



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

## Certificate of Analysis

*Final Report*

Laboratory Order ID 24H1424

Client Name: APEX Companies, LLC. - Richmond VA  
203 Wylderose Court  
Midlothian, VA 23113

Date Received: August 26, 2024 8:10  
Date Issued: August 26, 2024 16:52  
Project Number: 24009604  
Purchase Order:

Submitted To: [REDACTED]

Client Site I.D.: Rapidan WTP Wilderness

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

Sincerely,

[REDACTED]

[REDACTED]

Laboratory 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.

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TNI Accredited  
VELAP ID 460021



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## Certificate of Analysis

### Final Report

Client Name: APEX Companies, LLC. - Richmond VA      Date Issued: August 26, 2024 16:52  
203 Wylderose Court      Project Number: 24009604  
Midlothian VA, 23113      Purchase Order:  
Submitted To: [REDACTED]  
Client Site I.D.: Rapidan WTP Wilderness

### ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 24H1424

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
0823249604-5 Trip Blank	24H1424-01	Non-Potable Water	06/10/2024 09:55	08/26/2024 08:10
0823249604-6 Wet Well	24H1424-02	Non-Potable Water	08/23/2024 14:00	08/26/2024 08:10
0823249604-7 Up Gradient Surface sample	24H1424-03	Non-Potable Water	08/23/2024 14:10	08/26/2024 08:10
0823249604-8 Down Gradient Surface Sample	24H1424-04	Non-Potable Water	08/23/2024 17:15	08/26/2024 08:10



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## Certificate of Analysis

### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

Laboratory Order ID: 24H1424

#### Analytical Results

Sample I.D. 0823249604-5 Trip Blank Laboratory Sample ID: 24H1424-01  
 Grab Date/Time: 06/10/2024 09:55  
 Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
1,1,1,2-Tetrachloroethane	01	SW8260D	<0.40 ug/L		0.40	1	08/26/24 12:39	08/26/24 12:39	TLH
1,1,1-Trichloroethane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,1,2,2-Tetrachloroethane	01	SW8260D	<0.40 ug/L		0.40	1	08/26/24 12:39	08/26/24 12:39	TLH
1,1,2-Trichloroethane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,1-Dichloroethane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,1-Dichloroethylene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,1-Dichloropropene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,2,3-Trichlorobenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,2,3-Trichloropropane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,2,4-Trichlorobenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,2,4-Trimethylbenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,2-Dibromo-3-chloropropane (DBCP)	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,2-Dibromoethane (EDB)	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,2-Dichlorobenzene	01	SW8260D	<0.50 ug/L		0.50	1	08/26/24 12:39	08/26/24 12:39	TLH
1,2-Dichloroethane	01	SW8260D	<1.00 ug/L	C	1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,2-Dichloropropane	01	SW8260D	<0.50 ug/L		0.50	1	08/26/24 12:39	08/26/24 12:39	TLH
1,3,5-Trimethylbenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,3-Dichlorobenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,3-Dichloropropane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
1,4-Dichlorobenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
2,2-Dichloropropane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
2-Butanone (MEK)	01	SW8260D	<10.0 ug/L		10.0	1	08/26/24 12:39	08/26/24 12:39	TLH
2-Chlorotoluene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
2-Hexanone (MBK)	01	SW8260D	<5.00 ug/L		5.00	1	08/26/24 12:39	08/26/24 12:39	TLH
4-Chlorotoluene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH



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## Certificate of Analysis

### Final Report

Client Name:	APEX Companies, LLC. - Richmond VA 203 Wylderose Court  Midlothian VA, 23113	Date Issued:	August 26, 2024 16:52
Submitted To:	██████████	Project Number:	24009604
Client Site I.D.:	Rapidan WTP Wilderness	Purchase Order:	

**Laboratory Order ID: 24H1424**

**Analytical Results**

Sample I.D. 0823249604-5 Trip Blank	Laboratory Sample ID: 24H1424-01
Grab Date/Time: 06/10/2024 09:55	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
4-Isopropyltoluene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
4-Methyl-2-pentanone (MIBK)	01	SW8260D	<5.00 ug/L		5.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Acetone	01	SW8260D	<10.0 ug/L		10.0	1	08/26/24 12:39	08/26/24 12:39	TLH
Benzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Bromobenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Bromochloromethane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Bromodichloromethane	01	SW8260D	<0.50 ug/L		0.50	1	08/26/24 12:39	08/26/24 12:39	TLH
Bromoform	01	SW8260D	<1.00 ug/L	C	1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Bromomethane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Carbon disulfide	01	SW8260D	<10.0 ug/L		10.0	1	08/26/24 12:39	08/26/24 12:39	TLH
Carbon tetrachloride	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Chlorobenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Chloroethane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Chloroform	01	SW8260D	<0.50 ug/L		0.50	1	08/26/24 12:39	08/26/24 12:39	TLH
Chloromethane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
cis-1,2-Dichloroethylene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
cis-1,3-Dichloropropene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Dibromochloromethane	01	SW8260D	<0.50 ug/L		0.50	1	08/26/24 12:39	08/26/24 12:39	TLH
Dibromomethane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Dichlorodifluoromethane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Di-isopropyl ether (DIPE)	01	SW8260D	<5.00 ug/L		5.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Ethylbenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Hexachlorobutadiene	01	SW8260D	<0.80 ug/L		0.80	1	08/26/24 12:39	08/26/24 12:39	TLH
Iodomethane	01	SW8260D	<10.0 ug/L	C	10.0	1	08/26/24 12:39	08/26/24 12:39	TLH
Isopropylbenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
m+p-Xylenes	01	SW8260D	<2.00 ug/L		2.00	1	08/26/24 12:39	08/26/24 12:39	TLH



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Submitted To:	██████████	Project Number:	24009604
Client Site I.D.:	Rapidan WTP Wilderness	Purchase Order:	

**Laboratory Order ID: 24H1424**

**Analytical Results**

Sample I.D. 0823249604-5 Trip Blank	Laboratory Sample ID: 24H1424-01
Grab Date/Time: 06/10/2024 09:55	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
Methylene chloride	01	SW8260D	<4.00 ug/L	C	4.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Methyl-t-butyl ether (MTBE)	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Naphthalene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
n-Butylbenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
n-Propylbenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
o-Xylene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
sec-Butylbenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Styrene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
tert-Butylbenzene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Tetrachloroethylene (PCE)	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Toluene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
trans-1,2-Dichloroethylene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
trans-1,3-Dichloropropene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Trichloroethylene	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Trichlorofluoromethane	01	SW8260D	<1.00 ug/L		1.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Vinyl acetate	01	SW8260D	<10.0 ug/L		10.0	1	08/26/24 12:39	08/26/24 12:39	TLH
Vinyl chloride	01	SW8260D	<0.50 ug/L		0.50	1	08/26/24 12:39	08/26/24 12:39	TLH
Xylenes, Total	01	SW8260D	<3.00 ug/L		3.00	1	08/26/24 12:39	08/26/24 12:39	TLH
Surr: 1,2 Dichloroethane d4 (Surr)	01	SW8260D	101 %		70-120		08/26/24 12:39	08/26/24 12:39	TLH
Surr: 4-Bromofluorobenzene (Surr)	01	SW8260D	106 %		75-120		08/26/24 12:39	08/26/24 12:39	TLH
Surr: Dibromofluoromethane (Surr)	01	SW8260D	101 %		70-130		08/26/24 12:39	08/26/24 12:39	TLH
Surr: Toluene-d8 (Surr)	01	SW8260D	103 %		70-130		08/26/24 12:39	08/26/24 12:39	TLH



