene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2-Chloronaphthalene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2-Chlorophenol	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2-Methylnaphthalene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2-Naphthylamine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2-Nitroaniline	01	SW8270E	<20.0 ug/L		20.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2-Nitrophenol	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
3,3'-Dichlorobenzidine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
3-Methylcholanthrene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
3-Nitroaniline	01	SW8270E	<20.0 ug/L		20.0	1	08/27/24 09:00	08/27/24 20:02	BMS

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: Spotsylvania County Department of Utilities
10900 HCC Drive

Fredericksburg VA, 22408

Submitted To: [redacted]

Client Site I.D.: Motts Rappahannock

Date Issued: August 28, 2024 13:34
Project Number: 4H23002
Purchase Order: LAB-11532

Laboratory Order ID: 24H1444

Analytical Results

Sample I.D. Motts Rappahannock-1 **Laboratory Sample ID:** 24H1444-01

Grab Date/Time: 08/26/2024 08:43

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									
4,6-Dinitro-2-methylphenol	01	SW8270E	<50.0 ug/L		50.0	1	08/27/24 09:00	08/27/24 20:02	BMS
4-Aminobiphenyl	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
4-Bromophenyl phenyl ether	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
4-Chloroaniline	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
4-Chlorophenyl phenyl ether	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
4-Nitroaniline	01	SW8270E	<20.0 ug/L		20.0	1	08/27/24 09:00	08/27/24 20:02	BMS
4-Nitrophenol	01	SW8270E	<50.0 ug/L		50.0	1	08/27/24 09:00	08/27/24 20:02	BMS
7,12-Dimethylbenz (a) anthracene	01	SW8270E	<10.0 ug/L	C	10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Acenaphthene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Acenaphthylene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Acetophenone	01	SW8270E	<20.0 ug/L	C	20.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Aniline	01	SW8270E	<50.0 ug/L		50.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Anthracene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Benzidine	01	SW8270E	<50.0 ug/L		50.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Benzo (a) anthracene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Benzo (a) pyrene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Benzo (b) fluoranthene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Benzo (g,h,i) perylene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Benzo (k) fluoranthene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Benzoic acid	01	SW8270E	<50.0 ug/L		50.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Benzyl alcohol	01	SW8270E	<20.0 ug/L		20.0	1	08/27/24 09:00	08/27/24 20:02	BMS
bis (2-Chloroethoxy) methane	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
bis (2-Chloroethyl) ether	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
2,2'-Oxybis (1-chloropropane)	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
bis (2-Ethylhexyl) phthalate	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: Spotsylvania County Department of Utilities
10900 HCC Drive

Fredericksburg VA, 22408

Submitted To: [redacted]

Client Site I.D.: Motts Rappahannock

Date Issued: August 28, 2024 13:34
Project Number: 4H23002
Purchase Order: LAB-11532

Laboratory Order ID: 24H1444

Analytical Results

Sample I.D. Motts Rappahannock-1 **Laboratory Sample ID:** 24H1444-01

Grab Date/Time: 08/26/2024 08:43

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									
Butyl benzyl phthalate	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Chrysene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Dibenz (a,h) anthracene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Dibenz (a,j) acridine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Dibenzofuran	01	SW8270E	<5.00 ug/L		5.00	1	08/27/24 09:00	08/27/24 20:02	BMS
Diethyl phthalate	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Dimethyl phthalate	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Di-n-butyl phthalate	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Di-n-octyl phthalate	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Diphenylamine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Ethyl methanesulfonate	01	SW8270E	<20.0 ug/L		20.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Fluoranthene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Fluorene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Hexachlorobenzene	01	SW8270E	<1.00 ug/L		1.00	1	08/27/24 09:00	08/27/24 20:02	BMS
Hexachlorobutadiene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Hexachlorocyclopentadiene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Hexachloroethane	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Indeno (1,2,3-cd) pyrene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Isophorone	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
m+p-Cresols	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Methyl methanesulfonate	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Naphthalene	01	SW8270E	<5.00 ug/L		5.00	1	08/27/24 09:00	08/27/24 20:02	BMS
Nitrobenzene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
n-Nitrosodimethylamine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
n-Nitrosodi-n-butylamine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
n-Nitrosodi-n-propylamine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS

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Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities	Date Issued:	August 28, 2024 13:34
	10900 HCC Drive	Project Number:	4H23002
		Purchase Order:	LAB-11532
	Fredericksburg VA, 22408		
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

Laboratory Order ID: 24H1444

Analytical Results

Sample I.D. Motts Rappahannock-1 **Laboratory Sample ID:** 24H1444-01

Grab Date/Time: 08/26/2024 08:43

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									
n-Nitrosodiphenylamine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
n-Nitrosopiperidine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
o+m+p-Cresols	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
o-Cresol	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
p-(Dimethylamino) azobenzene	01	SW8270E	<2.50 ug/L		2.50	1	08/27/24 09:00	08/27/24 20:02	BMS
p-Chloro-m-cresol	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Pentachloronitrobenzene (quintozene)	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Pentachlorophenol	01	SW8270E	<20.0 ug/L		20.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Phenacetin	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Phenanthrene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Phenol	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Pronamide	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Pyrene	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Pyridine	01	SW8270E	<10.0 ug/L		10.0	1	08/27/24 09:00	08/27/24 20:02	BMS
Surr: 2,4,6-Tribromophenol (Surr)	*01*	*SW8270E*	*68.6 %*		*5-136*		*08/27/24 09:00*	*08/27/24 20:02*	*BMS*
Surr: 2-Fluorobiphenyl (Surr)	*01*	*SW8270E*	*57.1 %*		*9-117*		*08/27/24 09:00*	*08/27/24 20:02*	*BMS*
Surr: 2-Fluorophenol (Surr)	*01*	*SW8270E*	*39.0 %*		*5-60*		*08/27/24 09:00*	*08/27/24 20:02*	*BMS*
Surr: Nitrobenzene-d5 (Surr)	*01*	*SW8270E*	*73.5 %*		*5-151*		*08/27/24 09:00*	*08/27/24 20:02*	*BMS*
Surr: Phenol-d5 (Surr)	*01*	*SW8270E*	*25.1 %*		*5-60*		*08/27/24 09:00*	*08/27/24 20:02*	*BMS*
Surr: p-Terphenyl-d14 (Surr)	*01*	*SW8270E*	*58.9 %*		*5-141*		*08/27/24 09:00*	*08/27/24 20:02*	*BMS*

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Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities	Date Issued:	August 28, 2024 13:34
	10900 HCC Drive	Project Number:	4H23002
		Purchase Order:	LAB-11532
	Fredericksburg VA, 22408		
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS		**Preparation Method:**	**SW3510C/EPA600-MS**		
24H1444-01	1050 mL / 1.00 mL	SW8270E	BHH1138	SHH1089	AH40174

