

1/25/2021

Mr. Bipul Saraf

Yorke Engineering, LLC

31726 Rancho Viejo Road

Suite 218

San Juan Capistrano CA 92675

Project Name: Odor Sampling

Project #: 357-007-01

Workorder #: 2101121

Dear Mr. Bipul Saraf

The following report includes the data for the above referenced project for sample(s) received on 1/9/2021 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-13A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Jade White at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Jade White

Project Manager

WORK ORDER #: 2101121

Work Order Summary

CLIENT:	Mr. Bipul Saraf Yorke Engineering, LLC 31726 Rancho Viejo Road Suite 218 San Juan Capistrano, CA 92675	BILL TO:	Mr. Bipul Saraf Yorke Engineering, LLC 31726 Rancho Viejo Road Suite 218 San Juan Capistrano, CA 92675
PHONE:	949-248-8490	P.O. #	357-007-01
FAX:		PROJECT #	357-007-01 Odor Sampling
DATE RECEIVED:	01/09/2021	CONTACT:	Jade White
DATE COMPLETED:	01/21/2021		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	FS-55	Modified TO-13A
02A	Rattlesnake	Modified TO-13A
03A	Lab Blank	Modified TO-13A
04A	CCV	Modified TO-13A
05A	LCS	Modified TO-13A
05AA	LCSD	Modified TO-13A

CERTIFIED BY: 

 Technical Director

DATE: 01/25/21

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-13A
Yorke Engineering, LLC
Workorder# 2101121

Two PUF/XAD Cartridge samples were received on January 09, 2021. The laboratory performed the analysis for polycyclic aromatic hydrocarbons in air by modified EPA Method TO-13A. The PUF/XAD samples were extracted using Pressurized Fluid Extraction (PFE) by EPA Method 3545A. The sample extract was then concentrated to 1.0 mL and analyzed by GC/MS in the full scan mode.

To meet the quality control objectives outlined in Method TO-13A, a field blank is required for each sampling episode. If field blanks are not provided to the laboratory, any attendant risk to data quality is the responsibility of the data user.

The frequency of matrix spikes are determined by the different monitoring programs. Matrix spikes are not included in the routine calibration specifications for TO-13A.

<i>Requirement</i>	<i>TO-13A</i>	<i>ATL Modifications</i>
Initial Calibration	Calibration range: 0.1-2.5 ug/mL in Hexane	Calibration range: 1.0-500 ug/mL in Methylene chloride
Method Blank	<MDL	<Reporting limit
Surrogate Recoveries	60-120%	50-150% for Field Surrogates Fluoranthene-d10 and Benzo(a)pyrene-d12

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The sample cartridges were pre-spiked with Fluoranthene-d10 and Benzo(a)Pyrene-d12 on 11/12/2020.

Sampling volumes were supplied by the client. A sample volume of 393,000 L was used for the Lab Blank.

The recovery for Indeno(1,2,3-c,d)pyrene in the LCSD was outside the laboratory control limits. Due to the nature of PUF/XAD2 extraction, it is not possible to re-extract the associated samples. All other LCSD recoveries were within allowed limits.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

E - Exceeds instrument calibration range.

Q - Exceeds quality control limits.

S - Saturated peak.

J - Estimated value.

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

Client Sample ID: FS-55

Lab ID#: 2101121-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Naphthalene	1.0	0.0026	6.1	0.016
2-Methylnaphthalene	1.0	0.0026	2.6	0.0068

Client Sample ID: Rattlesnake

Lab ID#: 2101121-02A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Naphthalene	1.0	0.0025	6.6	0.017
2-Methylnaphthalene	1.0	0.0025	2.8	0.0073

Client Sample ID: FS-55

Lab ID#: 2101121-01A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	12011116	Date of Collection:	1/6/21 12:57:00 PM
Dil. Factor:	1.00	Date of Analysis:	1/11/21 07:03 PM
		Date of Extraction:	1/11/21

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Naphthalene	1.0	0.0026	6.1	0.016
2-Methylnaphthalene	1.0	0.0026	2.6	0.0068
2-Chloronaphthalene	1.0	0.0026	Not Detected	Not Detected
Acenaphthylene	1.0	0.0026	Not Detected	Not Detected
Acenaphthene	1.0	0.0026	Not Detected	Not Detected
Fluorene	1.0	0.0026	Not Detected	Not Detected
Phenanthrene	1.0	0.0026	Not Detected	Not Detected
Anthracene	1.0	0.0026	Not Detected	Not Detected
Fluoranthene	1.0	0.0026	Not Detected	Not Detected
Pyrene	1.0	0.0026	Not Detected	Not Detected
Chrysene	1.0	0.0026	Not Detected	Not Detected
Benzo(a)anthracene	1.0	0.0026	Not Detected	Not Detected
Benzo(b)fluoranthene	1.0	0.0026	Not Detected	Not Detected
Benzo(k)fluoranthene	1.0	0.0026	Not Detected	Not Detected
Benzo(a)pyrene	1.0	0.0026	Not Detected	Not Detected
Indeno(1,2,3-c,d)pyrene	1.0	0.0026	Not Detected	Not Detected
Dibenz(a,h)anthracene	1.0	0.0026	Not Detected	Not Detected
Benzo(g,h,i)perylene	1.0	0.0026	Not Detected	Not Detected

Air Sample Volume(L): 381000

Container Type: PUF/XAD Cartridge

Surrogates	%Recovery	Method Limits
Fluorene-d10	68	60-120
Pyrene-d10	75	60-120
Benzo(a)pyrene-d12	67	50-150
Fluoranthene-d10	67	50-150

Client Sample ID: Rattlesnake

Lab ID#: 2101121-02A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	12011117	Date of Collection:	1/7/21 2:50:00 PM
Dil. Factor:	1.00	Date of Analysis:	1/11/21 07:32 PM
		Date of Extraction:	1/11/20

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Naphthalene	1.0	0.0025	6.6	0.017
2-Methylnaphthalene	1.0	0.0025	2.8	0.0073
2-Chloronaphthalene	1.0	0.0025	Not Detected	Not Detected
Acenaphthylene	1.0	0.0025	Not Detected	Not Detected
Acenaphthene	1.0	0.0025	Not Detected	Not Detected
Fluorene	1.0	0.0025	Not Detected	Not Detected
Phenanthrene	1.0	0.0025	Not Detected	Not Detected
Anthracene	1.0	0.0025	Not Detected	Not Detected
Fluoranthene	1.0	0.0025	Not Detected	Not Detected
Pyrene	1.0	0.0025	Not Detected	Not Detected
Chrysene	1.0	0.0025	Not Detected	Not Detected
Benzo(a)anthracene	1.0	0.0025	Not Detected	Not Detected
Benzo(b)fluoranthene	1.0	0.0025	Not Detected	Not Detected
Benzo(k)fluoranthene	1.0	0.0025	Not Detected	Not Detected
Benzo(a)pyrene	1.0	0.0025	Not Detected	Not Detected
Indeno(1,2,3-c,d)pyrene	1.0	0.0025	Not Detected	Not Detected
Dibenz(a,h)anthracene	1.0	0.0025	Not Detected	Not Detected
Benzo(g,h,i)perylene	1.0	0.0025	Not Detected	Not Detected

Air Sample Volume(L): 393000

Container Type: PUF/XAD Cartridge

Surrogates	%Recovery	Method Limits
Fluorene-d10	76	60-120
Pyrene-d10	82	60-120
Benzo(a)pyrene-d12	70	50-150
Fluoranthene-d10	64	50-150

Client Sample ID: Lab Blank

Lab ID#: 2101121-03A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	12011106	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/11/21 02:05 PM
		Date of Extraction:	1/11/21

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Naphthalene	1.0	0.0025	Not Detected	Not Detected
2-Methylnaphthalene	1.0	0.0025	Not Detected	Not Detected
2-Chloronaphthalene	1.0	0.0025	Not Detected	Not Detected
Acenaphthylene	1.0	0.0025	Not Detected	Not Detected
Acenaphthene	1.0	0.0025	Not Detected	Not Detected
Fluorene	1.0	0.0025	Not Detected	Not Detected
Phenanthrene	1.0	0.0025	Not Detected	Not Detected
Anthracene	1.0	0.0025	Not Detected	Not Detected
Fluoranthene	1.0	0.0025	Not Detected	Not Detected
Pyrene	1.0	0.0025	Not Detected	Not Detected
Chrysene	1.0	0.0025	Not Detected	Not Detected
Benzo(a)anthracene	1.0	0.0025	Not Detected	Not Detected
Benzo(b)fluoranthene	1.0	0.0025	Not Detected	Not Detected
Benzo(k)fluoranthene	1.0	0.0025	Not Detected	Not Detected
Benzo(a)pyrene	1.0	0.0025	Not Detected	Not Detected
Indeno(1,2,3-c,d)pyrene	1.0	0.0025	Not Detected	Not Detected
Dibenz(a,h)anthracene	1.0	0.0025	Not Detected	Not Detected
Benzo(g,h,i)perylene	1.0	0.0025	Not Detected	Not Detected

Air Sample Volume(L): 393000
 Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorene-d10	91	60-120
Pyrene-d10	109	60-120
Benzo(a)pyrene-d12	92	50-150
Fluoranthene-d10	76	50-150

Client Sample ID: CCV

Lab ID#: 2101121-04A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	12011103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/11/21 12:35 PM
		Date of Extraction: NA

Compound	%Recovery
Naphthalene	88
2-Methylnaphthalene	91
2-Chloronaphthalene	93
Acenaphthylene	90
Acenaphthene	85
Fluorene	87
Phenanthrene	87
Anthracene	87
Fluoranthene	82
Pyrene	91
Chrysene	81
Benzo(a)anthracene	92
Benzo(b)fluoranthene	90
Benzo(k)fluoranthene	98
Benzo(a)pyrene	93
Indeno(1,2,3-c,d)pyrene	131 Q
Dibenz(a,h)anthracene	113
Benzo(g,h,i)perylene	114

Air Sample Volume(L): 1.00

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorene-d10	86	70-130
Pyrene-d10	94	70-130
Benzo(a)pyrene-d12	94	70-130
Fluoranthene-d10	81	70-130

Client Sample ID: LCS

Lab ID#: 2101121-05A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	12011104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/11/21 01:05 PM
		Date of Extraction: 1/11/21

Compound	%Recovery	Method Limits
Naphthalene	66	60-120
2-Methylnaphthalene	71	60-120
2-Chloronaphthalene	74	60-120
Acenaphthylene	70	60-120
Acenaphthene	65	60-120
Fluorene	66	60-120
Phenanthrene	70	60-120
Anthracene	69	60-120
Fluoranthene	67	60-120
Pyrene	74	60-120
Chrysene	73	60-120
Benzo(a)anthracene	77	60-120
Benzo(b)fluoranthene	84	60-120
Benzo(k)fluoranthene	67	60-120
Benzo(a)pyrene	75	60-120
Indeno(1,2,3-c,d)pyrene	112	60-120
Dibenz(a,h)anthracene	92	60-120
Benzo(g,h,i)perylene	95	60-120

Air Sample Volume(L): 1.00
 Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorene-d10	80	60-120
Pyrene-d10	94	60-120
Benzo(a)pyrene-d12	80	50-150
Fluoranthene-d10	65	50-150

Client Sample ID: LCSD

Lab ID#: 2101121-05AA

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	12011105	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/11/21 01:35 PM
		Date of Extraction:	1/11/21

Compound	%Recovery	Method Limits
Naphthalene	76	60-120
2-Methylnaphthalene	84	60-120
2-Chloronaphthalene	86	60-120
Acenaphthylene	84	60-120
Acenaphthene	80	60-120
Fluorene	82	60-120
Phenanthrene	82	60-120
Anthracene	83	60-120
Fluoranthene	77	60-120
Pyrene	90	60-120
Chrysene	80	60-120
Benzo(a)anthracene	91	60-120
Benzo(b)fluoranthene	98	60-120
Benzo(k)fluoranthene	82	60-120
Benzo(a)pyrene	88	60-120
Indeno(1,2,3-c,d)pyrene	130 Q	60-120
Dibenz(a,h)anthracene	110	60-120
Benzo(g,h,i)perylene	113	60-120

Air Sample Volume(L): 1.00

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorene-d10	96	60-120
Pyrene-d10	109	60-120
Benzo(a)pyrene-d12	98	50-150
Fluoranthene-d10	79	50-150