



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1701626

Report Created for: Schutze & Associates, Inc.
44358 South Grimmer Blvd
Fremont, CA 94538

Project Contact: Kevin Loeb
Project P.O.:
Project Name: Tung/SCS539

Project Received: 01/17/2017

Analytical Report reviewed & approved for release on 01/24/2017 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Schutze & Associates, Inc.

Project: Tung/SCS539

WorkOrder: 1701626

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

a10	reporting limit changed due to variable volume of air that pumped through each filter / sorbent tube.
j1	see attached narrative



Glossary of Terms & Qualifier Definitions

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Quality Control Qualifiers

F2 LCS/LCSD recovery and/or RPD is out of acceptance criteria.



Case Narrative

Client: Schutze & Associates, Inc.
Project: Tung/SCS539

Work Order: 1701626
January 25, 2017

1/23/17 TO-17 GC-37

Sample: SV-2-5 (1701626-003C)

The total volume collected onto the sorbent tube was calculated using observed initial and final pressures on a 1 L summa can. The final pressure of the summa can associated with the sample was measured in the lab at McC Campbell Analytical on 1/18/17.

The Nitrogen concentration cannot be reported due to a miscommunication in the lab. The sample canisters were inadvertently pressurized with N₂ for analysis by GC-FID.

TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Active Soil Gas Advisory of July 2015.



Analytical Report

Client: Schutze & Associates, Inc.
Date Received: 1/17/17 15:30
Date Prepared: 1/20/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: ASTM D 1946-90
Analytical Method: ASTM D 1946-90
Unit: %

Atmospheric Gases

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-5	1701626-001A	SoilGas	01/13/2017 12:00	GC26	132974

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.11	24.13	AK

Analytes	Result	RL	DF	Date Analyzed
Oxygen	17	0.40	1	01/20/2017 16:37

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-5 TO-17 Summa	1701626-001B	SoilGas	01/13/2017 12:00	GC26	132974

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.40	24.77	AK

Analytes	Result	RL	DF	Date Analyzed
Oxygen	16	0.40	1	01/20/2017 17:40

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-3	1701626-002A	SoilGas	01/13/2017 12:00	GC26	132974

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.73	25.40	AK

Analytes	Result	RL	DF	Date Analyzed
Oxygen	17	0.40	1	01/20/2017 16:58

(Cont.)

 Angela Rydelius, Lab Manager



Analytical Report

Client: Schutze & Associates, Inc.
Date Received: 1/17/17 15:30
Date Prepared: 1/20/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: ASTM D 1946-90
Analytical Method: ASTM D 1946-90
Unit: %

Atmospheric Gases

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-3 TO-17 Summa	1701626-002B	SoilGas	01/13/2017 12:00	GC26	132974

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.07	24.12	AK

Analytes	Result	RL	DF	Date Analyzed
Oxygen	16	0.40	1	01/20/2017 18:01

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-2-5	1701626-003A	SoilGas	01/13/2017 12:00	GC26	132974

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.13	24.22	AK

Analytes	Result	RL	DF	Date Analyzed
Oxygen	16	0.40	1	01/20/2017 17:19

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-2-5 TO-17 Summa	1701626-003B	SoilGas	01/13/2017 12:00	GC26	132974

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
11.98	23.87	AK

Analytes	Result	RL	DF	Date Analyzed
Oxygen	17	0.40	1	01/20/2017 18:22

 Angela Rydelius, Lab Manager



Analytical Report

Client: Schutze & Associates, Inc.
Date Received: 1/17/17 15:30
Date Prepared: 1/19/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: ASTM D 1946-90
Analytical Method: ASTM D 1946-90
Unit: %

Helium

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-5	1701626-001A	SoilGas	01/13/2017 12:00	GC26	132841

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.11	24.13	AK

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.050	1	01/19/2017 11:17

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-3	1701626-002A	SoilGas	01/13/2017 12:00	GC26	132841

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.73	25.40	AK

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.050	1	01/19/2017 11:29

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-2-5	1701626-003A	SoilGas	01/13/2017 12:00	GC26	132841

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.13	24.22	AK

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.050	1	01/19/2017 11:42

 Angela Rydelius, Lab Manager



Analytical Report

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Date Received: 1/17/17 15:30
Date Prepared: 1/20/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: ASTM D 1946-90
Analytical Method: ASTM D 1946-90
Unit: %

Light Gases

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-5	1701626-001A	SoilGas	01/13/2017 12:00	GC26	132973

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.11	24.13	AK

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	0.067	0.0040	1	01/20/2017 10:50
Methane	0.00068	0.00020	1	01/20/2017 10:50

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-5 TO-17 Summa	1701626-001B	SoilGas	01/13/2017 12:00	GC26	132973

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.40	24.77	AK

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	0.066	0.0040	1	01/20/2017 14:01
Methane	0.00069	0.00020	1	01/20/2017 14:01

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-3	1701626-002A	SoilGas	01/13/2017 12:00	GC26	132973

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.73	25.40	AK

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	0.015	0.0040	1	01/20/2017 11:11
Methane	0.00028	0.00020	1	01/20/2017 11:11

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WorkOrder: 1701626
Extraction Method: ASTM D 1946-90
Analytical Method: ASTM D 1946-90
Unit: %

Light Gases

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-3 TO-17 Summa	1701626-002B	SoilGas	01/13/2017 12:00	GC26	132973

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.07	24.12	AK

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	0.0094	0.0040	1	01/20/2017 14:22
Methane	0.00026	0.00020	1	01/20/2017 14:22

SV-2-5	1701626-003A	SoilGas	01/13/2017 12:00	GC26	132973
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Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.13	24.22	AK

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	0.033	0.0040	1	01/20/2017 11:33
Methane	0.00069	0.00020	1	01/20/2017 11:33

SV-2-5 TO-17 Summa	1701626-003B	SoilGas	01/13/2017 12:00	GC26	132973
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Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
11.98	23.87	AK

Analytes	Result	RL	DF	Date Analyzed
Carbon Dioxide	0.037	0.0040	1	01/20/2017 14:44
Methane	0.00022	0.00020	1	01/20/2017 14:44