QC Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS			**Preparation Method:**	**SW3510C/EPA600-MS**	
BHH1138-BLK1	1000 mL / 1.00 mL	SW8270E	BHH1138	SHH1089	AH40174
BHH1138-BLK2		SW8270E	BHH1138	SHH1085	AH40198
BHH1138-BS1	1000 mL / 1.00 mL	SW8270E	BHH1138	SHH1089	AH40174
BHH1138-BS2		SW8270E	BHH1138	SHH1085	AH40198
BHH1138-MS1	1010 mL / 1.00 mL	SW8270E	BHH1138	SHH1089	AH40174
BHH1138-MS2	1070 mL / 1.00 mL	SW8270E	BHH1138	SHH1089	AH40174
BHH1138-MSD1	1000 mL / 1.00 mL	SW8270E	BHH1138	SHH1089	AH40174
BHH1138-MSD2	1070 mL / 1.00 mL	SW8270E	BHH1138	SHH1089	AH40174

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Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities	Date Issued:	August 28, 2024 13:34
	10900 HCC Drive	Project Number:	4H23002
		Purchase Order:	LAB-11532
	Fredericksburg VA, 22408		
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Blank (BHH1138-BLK1)				Prepared & Analyzed: 08/27/2024						
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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Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities	Date Issued:	August 28, 2024 13:34
	10900 HCC Drive	Project Number:	4H23002
		Purchase Order:	LAB-11532
	Fredericksburg VA, 22408		
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Blank (BHH1138-BLK1)				Prepared & Analyzed: 08/27/2024						
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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Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities	Date Issued:	August 28, 2024 13:34
	10900 HCC Drive	Project Number:	4H23002
		Purchase Order:	LAB-11532
	Fredericksburg VA, 22408		
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Blank (BHH1138-BLK1)				Prepared & Analyzed: 08/27/2024						
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)	66.4		ug/L	100		66.4	5-136			
Surr: 2-Fluorobiphenyl (Surr)	29.6		ug/L	50.0		59.3	9-117			

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Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities 10900 HCC Drive Fredericksburg VA, 22408	Date Issued: Project Number: Purchase Order:	August 28, 2024 13:34 4H23002 LAB-11532
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Blank (BHH1138-BLK1)				Prepared & Analyzed: 08/27/2024						
Surr: 2-Fluorophenol (Surr)	45.4		ug/L	100		45.4	5-60			
Surr: Nitrobenzene-d5 (Surr)	37.4		ug/L	50.0		74.9	5-151			
Surr: Phenol-d5 (Surr)	28.1		ug/L	100		28.1	5-60			
Surr: p-Terphenyl-d14 (Surr)	31.4		ug/L	50.0		62.8	5-141			
LCS (BHH1138-BS1)				Prepared & Analyzed: 08/27/2024						
1,2,4-Trichlorobenzene	27.8 ug/L	10.0	ug/L	50.0	ug/L	55.6	57-130			L
1,2-Dichlorobenzene	27.6 ug/L	10.0	ug/L	50.0	ug/L	55.2	22-115			
1,3-Dichlorobenzene	27.1 ug/L	10.0	ug/L	50.0	ug/L	54.1	22-112			
1,4-Dichlorobenzene	27.9 ug/L	10.0	ug/L	50.0	ug/L	55.7	13-112			
2,4,6-Trichlorophenol	32.9 ug/L	10.0	ug/L	50.0	ug/L	65.8	52-129			
2,4-Dichlorophenol	34.5 ug/L	10.0	ug/L	50.0	ug/L	69.0	53-122			
2,4-Dimethylphenol	36.7 ug/L	5.00	ug/L	50.0	ug/L	73.3	42-120			
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	94.8	48-127			
2,4-Dinitrotoluene	44.0 ug/L	10.0	ug/L	50.0	ug/L	87.9	10-173			
2,6-Dinitrotoluene	39.9 ug/L	10.0	ug/L	50.0	ug/L	79.8	68-137			
2-Chloronaphthalene	30.0 ug/L	10.0	ug/L	50.0	ug/L	60.1	65-120			L
2-Chlorophenol	33.2 ug/L	10.0	ug/L	50.0	ug/L	66.4	36-120			
2-Nitrophenol	39.0 ug/L	10.0	ug/L	50.0	ug/L	77.9	45-167			
3,3'-Dichlorobenzidine	29.1 ug/L	10.0	ug/L	50.0	ug/L	58.3	10-213			
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	96.8	53-130			
4-Bromophenyl phenyl ether	30.0 ug/L	10.0	ug/L	50.0	ug/L	60.0	65-120			L
4-Chlorophenyl phenyl ether	29.1 ug/L	10.0	ug/L	50.0	ug/L	58.3	38-145			
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	40.6	13-129			
Acenaphthene	31.1 ug/L	10.0	ug/L	50.0	ug/L	62.2	60-132			
Acenaphthylene	32.6 ug/L	10.0	ug/L	50.0	ug/L	65.3	54-126			
Acetophenone	28.0 ug/L	20.0	ug/L	50.0	ug/L	56.0	0-200			
Anthracene	32.4 ug/L	10.0	ug/L	50.0	ug/L	64.9	43-120			
Benzo (a) anthracene	35.9 ug/L	10.0	ug/L	50.0	ug/L	71.8	42-133			
Benzo (a) pyrene	38.2 ug/L	10.0	ug/L	50.0	ug/L	76.4	32-148			
Benzo (b) fluoranthene	40.4 ug/L	10.0	ug/L	50.0	ug/L	80.9	42-140			
Benzo (g,h,i) perylene	42.7 ug/L	10.0	ug/L	50.0	ug/L	85.3	10-195			