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### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

Laboratory Order ID: 24H1424

#### Analytical Results

Sample I.D. 0823249604-6 Wet Well Laboratory Sample ID: 24H1424-02  
 Grab Date/Time: 08/23/2024 14:00  
 Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
1,1,1,2-Tetrachloroethane	02	SW8260D	<0.40 ug/L		0.40	1	08/26/24 13:02	08/26/24 13:02	TLH
1,1,1-Trichloroethane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,1,2,2-Tetrachloroethane	02	SW8260D	<0.40 ug/L		0.40	1	08/26/24 13:02	08/26/24 13:02	TLH
1,1,2-Trichloroethane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,1-Dichloroethane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,1-Dichloroethylene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,1-Dichloropropene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,2,3-Trichlorobenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,2,3-Trichloropropane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,2,4-Trichlorobenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,2,4-Trimethylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,2-Dibromo-3-chloropropane (DBCP)	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,2-Dibromoethane (EDB)	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,2-Dichlorobenzene	02	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:02	08/26/24 13:02	TLH
1,2-Dichloroethane	02	SW8260D	<1.00 ug/L	C	1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,2-Dichloropropane	02	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:02	08/26/24 13:02	TLH
1,3,5-Trimethylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,3-Dichlorobenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,3-Dichloropropane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
1,4-Dichlorobenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
2,2-Dichloropropane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
2-Butanone (MEK)	02	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:02	08/26/24 13:02	TLH
2-Chlorotoluene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
2-Hexanone (MBK)	02	SW8260D	<5.00 ug/L		5.00	1	08/26/24 13:02	08/26/24 13:02	TLH
4-Chlorotoluene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH



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## Certificate of Analysis

### Final Report

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 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

Laboratory Order ID: 24H1424

#### Analytical Results

Sample I.D. 0823249604-6 Wet Well Laboratory Sample ID: 24H1424-02  
 Grab Date/Time: 08/23/2024 14:00  
 Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
4-Isopropyltoluene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
4-Methyl-2-pentanone (MIBK)	02	SW8260D	<5.00 ug/L		5.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Acetone	02	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:02	08/26/24 13:02	TLH
Benzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Bromobenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Bromochloromethane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Bromodichloromethane	02	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:02	08/26/24 13:02	TLH
Bromoform	02	SW8260D	<1.00 ug/L	C	1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Bromomethane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Carbon disulfide	02	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:02	08/26/24 13:02	TLH
Carbon tetrachloride	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Chlorobenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Chloroethane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Chloroform	02	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:02	08/26/24 13:02	TLH
Chloromethane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
cis-1,2-Dichloroethylene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
cis-1,3-Dichloropropene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Dibromochloromethane	02	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:02	08/26/24 13:02	TLH
Dibromomethane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Dichlorodifluoromethane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Di-isopropyl ether (DIPE)	02	SW8260D	<5.00 ug/L		5.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Ethylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Hexachlorobutadiene	02	SW8260D	<0.80 ug/L		0.80	1	08/26/24 13:02	08/26/24 13:02	TLH
Iodomethane	02	SW8260D	<10.0 ug/L	C	10.0	1	08/26/24 13:02	08/26/24 13:02	TLH
Isopropylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
m+p-Xylenes	02	SW8260D	<2.00 ug/L		2.00	1	08/26/24 13:02	08/26/24 13:02	TLH



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## Certificate of Analysis

### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

Laboratory Order ID: 24H1424

#### Analytical Results

Sample I.D. 0823249604-6 Wet Well Laboratory Sample ID: 24H1424-02  
 Grab Date/Time: 08/23/2024 14:00  
 Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
Methylene chloride	02	SW8260D	<4.00 ug/L	C	4.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Methyl-t-butyl ether (MTBE)	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Naphthalene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
n-Butylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
n-Propylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
o-Xylene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
sec-Butylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Styrene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
tert-Butylbenzene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Tetrachloroethylene (PCE)	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Toluene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
trans-1,2-Dichloroethylene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
trans-1,3-Dichloropropene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Trichloroethylene	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Trichlorofluoromethane	02	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Vinyl acetate	02	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:02	08/26/24 13:02	TLH
Vinyl chloride	02	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:02	08/26/24 13:02	TLH
Xylenes, Total	02	SW8260D	<3.00 ug/L		3.00	1	08/26/24 13:02	08/26/24 13:02	TLH
Surr: 1,2 Dichloroethane d4 (Surr)	02	SW8260D	106 %		70-120		08/26/24 13:02	08/26/24 13:02	TLH
Surr: 4-Bromofluorobenzene (Surr)	02	SW8260D	105 %		75-120		08/26/24 13:02	08/26/24 13:02	TLH
Surr: Dibromofluoromethane (Surr)	02	SW8260D	104 %		70-130		08/26/24 13:02	08/26/24 13:02	TLH
Surr: Toluene-d8 (Surr)	02	SW8260D	103 %		70-130		08/26/24 13:02	08/26/24 13:02	TLH





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### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

Laboratory Order ID: 24H1424

#### Analytical Results

Sample I.D. 0823249604-7 Up Gradient Surface sample Laboratory Sample ID: 24H1424-03  
 Grab Date/Time: 08/23/2024 14:10  
 Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
1,1,1,2-Tetrachloroethane	03	SW8260D	<0.40 ug/L		0.40	1	08/26/24 13:25	08/26/24 13:25	TLH
1,1,1-Trichloroethane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,1,2,2-Tetrachloroethane	03	SW8260D	<0.40 ug/L		0.40	1	08/26/24 13:25	08/26/24 13:25	TLH
1,1,2-Trichloroethane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,1-Dichloroethane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,1-Dichloroethylene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,1-Dichloropropene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,2,3-Trichlorobenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,2,3-Trichloropropane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,2,4-Trichlorobenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,2,4-Trimethylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,2-Dibromo-3-chloropropane (DBCP)	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,2-Dibromoethane (EDB)	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,2-Dichlorobenzene	03	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:25	08/26/24 13:25	TLH
1,2-Dichloroethane	03	SW8260D	<1.00 ug/L	C	1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,2-Dichloropropane	03	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:25	08/26/24 13:25	TLH
1,3,5-Trimethylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,3-Dichlorobenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,3-Dichloropropane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
1,4-Dichlorobenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
2,2-Dichloropropane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
2-Butanone (MEK)	03	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:25	08/26/24 13:25	TLH
2-Chlorotoluene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
2-Hexanone (MBK)	03	SW8260D	<5.00 ug/L		5.00	1	08/26/24 13:25	08/26/24 13:25	TLH
4-Chlorotoluene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH



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### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

Laboratory Order ID: 24H1424

#### Analytical Results

Sample I.D. 0823249604-7 Up Gradient Surface sample Laboratory Sample ID: 24H1424-03  
 Grab Date/Time: 08/23/2024 14:10  
 Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
4-Isopropyltoluene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
4-Methyl-2-pentanone (MIBK)	03	SW8260D	<5.00 ug/L		5.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Acetone	03	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:25	08/26/24 13:25	TLH
Benzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Bromobenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Bromochloromethane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Bromodichloromethane	03	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:25	08/26/24 13:25	TLH
Bromoform	03	SW8260D	<1.00 ug/L	C	1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Bromomethane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Carbon disulfide	03	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:25	08/26/24 13:25	TLH
Carbon tetrachloride	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Chlorobenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Chloroethane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Chloroform	03	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:25	08/26/24 13:25	TLH
Chloromethane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
cis-1,2-Dichloroethylene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
cis-1,3-Dichloropropene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Dibromochloromethane	03	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:25	08/26/24 13:25	TLH
Dibromomethane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Dichlorodifluoromethane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Di-isopropyl ether (DIPE)	03	SW8260D	<5.00 ug/L		5.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Ethylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Hexachlorobutadiene	03	SW8260D	<0.80 ug/L		0.80	1	08/26/24 13:25	08/26/24 13:25	TLH
Iodomethane	03	SW8260D	<10.0 ug/L	C	10.0	1	08/26/24 13:25	08/26/24 13:25	TLH
Isopropylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
m+p-Xylenes	03	SW8260D	<2.00 ug/L		2.00	1	08/26/24 13:25	08/26/24 13:25	TLH



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## Certificate of Analysis

### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

Laboratory Order ID: 24H1424

#### Analytical Results

Sample I.D. 0823249604-7 Up Gradient Surface sample Laboratory Sample ID: 24H1424-03  
 Grab Date/Time: 08/23/2024 14:10  
 Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
Methylene chloride	03	SW8260D	<4.00 ug/L	C	4.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Methyl-t-butyl ether (MTBE)	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Naphthalene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
n-Butylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
n-Propylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
o-Xylene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
sec-Butylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Styrene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
tert-Butylbenzene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Tetrachloroethylene (PCE)	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Toluene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
trans-1,2-Dichloroethylene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
trans-1,3-Dichloropropene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Trichloroethylene	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Trichlorofluoromethane	03	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Vinyl acetate	03	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:25	08/26/24 13:25	TLH
Vinyl chloride	03	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:25	08/26/24 13:25	TLH
Xylenes, Total	03	SW8260D	<3.00 ug/L		3.00	1	08/26/24 13:25	08/26/24 13:25	TLH
Surr: 1,2 Dichloroethane d4 (Surr)	03	SW8260D	106 %		70-120		08/26/24 13:25	08/26/24 13:25	TLH
Surr: 4-Bromofluorobenzene (Surr)	03	SW8260D	105 %		75-120		08/26/24 13:25	08/26/24 13:25	TLH
Surr: Dibromofluoromethane (Surr)	03	SW8260D	103 %		70-130		08/26/24 13:25	08/26/24 13:25	TLH
Surr: Toluene-d8 (Surr)	03	SW8260D	104 %		70-130		08/26/24 13:25	08/26/24 13:25	TLH



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## Certificate of Analysis

### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

Laboratory Order ID: 24H1424

#### Analytical Results

Sample I.D. 0823249604-8 Down Gradient Surface Sample Laboratory Sample ID: 24H1424-04  
 Grab Date/Time: 08/23/2024 17:15  
 Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
1,1,1,2-Tetrachloroethane	04	SW8260D	<0.40 ug/L		0.40	1	08/26/24 13:49	08/26/24 13:49	TLH
1,1,1-Trichloroethane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,1,2,2-Tetrachloroethane	04	SW8260D	<0.40 ug/L		0.40	1	08/26/24 13:49	08/26/24 13:49	TLH
1,1,2-Trichloroethane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,1-Dichloroethane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,1-Dichloroethylene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,1-Dichloropropene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,2,3-Trichlorobenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,2,3-Trichloropropane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,2,4-Trichlorobenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,2,4-Trimethylbenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,2-Dibromo-3-chloropropane (DBCP)	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,2-Dibromoethane (EDB)	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,2-Dichlorobenzene	04	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:49	08/26/24 13:49	TLH
1,2-Dichloroethane	04	SW8260D	<1.00 ug/L	C	1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,2-Dichloropropane	04	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:49	08/26/24 13:49	TLH
1,3,5-Trimethylbenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,3-Dichlorobenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,3-Dichloropropane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
1,4-Dichlorobenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
2,2-Dichloropropane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
2-Butanone (MEK)	04	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:49	08/26/24 13:49	TLH
2-Chlorotoluene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
2-Hexanone (MBK)	04	SW8260D	<5.00 ug/L		5.00	1	08/26/24 13:49	08/26/24 13:49	TLH
4-Chlorotoluene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH



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## Certificate of Analysis

### Final Report

Client Name:	APEX Companies, LLC. - Richmond VA 203 Wylderose Court  Midlothian VA, 23113	Date Issued:	August 26, 2024 16:52
Submitted To:	██████████	Project Number:	24009604
Client Site I.D.:	Rapidan WTP Wilderness	Purchase Order:	

**Laboratory Order ID: 24H1424**

**Analytical Results**

Sample I.D. 0823249604-8 Down Gradient Surface Sample	Laboratory Sample ID: 24H1424-04
Grab Date/Time: 08/23/2024 17:15	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
4-Isopropyltoluene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
4-Methyl-2-pentanone (MIBK)	04	SW8260D	<5.00 ug/L		5.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Acetone	04	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:49	08/26/24 13:49	TLH
Benzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Bromobenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Bromochloromethane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Bromodichloromethane	04	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:49	08/26/24 13:49	TLH
Bromoform	04	SW8260D	<1.00 ug/L	C	1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Bromomethane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Carbon disulfide	04	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:49	08/26/24 13:49	TLH
Carbon tetrachloride	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Chlorobenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Chloroethane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Chloroform	04	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:49	08/26/24 13:49	TLH
Chloromethane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
cis-1,2-Dichloroethylene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
cis-1,3-Dichloropropene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Dibromochloromethane	04	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:49	08/26/24 13:49	TLH
Dibromomethane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Dichlorodifluoromethane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Di-isopropyl ether (DIPE)	04	SW8260D	<5.00 ug/L		5.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Ethylbenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Hexachlorobutadiene	04	SW8260D	<0.80 ug/L		0.80	1	08/26/24 13:49	08/26/24 13:49	TLH
Iodomethane	04	SW8260D	<10.0 ug/L	C	10.0	1	08/26/24 13:49	08/26/24 13:49	TLH
Isopropylbenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
m+p-Xylenes	04	SW8260D	<2.00 ug/L		2.00	1	08/26/24 13:49	08/26/24 13:49	TLH