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Date Received: 1/17/17 15:30
Date Prepared: 1/23/17-1/24/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-5	1701626-001A	SoilGas	01/13/2017 12:00	GC29	133045

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.11	24.13	AK

Analytes	Result	RL	DF	Date Analyzed
Acetone	180	60	1	01/24/2017 00:11
Acrolein	ND	5.8	1	01/24/2017 00:11
Acrylonitrile	ND	1.1	1	01/24/2017 00:11
tert-Amyl methyl ether (TAME)	ND	2.1	1	01/24/2017 00:11
Benzene	73	1.6	1	01/24/2017 00:11
Benzyl chloride	ND	2.6	1	01/24/2017 00:11
Bromodichloromethane	ND	3.5	1	01/24/2017 00:11
Bromoform	ND	5.2	1	01/24/2017 00:11
Bromomethane	ND	2.0	1	01/24/2017 00:11
1,3-Butadiene	ND	1.1	1	01/24/2017 00:11
2-Butanone (MEK)	120	75	1	01/24/2017 00:11
t-Butyl alcohol (TBA)	ND	31	1	01/24/2017 00:11
Carbon Disulfide	15	1.6	1	01/24/2017 00:11
Carbon Tetrachloride	ND	3.2	1	01/24/2017 00:11
Chlorobenzene	ND	2.4	1	01/24/2017 00:11
Chloroethane	ND	1.3	1	01/24/2017 00:11
Chloroform	ND	2.4	1	01/24/2017 00:11
Chloromethane	ND	1.0	1	01/24/2017 00:11
Cyclohexane	30	18	1	01/24/2017 00:11
Dibromochloromethane	ND	4.4	1	01/24/2017 00:11
1,2-Dibromo-3-chloropropane	ND	0.12	1	01/24/2017 00:11
1,2-Dibromoethane (EDB)	ND	3.9	1	01/24/2017 00:11
1,2-Dichlorobenzene	ND	3.0	1	01/24/2017 00:11
1,3-Dichlorobenzene	ND	3.0	1	01/24/2017 00:11
1,4-Dichlorobenzene	ND	3.0	1	01/24/2017 00:11
Dichlorodifluoromethane	2.7	2.5	1	01/24/2017 00:11
1,1-Dichloroethane	ND	2.0	1	01/24/2017 00:11
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	01/24/2017 00:11
1,1-Dichloroethene	ND	2.0	1	01/24/2017 00:11
cis-1,2-Dichloroethene	ND	2.0	1	01/24/2017 00:11
trans-1,2-Dichloroethene	ND	2.0	1	01/24/2017 00:11
1,2-Dichloropropane	ND	2.4	1	01/24/2017 00:11
cis-1,3-Dichloropropene	ND	2.3	1	01/24/2017 00:11
trans-1,3-Dichloropropene	ND	2.3	1	01/24/2017 00:11

(Cont.)

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Date Received: 1/17/17 15:30
Date Prepared: 1/23/17-1/24/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-5	1701626-001A	SoilGas	01/13/2017 12:00	GC29	133045

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.11	24.13	AK

Analytes	Result	RL	DF	Date Analyzed
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	01/24/2017 00:11
Diisopropyl ether (DIPE)	ND	2.1	1	01/24/2017 00:11
1,4-Dioxane	ND	1.8	1	01/24/2017 00:11
Ethanol	ND	96	1	01/24/2017 00:11
Ethyl acetate	ND	1.8	1	01/24/2017 00:11
Ethyl tert-butyl ether (ETBE)	ND	2.1	1	01/24/2017 00:11
Ethylbenzene	18	2.2	1	01/24/2017 00:11
4-Ethyltoluene	4.8	2.5	1	01/24/2017 00:11
Freon 113	ND	3.9	1	01/24/2017 00:11
Heptane	34	21	1	01/24/2017 00:11
Hexachlorobutadiene	ND	5.4	1	01/24/2017 00:11
Hexane	57	18	1	01/24/2017 00:11
2-Hexanone	11	2.1	1	01/24/2017 00:11
4-Methyl-2-pentanone (MIBK)	10	2.1	1	01/24/2017 00:11
Methyl-t-butyl ether (MTBE)	ND	1.8	1	01/24/2017 00:11
Methylene chloride	ND	8.8	1	01/24/2017 00:11
Methyl methacrylate	ND	2.1	1	01/24/2017 00:11
Naphthalene	ND	5.3	1	01/24/2017 00:11
Propene	ND	880	10	01/23/2017 18:58
Styrene	14	2.2	1	01/24/2017 00:11
1,1,1,2-Tetrachloroethane	ND	3.5	1	01/24/2017 00:11
1,1,2,2-Tetrachloroethane	ND	3.5	1	01/24/2017 00:11
Tetrachloroethene	ND	3.4	1	01/24/2017 00:11
Tetrahydrofuran	ND	3.0	1	01/24/2017 00:11
Toluene	71	1.9	1	01/24/2017 00:11
1,2,4-Trichlorobenzene	ND	3.8	1	01/24/2017 00:11
1,1,1-Trichloroethane	ND	2.8	1	01/24/2017 00:11
1,1,2-Trichloroethane	ND	2.8	1	01/24/2017 00:11
Trichloroethene	ND	2.8	1	01/24/2017 00:11
Trichlorofluoromethane	ND	2.8	1	01/24/2017 00:11
1,2,4-Trimethylbenzene	7.1	2.5	1	01/24/2017 00:11
1,3,5-Trimethylbenzene	ND	2.5	1	01/24/2017 00:11
Vinyl Acetate	ND	18	1	01/24/2017 00:11
Vinyl Chloride	ND	1.3	1	01/24/2017 00:11

(Cont.)