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Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities 10900 HCC Drive Fredericksburg VA, 22408	Date Issued: Project Number: Purchase Order:	August 28, 2024 13:34 4H23002 LAB-11532
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
LCS (BHH1138-BS1)				Prepared & Analyzed: 08/27/2024						
Benzo (k) fluoranthene	32.9 ug/L	10.0	ug/L	50.0	ug/L	65.8	25-146			
bis (2-Chloroethoxy) methane	32.7 ug/L	10.0	ug/L	50.0	ug/L	65.3	49-165			
bis (2-Chloroethyl) ether	32.6 ug/L	10.0	ug/L	50.0	ug/L	65.1	43-126			
2,2'-Oxybis (1-chloropropane)	30.7 ug/L	10.0	ug/L	50.0	ug/L	61.4	63-139			L
bis (2-Ethylhexyl) phthalate	31.2 ug/L	10.0	ug/L	50.0	ug/L	62.4	29-137			
Butyl benzyl phthalate	33.9 ug/L	10.0	ug/L	50.0	ug/L	67.8	10-140			
Chrysene	34.6 ug/L	10.0	ug/L	50.0	ug/L	69.3	44-140			
Dibenz (a,h) anthracene	40.0 ug/L	10.0	ug/L	50.0	ug/L	80.0	10-200			
Diethyl phthalate	35.8 ug/L	10.0	ug/L	50.0	ug/L	71.7	10-120			
Dimethyl phthalate	34.9 ug/L	10.0	ug/L	50.0	ug/L	69.8	10-120			
Di-n-butyl phthalate	36.0 ug/L	10.0	ug/L	50.0	ug/L	71.9	10-120			
Di-n-octyl phthalate	34.6 ug/L	10.0	ug/L	50.0	ug/L	69.3	19-132			
Fluoranthene	40.4 ug/L	10.0	ug/L	50.0	ug/L	80.8	43-121			
Fluorene	33.2 ug/L	10.0	ug/L	50.0	ug/L	66.5	70-120			L
Hexachlorobenzene	31.6 ug/L	1.00	ug/L	50.0	ug/L	63.2	10-142			
Hexachlorobutadiene	30 0 ug/L	10 0	ug/L	50 0	ug/L	60 0	38 120			
Hexachlorocyclopentadiene	29.4 ug/L	10.0	ug/L	50.0	ug/L	58.9	10-76			
Hexachloroethane	31 3 ug/L	10 0	ug/L	50 0	ug/L	62 6	55 120			
Indeno (1,2,3-cd) pyrene	39.9 ug/L	10.0	ug/L	50.0	ug/L	79.7	10-151			
Isophorone	24 8 ug/L	10 0	ug/L	50 0	ug/L	49 7	47 180			
Naphthalene	26.6 ug/L	5.00	ug/L	50.0	ug/L	53.2	36-120			
Nitrobenzene	38 0 ug/L	10 0	ug/L	50 0	ug/L	76 1	54 158			
n-Nitrosodimethylamine	24.3 ug/L	10.0	ug/L	50.0	ug/L	48.6	10-85			
n Nitrosodi n propylamine	31 2 ug/L	10 0	ug/L	50 0	ug/L	62 3	14 198			
n-Nitrosodiphenylamine	29.1 ug/L	10.0	ug/L	50.0	ug/L	58.1	12-97			
p Chloro m cresol	37 2 ug/L	10 0	ug/L	50 0	ug/L	74 5	10 142			
Pentachloronitrobenzene (quintozene)	<10.0 ug/L	10.0	ug/L		ug/L		0-200			
Pentachlorophenol	29 4 ug/L	20 0	ug/L	50 0	ug/L	58 9	38 152			
Phenanthrene	35.7 ug/L	10.0	ug/L	50.0	ug/L	71.3	65-120			
Phenol	16 2 ug/L	10 0	ug/L	50 5	ug/L	32 1	17 120			
Pyrene	32.4 ug/L	10.0	ug/L	50.0	ug/L	64.7	70-120			L

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Certificate of Analysis

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	10900 HCC Drive	Project Number:	4H23002
		Purchase Order:	LAB-11532
	Fredericksburg VA, 22408		
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
LCS (BHH1138-BS1)					Prepared & Analyzed: 08/27/2024					
Pyridine	25.4 ug/L	10.0	ug/L	50.0	ug/L	50.9	10-103			
Surr: 2,4,6-Tribromophenol (Surr)	69.6		ug/L	100	ug/L	69.6	5-136			
Surr: 2-Fluorobiphenyl (Surr)	30.2		ug/L	50.0	ug/L	60.4	9-117			
Surr: 2-Fluorophenol (Surr)	45.5		ug/L	100	ug/L	45.5	5-60			
Surr: Nitrobenzene-d5 (Surr)	37.5		ug/L	50.0	ug/L	75.1	5-151			
Surr: Phenol-d5 (Surr)	29.6		ug/L	100	ug/L	29.6	5-60			
Surr: p-Terphenyl-d14 (Surr)	31.6		ug/L	50.0	ug/L	63.2	5-141			
Matrix Spike (BHH1138-MS1)		**Source: 24H1159-01**			Prepared & Analyzed: 08/27/2024					
1,2,4-Trichlorobenzene	22.7 ug/L	10.0	ug/L	49.5	<10.0 ug/L	45.9	44-142			
1,2-Dichlorobenzene	22.5 ug/L	10.0	ug/L	49.5	<10.0 ug/L	45.4	22-115			
1,3-Dichlorobenzene	22.2 ug/L	10.0	ug/L	49.5	<10.0 ug/L	44.8	22-112			
1,4-Dichlorobenzene	22.6 ug/L	10.0	ug/L	49.5	<10.0 ug/L	45.6	13-112			
2,4,6-Trichlorophenol	26.5 ug/L	10.0	ug/L	49.5	<10.0 ug/L	53.4	37-144			
2,4-Dichlorophenol	26.7 ug/L	10.0	ug/L	49.5	<10.0 ug/L	54.0	39-135			
2,4-Dimethylphenol	27.7 ug/L	5.00	ug/L	49.5	<5.00 ug/L	56.0	32-120			
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L	49.5	<50.0 ug/L	83.4	39-139			
2,4-Dinitrotoluene	41.6 ug/L	10.0	ug/L	49.5	<10.0 ug/L	84.0	10-191			
2,6-Dinitrotoluene	32.6 ug/L	10.0	ug/L	49.5	<10.0 ug/L	65.8	50-158			
2-Chloronaphthalene	25.0 ug/L	10.0	ug/L	49.5	<10.0 ug/L	50.5	60-120			M
2-Chlorophenol	24.6 ug/L	10.0	ug/L	49.5	<10.0 ug/L	49.7	23-134			
2-Nitrophenol	30.5 ug/L	10.0	ug/L	49.5	<10.0 ug/L	61.7	29-182			
3,3'-Dichlorobenzidine	27.1 ug/L	10.0	ug/L	49.5	<10.0 ug/L	54.8	10-262			
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L	49.5	<50.0 ug/L	87.6	10-181			
4-Bromophenyl phenyl ether	26.7 ug/L	10.0	ug/L	49.5	<10.0 ug/L	54.0	53-127			
4-Chlorophenyl phenyl ether	25.1 ug/L	10.0	ug/L	49.5	<10.0 ug/L	50.8	25-158			
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	49.5	<50.0 ug/L	33.1	10-132			
Acenaphthene	25.5 ug/L	10.0	ug/L	49.5	<10.0 ug/L	51.4	47-145			
Acenaphthylene	27.5 ug/L	10.0	ug/L	49.5	<10.0 ug/L	55.5	33-145			
Acetophenone	23.5 ug/L	20.0	ug/L	49.5	<20.0 ug/L	47.4	0-200			
Anthracene	29.0 ug/L	10.0	ug/L	49.5	<10.0 ug/L	58.6	27-133			
Benzo (a) anthracene	34.6 ug/L	10.0	ug/L	49.5	<10.0 ug/L	70.0	33-143			

