Atmospheric Analysis & Consulting, Inc.

Client	: Yorke Engineering
Client Project Name	: Ninyo & Moore Odor Sampling & Analysis
Client Project No.	: 0357-007-01
AAC Project No.	: 210070
Reporting Date	: 01/18/2021

On January 12, 2021, Atmospheric Analysis & Consulting, Inc. received two (2) DNPH impregnated silica gel cartridge for Carbonyls analysis by EPA Method TO-11A. Upon receipt the sample was assigned a unique Laboratory ID number as follows:

Client Sample ID	AAC Sample ID
FS 55	210070-15956
Rattlesnake	210070-15958

This analysis is accredited under the laboratory's ISO/IEC 17025:2005 accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation AT-1908. Test results apply to samples as received. For detailed information pertaining to specific EPA, NCASI, ASTM and SCAQMD accreditations (Methods & Analytes), please visit our website at www.aaclab.com

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. The samples were received at 5.9°C which is above the method recommended temperature of 4.0°C. An unknown peak co-eluted with Formaldehyde which may have affected reported concentrations for the target analyte. No other problems were encountered during receiving, preparation, and/or analysis of these samples.

The Technical Director or his/her designee, as verified by the following signature, has authorized release of the data contained in this hardcopy report.

If you have any questions or require further explanation of data results, please contact the undersigned.

Dr. Sucha Parmar, PhD
Technical Director

This report consists of 8 pages.

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LABORATORY ANALYSIS REPORT
Analysis of Carbonyls by EPA Method TO-11A

Client : Yorke Engineering
Client Project Name : Ninyo & Moore Odor Sampling & Analysis
AAC Project No. : 210070
Analyst : JD/RS/EG
Units : ug/m3

Sampling Date (s) : 01/06-07/2021
Receiving Date : 01/12/2021
Analysis Date : 01/15/2021
Reporting Date : 01/18/2021

Client ID	AAC Sample ID	Formaldehyde	Acetaldehyde	Acrolein	Acetone	Propionaldehyde	Crotonaldehyde	Methacrolein	MEK & Butyraldehyde	Benzaldehyde	Valeraldehyde	m-Tolualdehyde	Hexaldehyde
FS 55	210070-15956	0.465	1.30	0.024	5.44	0.374	ND	0.133	0.597	0.127	0.187	0.049	0.115
	SRL (ug/m3)	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053
	Qualifier			J								J	
Rattlesnake	210070-15958	0.649	1.49	0.042	8.48	0.335	0.048	0.159	0.786	0.155	0.295	0.056	0.168
	SRL (ug/m3)	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053
	Qualifier			J			J						

ND - Compound was analyzed for, but was not detected at or above the SDL.
J - Analyte was detected between the SRL and the SDL.

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Quality Control/Quality Assurance Report

EPA TO-11A

HPLC Calibration Verification of the 10/19/2020 Calibration

Analysis Date : 01/15/2021
Analyst : JD
Instrument ID : HPLC 01

Opening CCV

Standard Concentration (ug/mL)	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
2.50	2.74	2.64	2.52	2.71	2.67	2.61	2.64	5.24	2.60	2.62	2.55	2.62
Accuracy (%)*	110	106	101	108	107	104	106	105	104	105	102	105

Continuing CCV

Standard Concentration (ug/mL)	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
2.50	2.66	2.57	2.46	2.60	2.61	2.54	2.54	5.07	2.53	2.54	2.47	2.53
Accuracy (%)*	106	103	98.4	104	104	102	102	101	101	102	98.8	101

Closing CCV

Standard Concentration (ug/mL)	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
2.50	2.72	2.68	2.59	2.74	2.72	2.65	2.71	5.37	2.61	2.66	2.57	2.66
Accuracy (%)*	109	107	104	110	109	106	108	107	104	106	103	106

Second Source

Standard Concentration (ug/mL)	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
5.00	5.57	5.53	5.41	5.62	5.68	5.44	5.54	11.2	5.45	5.57	5.45	5.54
Accuracy (%)**	111	111	108	112	114	109	111	112	109	111	109	111

*Must be 100 ± 10%
**Second Source must be 85 - 115 %

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Quality Control/Quality Assurance Report

EPA TO-11A

Laboratory Control Spike Analysis

Analysis Date : 01/15/2021 Analyst : JD Instrument ID : HPLC 01

Laboratory Control Spike

Analytes	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
Sample Concentration (ug/mL)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Spike Concentration (ug/mL)	1.25	1.25	1.25	1.25	1.25	1.25	1.25	2.50	1.25	1.25	1.25	1.25
Spiked Sample Concentration (ug/mL)	1.37	1.35	1.32	1.35	1.36	1.32	1.35	2.71	1.31	1.35	1.29	1.34
Duplicate Spiked Sample Concentration (ug/mL)	1.37	1.36	1.33	1.36	1.37	1.33	1.35	2.74	1.32	1.36	1.31	1.34
Spike Recovery (%)*	110	108	106	108	109	106	108	108	105	108	103	107
Duplicate Spike Recovery (%)*	110	109	106	109	110	106	108	110	106	109	105	107
RPD**	0.0	0.7	0.8	0.7	0.7	0.8	0.0	1.1	0.8	0.7	1.5	0.0