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## Certificate of Analysis

### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

Laboratory Order ID: 24H1424

#### Analytical Results

Sample I.D. 0823249604-8 Down Gradient Surface Sample Laboratory Sample ID: 24H1424-04  
 Grab Date/Time: 08/23/2024 17:15  
 Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D F	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
Methylene chloride	04	SW8260D	<4.00 ug/L	C	4.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Methyl-t-butyl ether (MTBE)	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Naphthalene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
n-Butylbenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
n-Propylbenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
o-Xylene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
sec-Butylbenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Styrene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
tert-Butylbenzene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Tetrachloroethylene (PCE)	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Toluene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
trans-1,2-Dichloroethylene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
trans-1,3-Dichloropropene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Trichloroethylene	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Trichlorofluoromethane	04	SW8260D	<1.00 ug/L		1.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Vinyl acetate	04	SW8260D	<10.0 ug/L		10.0	1	08/26/24 13:49	08/26/24 13:49	TLH
Vinyl chloride	04	SW8260D	<0.50 ug/L		0.50	1	08/26/24 13:49	08/26/24 13:49	TLH
Xylenes, Total	04	SW8260D	<3.00 ug/L		3.00	1	08/26/24 13:49	08/26/24 13:49	TLH
Surr: 1,2 Dichloroethane d4 (Surr)	04	SW8260D	104 %		70-120		08/26/24 13:49	08/26/24 13:49	TLH
Surr: 4-Bromofluorobenzene (Surr)	04	SW8260D	106 %		75-120		08/26/24 13:49	08/26/24 13:49	TLH
Surr: Dibromofluoromethane (Surr)	04	SW8260D	104 %		70-130		08/26/24 13:49	08/26/24 13:49	TLH
Surr: Toluene-d8 (Surr)	04	SW8260D	103 %		70-130		08/26/24 13:49	08/26/24 13:49	TLH



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## Certificate of Analysis

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Submitted To:	██████████	Project Number:	24009604
Client Site I.D.:	Rapidan WTP Wilderness	Purchase Order:	

### Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
<b>Volatile Organic Compounds by GCMS</b>		<b>Preparation Method: SW5030B-MS</b>			
24H1424-01	5.00 mL / 5.00 mL	SW8260D	BHH1095	SHH0990	AG40309
24H1424-02	5.00 mL / 5.00 mL	SW8260D	BHH1095	SHH0990	AG40309
24H1424-03	5.00 mL / 5.00 mL	SW8260D	BHH1095	SHH0990	AG40309
24H1424-04	5.00 mL / 5.00 mL	SW8260D	BHH1095	SHH0990	AG40309

### QC Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
<b>Volatile Organic Compounds by GCMS</b>		<b>Preparation Method: SW5030B-MS</b>			
BHH1095-BLK1	5.00 mL / 5.00 mL	SW8260D	BHH1095	SHH0990	AG40309
BHH1095-BS1	5.00 mL / 5.00 mL	SW8260D	BHH1095	SHH0990	AG40309
BHH1095-MS1	5.00 mL / 5.00 mL	SW8260D	BHH1095	SHH0990	AG40309
BHH1095-MSD1	5.00 mL / 5.00 mL	SW8260D	BHH1095	SHH0990	AG40309



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Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

### 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
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#### Batch BHH1095 - SW5030B-MS

#### Blank (BHH1095-BLK1)

Prepared & Analyzed: 08/26/2024

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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 Submitted To: Midlothian VA, 23113  
 Client Site I.D.: Rapidan WTP Wilderness

### 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
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#### Batch BHH1095 - SW5030B-MS

#### Blank (BHH1095-BLK1)

Prepared & Analyzed: 08/26/2024

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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 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

### 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
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#### Batch BHH1095 - SW5030B-MS

##### Blank (BHH1095-BLK1)

Prepared & Analyzed: 08/26/2024

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							
<hr/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	49.0		ug/L	50.0		98.0	70-120			
Surr: 4-Bromofluorobenzene (Surr)	52.8		ug/L	50.0		106	75-120			
Surr: Dibromofluoromethane (Surr)	49.9		ug/L	50.0		99.8	70-130			
Surr: Toluene-d8 (Surr)	51.3		ug/L	50.0		103	70-130			

##### LCS (BHH1095-BS1)

Prepared & Analyzed: 08/26/2024

1,1,1,2-Tetrachloroethane	49.4 ug/L	0.4	ug/L	50.0 ug/L		98.8	80-130			
1,1,1-Trichloroethane	49.1 ug/L	1	ug/L	50.0 ug/L		98.2	65-130			
1,1,2,2-Tetrachloroethane	50.5 ug/L	0.4	ug/L	50.0 ug/L		101	65-130			
1,1,2-Trichloroethane	47.0 ug/L	1	ug/L	50.0 ug/L		94.0	75-125			
1,1-Dichloroethane	48.6 ug/L	1	ug/L	50.0 ug/L		97.2	70-135			
1,1-Dichloroethylene	47.0 ug/L	1	ug/L	50.0 ug/L		93.9	70-130			
1,1-Dichloropropene	49.3 ug/L	1	ug/L	50.0 ug/L		98.6	75-135			
1,2,3-Trichlorobenzene	44.4 ug/L	1	ug/L	50.0 ug/L		88.9	55-140			
1,2,3-Trichloropropane	47.5 ug/L	1	ug/L	50.0 ug/L		95.1	75-125			
1,2,4-Trichlorobenzene	46.2 ug/L	1	ug/L	50.0 ug/L		92.3	65-135			
1,2,4-Trimethylbenzene	46.3 ug/L	1	ug/L	50.0 ug/L		92.6	75-130			
1,2-Dibromo-3-chloropropane (DBCP)	42.1 ug/L	1	ug/L	50.0 ug/L		84.2	50-130			
1,2-Dibromoethane (EDB)	46.9 ug/L	1	ug/L	50.0 ug/L		93.7	80-120			
1,2-Dichlorobenzene	49.4 ug/L	0.5	ug/L	50.0 ug/L		98.9	70-120			
1,2-Dichloroethane	41.7 ug/L	1	ug/L	50.0 ug/L		83.4	70-130			
1,2-Dichloropropane	49.1 ug/L	0.5	ug/L	50.0 ug/L		98.2	75-125			
1,3,5-Trimethylbenzene	47.1 ug/L	1	ug/L	50.0 ug/L		94.3	75-125			
1,3-Dichlorobenzene	50.0 ug/L	1	ug/L	50.0 ug/L		100	75-125			
1,3-Dichloropropane	44.5 ug/L	1	ug/L	50.0 ug/L		89.0	75-125			



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 203 Wylderose Court Project Number: 24009604  
 Purchase Order:  
 Midlothian VA, 23113  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

### 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
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#### Batch BHH1095 - SW5030B-MS