 Angela Rydelius, Lab Manager



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Client: Schutze & Associates, Inc.
Date Received: 1/17/17 15:30
Date Prepared: 1/23/17-1/24/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-5	1701626-001A	SoilGas	01/13/2017 12:00	GC29	133045

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.11	24.13	AK

Analytes	Result	RL	DF	Date Analyzed
Xylenes, Total	36	6.6	1	01/24/2017 00:11

Surrogates	REC (%)	Limits	Date Analyzed
1,2-DCA-d4	106	70-130	01/24/2017 00:11
Toluene-d8	107	70-130	01/24/2017 00:11
4-BFB	101	70-130	01/24/2017 00:11



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Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-3	1701626-002A	SoilGas	01/13/2017 12:00	GC29	133045

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.73	25.40	AK

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	60	1	01/24/2017 00:57
Acrolein	ND	5.8	1	01/24/2017 00:57
Acrylonitrile	ND	1.1	1	01/24/2017 00:57
tert-Amyl methyl ether (TAME)	ND	2.1	1	01/24/2017 00:57
Benzene	5.0	1.6	1	01/24/2017 00:57
Benzyl chloride	ND	2.6	1	01/24/2017 00:57
Bromodichloromethane	19	3.5	1	01/24/2017 00:57
Bromoform	ND	5.2	1	01/24/2017 00:57
Bromomethane	ND	2.0	1	01/24/2017 00:57
1,3-Butadiene	ND	1.1	1	01/24/2017 00:57
2-Butanone (MEK)	ND	75	1	01/24/2017 00:57
t-Butyl alcohol (TBA)	ND	31	1	01/24/2017 00:57
Carbon Disulfide	10	1.6	1	01/24/2017 00:57
Carbon Tetrachloride	ND	3.2	1	01/24/2017 00:57
Chlorobenzene	ND	2.4	1	01/24/2017 00:57
Chloroethane	ND	1.3	1	01/24/2017 00:57
Chloroform	150	2.4	1	01/24/2017 00:57
Chloromethane	ND	1.0	1	01/24/2017 00:57
Cyclohexane	ND	18	1	01/24/2017 00:57
Dibromochloromethane	ND	4.4	1	01/24/2017 00:57
1,2-Dibromo-3-chloropropane	ND	0.12	1	01/24/2017 00:57
1,2-Dibromoethane (EDB)	ND	3.9	1	01/24/2017 00:57
1,2-Dichlorobenzene	ND	3.0	1	01/24/2017 00:57
1,3-Dichlorobenzene	ND	3.0	1	01/24/2017 00:57
1,4-Dichlorobenzene	ND	3.0	1	01/24/2017 00:57
Dichlorodifluoromethane	2.6	2.5	1	01/24/2017 00:57
1,1-Dichloroethane	ND	2.0	1	01/24/2017 00:57
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	01/24/2017 00:57
1,1-Dichloroethene	ND	2.0	1	01/24/2017 00:57
cis-1,2-Dichloroethene	ND	2.0	1	01/24/2017 00:57
trans-1,2-Dichloroethene	ND	2.0	1	01/24/2017 00:57
1,2-Dichloropropane	ND	2.4	1	01/24/2017 00:57
cis-1,3-Dichloropropene	ND	2.3	1	01/24/2017 00:57
trans-1,3-Dichloropropene	ND	2.3	1	01/24/2017 00:57

(Cont.)

 Angela Rydelius, Lab Manager



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Client: Schutze & Associates, Inc.
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Date Prepared: 1/23/17-1/24/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-3	1701626-002A	SoilGas	01/13/2017 12:00	GC29	133045

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.73	25.40	AK

Analytes	Result	RL	DF	Date Analyzed
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	01/24/2017 00:57
Diisopropyl ether (DIPE)	ND	2.1	1	01/24/2017 00:57
1,4-Dioxane	ND	1.8	1	01/24/2017 00:57
Ethanol	ND	96	1	01/24/2017 00:57
Ethyl acetate	ND	1.8	1	01/24/2017 00:57
Ethyl tert-butyl ether (ETBE)	ND	2.1	1	01/24/2017 00:57
Ethylbenzene	4.8	2.2	1	01/24/2017 00:57
4-Ethyltoluene	ND	2.5	1	01/24/2017 00:57
Freon 113	ND	3.9	1	01/24/2017 00:57
Heptane	25	21	1	01/24/2017 00:57
Hexachlorobutadiene	ND	5.4	1	01/24/2017 00:57
Hexane	33	18	1	01/24/2017 00:57
2-Hexanone	ND	2.1	1	01/24/2017 00:57
4-Methyl-2-pentanone (MIBK)	ND	2.1	1	01/24/2017 00:57
Methyl-t-butyl ether (MTBE)	ND	1.8	1	01/24/2017 00:57
Methylene chloride	ND	8.8	1	01/24/2017 00:57
Methyl methacrylate	ND	2.1	1	01/24/2017 00:57
Naphthalene	ND	5.3	1	01/24/2017 00:57
Propene	ND	88	1	01/24/2017 00:57
Styrene	2.7	2.2	1	01/24/2017 00:57
1,1,1,2-Tetrachloroethane	ND	3.5	1	01/24/2017 00:57
1,1,2,2-Tetrachloroethane	ND	3.5	1	01/24/2017 00:57
Tetrachloroethene	ND	3.4	1	01/24/2017 00:57
Tetrahydrofuran	ND	3.0	1	01/24/2017 00:57
Toluene	120	1.9	1	01/24/2017 00:57
1,2,4-Trichlorobenzene	ND	3.8	1	01/24/2017 00:57
1,1,1-Trichloroethane	ND	2.8	1	01/24/2017 00:57
1,1,2-Trichloroethane	ND	2.8	1	01/24/2017 00:57
Trichloroethene	ND	2.8	1	01/24/2017 00:57
Trichlorofluoromethane	ND	2.8	1	01/24/2017 00:57
1,2,4-Trimethylbenzene	3.6	2.5	1	01/24/2017 00:57
1,3,5-Trimethylbenzene	ND	2.5	1	01/24/2017 00:57
Vinyl Acetate	ND	18	1	01/24/2017 00:57
Vinyl Chloride	ND	1.3	1	01/24/2017 00:57

(Cont.)