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Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Matrix Spike (BHH1138-MS1)	**Source: 24H1159-01**			Prepared & Analyzed: 08/27/2024						
Benzo (a) pyrene	34.8 ug/L	10.0	ug/L	49.5	<10.0 ug/L	70.3	17-163			
Benzo (b) fluoranthene	40.1 ug/L	10.0	ug/L	49.5	<10.0 ug/L	81.0	24-159			
Benzo (g,h,i) perylene	45.5 ug/L	10.0	ug/L	49.5	<10.0 ug/L	91.8	10-219			
Benzo (k) fluoranthene	29.7 ug/L	10.0	ug/L	49.5	<10.0 ug/L	60.0	11-162			
bis (2-Chloroethoxy) methane	26.1 ug/L	10.0	ug/L	49.5	<10.0 ug/L	52.8	33-184			
bis (2-Chloroethyl) ether	25.8 ug/L	10.0	ug/L	49.5	<10.0 ug/L	52.1	12-158			
2,2'-Oxybis (1-chloropropane)	24.2 ug/L	10.0	ug/L	49.5	<10.0 ug/L	49.0	36-166			
bis (2-Ethylhexyl) phthalate	30.7 ug/L	10.0	ug/L	49.5	<10.0 ug/L	61.9	10-158			
Butyl benzyl phthalate	33.5 ug/L	10.0	ug/L	49.5	<10.0 ug/L	67.8	10-152			
Chrysene	32.3 ug/L	10.0	ug/L	49.5	<10.0 ug/L	65.2	17-169			
Dibenz (a,h) anthracene	40.3 ug/L	10.0	ug/L	49.5	<10.0 ug/L	81.3	10-227			
Diethyl phthalate	33.0 ug/L	10.0	ug/L	49.5	<10.0 ug/L	66.8	10-120			
Dimethyl phthalate	28.8 ug/L	10.0	ug/L	49.5	<10.0 ug/L	58.1	10-120			
Di-n-butyl phthalate	33.0 ug/L	10.0	ug/L	49.5	<10.0 ug/L	66.6	10-120			
Di-n-octyl phthalate	34.0 ug/L	10.0	ug/L	49.5	<10.0 ug/L	68.8	10-146			
Fluoranthene	35 0 ug/L	10 0	ug/L	49 5	10 0 ug/L	70 7	26 137			
Fluorene	29.1 ug/L	10.0	ug/L	49.5	<10.0 ug/L	58.7	59-121			M
Hexachlorobenzene	28 1 ug/L	1 00	ug/L	49 5	1 00 ug/L	56 8	10 152			
Hexachlorobutadiene	23.5 ug/L	10.0	ug/L	49.5	<10.0 ug/L	47.5	24-120			
Hexachlorocyclopentadiene	21 1 ug/L	10 0	ug/L	49 5	10 0 ug/L	42 5	10 90			
Hexachloroethane	25.9 ug/L	10.0	ug/L	49.5	<10.0 ug/L	52.4	40-120			
Indeno (1,2,3 cd) pyrene	40 6 ug/L	10 0	ug/L	49 5	10 0 ug/L	82 0	10 171			
Isophorone	18.6 ug/L	10.0	ug/L	49.5	<10.0 ug/L	37.5	21-196			
Naphthalene	20 7 ug/L	5 00	ug/L	49 5	5 00 ug/L	41 8	21 133			
Nitrobenzene	30.9 ug/L	10.0	ug/L	49.5	<10.0 ug/L	62.3	35-180			
n Nitrosodimethylamine	11 1 ug/L	10 0	ug/L	49 5	10 0 ug/L	22 4	10 85			
n-Nitrosodi-n-propylamine	25.3 ug/L	10.0	ug/L	49.5	<10.0 ug/L	51.0	10-230			
n-Nitrosodiphenylamine	26.3 ug/L	10 0	ug/L	49 5	<10.0 ug/L	53.1	12 111			
p-Chloro-m-cresol	27.9 ug/L	10.0	ug/L	49.5	<10.0 ug/L	56.4	10-127			
Pentachloronitrobenzene (quintozene)	<10.0 ug/L	10.0	ug/L		<10.0 ug/L		0-200			
Pentachlorophenol	26.0 ug/L	20.0	ug/L	49.5	<20.0 ug/L	52.5	14-176			

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities	Date Issued:	August 28, 2024 13:34
	10900 HCC Drive	Project Number:	4H23002
		Purchase Order:	LAB-11532
	Fredericksburg VA, 22408		
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Matrix Spike (BHH1138-MS1)	**Source: 24H1159-01**			Prepared & Analyzed: 08/27/2024						
Phenanthrene	32.3 ug/L	10.0	ug/L	49.5	<10.0 ug/L	65.3	54-120			
Phenol	11.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	22.6	10-120			
Pyrene	32.3 ug/L	10.0	ug/L	49.5	<10.0 ug/L	65.2	52-120			
Pyridine	13.3 ug/L	10.0	ug/L	49.5	<10.0 ug/L	26.9	10-110			
Surr: 2,4,6-Tribromophenol (Surr)	56.4		ug/L	99.0	ug/L	57.0	5-136			
Surr: 2-Fluorobiphenyl (Surr)	22.8		ug/L	49.5	ug/L	46.1	9-117			
Surr: 2-Fluorophenol (Surr)	19.6		ug/L	99.0	ug/L	19.8	5-60			
Surr: Nitrobenzene-d5 (Surr)	29.5		ug/L	49.5	ug/L	59.6	5-151			
Surr: Phenol-d5 (Surr)	20.5		ug/L	99.0	ug/L	20.7	5-60			
Surr: p-Terphenyl-d14 (Surr)	29.8		ug/L	49.5	ug/L	60.1	5-141			
Matrix Spike (BHH1138-MS2)	**Source: 24H1265-04**			Prepared & Analyzed: 08/27/2024						
1,2,4-Trichlorobenzene	26.6 ug/L	10.0	ug/L	46.7	<10.0 ug/L	56.9	44-142			
1,2-Dichlorobenzene	27.5 ug/L	10.0	ug/L	46.7	<10.0 ug/L	58.9	22-115			
1,3-Dichlorobenzene	26.9 ug/L	10.0	ug/L	46.7	<10.0 ug/L	57.5	22-112			
1,4-Dichlorobenzene	27.5 ug/L	10.0	ug/L	46.7	<10.0 ug/L	58.9	13-112			
2,4,6-Trichlorophenol	31.4 ug/L	10.0	ug/L	46.7	<10.0 ug/L	67.3	37-144			
2,4-Dichlorophenol	31.1 ug/L	10.0	ug/L	46.7	<10.0 ug/L	66.5	39-135			
2,4-Dimethylphenol	31.7 ug/L	5.00	ug/L	46.7	<5.00 ug/L	67.8	32-120			
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L	46.7	<50.0 ug/L	92.8	39-139			
2,4-Dinitrotoluene	41.4 ug/L	10.0	ug/L	46.7	<10.0 ug/L	88.5	10-191			
2,6-Dinitrotoluene	35.6 ug/L	10.0	ug/L	46.7	<10.0 ug/L	76.2	50-158			
2-Chloronaphthalene	29.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	62.0	60-120			
2-Chlorophenol	30.3 ug/L	10.0	ug/L	46.7	<10.0 ug/L	64.8	23-134			
2-Nitrophenol	36.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	77.1	29-182			
3,3'-Dichlorobenzidine	23.4 ug/L	10.0	ug/L	46.7	<10.0 ug/L	50.0	10-262			
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L	46.7	<50.0 ug/L	91.2	10-181			
4-Bromophenyl phenyl ether	28.1 ug/L	10.0	ug/L	46.7	<10.0 ug/L	60.2	53-127			
4-Chlorophenyl phenyl ether	27.3 ug/L	10.0	ug/L	46.7	<10.0 ug/L	58.5	25-158			
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	46.7	<50.0 ug/L	34.9	10-132			
Acenaphthene	29.4 ug/L	10.0	ug/L	46.7	<10.0 ug/L	63.0	47-145			
Acenaphthylene	31.7 ug/L	10.0	ug/L	46.7	<10.0 ug/L	67.9	33-145			