#### LCS (BHH1095-BS1)

Prepared & Analyzed: 08/26/2024

1,4-Dichlorobenzene	49.0 ug/L	1	ug/L	50.0	ug/L	98.0	75-125			
2,2-Dichloropropane	48.4 ug/L	1	ug/L	50.0	ug/L	96.7	70-135			
2-Butanone (MEK)	48.3 ug/L	10	ug/L	50.0	ug/L	96.7	30-150			
2-Chlorotoluene	45.6 ug/L	1	ug/L	50.0	ug/L	91.2	75-125			
2-Hexanone (MBK)	43.9 ug/L	5	ug/L	50.0	ug/L	87.9	55-130			
4-Chlorotoluene	47.8 ug/L	1	ug/L	50.0	ug/L	95.7	75-130			
4-Isopropyltoluene	50.3 ug/L	1	ug/L	50.0	ug/L	101	75-130			
4-Methyl-2-pentanone (MIBK)	46.6 ug/L	5	ug/L	50.0	ug/L	93.3	60-135			
Acetone	44.5 ug/L	10	ug/L	50.0	ug/L	89.0	40-140			
Benzene	50.4 ug/L	1	ug/L	50.0	ug/L	101	80-120			
Bromobenzene	51.6 ug/L	1	ug/L	50.0	ug/L	103	75-125			
Bromochloromethane	46.2 ug/L	1	ug/L	50.0	ug/L	92.4	65-130			
Bromodichloromethane	45.9 ug/L	0.5	ug/L	50.0	ug/L	91.9	75-120			
Bromoform	54.2 ug/L	1	ug/L	50.0	ug/L	108	70-130			
Bromomethane	49.3 ug/L	1	ug/L	50.0	ug/L	98.6	30-145			
Carbon disulfide	57.7 ug/L	10	ug/L	50.0	ug/L	115	35 160			
Carbon tetrachloride	53.8 ug/L	1	ug/L	50.0	ug/L	108	65-140			
Chlorobenzene	51.2 ug/L	1	ug/L	50.0	ug/L	102	80 120			
Chloroethane	38.5 ug/L	1	ug/L	50.0	ug/L	77.1	60-135			
Chloroform	44.3 ug/L	0.5	ug/L	50.0	ug/L	88.5	65 135			
Chloromethane	53.9 ug/L	1	ug/L	50.0	ug/L	108	40-125			
cis-1,2-Dichloroethylene	46.1 ug/L	1	ug/L	50.0	ug/L	92.2	70 125			
cis-1,3-Dichloropropene	46.7 ug/L	1	ug/L	50.0	ug/L	93.3	70-130			
Dibromochloromethane	48.0 ug/L	0.5	ug/L	50.0	ug/L	96.0	60 135			
Dibromomethane	46.1 ug/L	1	ug/L	50.0	ug/L	92.3	75-125			
Dichlorodifluoromethane	53.6 ug/L	1	ug/L	50.0	ug/L	107	30 155			
Ethylbenzene	49.8 ug/L	1	ug/L	50.0	ug/L	99.5	75-125			
Hexachlorobutadiene	50.4 ug/L	0.8	ug/L	50.0	ug/L	101	50 140			
Isopropylbenzene	45.9 ug/L	1	ug/L	50.0	ug/L	91.9	75-125			
m+p Xylenes	101 ug/L	2	ug/L	100	ug/L	101	75 130			
Methylene chloride	45.9 ug/L	4	ug/L	50.0	ug/L	91.8	55-140			



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## Certificate of Analysis

### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Purchase Order:  
 Midlothian VA, 23113  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

### 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
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#### Batch BHH1095 - SW5030B-MS

##### LCS (BHH1095-BS1)

Prepared & Analyzed: 08/26/2024

Methyl-t-butyl ether (MTBE)	41.3 ug/L	1	ug/L	50.0	ug/L	82.6	65-125			
Naphthalene	40.6 ug/L	1	ug/L	50.0	ug/L	81.3	55-140			
n-Butylbenzene	47.1 ug/L	1	ug/L	50.0	ug/L	94.3	70-135			
n-Propylbenzene	47.2 ug/L	1	ug/L	50.0	ug/L	94.4	70-130			
o-Xylene	49.9 ug/L	1	ug/L	50.0	ug/L	99.7	80-120			
sec-Butylbenzene	49.1 ug/L	1	ug/L	50.0	ug/L	98.2	70-125			
Styrene	50.2 ug/L	1	ug/L	50.0	ug/L	100	65-135			
tert-Butylbenzene	48.7 ug/L	1	ug/L	50.0	ug/L	97.3	70-130			
Tetrachloroethylene (PCE)	54.9 ug/L	1	ug/L	50.0	ug/L	110	45-150			
Toluene	49.2 ug/L	1	ug/L	50.0	ug/L	98.4	75-120			
trans-1,2-Dichloroethylene	47.1 ug/L	1	ug/L	50.0	ug/L	94.1	60-140			
trans-1,3-Dichloropropene	49.3 ug/L	1	ug/L	50.0	ug/L	98.6	55-140			
Trichloroethylene	52.8 ug/L	1	ug/L	50.0	ug/L	106	70-125			
Trichlorofluoromethane	49.6 ug/L	1	ug/L	50.0	ug/L	99.2	60-145			
Vinyl chloride	51.6 ug/L	0.5	ug/L	50.0	ug/L	103	50-145			
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Surr: 1,2-Dichloroethane-d4 (Surr)	44.6		ug/L	50.0	ug/L	89.2	70-120			
Surr: 4-Bromofluorobenzene (Surr)	50.9		ug/L	50.0	ug/L	102	75-120			
Surr: Dibromofluoromethane (Surr)	46.9		ug/L	50.0	ug/L	93.7	70-130			
Surr: Toluene-d8 (Surr)	48.6		ug/L	50.0	ug/L	97.1	70-130			

##### Matrix Spike (BHH1095-MS1)

Source: 24H1424-02

Prepared & Analyzed: 08/26/2024

1,1,1,2-Tetrachloroethane	50.3 ug/L	0.4	ug/L	50.0	<0.4 ug/L	101	80-130			
1,1,1-Trichloroethane	47.2 ug/L	1	ug/L	50.0	<1 ug/L	94.5	65-130			
1,1,2,2-Tetrachloroethane	52.8 ug/L	0.4	ug/L	50.0	<0.4 ug/L	106	65-130			
1,1,2-Trichloroethane	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	75-125			
1,1-Dichloroethane	46.6 ug/L	1	ug/L	50.0	<1 ug/L	93.1	70-135			
1,1-Dichloroethylene	46.6 ug/L	1	ug/L	50.0	<1 ug/L	93.2	50-145			
1,1-Dichloropropene	47.6 ug/L	1	ug/L	50.0	<1 ug/L	95.3	75-135			
1,2,3-Trichlorobenzene	46.2 ug/L	1	ug/L	50.0	<1 ug/L	92.4	55-140			
1,2,3-Trichloropropane	48.9 ug/L	1	ug/L	50.0	<1 ug/L	97.7	75-125			
1,2,4-Trichlorobenzene	47.4 ug/L	1	ug/L	50.0	<1 ug/L	94.8	65-135			
1,2,4-Trimethylbenzene	46.1 ug/L	1	ug/L	50.0	<1 ug/L	92.1	75-130			