 Angela Rydelius, Lab Manager



Analytical Report

Client: Schutze & Associates, Inc.
Date Received: 1/17/17 15:30
Date Prepared: 1/23/17-1/24/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-3	1701626-002A	SoilGas	01/13/2017 12:00	GC29	133045

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.73	25.40	AK

Analytes	Result	RL	DF	Date Analyzed
Xylenes, Total	23	6.6	1	01/24/2017 00:57

Surrogates	REC (%)	Limits	Date Analyzed
1,2-DCA-d4	95	70-130	01/24/2017 00:57
Toluene-d8	103	70-130	01/24/2017 00:57
4-BFB	99	70-130	01/24/2017 00:57



Analytical Report

Client: Schutze & Associates, Inc.
Date Received: 1/17/17 15:30
Date Prepared: 1/23/17-1/24/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-2-5	1701626-003A	SoilGas	01/13/2017 12:00	GC29	133045

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.13	24.22	AK

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	60	1	01/24/2017 01:43
Acrolein	ND	5.8	1	01/24/2017 01:43
Acrylonitrile	ND	1.1	1	01/24/2017 01:43
tert-Amyl methyl ether (TAME)	ND	2.1	1	01/24/2017 01:43
Benzene	17	1.6	1	01/24/2017 01:43
Benzyl chloride	ND	2.6	1	01/24/2017 01:43
Bromodichloromethane	ND	3.5	1	01/24/2017 01:43
Bromoform	ND	5.2	1	01/24/2017 01:43
Bromomethane	ND	2.0	1	01/24/2017 01:43
1,3-Butadiene	ND	1.1	1	01/24/2017 01:43
2-Butanone (MEK)	ND	75	1	01/24/2017 01:43
t-Butyl alcohol (TBA)	ND	31	1	01/24/2017 01:43
Carbon Disulfide	200	1.6	1	01/24/2017 01:43
Carbon Tetrachloride	ND	3.2	1	01/24/2017 01:43
Chlorobenzene	ND	2.4	1	01/24/2017 01:43
Chloroethane	ND	1.3	1	01/24/2017 01:43
Chloroform	31	2.4	1	01/24/2017 01:43
Chloromethane	ND	1.0	1	01/24/2017 01:43
Cyclohexane	35	18	1	01/24/2017 01:43
Dibromochloromethane	ND	4.4	1	01/24/2017 01:43
1,2-Dibromo-3-chloropropane	ND	0.12	1	01/24/2017 01:43
1,2-Dibromoethane (EDB)	ND	3.9	1	01/24/2017 01:43
1,2-Dichlorobenzene	ND	3.0	1	01/24/2017 01:43
1,3-Dichlorobenzene	ND	3.0	1	01/24/2017 01:43
1,4-Dichlorobenzene	ND	3.0	1	01/24/2017 01:43
Dichlorodifluoromethane	2.9	2.5	1	01/24/2017 01:43
1,1-Dichloroethane	ND	2.0	1	01/24/2017 01:43
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	01/24/2017 01:43
1,1-Dichloroethene	ND	2.0	1	01/24/2017 01:43
cis-1,2-Dichloroethene	ND	2.0	1	01/24/2017 01:43
trans-1,2-Dichloroethene	ND	2.0	1	01/24/2017 01:43
1,2-Dichloropropane	ND	2.4	1	01/24/2017 01:43
cis-1,3-Dichloropropene	ND	2.3	1	01/24/2017 01:43
trans-1,3-Dichloropropene	ND	2.3	1	01/24/2017 01:43

(Cont.)

 Angela Rydelius, Lab Manager



Analytical Report

Client: Schutze & Associates, Inc.
Date Received: 1/17/17 15:30
Date Prepared: 1/23/17-1/24/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-2-5	1701626-003A	SoilGas	01/13/2017 12:00	GC29	133045

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.13	24.22	AK

Analytes	Result	RL	DF	Date Analyzed
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	01/24/2017 01:43
Diisopropyl ether (DIPE)	ND	2.1	1	01/24/2017 01:43
1,4-Dioxane	ND	1.8	1	01/24/2017 01:43
Ethanol	ND	96	1	01/24/2017 01:43
Ethyl acetate	ND	1.8	1	01/24/2017 01:43
Ethyl tert-butyl ether (ETBE)	ND	2.1	1	01/24/2017 01:43
Ethylbenzene	6.0	2.2	1	01/24/2017 01:43
4-Ethyltoluene	3.0	2.5	1	01/24/2017 01:43
Freon 113	ND	3.9	1	01/24/2017 01:43
Heptane	45	21	1	01/24/2017 01:43
Hexachlorobutadiene	ND	5.4	1	01/24/2017 01:43
Hexane	430	18	1	01/24/2017 01:43
2-Hexanone	ND	2.1	1	01/24/2017 01:43
4-Methyl-2-pentanone (MIBK)	24	2.1	1	01/24/2017 01:43
Methyl-t-butyl ether (MTBE)	ND	1.8	1	01/24/2017 01:43
Methylene chloride	ND	8.8	1	01/24/2017 01:43
Methyl methacrylate	ND	2.1	1	01/24/2017 01:43
Naphthalene	ND	5.3	1	01/24/2017 01:43
Propene	210	88	1	01/24/2017 01:43
Styrene	3.4	2.2	1	01/24/2017 01:43
1,1,1,2-Tetrachloroethane	ND	3.5	1	01/24/2017 01:43
1,1,2,2-Tetrachloroethane	ND	3.5	1	01/24/2017 01:43
Tetrachloroethene	ND	3.4	1	01/24/2017 01:43
Tetrahydrofuran	4.8	3.0	1	01/24/2017 01:43
Toluene	96	1.9	1	01/24/2017 01:43
1,2,4-Trichlorobenzene	ND	3.8	1	01/24/2017 01:43
1,1,1-Trichloroethane	ND	2.8	1	01/24/2017 01:43
1,1,2-Trichloroethane	ND	2.8	1	01/24/2017 01:43
Trichloroethene	ND	2.8	1	01/24/2017 01:43
Trichlorofluoromethane	ND	2.8	1	01/24/2017 01:43
1,2,4-Trimethylbenzene	7.7	2.5	1	01/24/2017 01:43
1,3,5-Trimethylbenzene	2.6	2.5	1	01/24/2017 01:43
Vinyl Acetate	ND	18	1	01/24/2017 01:43
Vinyl Chloride	ND	1.3	1	01/24/2017 01:43

(Cont.)