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1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities 10900 HCC Drive Fredericksburg VA, 22408	Date Issued: Project Number: Purchase Order:	August 28, 2024 13:34 4H23002 LAB-11532
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Matrix Spike (BHH1138-MS2)	**Source: 24H1265-04**			Prepared & Analyzed: 08/27/2024						
Acetophenone	27.9 ug/L	20.0	ug/L	46.7	<20.0 ug/L	59.7	0-200			
Anthracene	29.4 ug/L	10.0	ug/L	46.7	<10.0 ug/L	62.9	27-133			
Benzo (a) anthracene	34.4 ug/L	10.0	ug/L	46.7	<10.0 ug/L	73.7	33-143			
Benzo (a) pyrene	36.6 ug/L	10.0	ug/L	46.7	<10.0 ug/L	78.3	17-163			
Benzo (b) fluoranthene	40.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	85.5	24-159			
Benzo (g,h,i) perylene	40.1 ug/L	10.0	ug/L	46.7	<10.0 ug/L	85.8	10-219			
Benzo (k) fluoranthene	31.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	66.3	11-162			
bis (2-Chloroethoxy) methane	31.1 ug/L	10.0	ug/L	46.7	<10.0 ug/L	66.6	33-184			
bis (2-Chloroethyl) ether	32.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	68.5	12-158			
2,2'-Oxybis (1-chloropropane)	31.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	66.4	36-166			
bis (2-Ethylhexyl) phthalate	31.3 ug/L	10.0	ug/L	46.7	<10.0 ug/L	67.0	10-158			
Butyl benzyl phthalate	32.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	68.5	10-152			
Chrysene	32.5 ug/L	10.0	ug/L	46.7	<10.0 ug/L	69.5	17-169			
Dibenz (a,h) anthracene	37.3 ug/L	10.0	ug/L	46.7	<10.0 ug/L	79.7	10-227			
Diethyl phthalate	33.2 ug/L	10.0	ug/L	46.7	<10.0 ug/L	71.0	10-120			
Dimethyl phthalate	32 6 ug/L	10 0	ug/L	46 7	10 0 ug/L	69 7	10 120			
Di-n-butyl phthalate	33.6 ug/L	10.0	ug/L	46.7	<10.0 ug/L	72.0	10-120			
Di n octyl phthalate	36 9 ug/L	10 0	ug/L	46 7	10 0 ug/L	79 1	10 146			
Fluoranthene	35.2 ug/L	10.0	ug/L	46.7	<10.0 ug/L	75.3	26-137			
Fluorene	31 1 ug/L	10 0	ug/L	46 7	10 0 ug/L	66 6	59 121			
Hexachlorobenzene	29.4 ug/L	1.00	ug/L	46.7	<1.00 ug/L	62.9	10-152			
Hexachlorobutadiene	28 5 ug/L	10 0	ug/L	46 7	10 0 ug/L	61 1	24 120			
Hexachlorocyclopentadiene	25.7 ug/L	10.0	ug/L	46.7	<10.0 ug/L	55.1	10-90			
Hexachloroethane	30 9 ug/L	10 0	ug/L	46 7	10 0 ug/L	66 1	40 120			
Indeno (1,2,3-cd) pyrene	37.9 ug/L	10.0	ug/L	46.7	<10.0 ug/L	81.0	10-171			
Isophorone	22 2 ug/L	10 0	ug/L	46 7	10 0 ug/L	47 6	21 196			
Naphthalene	24.9 ug/L	5.00	ug/L	46.7	<5.00 ug/L	53.3	21-133			
Nitrobenzene	35 6 ug/L	10 0	ug/L	46 7	10 0 ug/L	76 1	35 180			
n-Nitrosodimethylamine	14.5 ug/L	10.0	ug/L	46.7	<10.0 ug/L	31.1	10-85			
n Nitrosodi n propylamine	30 1 ug/L	10 0	ug/L	46 7	10 0 ug/L	64 4	10 230			
n-Nitrosodiphenylamine	26.1 ug/L	10.0	ug/L	46.7	<10.0 ug/L	56.0	12-111			

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1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities 10900 HCC Drive Fredericksburg VA, 22408	Date Issued:	August 28, 2024 13:34
		Project Number:	4H23002
		Purchase Order:	LAB-11532
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Matrix Spike (BHH1138-MS2)	**Source: 24H1265-04**			Prepared & Analyzed: 08/27/2024						
p-Chloro-m-cresol	31.2 ug/L	10.0	ug/L	46.7	<10.0 ug/L	66.8	10-127			
Pentachloronitrobenzene (quintozene)	<10.0 ug/L	10.0	ug/L		<10.0 ug/L		0-200			
Pentachlorophenol	28.4 ug/L	20.0	ug/L	46.7	<20.0 ug/L	60.7	14-176			
Phenanthrene	33.1 ug/L	10.0	ug/L	46.7	<10.0 ug/L	70.9	54-120			
Phenol	12.4 ug/L	10.0	ug/L	47.2	<10.0 ug/L	26.2	10-120			
Pyrene	31.3 ug/L	10.0	ug/L	46.7	<10.0 ug/L	66.9	52-120			
Pyridine	15.7 ug/L	10.0	ug/L	46.7	<10.0 ug/L	33.6	10-110			
Surr: 2,4,6-Tribromophenol (Surr)	61.7		ug/L	93.5	ug/L	66.0	5-136			
Surr: 2-Fluorobiphenyl (Surr)	26.9		ug/L	46.7	ug/L	57.5	9-117			
Surr: 2-Fluorophenol (Surr)	22.7		ug/L	93.5	ug/L	24.3	5-60			
Surr: Nitrobenzene-d5 (Surr)	35.1		ug/L	46.7	ug/L	75.1	5-151			
Surr: Phenol-d5 (Surr)	22.3		ug/L	93.5	ug/L	23.9	5-60			
Surr: p-Terphenyl-d14 (Surr)	28.2		ug/L	46.7	ug/L	60.3	5-141			
Matrix Spike Dup (BHH1138-MSD1)	**Source: 24H1159-01**			Prepared & Analyzed: 08/27/2024						
1,2,4-Trichlorobenzene	24.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	49.0	44-142	7.61	20	
1,2-Dichlorobenzene	23.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	47.7	22-115	5.89	20	
1,3-Dichlorobenzene	24.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	48.4	22-112	8.72	20	
1,4-Dichlorobenzene	25.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	49.9	13-112	10.1	20	
2,4,6-Trichlorophenol	29.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	58.9	37-144	10.7	20	
2,4-Dichlorophenol	29.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	59.6	39-135	10.8	20	
2,4-Dimethylphenol	32.3 ug/L	5.00	ug/L	50.0	<5.00 ug/L	64.7	32-120	15.3	20	
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L	50.0	<50.0 ug/L	86.0	39-139	4.06	20	
2,4-Dinitrotoluene	40.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	80.9	10-191	2.74	20	
2,6-Dinitrotoluene	36.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	72.3	50-158	10.5	20	
2-Chloronaphthalene	26.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	53.0	60-120	5.87	20	M
2-Chlorophenol	28.7 ug/L	10.0	ug/L	50.0	<10.0 ug/L	57.5	23-134	15.5	20	
2-Nitrophenol	34.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	69.6	29-182	13.0	20	
3,3'-Dichlorobenzidine	28.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	56.8	10-262	4.51	20	
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L	50.0	<50.0 ug/L	87.5	10-181	0.835	20	
4-Bromophenyl phenyl ether	28.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	55.9	53-127	4.45	20	
4-Chlorophenyl phenyl ether	27.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	54.7	25-158	8.39	20	

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

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Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Matrix Spike Dup (BHH1138-MSD1)	**Source: 24H1159-01**			Prepared & Analyzed: 08/27/2024						
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	50.0	<50.0 ug/L	31.8	10-132	3.08	20	
Acenaphthene	28.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	57.5	47-145	12.2	20	
Acenaphthylene	29.7 ug/L	10.0	ug/L	50.0	<10.0 ug/L	59.4	33-145	7.71	20	
Acetophenone	26.3 ug/L	20.0	ug/L	50.0	<20.0 ug/L	52.6	0-200	11.4	20	
Anthracene	30.9 ug/L	10.0	ug/L	50.0	<10.0 ug/L	61.9	27-133	6.37	20	
Benzo (a) anthracene	34.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	69.5	33-143	0.336	20	
Benzo (a) pyrene	37.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	74.3	17-163	6.53	20	
Benzo (b) fluoranthene	37.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	75.7	24-159	5.77	20	
Benzo (g,h,i) perylene	46.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	92.2	10-219	1.45	20	
Benzo (k) fluoranthene	33.6 ug/L	10.0	ug/L	50.0	<10.0 ug/L	67.2	11-162	12.3	20	
bis (2-Chloroethoxy) methane	30.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	60.3	33-184	14.3	20	
bis (2-Chloroethyl) ether	29.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	59.5	12-158	14.3	20	
2,2'-Oxybis (1-chloropropane)	28.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	56.1	36-166	14.5	20	
bis (2-Ethylhexyl) phthalate	31.7 ug/L	10.0	ug/L	50.0	<10.0 ug/L	63.5	10-158	3.45	20	
Butyl benzyl phthalate	34.9 ug/L	10.0	ug/L	50.0	<10.0 ug/L	69.8	10-152	3.93	20	
Chrysene	34 6 ug/L	10 0	ug/L	50 0	10 0 ug/L	69 1	17 169	6 92	20	
Dibenz (a,h) anthracene	43.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	86.2	10-227	6.84	20	
Diethyl phthalate	34 7 ug/L	10 0	ug/L	50 0	10 0 ug/L	69 4	10 120	4 84	20	
Dimethyl phthalate	31.9 ug/L	10.0	ug/L	50.0	<10.0 ug/L	63.7	10-120	10.2	20	
Di n butyl phthalate	34 4 ug/L	10 0	ug/L	50 0	10 0 ug/L	68 8	10 120	4 21	20	
Di-n-octyl phthalate	35.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	70.6	10-146	3.61	20	
Fluoranthene	36 2 ug/L	10 0	ug/L	50 0	10 0 ug/L	72 3	26 137	3 29	20	
Fluorene	30.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	61.0	59-121	4.77	20	
Hexachlorobenzene	29 9 ug/L	1 00	ug/L	50 0	1 00 ug/L	59 9	10 152	6 31	20	
Hexachlorobutadiene	25.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	50.4	24-120	7.04	20	
Hexachlorocyclopentadiene	24 2 ug/L	10 0	ug/L	50 0	10 0 ug/L	48 5	10 90	14 0	20	
Hexachloroethane	27.6 ug/L	10.0	ug/L	50.0	<10.0 ug/L	55.3	40-120	6.31	20	
Indeno (1,2,3 cd) pyrene	43 1 ug/L	10 0	ug/L	50 0	10 0 ug/L	86 2	10 171	6 06	20	
Isophorone	21.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	42.0	21-196	12.4	20	
Naphthalene	23 4 ug/L	5 00	ug/L	50 0	5 00 ug/L	46 8	21 133	12 2	20	
Nitrobenzene	34.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	69.0	35-180	11.2	20	

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

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Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Matrix Spike Dup (BHH1138-MSD1)	**Source: 24H1159-01**			Prepared & Analyzed: 08/27/2024						
n-Nitrosodimethylamine	13.9 ug/L	10.0	ug/L	50.0	<10.0 ug/L	27.7	10-85	22.4	20	P
n-Nitrosodi-n-propylamine	28.7 ug/L	10.0	ug/L	50.0	<10.0 ug/L	57.3	10-230	12.7	20	
n-Nitrosodiphenylamine	26.6 ug/L	10.0	ug/L	50.0	<10.0 ug/L	53.2	12-111	1.15	20	
p-Chloro-m-cresol	31.9 ug/L	10.0	ug/L	50.0	<10.0 ug/L	63.7	10-127	13.1	20	
Pentachloronitrobenzene (quintozene)	<10.0 ug/L	10.0	ug/L		<10.0 ug/L		0-200		20	
Pentachlorophenol	27.8 ug/L	20.0	ug/L	50.0	<20.0 ug/L	55.6	14-176	6.77	20	
Phenanthrene	35.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	70.2	54-120	8.20	20	
Phenol	12.6 ug/L	10.0	ug/L	50.5	<10.0 ug/L	24.9	10-120	10.6	20	
Pyrene	33.7 ug/L	10.0	ug/L	50.0	<10.0 ug/L	67.4	52-120	4.31	20	
Pyridine	15.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	30.9	10-110	15.0	20	
Surr: 2,4,6-Tribromophenol (Surr)	60.8		ug/L	100	ug/L	60.8	5-136			
Surr: 2-Fluorobiphenyl (Surr)	26.2		ug/L	50.0	ug/L	52.4	9-117			
Surr: 2-Fluorophenol (Surr)	22.9		ug/L	100	ug/L	22.9	5-60			
Surr: Nitrobenzene-d5 (Surr)	33.6		ug/L	50.0	ug/L	67.2	5-151			
Surr: Phenol-d5 (Surr)	22.7		ug/L	100	ug/L	22.7	5-60			
Surr: p-Terphenyl-d14 (Surr)	31.3		ug/L	50.0	ug/L	62.7	5-141			
Matrix Spike Dup (BHH1138-MSD2)	**Source: 24H1265-04**			Prepared & Analyzed: 08/27/2024						
1,2,4-Trichlorobenzene	27.4 ug/L	10.0	ug/L	46.7	<10.0 ug/L	58.6	44-142	2.95	20	
1,2-Dichlorobenzene	27.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	57.7	22-115	2.02	20	
1,3-Dichlorobenzene	26.8 ug/L	10.0	ug/L	46.7	<10.0 ug/L	57.4	22-112	0.0696	20	
1,4-Dichlorobenzene	27.3 ug/L	10.0	ug/L	46.7	<10.0 ug/L	58.3	13-112	0.955	20	
2,4,6-Trichlorophenol	31.2 ug/L	10.0	ug/L	46.7	<10.0 ug/L	66.8	37-144	0.716	20	
2,4-Dichlorophenol	32.9 ug/L	10.0	ug/L	46.7	<10.0 ug/L	70.3	39-135	5.52	20	
2,4-Dimethylphenol	34.1 ug/L	5.00	ug/L	46.7	<5.00 ug/L	72.9	32-120	7.16	20	
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L	46.7	<50.0 ug/L	97.4	39-139	4.86	20	
2,4-Dinitrotoluene	40.3 ug/L	10.0	ug/L	46.7	<10.0 ug/L	86.3	10-191	2.52	20	
2,6-Dinitrotoluene	35.6 ug/L	10.0	ug/L	46.7	<10.0 ug/L	76.2	50-158	0.0525	20	
2-Chloronaphthalene	29.1 ug/L	10.0	ug/L	46.7	<10.0 ug/L	62.3	60-120	0.547	20	
2-Chlorophenol	30.5 ug/L	10.0	ug/L	46.7	<10.0 ug/L	65.2	23-134	0.646	20	
2-Nitrophenol	37.3 ug/L	10.0	ug/L	46.7	<10.0 ug/L	79.9	29-182	3.49	20	
3,3'-Dichlorobenzidine	25.5 ug/L	10.0	ug/L	46.7	<10.0 ug/L	54.6	10-262	8.80	20	