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## Certificate of Analysis

### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Midlothian VA, 23113 Purchase Order:  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

### 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
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#### Batch BHH1095 - SW5030B-MS

##### Matrix Spike (BHH1095-MS1)

Source: 24H1424-02

Prepared & Analyzed: 08/26/2024

1,2-Dibromo-3-chloropropane (DBCP)	41.6 ug/L	1	ug/L	50.0	<1 ug/L	83.2	50-130			
1,2-Dibromoethane (EDB)	48.7 ug/L	1	ug/L	50.0	<1 ug/L	97.4	80-120			
1,2-Dichlorobenzene	50.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	102	70-120			
1,2-Dichloroethane	42.1 ug/L	1	ug/L	50.0	<1 ug/L	84.2	70-130			
1,2-Dichloropropane	50.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	102	75-125			
1,3,5-Trimethylbenzene	45.9 ug/L	1	ug/L	50.0	<1 ug/L	91.9	75-124			
1,3-Dichlorobenzene	50.0 ug/L	1	ug/L	50.0	<1 ug/L	100	75-125			
1,3-Dichloropropane	48.0 ug/L	1	ug/L	50.0	<1 ug/L	95.9	75-125			
1,4-Dichlorobenzene	49.2 ug/L	1	ug/L	50.0	<1 ug/L	98.4	75-125			
2,2-Dichloropropane	46.6 ug/L	1	ug/L	50.0	<1 ug/L	93.2	70-135			
2-Butanone (MEK)	46.5 ug/L	10	ug/L	50.0	<10 ug/L	93.0	30-150			
2-Chlorotoluene	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.8	75-125			
2-Hexanone (MBK)	43.4 ug/L	5	ug/L	50.0	<5 ug/L	86.7	55-130			
4-Chlorotoluene	46.1 ug/L	1	ug/L	50.0	<1 ug/L	92.3	75-130			
4-Isopropyltoluene	48.6 ug/L	1	ug/L	50.0	<1 ug/L	97.2	75-130			
4 Methyl 2 pentanone (MIBK)	47.8 ug/L	5	ug/L	50.0	5 ug/L	95.6	60 135			
Acetone	43.3 ug/L	10	ug/L	50.0	<10 ug/L	86.7	40-140			
Benzene	50.0 ug/L	1	ug/L	50.0	1 ug/L	99.9	80 120			
Bromobenzene	52.6 ug/L	1	ug/L	50.0	<1 ug/L	105	75-125			
Bromochloromethane	47.8 ug/L	1	ug/L	50.0	1 ug/L	95.5	65 130			
Bromodichloromethane	47.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	95.6	75-136			
Bromoform	57.3 ug/L	1	ug/L	50.0	1 ug/L	115	70 130			
Bromomethane	45.9 ug/L	1	ug/L	50.0	<1 ug/L	91.8	30-145			
Carbon disulfide	52.7 ug/L	10	ug/L	50.0	10 ug/L	105	35 160			
Carbon tetrachloride	54.0 ug/L	1	ug/L	50.0	<1 ug/L	108	65-140			
Chlorobenzene	50.6 ug/L	1	ug/L	50.0	1 ug/L	101	80 120			
Chloroethane	35.5 ug/L	1	ug/L	50.0	<1 ug/L	71.0	60-135			
Chloroform	43.6 ug/L	0.5	ug/L	50.0	0.5 ug/L	87.3	65 135			
Chloromethane	48.6 ug/L	1	ug/L	50.0	<1 ug/L	97.1	40-125			
cis 1,2 Dichloroethylene	46.1 ug/L	1	ug/L	50.0	1 ug/L	92.2	70 125			
cis-1,3-Dichloropropene	48.7 ug/L	1	ug/L	50.0	<1 ug/L	97.4	47-136			



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## Certificate of Analysis

### Final Report

Client Name:	APEX Companies, LLC. - Richmond VA 203 Wylderose Court  Midlothian VA, 23113	Date Issued:	August 26, 2024 16:52
Submitted To:	██████████	Project Number:	24009604
Client Site I.D.:	Rapidan WTP Wilderness	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
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#### Batch BHH1095 - SW5030B-MS

##### Matrix Spike (BHH1095-MS1)

Source: 24H1424-02

Prepared & Analyzed: 08/26/2024

Dibromochloromethane	51.9 ug/L	0.5	ug/L	50.0	<0.5 ug/L	104	60-135			
Dibromomethane	48.3 ug/L	1	ug/L	50.0	<1 ug/L	96.6	75-125			
Dichlorodifluoromethane	49.7 ug/L	1	ug/L	50.0	<1 ug/L	99.5	30-155			
Ethylbenzene	48.9 ug/L	1	ug/L	50.0	<1 ug/L	97.8	75-125			
Hexachlorobutadiene	49.0 ug/L	0.8	ug/L	50.0	<0.8 ug/L	98.0	50-140			
Isopropylbenzene	45.3 ug/L	1	ug/L	50.0	<1 ug/L	90.6	75-125			
m+p-Xylenes	99.4 ug/L	2	ug/L	100	<2 ug/L	99.4	75-130			
Methylene chloride	44.0 ug/L	4	ug/L	50.0	<4 ug/L	88.0	55-140			
Methyl-t-butyl ether (MTBE)	42.7 ug/L	1	ug/L	50.0	<1 ug/L	85.4	65-125			
Naphthalene	41.7 ug/L	1	ug/L	50.0	<1 ug/L	83.4	55-140			
n-Butylbenzene	45.6 ug/L	1	ug/L	50.0	<1 ug/L	91.2	70-135			
n-Propylbenzene	46.7 ug/L	1	ug/L	50.0	<1 ug/L	93.5	70-130			
o-Xylene	49.8 ug/L	1	ug/L	50.0	<1 ug/L	99.7	80-120			
sec-Butylbenzene	47.5 ug/L	1	ug/L	50.0	<1 ug/L	95.0	70-125			
Styrene	49.5 ug/L	1	ug/L	50.0	<1 ug/L	99.0	65-135			
tert Butylbenzene	47.4 ug/L	1	ug/L	50.0	1 ug/L	94.9	70-130			
Tetrachloroethylene (PCE)	51.7 ug/L	1	ug/L	50.0	<1 ug/L	103	51-231			
Toluene	49.4 ug/L	1	ug/L	50.0	1 ug/L	98.8	75-120			
trans-1,2-Dichloroethylene	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.7	60-140			
trans 1,3 Dichloropropene	52.0 ug/L	1	ug/L	50.0	1 ug/L	104	55-140			
Trichloroethylene	52.5 ug/L	1	ug/L	50.0	<1 ug/L	105	70-125			
Trichlorofluoromethane	47.1 ug/L	1	ug/L	50.0	1 ug/L	94.2	60-145			
Vinyl chloride	47.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	95.6	50-145			
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Surr: 1,2 Dichloroethane d4 (Surr)	44.3		ug/L	50.0	ug/L	88.5	70-120			
Surr: 4-Bromofluorobenzene (Surr)	50.1		ug/L	50.0	ug/L	100	75-120			
Surr: Dibromofluoromethane (Surr)	45.2		ug/L	50.0	ug/L	90.4	70-130			
Surr: Toluene-d8 (Surr)	48.3		ug/L	50.0	ug/L	96.6	70-130			