 Angela Rydelius, Lab Manager



Analytical Report

Client: Schutze & Associates, Inc.
Date Received: 1/17/17 15:30
Date Prepared: 1/23/17-1/24/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-2-5	1701626-003A	SoilGas	01/13/2017 12:00	GC29	133045

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.13	24.22	AK

Analytes	Result	RL	DF	Date Analyzed
Xylenes, Total	28	6.6	1	01/24/2017 01:43
Surrogates	REC (%)	Limits		
1,2-DCA-d4	99	70-130		01/24/2017 01:43
Toluene-d8	101	70-130		01/24/2017 01:43
4-BFB	99	70-130		01/24/2017 01:43

 Angela Rydelius, Lab Manager



Analytical Report

Client: Schutze & Associates, Inc.
Date Received: 1/17/17 15:30
Date Prepared: 1/19/17-1/23/17
Project: Tung/SCS539

WorkOrder: 1701626
Extraction Method: TO17
Analytical Method: TO17
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-5 Sorbent Tube	1701626-001C	SoilGas	01/13/2017 12:00	GC37	132978

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	ND	2.7	1	01/19/2017 15:26

Surrogates	REC (%)	Limits	Date Analyzed
4-BFB	90	70-130	01/19/2017 15:26

Analyst(s): KBO **Analytical Comments:** a10

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-1-3 Sorbent Tube	1701626-002C	SoilGas	01/13/2017 12:00	GC37	132978

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	ND	3.0	1	01/19/2017 17:44

Surrogates	REC (%)	Limits	Date Analyzed
4-BFB	94	70-130	01/19/2017 17:44

Analyst(s): KBO **Analytical Comments:** a10

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV-2-5 Sorbent Tube	1701626-003C	SoilGas	01/13/2017 12:00	GC37	132978

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	ND	2.7	1	01/23/2017 16:35

Surrogates	REC (%)	Limits	Date Analyzed
4-BFB	90	70-130	01/23/2017 16:35

Analyst(s): KBO **Analytical Comments:** a10,j1

 Angela Rydelius, Lab Manager



Quality Control Report

Client: Schutze & Associates, Inc.
Date Prepared: 1/20/17
Date Analyzed: 1/20/17
Instrument: GC26
Matrix: SoilGas
Project: Tung/SCS539

WorkOrder: 1701626
BatchID: 132974
Extraction Method: ASTM D 1946-90
Analytical Method: ASTM D 1946-90
Unit: %
Sample ID: MB/LCS-132974

QC Summary Report for ASTM D1946-90

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Oxygen	ND	0.781	0.20	0.70	-	112	70-130

QA/QC Officer



Quality Control Report

Client: Schutze & Associates, Inc.
Date Prepared: 1/19/17
Date Analyzed: 1/19/17
Instrument: GC26
Matrix: Soilgas
Project: Tung/SCS539

WorkOrder: 1701626
BatchID: 132841
Extraction Method: ASTM D 1946-90
Analytical Method: ASTM D 1946-90
Unit: %
Sample ID: MB/LCS-132841

QC Summary Report for ASTM D1946-90

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Helium	ND	0.0836	0.025	0.10	-	84	60-140

 QA/QC Officer



Quality Control Report

Client: Schutze & Associates, Inc.
Date Prepared: 1/20/17
Date Analyzed: 1/20/17
Instrument: GC26
Matrix: SoilGas
Project: Tung/SCS539

WorkOrder: 1701626
BatchID: 132973
Extraction Method: ASTM D 1946-90
Analytical Method: ASTM D 1946-90
Unit: %
Sample ID: MB/LCS-132973

QC Summary Report for ASTM D1946-90

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Carbon Dioxide	ND	0.00889	0.0020	0.010	-	89	70-130
Methane	ND	0.00820	0.00010	0.010	-	82	70-130

QA/QC Officer



Quality Control Report

Client: Schutze & Associates, Inc.
Date Prepared: 1/23/17
Date Analyzed: 1/23/17
Instrument: GC29
Matrix: SoilGas
Project: Tung/SCS539

WorkOrder: 1701626
BatchID: 133045
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-133045

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	66.4	30	60	-	111	60-140
Acrolein	ND	66.8	2.9	58.25	-	115	60-140
Acrylonitrile	ND	71.1	0.55	55	-	129	60-140
tert-Amyl methyl ether (TAME)	ND	131	1.0	105	-	125	60-140
Benzene	ND	97.2	0.80	80	-	122	60-140
Benzyl chloride	ND	175	1.3	132.5	-	132	60-140
Bromodichloromethane	ND	202	1.8	175	-	115	60-140
Bromoform	ND	348	2.6	262.5	-	133	60-140
Bromomethane	ND	79.7	1.0	97.5	-	82	60-140
1,3-Butadiene	ND	67.4	0.55	55	-	122	60-140
2-Butanone (MEK)	ND	90.8	38	75	-	121	60-140
t-Butyl alcohol (TBA)	ND	96.4	16	77.5	-	124	60-140
Carbon Disulfide	ND	88.1	0.80	80	-	110	60-140
Carbon Tetrachloride	ND	204	1.6	160	-	127	60-140
Chlorobenzene	ND	140	1.2	117.5	-	119	60-140
Chloroethane	ND	68.4	0.65	67.5	-	101	60-140
Chloroform	ND	135	1.2	122.5	-	110	60-140
Chloromethane	ND	59.0	0.50	52.5	-	112	60-140
Cyclohexane	ND	94.0	9.0	87.5	-	107	60-140
Dibromochloromethane	ND	284	2.2	217.5	-	130	60-140
1,2-Dibromo-3-chloropropane	ND	315	0.060	245	-	129	60-140
1,2-Dibromoethane (EDB)	ND	222	2.0	195	-	114	60-140
1,2-Dichlorobenzene	ND	185	1.5	152.5	-	121	60-140
1,3-Dichlorobenzene	ND	184	1.5	152.5	-	120	60-140
1,4-Dichlorobenzene	ND	184	1.5	152.5	-	121	60-140
Dichlorodifluoromethane	ND	148	1.2	125	-	118	60-140
1,1-Dichloroethane	ND	116	1.0	102.5	-	113	60-140
1,2-Dichloroethane (1,2-DCA)	ND	111	1.0	102.5	-	108	60-140
1,1-Dichloroethene	ND	106	1.0	100	-	106	60-140
cis-1,2-Dichloroethene	ND	114	1.0	100	-	115	60-140
trans-1,2-Dichloroethene	ND	114	1.0	100	-	114	60-140
1,2-Dichloropropane	ND	124	1.2	117.5	-	106	60-140
cis-1,3-Dichloropropene	ND	138	1.2	115	-	120	60-140
trans-1,3-Dichloropropene	ND	144	1.2	115	-	125	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	217	1.8	177.5	-	122	60-140
Diisopropyl ether (DIPE)	ND	122	1.0	105	-	116	60-140
1,4-Dioxane	ND	134	0.90	92.5	-	144, F2	60-140

(Cont.)