*Must be 100 ± 15%

** Must be ≤ 25%

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Quality Control/Quality Assurance Report

EPA TO-11A

Matrix Spike Analysis

Analysis Date : 01/15/2021 Analyst : JD Instrument ID : HPLC 01

Sample ID 210070-15956

Analytes	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
Sample Concentration (ug/mL)	0.109	0.303	0.006	1.27	0.087	0.000	0.031	0.139	0.030	0.044	0.011	0.027
Spike Concentration (ug/mL)	1.25	1.25	1.25	1.25	1.25	1.25	1.25	2.50	1.25	1.25	1.25	1.25
Spiked Sample Concentration (ug/mL)	1.62	1.57	1.24	2.51	1.41	1.35	1.48	2.52	1.29	1.34	1.27	1.33
Duplicate Spiked Sample Concentration (ug/mL)	1.63	1.58	1.24	2.51	1.41	1.36	1.49	2.52	1.30	1.35	1.29	1.33
Spike Recovery (%)*	121	101	98.8	99.1	106	108	116	95.2	101	104	101	104
Dulicate Spike Recovery (%)*	122	102	98.8	99.1	106	109	117	95.2	102	105	102	104
RPD**	0.6	0.6	0.0	0.0	0.0	0.7	0.7	0.0	0.8	0.7	1.6	0.0

*Must be 100± 25%

** Must be ≤ 25%

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Quality Control/Quality Assurance Report

EPA TO-11A

Duplicate Analysis

Analysis Date : 01/15/2021
Analyst : JD

Instrument ID : HPLC 01

Analyte	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
Sample ID	210070-15956											
Sample Concentration (ug/mL)	0.217	0.607	<SRL	2.54	0.175	ND	0.062	0.279	0.059	0.087	<SRL	0.054
Duplicate Sample Concentration (ug/mL)	0.218	0.616	<SRL	2.59	0.166	ND	0.064	0.282	0.057	0.087	<SRL	0.054
RPD**	0.4	1.5	NA	2.0	5.1	NA	2.2	1.0	3.4	0.9	NA	0.6
Sample ID	210079-15988											
Sample Concentration (ug/mL)	2.33	1.99	0.035	2.77	0.262	<SRL	0.074	0.549	0.186	0.185	0.031	0.097
Duplicate Sample Concentration (ug/mL)	2.43	2.07	0.035	2.88	0.273	<SRL	0.077	0.570	0.185	0.185	0.032	0.098
RPD**	4.2	3.8	1.4	3.9	4.0	NA	4.4	3.8	0.1	0.2	1.0	1.0

ND = Not Detected
NA=Not Applicable
** Must be <20%

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Quality Control/Quality Assurance Report

EPA TO-11A

System and Method Blank Analysis

Analysis Date : 01/15/2021
Analyst : JD

Instrument ID : HPLC 01

Analyte	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
Opening Acetonitrile Blank	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Method Blank 01/15/21	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Continuing Acetonitrile Blank	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Continuing Acetonitrile Blank	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Closing Acetonitrile Blank	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Reporting Limit	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025

RL= Reporting Limit
<RL=less than the Reporting Limit

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AAC Project No. 210070 Page ____ of ____

CHAIN OF CUSTODY/ ANALYSIS REQUEST FORM

Client Name Ninyo & Moore			Project Name Odor Sampling & Analysis			Analysis Requested			Send report:
Project Mgr. (Print Name) Keith Gilbert			Project Number 0357-007-01			EPA TO-15	SCAQMD 307-91	EPA TO_11A	
Sampler's Name (Print Name) Bipul K. Saraf			Sampler's Signature: Bipul K. Saraf						Attn: Bipul Saraf E-Mail – Bsaraf@YorkeEngr.com Phone#: 949-444-8063 Fax#____
AAC Sample No.	Date Sampled	Time Sampled	Sample Type	Client Sample ID/Description	Type/No. of Containers				Send invoice to:
15955	1/6	1303-1303	Canister	FS 55	1	X	X		
15956	1/6	1312-1312	CARTRIDGE	FS 55	1			X	
15957	1/7	1303-1303	Canister	Rattlesnake	1	X	X		Attn: Accounting@YorkeEngr.com
15958	1/7	1312-1312	CARTRIDGE	Rattlesnake	1			X	P.O. # ____
									Special Instructions/remarks: Please report all compounds including aldehyde per TO-15. Include all compounds per SCAQMD 307-91.
Relinquished by (Signature): Bipul K. Saraf	Print Name:	Date/Time 1/8/2021 15:30 PM	Received by (signature): Print Name						
Relinquished by (Signature):	Print Name:	Date/Time	Received by (signature): Print Name	Gabriel Rubio	1/12/21 1437				

FX: 3x Cans (1x unused) + 3x Encinas 5.19°C TO7