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## Certificate of Analysis

### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Purchase Order:  
 Midlothian VA, 23113  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

### 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
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#### Batch BHH1095 - SW5030B-MS

#### Matrix Spike Dup (BHH1095-MSD1)

Source: 24H1424-02

Prepared & Analyzed: 08/26/2024

1,1,1,2-Tetrachloroethane	52.0 ug/L	0.4	ug/L	50.0	<0.4 ug/L	104	80-130	3.34	30	
1,1,1-Trichloroethane	48.5 ug/L	1	ug/L	50.0	<1 ug/L	97.0	65-130	2.63	30	
1,1,2,2-Tetrachloroethane	54.9 ug/L	0.4	ug/L	50.0	<0.4 ug/L	110	65-130	3.92	30	
1,1,2-Trichloroethane	52.6 ug/L	1	ug/L	50.0	<1 ug/L	105	75-125	2.99	30	
1,1-Dichloroethane	46.4 ug/L	1	ug/L	50.0	<1 ug/L	92.7	70-135	0.430	30	
1,1-Dichloroethylene	45.6 ug/L	1	ug/L	50.0	<1 ug/L	91.2	50-145	2.15	30	
1,1-Dichloropropene	48.2 ug/L	1	ug/L	50.0	<1 ug/L	96.4	75-135	1.19	30	
1,2,3-Trichlorobenzene	47.0 ug/L	1	ug/L	50.0	<1 ug/L	94.0	55-140	1.70	30	
1,2,3-Trichloropropane	51.4 ug/L	1	ug/L	50.0	<1 ug/L	103	75-125	5.07	30	
1,2,4-Trichlorobenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.6	65-135	0.841	30	
1,2,4-Trimethylbenzene	45.9 ug/L	1	ug/L	50.0	<1 ug/L	91.7	75-130	0.435	30	
1,2-Dibromo-3-chloropropane (DBCP)	43.8 ug/L	1	ug/L	50.0	<1 ug/L	87.6	50-130	5.18	30	
1,2-Dibromoethane (EDB)	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	80-120	4.52	30	
1,2-Dichlorobenzene	51.0 ug/L	0.5	ug/L	50.0	<0.5 ug/L	102	70-120	0.530	30	
1,2-Dichloroethane	43.8 ug/L	1	ug/L	50.0	<1 ug/L	87.7	70-130	4.07	30	
1,2-Dichloropropane	50.3 ug/L	0.5	ug/L	50.0	<0.5 ug/L	101	75-125	0.890	30	
1,3,5-Trimethylbenzene	45.6 ug/L	1	ug/L	50.0	<1 ug/L	91.1	75-124	0.831	30	
1,3-Dichlorobenzene	49.8 ug/L	1	ug/L	50.0	<1 ug/L	99.6	75-125	0.481	30	
1,3-Dichloropropane	48.5 ug/L	1	ug/L	50.0	<1 ug/L	96.9	75-125	1.08	30	
1,4-Dichlorobenzene	49.5 ug/L	1	ug/L	50.0	<1 ug/L	99.0	75-125	0.588	30	
2,2-Dichloropropane	46.7 ug/L	1	ug/L	50.0	<1 ug/L	93.4	70-135	0.172	30	
2-Butanone (MEK)	49.0 ug/L	10	ug/L	50.0	<10 ug/L	98.0	30-150	5.32	30	
2-Chlorotoluene	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.8	75-125	0.0661	30	
2-Hexanone (MBK)	48.1 ug/L	5	ug/L	50.0	<5 ug/L	96.2	55-130	10.4	30	
4-Chlorotoluene	46.5 ug/L	1	ug/L	50.0	<1 ug/L	92.9	75-130	0.734	30	
4-Isopropyltoluene	48.4 ug/L	1	ug/L	50.0	<1 ug/L	96.7	75-130	0.516	30	
4-Methyl-2-pentanone (MIBK)	52.4 ug/L	5	ug/L	50.0	<5 ug/L	105	60-135	9.07	30	
Acetone	45.3 ug/L	10	ug/L	50.0	<10 ug/L	90.6	40-140	4.42	30	
Benzene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	80-120	0.380	30	
Bromobenzene	53.4 ug/L	1	ug/L	50.0	<1 ug/L	107	75-125	1.60	30	
Bromochloromethane	49.2 ug/L	1	ug/L	50.0	<1 ug/L	98.5	65-130	3.07	30	



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## Certificate of Analysis

### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Purchase Order:  
 Midlothian VA, 23113  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

### 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
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#### Batch BHH1095 - SW5030B-MS