QA/QC Officer



Quality Control Report

Client: Schutze & Associates, Inc.
Date Prepared: 1/23/17
Date Analyzed: 1/23/17
Instrument: GC29
Matrix: SoilGas
Project: Tung/SCS539

WorkOrder: 1701626
BatchID: 133045
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-133045

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethanol	ND	56.7	48	47.5	-	119	60-140
Ethyl acetate	ND	106	0.90	92.5	-	114	60-140
Ethyl tert-butyl ether (ETBE)	ND	127	1.0	105	-	121	60-140
Ethylbenzene	ND	128	1.1	110	-	116	60-140
4-Ethyltoluene	ND	154	1.2	125	-	123	60-140
Freon 113	ND	222	2.0	195	-	114	60-140
Heptane	ND	116	10	105	-	110	60-140
Hexachlorobutadiene	ND	355	2.7	270	-	132	60-140
Hexane	ND	101	9.0	90	-	112	60-140
2-Hexanone	ND	122	1.0	105	-	116	60-140
Isopropyl Alcohol	ND	73.4	25	62.5	-	117	60-140
4-Methyl-2-pentanone (MIBK)	ND	124	1.0	105	-	119	60-140
Methyl-t-butyl ether (MTBE)	ND	107	0.90	92.5	-	116	60-140
Methylene chloride	ND	96.5	4.4	87.5	-	110	60-140
Methyl methacrylate	ND	125	1.0	104	-	120	60-140
Naphthalene	ND	333	2.6	265	-	126	60-140
Propene	ND	41.2	44	42.5	-	97	60-140
Styrene	ND	130	1.1	107.5	-	120	60-140
1,1,1,2-Tetrachloroethane	ND	224	1.8	175	-	128	60-140
1,1,2,2-Tetrachloroethane	ND	203	1.8	175	-	116	60-140
Tetrachloroethene	ND	220	1.7	172	-	128	60-140
Tetrahydrofuran	ND	70.5	1.5	75	-	94	60-140
Toluene	ND	110	0.95	95	-	116	60-140
1,2,4-Trichlorobenzene	ND	249	1.9	187.5	-	133	60-140
1,1,1-Trichloroethane	ND	168	1.4	137.5	-	122	60-140
1,1,2-Trichloroethane	ND	159	1.4	137.5	-	116	60-140
Trichloroethene	ND	157	1.4	137.5	-	114	60-140
Trichlorofluoromethane	ND	172	1.4	142.5	-	121	60-140
1,2,4-Trimethylbenzene	ND	155	1.2	125	-	124	60-140
1,3,5-Trimethylbenzene	ND	150	1.2	125	-	120	60-140
Vinyl Acetate	ND	105	9.0	90	-	117	60-140
Vinyl Chloride	ND	75.3	0.65	65	-	116	60-140
Xylenes, Total	ND	396	3.3	330	-	120	60-140

(Cont.)

QA/QC Officer



Quality Control Report

Client: Schutze & Associates, Inc.
Date Prepared: 1/23/17
Date Analyzed: 1/23/17
Instrument: GC29
Matrix: SoilGas
Project: Tung/SCS539

WorkOrder: 1701626
BatchID: 133045
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-133045

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
1,2-DCA-d4	493.9	507		500	99	101	70-130
Toluene-d8	520.1	503		500	104	101	70-130
4-BFB	482.7	488		500	97	98	70-130

QA/QC Officer



Quality Control Report

Client: Schutze & Associates, Inc.
Date Prepared: 1/19/17
Date Analyzed: 1/19/17
Instrument: GC37
Matrix: Sorbent Tube
Project: Tung/SCS539

WorkOrder: 1701626
BatchID: 132978
Extraction Method: TO17
Analytical Method: TO17
Unit: µg/m³
Sample ID: MB/LCS-132978

QC Summary Report for TO17

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1,1-Trichloroethane	ND	55.8	2.0	50	-	112	60-140
1,1-Dichloroethane	ND	56.6	2.0	50	-	113	60-140
1,1-Dichloroethene	ND	55.1	2.0	50	-	110	60-140
1,1-Dichloropropene	ND	59.5	2.0	50	-	119	60-140
2,2-Dichloropropane	ND	57.5	2.0	50	-	115	60-140
2-Butanone (MEK)	ND	227	8.0	200	-	114	60-140
2-Hexanone	ND	56.4	2.0	50	-	113	60-140
4-Methyl-2-pentanone (MIBK)	ND	49.9	2.0	50	-	100	60-140
Acetone	ND	873	20	1000	-	87	60-140
Bromochloromethane	ND	57.8	2.0	50	-	116	60-140
Carbon Disulfide	ND	49.5	2.0	50	-	99	60-140
Carbon Tetrachloride	ND	57.6	2.0	50	-	115	60-140
Chloroform	ND	57.2	2.0	50	-	114	60-140
cis-1,2-Dichloroethene	ND	57.4	2.0	50	-	115	60-140
Dibromomethane	ND	57.3	2.0	50	-	115	60-140
Dichlorodifluoromethane	ND	50.5	2.0	50	-	101	60-140
Diisopropyl ether (DIPE)	ND	53.4	2.0	50	-	107	60-140
Ethyl tert-butyl ether (ETBE)	ND	59.3	2.0	50	-	119	60-140
Methylene chloride	ND	45.2	2.0	50	-	90	60-140
n-Butyl benzene	ND	54.6	2.0	50	-	109	60-140
t-Butyl alcohol (TBA)	ND	235	8.0	200	-	117	60-140
tert-Amyl methyl ether (TAME)	ND	56.8	2.0	50	-	114	60-140
Tetrahydrofuran	ND	403	2.0	500	-	81	60-140
trans-1,2-Dichloroethene	ND	51.5	2.0	50	-	103	60-140
Trichlorofluoromethane	ND	41.9	2.0	50	-	84	60-140
Benzene	ND	55.2	2.0	50	-	110	60-140
Bromobenzene	ND	55.6	2.0	50	-	111	60-140
Bromodichloromethane	ND	56.6	2.0	50	-	113	60-140
Bromoform	ND	61.0	2.0	50	-	122	60-140
sec-Butyl benzene	ND	56.8	2.0	50	-	114	60-140
tert-Butyl benzene	ND	55.7	2.0	50	-	111	60-140
Chlorobenzene	ND	55.8	2.0	50	-	112	60-140
2-Chlorotoluene	ND	53.9	2.0	50	-	108	60-140
4-Chlorotoluene	ND	56.2	2.0	50	-	112	60-140
Dibromochloromethane	ND	59.3	2.0	50	-	119	60-140
1,2-Dibromo-3-chloropropane	ND	24.7	2.0	20	-	124	60-140
1,2-Dibromoethane (EDB)	ND	56.0	2.0	50	-	112	60-140