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1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities 10900 HCC Drive Fredericksburg VA, 22408	Date Issued: Project Number: Purchase Order:	August 28, 2024 13:34 4H23002 LAB-11532
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Matrix Spike Dup (BHH1138-MSD2)	**Source: 24H1265-04**			Prepared & Analyzed: 08/27/2024						
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L	46.7	<50.0 ug/L	94.2	10-181	3.19	20	
4-Bromophenyl phenyl ether	28.3 ug/L	10.0	ug/L	46.7	<10.0 ug/L	60.6	53-127	0.596	20	
4-Chlorophenyl phenyl ether	28.8 ug/L	10.0	ug/L	46.7	<10.0 ug/L	61.7	25-158	5.36	20	
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	46.7	<50.0 ug/L	39.7	10-132	12.9	20	
Acenaphthene	30.6 ug/L	10.0	ug/L	46.7	<10.0 ug/L	65.6	47-145	4.01	20	
Acenaphthylene	30.5 ug/L	10.0	ug/L	46.7	<10.0 ug/L	65.3	33-145	3.87	20	
Acetophenone	28.6 ug/L	20.0	ug/L	46.7	<20.0 ug/L	61.1	0-200	2.32	20	
Anthracene	29.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	62.0	27-133	1.38	20	
Benzo (a) anthracene	33.9 ug/L	10.0	ug/L	46.7	<10.0 ug/L	72.6	33-143	1.56	20	
Benzo (a) pyrene	36.6 ug/L	10.0	ug/L	46.7	<10.0 ug/L	78.3	17-163	0.102	20	
Benzo (b) fluoranthene	38.1 ug/L	10.0	ug/L	46.7	<10.0 ug/L	81.5	24-159	4.74	20	
Benzo (g,h,i) perylene	38.2 ug/L	10.0	ug/L	46.7	<10.0 ug/L	81.7	10-219	4.82	20	
Benzo (k) fluoranthene	31.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	66.4	11-162	0.241	20	
bis (2-Chloroethoxy) methane	31.8 ug/L	10.0	ug/L	46.7	<10.0 ug/L	68.0	33-184	2.20	20	
bis (2-Chloroethyl) ether	30.9 ug/L	10.0	ug/L	46.7	<10.0 ug/L	66.1	12-158	3.57	20	
2,2' Oxybis (1 chloropropane)	30 0 ug/L	10 0	ug/L	46 7	10 0 ug/L	64 3	36 166	3 27	20	
bis (2-Ethylhexyl) phthalate	29.3 ug/L	10.0	ug/L	46.7	<10.0 ug/L	62.7	10-158	6.51	20	
Butyl benzyl phthalate	31 5 ug/L	10 0	ug/L	46 7	10 0 ug/L	67 5	10 152	1 56	20	
Chrysene	32.1 ug/L	10.0	ug/L	46.7	<10.0 ug/L	68.8	17-169	0.955	20	
Dibenz (a,h) anthracene	37 3 ug/L	10 0	ug/L	46 7	10 0 ug/L	79 8	10 227	0 0502	20	
Diethyl phthalate	33.9 ug/L	10.0	ug/L	46.7	<10.0 ug/L	72.6	10-120	2.26	20	
Dimethyl phthalate	31 9 ug/L	10 0	ug/L	46 7	10 0 ug/L	68 4	10 120	1 88	20	
Di-n-butyl phthalate	32.5 ug/L	10.0	ug/L	46.7	<10.0 ug/L	69.6	10-120	3.45	20	
Di n octyl phthalate	32 3 ug/L	10 0	ug/L	46 7	10 0 ug/L	69 1	10 146	13 5	20	
Fluoranthene	36.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	77.1	26-137	2.34	20	
Fluorene	31 8 ug/L	10 0	ug/L	46 7	10 0 ug/L	68 0	59 121	2 08	20	
Hexachlorobenzene	29.9 ug/L	1.00	ug/L	46.7	<1.00 ug/L	64.0	10-152	1.67	20	
Hexachlorobutadiene	29 4 ug/L	10 0	ug/L	46 7	10 0 ug/L	63 0	24 120	3 06	20	
Hexachlorocyclopentadiene	26.8 ug/L	10.0	ug/L	46.7	<10.0 ug/L	57.4	10-90	4.13	20	
Hexachloroethane	31 2 ug/L	10 0	ug/L	46 7	10 0 ug/L	66 8	40 120	1 08	20	
Indeno (1,2,3-cd) pyrene	37.6 ug/L	10.0	ug/L	46.7	<10.0 ug/L	80.4	10-171	0.843	20	