#### Matrix Spike Dup (BHH1095-MSD1)

Source: 24H1424-02

Prepared & Analyzed: 08/26/2024

Bromodichloromethane	48.3 ug/L	0.5	ug/L	50.0	<0.5 ug/L	96.7	75-136	1.14	30	
Bromoform	61.2 ug/L	1	ug/L	50.0	<1 ug/L	122	70-130	6.65	30	
Bromomethane	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.8	30-145	1.16	30	
Carbon disulfide	54.3 ug/L	10	ug/L	50.0	<10 ug/L	109	35-160	3.01	30	
Carbon tetrachloride	53.5 ug/L	1	ug/L	50.0	<1 ug/L	107	65-140	0.986	30	
Chlorobenzene	50.9 ug/L	1	ug/L	50.0	<1 ug/L	102	80-120	0.611	30	
Chloroethane	35.4 ug/L	1	ug/L	50.0	<1 ug/L	70.9	60-135	0.197	30	
Chloroform	44.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	88.9	65-135	1.79	30	
Chloromethane	47.9 ug/L	1	ug/L	50.0	<1 ug/L	95.8	40-125	1.37	30	
cis-1,2-Dichloroethylene	46.5 ug/L	1	ug/L	50.0	<1 ug/L	93.0	70-125	0.864	30	
cis-1,3-Dichloropropene	48.4 ug/L	1	ug/L	50.0	<1 ug/L	96.7	47-136	0.742	30	
Dibromochloromethane	52.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	105	60-135	1.05	30	
Dibromomethane	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	75-125	4.67	30	
Dichlorodifluoromethane	59.5 ug/L	1	ug/L	50.0	<1 ug/L	119	30-155	17.9	30	
Ethylbenzene	48.6 ug/L	1	ug/L	50.0	<1 ug/L	97.1	75-125	0.677	30	
Hexachlorobutadiene	48.7 ug/L	0.8	ug/L	50.0	<0.8 ug/L	97.4	50-140	0.655	30	
Isopropylbenzene	45.1 ug/L	1	ug/L	50.0	<1 ug/L	90.1	75-125	0.487	30	
m+p-Xylenes	98.6 ug/L	2	ug/L	100	<2 ug/L	98.6	75-130	0.818	30	
Methylene chloride	44.1 ug/L	4	ug/L	50.0	<4 ug/L	88.3	55-140	0.250	30	
Methyl-t-butyl ether (MTBE)	44.4 ug/L	1	ug/L	50.0	<1 ug/L	88.8	65-125	3.86	30	
Naphthalene	43.8 ug/L	1	ug/L	50.0	<1 ug/L	87.6	55-140	4.89	30	
n-Butylbenzene	44.6 ug/L	1	ug/L	50.0	<1 ug/L	89.3	70-135	2.15	30	
n-Propylbenzene	46.0 ug/L	1	ug/L	50.0	<1 ug/L	92.0	70-130	1.62	30	
o-Xylene	50.1 ug/L	1	ug/L	50.0	<1 ug/L	100	80-120	0.520	30	
sec-Butylbenzene	47.1 ug/L	1	ug/L	50.0	<1 ug/L	94.3	70-125	0.803	30	
Styrene	50.1 ug/L	1	ug/L	50.0	<1 ug/L	100	65-135	1.20	30	
tert-Butylbenzene	47.2 ug/L	1	ug/L	50.0	<1 ug/L	94.4	70-130	0.486	30	
Tetrachloroethylene (PCE)	51.7 ug/L	1	ug/L	50.0	<1 ug/L	103	51-231	0.116	30	
Toluene	49.3 ug/L	1	ug/L	50.0	<1 ug/L	98.6	75-120	0.243	30	
trans-1,2-Dichloroethylene	45.6 ug/L	1	ug/L	50.0	<1 ug/L	91.2	60-140	0.462	30	
trans-1,3-Dichloropropene	52.8 ug/L	1	ug/L	50.0	<1 ug/L	106	55-140	1.47	30	





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## Certificate of Analysis

### Final Report

Client Name: APEX Companies, LLC. - Richmond VA Date Issued: August 26, 2024 16:52  
 203 Wylderose Court Project Number: 24009604  
 Purchase Order:  
 Midlothian VA, 23113  
 Submitted To: XXXXXXXXXX  
 Client Site I.D.: Rapidan WTP Wilderness

### 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
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#### Batch BHH1095 - SW5030B-MS

##### Matrix Spike Dup (BHH1095-MSD1)

Source: 24H1424-02

Prepared & Analyzed: 08/26/2024

Trichloroethylene	52.8 ug/L	1	ug/L	50.0	<1 ug/L	106	70-125	0.646	30	
Trichlorofluoromethane	46.6 ug/L	1	ug/L	50.0	<1 ug/L	93.3	60-145	0.982	30	
Vinyl chloride	48.7 ug/L	0.5	ug/L	50.0	<0.5 ug/L	97.4	50-145	1.86	30	
-----										
Surr: 1,2-Dichloroethane-d4 (Surr)	44.8		ug/L	50.0	ug/L	89.6	70-120			
Surr: 4-Bromofluorobenzene (Surr)	50.1		ug/L	50.0	ug/L	100	75-120			
Surr: Dibromofluoromethane (Surr)	46.6		ug/L	50.0	ug/L	93.2	70-130			
Surr: Toluene-d8 (Surr)	48.1		ug/L	50.0	ug/L	96.2	70-130			

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### Certified Analyses included in this Report

Analyte	Certifications
<b>SW8260D in Non-Potable Water</b>	
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
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

## Certificate of Analysis

### Final Report

Client Name:	APEX Companies, LLC. - Richmond VA 203 Wylderose Court  Midlothian VA, 23113	Date Issued:	August 26, 2024 16:52
		Project Number:	24009604
		Purchase Order:	
Submitted To:	██████████		
Client Site I.D.:	Rapidan WTP Wilderness		

### Certified Analyses included in this Report

Analyte	Certifications
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
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



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### Certificate of Analysis

*Final Report*

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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 #T104704	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

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203 Wylderose Court      Project Number: 24009604  
Midlothian VA, 23113      Purchase Order:  
Submitted To: [REDACTED]  
Client Site I.D.: Rapidan WTP Wilderness

### Summary of Data Qualifiers

C Continuing calibration verification response for this analyte is outside specifications.  
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.



Apex Companies, LLC  
 203 Wylderoose Court  
 Midlothian, VA 23113  
 (804) 897-2718

# CHAIN OF CUSTODY RECORD

JOB NO.		JOB NAME				PROJECT MANAGER				PARAMETERS							TURN - AROUND TIME		
24009604		Rapidan WTP Wilderness				[Redacted]				[Diagonal Lines]							24 Hr		
SAMPLER(S): (Signature(s))						(Printed)													
SAMPLE ID	DATE	TIME	COMP.	GRAB	MATRIX	PRES.	STATION / LOCATION	NO. OF CONTAINERS	TPH - 1720 8015	VOCs 82260	VOCs 82270							REMARKS	
823249604-5	8/10/24	955	X	X	W	HCL 40c	TAP Blank	2	X										
823249604-6	8/23/24	1400		X	W	HCL 40c	WET WELL	5	X	X	X								
823249604-7	8/23/24	1410		X	W	HCL 40c	UP Gradient Surface Sample	5	X	X	X								
823249604-8	8/23/24	1715		X	W	HCL 40c	DOWN Gradient Surface Sample	5	X	X	X								
TOTALS								17	3	4	3								OT: 3.2 393 CF: 0.0 16 F7: 3.2 no seal
Relinquished by: (Signature)			Date/Time			Received by: (Signature)			Relinquished by: (Signature)			Date/Time			Received by: (Signature)				
[Redacted]			8/26/24			② [Redacted]			③ [Redacted]						④ [Redacted]				
(Printed)			810			(Printed) 8/26/24 0810			(Printed)						(Printed)				
Relinquished by: (Signature)			Date/Time			Received by: (Signature)			Remarks										
⑤ [Redacted]						⑥ [Redacted]			* STATE LEAD * * VOCs SAME DAY *										
(Printed)						(Printed)													

**APEX-Richmond 24H1424**  
**Rapidan WTP Wilderness**  
**Recd: 08/26/2024 Due: 08/26/2024**

v130325002

Distribution: WHITE => original (accompanies samples; returned with results) : YELLOW => sampler's copy

1 of 1 pages



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### Certificate of Analysis

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 Submitted To: [REDACTED]  
 Client Site I.D.: Rapidan WTP Wilderness

### Sample Conditions Checklist

Samples Received at:	3.20°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?	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

Remaining analysis found on work order 24H1425. HEG 8/26/24 0835

Per [REDACTED] via phone  
 Analyze for SVOC 8270 and VOC 8260  
 JNH 8/26/24 0920