(Cont.)

QA/QC Officer



Quality Control Report

Client: Schutze & Associates, Inc.
Date Prepared: 1/19/17
Date Analyzed: 1/19/17
Instrument: GC37
Matrix: Sorbent Tube
Project: Tung/SCS539

WorkOrder: 1701626
BatchID: 132978
Extraction Method: TO17
Analytical Method: TO17
Unit: µg/m³
Sample ID: MB/LCS-132978

QC Summary Report for TO17

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,2-Dichlorobenzene	ND	54.3	2.0	50	-	109	60-140
1,3-Dichlorobenzene	ND	56.2	2.0	50	-	112	60-140
1,4-Dichlorobenzene	ND	55.4	2.0	50	-	111	60-140
1,2-Dichloroethane (1,2-DCA)	ND	57.1	2.0	50	-	114	60-140
1,2-Dichloropropane	ND	56.1	2.0	50	-	112	60-140
1,3-Dichloropropane	ND	56.9	2.0	50	-	114	60-140
cis-1,3-Dichloropropene	ND	58.5	2.0	50	-	117	60-140
trans-1,3-Dichloropropene	ND	61.3	2.0	50	-	123	60-140
Ethylbenzene	ND	56.0	2.0	50	-	112	60-140
Hexachlorobutadiene	ND	54.0	2.0	50	-	108	60-140
Isopropylbenzene	ND	49.9	2.0	50	-	100	60-140
4-Isopropyl toluene	ND	56.4	2.0	50	-	113	60-140
Methyl-t-butyl ether (MTBE)	ND	53.4	2.0	50	-	107	60-140
Naphthalene	ND	56.6	2.0	50	-	113	60-140
n-Propyl benzene	ND	56.7	2.0	50	-	113	60-140
Styrene	ND	56.8	2.0	50	-	114	60-140
1,1,1,2-Tetrachloroethane	ND	56.8	2.0	50	-	114	60-140
1,1,2,2-Tetrachloroethane	ND	55.1	2.0	50	-	110	60-140
Tetrachloroethene	ND	56.6	2.0	50	-	113	60-140
Toluene	ND	56.2	2.0	50	-	112	60-140
1,2,3-Trichlorobenzene	ND	54.0	2.0	50	-	108	60-140
1,2,4-Trichlorobenzene	ND	54.6	2.0	50	-	109	60-140
1,1,2-Trichloroethane	ND	53.7	2.0	50	-	107	60-140
Trichloroethene	ND	51.9	2.0	50	-	104	60-140
1,2,3-Trichloropropane	ND	56.7	2.0	50	-	113	60-140
1,2,4-Trimethylbenzene	ND	56.1	2.0	50	-	112	60-140
1,3,5-Trimethylbenzene	ND	57.3	2.0	50	-	115	60-140
Xylenes, Total	ND	167	6.0	150	-	112	60-140
Surrogate Recovery							
toluene-d8	100.1	97.4		100	100	97	70-130
4-BFB	104.7	100		100	105	100	70-130

QA/QC Officer

1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1701626

ClientCode: SCO

WaterTrax WriteOn EDF Excel EQulS Email HardCopy ThirdParty J-flag

Report to:

Kevin Loeb
Schutze & Associates, Inc.
44358 South Grimmer Blvd
Fremont, CA 94538
(510) 226-9944 FAX: (510) 625-8176

Email: kevin@schutze-inc.com; js@schutze-inc.co
cc/3rd Party:
PO:
ProjectNo: Tung/SCS539

Bill to:

Accounts Payable
Schutze & Associates, Inc.
44358 South Grimmer Blvd
Fremont, CA 94538
priscillajazz@yahoo.com

Requested TAT: 5 days;

Date Received: 01/17/2017

Date Logged: 01/17/2017

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1701626-001	SV-1-5	SoilGas	1/13/2017 12:00	<input type="checkbox"/>	A	A	A	A	A	A						
1701626-001	SV-1-5 Sorbent Tube	SoilGas	1/13/2017 12:00	<input type="checkbox"/>								C				
1701626-001	SV-1-5 TO-17 Summa	SoilGas	1/13/2017 12:00	<input type="checkbox"/>		B		B								
1701626-002	SV-1-3	SoilGas	1/13/2017 12:00	<input type="checkbox"/>	A	A	A	A	A	A						
1701626-002	SV-1-3 Sorbent Tube	SoilGas	1/13/2017 12:00	<input type="checkbox"/>								C				
1701626-002	SV-1-3 TO-17 Summa	SoilGas	1/13/2017 12:00	<input type="checkbox"/>		B		B								
1701626-003	SV-2-5	SoilGas	1/13/2017 12:00	<input type="checkbox"/>	A	A	A	A	A	A						
1701626-003	SV-2-5 Sorbent Tube	SoilGas	1/13/2017 12:00	<input type="checkbox"/>								C				
1701626-003	SV-2-5 TO-17 Summa	SoilGas	1/13/2017 12:00	<input type="checkbox"/>		B		B								

Test Legend:

1	ATMOSPHERICGAS_SG(%)	2	HELIUM_LC_SOILGAS(%)	3	LG_SUMMA_SOILGAS(%)	4	PRHELIUM SHROUD
5	TO15_Scan-SIM_SOIL(UG/M3)	6	TO15-8260_SOIL(UG/M3)	7	TO17VOC_ST(UGM3)	8	
9		10		11		12	

Prepared by: Jena Alfaro

The following SamplIDs: 001A, 002A, 003A contain testgroup TO15He_O2_CO2_Ch4_SG.