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1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities 10900 HCC Drive Fredericksburg VA, 22408	Date Issued: Project Number: Purchase Order:	August 28, 2024 13:34 4H23002 LAB-11532
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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 BHH1138 - SW3510C/EPA600-MS										
Matrix Spike Dup (BHH1138-MSD2)	**Source: 24H1265-04**			Prepared & Analyzed: 08/27/2024						
Isophorone	24.0 ug/L	10.0	ug/L	46.7	<10.0 ug/L	51.4	21-196	7.64	20	
Naphthalene	26 2 ug/L	5 00	ug/L	46 7	5 00 ug/L	56 1	21 133	5 12	20	
Nitrobenzene	36.8 ug/L	10.0	ug/L	46.7	<10.0 ug/L	78.8	35-180	3.51	20	
n Nitrosodimethylamine	21 3 ug/L	10 0	ug/L	46 7	10 0 ug/L	45 5	10 85	37 7	20	P
n-Nitrosodi-n-propylamine	30.9 ug/L	10.0	ug/L	46.7	<10.0 ug/L	66.1	10-230	2.67	20	
n Nitrosodiphenylamine	26 9 ug/L	10 0	ug/L	46 7	10 0 ug/L	57 6	12 111	2 89	20	
p-Chloro-m-cresol	34.6 ug/L	10.0	ug/L	46.7	<10.0 ug/L	74.1	10-127	10.4	20	
Pentachloronitrobenzene (quintozene)	10 0 ug/L	10 0	ug/L		10 0 ug/L		0 200		20	
Pentachlorophenol	28.2 ug/L	20.0	ug/L	46.7	<20.0 ug/L	60.4	14-176	0.396	20	
Phenanthrene	34 6 ug/L	10 0	ug/L	46 7	10 0 ug/L	74 1	54 120	4 41	20	
Phenol	13.2 ug/L	10.0	ug/L	47.2	<10.0 ug/L	27.9	10-120	6.22	20	
Pyrene	28 1 ug/L	10 0	ug/L	46 7	10 0 ug/L	60 2	52 120	10 5	20	
Pyridine	18.4 ug/L	10.0	ug/L	46.7	<10.0 ug/L	39.4	10-110	15.8	20	
Surr 2,4,6 Tribromophenol (Surr)	61 4		ug/L	93 5	ug/L	65 6	5 136			
Surr: 2-Fluorobiphenyl (Surr)	27.5		ug/L	46.7	ug/L	58.9	9-117			
Surr 2 Fluorophenol (Surr)	37 3		ug/L	93 5	ug/L	39 9	5 60			
Surr: Nitrobenzene-d5 (Surr)	36.6		ug/L	46.7	ug/L	78.3	5-151			
Surr Phenol d5 (Surr)	23 7		ug/L	93 5	ug/L	25 4	5 60			
Surr: p-Terphenyl-d14 (Surr)	26.4		ug/L	46.7	ug/L	56.5	5-141			

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Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

Certified Analyses included in this Report

Analyte	Certifications
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
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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Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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,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

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Certificate of Analysis

Final Report

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Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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
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
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	07/31/2025
NYDOH	New York DOH Drinking Water	12069	04/01/2025
PADEP	NELAP-Pennsylvania Certificate #009	68-03503	10/31/2024
SCDHEC	South Carolina Dept of Health and Environmental	93016	09/14/2024
TXCEQ	Texas Comm on Environmental Quality #T10470	T104704576	05/31/2025
VELAP	NELAP-Virginia Certificate #12969	460021	06/14/2025
WVDEP	West Virginia DEP	350	11/30/2024

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Certificate of Analysis

Final Report

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	10900 HCC Drive	Project Number:	4H23002
		Purchase Order:	LAB-11532
	Fredericksburg VA, 22408		
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

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
P	Duplicate analysis does not meet the acceptance criteria for precision
RPD	Relative Percent Difference
Qual	Qualifers
-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.

ENTHALPY ANALYTICAL

1941 REYMET ROAD
RICHMOND, VIRGINIA 23237
(804) 358-8295 PHONE
(804)358-8297 FAX

Email invoice to: [redacted]

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: Spotsylvania County Utilities	INVOICE TO: [redacted]	PROJECT NAME/Quote #:
CONTACT: [redacted]	INVOICE CONTACT:	SITE NAME: Motts Rappahannock
ADDRESS: 10000 Hcc Dr, Fredericksburg VA 22408	INVOICE ADDRESS: [redacted]	PROJECT NUMBER: 4482002
PHONE #: [redacted]	INVOICE PHONE #: [redacted]	P.O. #: LAB-11532
FAX #:	EMAIL: [redacted]	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): [redacted]	SAMPLER SIGNATURE: [redacted]	urn 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 Surface Water

LAB USE ONLY

Cooler Temp

Therm ID: 271
Observed Temp °C 5.8
Correction Factor °C 0.0
Corrected Temp °C 5.8

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: VOC EPA 524	ANALYSIS: EPA 525.2	ANALYSIS: SVOC SW8270	ANALYSIS: VOC SW 8260	ANALYSIS:	ANALYSIS:	ANALYSIS:	ANALYSIS:	COMMENTS
1) Motts Rappahannock	✓					8/26/24	0831	0831	OT	5	✓								
2) Motts Rappahannock-1	✓					8/26/24	0845	0845	OT	1			✓						
3) Motts Rappahannock-2	✓					8/26/24	0858	0858	OT	1			✓						
4) Motts Rappahannock						8/26/24	0827	0827	OT	1		✓							
5) Motts Rappahannock-1	✓					8/26/24	0845	0845	OT	3				✓					
6) Motts Rappahannock-2	✓					8/26/24	0858	0858	OT	3				✓					
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: [redacted]	DATE / TIME 8-26-24/1030	RECEIVED: [redacted]	DATE / TIME 8-26-24 1030
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package
Level III ☐
Level IV ☐

Custody Seals used and intact? (Y/N)

Received on ice? (Y/N)

LAB USE ONLY

SCDOU **24H1444**
Motts Rappahannock
Recd: 08/26/2024 Due: 08/28/2024

ENTHALPY ANALYTICAL

Sample Preservation Log

Order ID 24H1444 Date Performed: 8/26/24 Analyst Performing Check: HG

Sample ID	Container ID	Metals			Cyanide			Sulfide			Ammonia			TKN			Phos, Tot			NO3+NO2			DRO			Pesticide (8081/608/508) PCB DW only			SVOC (525/8270/625)			CrVI * **		Pest/PCB (508) / SVOC(525)								
		pH as Received		Final pH	pH as Received		Final pH	pH as Received		Final pH	pH as Received		Final pH	pH as Received		Final pH	pH as Received		Final pH	pH as Received		Final pH	pH as Received		Final pH	Received Res. Cl		final + or -	Received Res. Cl		final + or -	Received pH	Final pH	pH as Received		Final pH	pH as Received		Final pH	pH as Received		Final pH
		< 2	Other		> 12	Other		> 9	Other		< 2	Other		< 2	Other		< 2	Other		< 2	Other		< 2	Other		+	-		+	-				< 2	Other			Other			Other	
1	A																												—												

NaOH ID: _____ HNO_3 ID: _____ CrVI preserved date/time: _____ Analyst Initials: _____

*** pH must be adjusted between 9.3 - 9.7***

H_2SO_4 ID: _____ $Na_2S_2O_3$ ID: _____ Ammonia Buffer Sol'n ID: _____

HCL ID: _____ Na_2SO_3 ID: _____ 5N NaOH ID: _____

**W.Va only certifies DISS CrVI and not T CrVI as an approved analyte under 40CFR136 for waste water.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Spotsylvania County Department of Utilities	Date Issued:	August 28, 2024 13:34
	10900 HCC Drive	Project Number:	4H23002
		Purchase Order:	LAB-11532
	Fredericksburg VA, 22408		
Submitted To:	[redacted]		
Client Site I.D.:	Motts Rappahannock		

Sample Conditions Checklist

Samples Received at:	**5.80°C**
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	Yes
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

SVOC samples logged for a 2 day and VOC samples logged on a 1 day per [redacted] at drop off. HEG 8/26/24 1147

Remaining analysis found on work order 24H1437. HEG 8/26/24 1148

Only one SVOC 8270 and one VOC 8260 sample is to be analyzed per [redacted] via phone. HEG 8/26/24 1552