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: SCHUTZE & ASSOCIATES, INC.

Project: Tung/SCS539

Work Order: 1701626

Client Contact: Kevin Loeb

QC Level: LEVEL 2

Contact's Email: kevin@schutze-inc.com; js@schutze-inc.com;
Mari@schutze-inc.com;

Comments:

Date Logged: 1/17/2017

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1701626-001A	SV-1-5	SoilGas	TO15 w/ Helium, O2, CO2 and Methane	1	1L Summa	<input type="checkbox"/>	1/13/2017 12:00	5 days		<input type="checkbox"/>	
1701626-001B	SV-1-5 TO-17 Summa	SoilGas	ASTM D1946-90 (Helium)	1	1L Summa	<input type="checkbox"/>	1/13/2017 12:00	5 days		<input type="checkbox"/>	
1701626-001C	SV-1-5 Sorbent Tube	SoilGas	TO17 (VOCs) (µg/m³) <Naphthalene>	1	Sorbent Tube	<input type="checkbox"/>	1/13/2017 12:00	5 days		<input type="checkbox"/>	
1701626-002A	SV-1-3	SoilGas	TO15 w/ Helium, O2, CO2 and Methane	1	1L Summa	<input type="checkbox"/>	1/13/2017 12:00	5 days		<input type="checkbox"/>	
1701626-002B	SV-1-3 TO-17 Summa	SoilGas	ASTM D1946-90 (Helium)	1	1L Summa	<input type="checkbox"/>	1/13/2017 12:00	5 days		<input type="checkbox"/>	
1701626-002C	SV-1-3 Sorbent Tube	SoilGas	TO17 (VOCs) (µg/m³) <Naphthalene>	1	Sorbent Tube	<input type="checkbox"/>	1/13/2017 12:00	5 days		<input type="checkbox"/>	
1701626-003A	SV-2-5	SoilGas	TO15 w/ Helium, O2, CO2 and Methane	1	1L Summa	<input type="checkbox"/>	1/13/2017 12:00	5 days		<input type="checkbox"/>	
1701626-003B	SV-2-5 TO-17 Summa	SoilGas	ASTM D1946-90 (Helium)	1	1L Summa	<input type="checkbox"/>	1/13/2017 12:00	5 days		<input type="checkbox"/>	
1701626-003C	SV-2-5 Sorbent Tube	SoilGas	TO17 (VOCs) (µg/m³) <Naphthalene>	1	Sorbent Tube	<input type="checkbox"/>	1/13/2017 12:00	5 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Rd. Pittsburg, Ca. 94565-1701
 Telephone: (877) 252-9262 / Fax: (925) 252-9269

www.mcccampbell.com main@mcccampbell.com

CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush	2 Day Rush	3 Day Rush	STD	<input checked="" type="checkbox"/>	Quote #
J-Flag / MDL	ESL	Cleanup Approved	Bottle Order #		
Delivery Format: GeoTracker EDF	PDF	EDD	Write On (DW)	EQuIS	

Report To: Kevin Loeb Bill To:

Company: Schutze & Assoc.

Email:

Email: Tele: 510-226-9944

Project Name/ #: Tung/SCS539

Project Location: 1607 2nd Ave, Oakland PO #

Sampler Signature: [Signature]

Analysis Requested

SAMPLE ID Location / Field Point	Sampling Start		End	Canister SN#	Sample Kit / Manifold # ST=Seibert Tube	VOCs TO-15 (µg/m³) - See Notes 8010 by TO-15 (µg/m³)	TPH (g) (µg/m³)	LEED: (inc. 4PCH, Formaldehyde, CO, Total VOCs)	Fixed Gas (CO, Methane, Ethane, Ethylene, Acetylene, Propane, CO) %	Fixed Gas: (O₂, N₂) % O₂, N₂, Methane, and CO₂	API: Aliphatic and/or Aromatic (circle one) µg/m³	Helium Leak Check %	Leak Check (IPA, Norflorane, 1,1- difluoroethane) µg/m³	T017 (Naphthalene)	Matrix		Canister Pressure / Vacuum	
	Date	Time	Time												Soilgas	Indoor Air	Initial	Final
SU-1-5	1/13	12:00		7521-869	316T-1315	X				X		X			X		-27	-4
				7525-873	ST= G0148983					X		X		X	X		-25	-3
SU-1-3"				0885-2513	316-1338	X				X		X		X	X		-29	-3
				6171-757	ST= G0149907					X		X		X	X		-25	-5
SU-2-5				1990-1938	316T-1309	X				X		X		X	X		-30	-4
				7508-856	ST= G0148929					X		X		X	X		-25	-
<p>No Nitrogen analysis due to He leak check</p>																		

Helium Shroud SN#

Leak Check Default is IPA

Notes: Please specify units if different than default: VOCs is reported in µg/m³, fixed is reported in %.

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time	Comments / Instructions
<u>Mari Chirun</u>	1-17-17	955	<u>[Signature]</u>	1-17-17	955	X No Samples Labeled. Confirmed via Canister IDs
<u>[Signature]</u>	1-17-17	1530	<u>[Signature]</u>	1-17-17	1530	



Sample Receipt Checklist

Client Name: **Schutze & Associates, Inc.**
 Project Name: **Tung/SCS539**

Date and Time Received: **1/17/2017 15:30**
 Date Logged: **1/17/2017**
 Received by: **Jena Alfaro**
 Logged by: **Jena Alfaro**

WorkOrder No: **1701626** Matrix: SoilGas
 Carrier: David Shaver (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes No NA
 Shipping container/cooler in good condition? Yes No
 Samples in proper containers/bottles? Yes No
 Sample containers intact? Yes No
 Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No NA
 Sample/Temp Blank temperature Temp: NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

 Comments: