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7/9/2021
Ms. Michelle Myers
GeoSyntec Consultants
3043 Gold Canal Drive, Suite 100

Rancho Cordova CA 95670

Project Name: Cascade SVE
Project #:
Workorder #: 2106638

Dear Ms. Michelle Myers

The following report includes the data for the above referenced project for sample(s) received on 6/25/2021 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-15 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: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

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WORK ORDER #: 2106638

Work Order Summary

CLIENT:	Ms. Michelle Myers GeoSyntec Consultants 3043 Gold Canal Drive, Suite 100 Rancho Cordova, CA 95670	**BILL TO:**	Accounts Payable Cascade Corporation 2201 NE 201st Avenue Fairview, OR 97024
PHONE:	916-637-8338	**P.O. #**	
FAX:		**PROJECT #**	Cascade SVE
DATE RECEIVED:	06/25/2021	**CONTACT:**	Monica Tran
DATE COMPLETED:	07/09/2021		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VMWJ2-062421	Modified TO-15	5.5 "Hg	10 psi
02A	VMWK-062421	Modified TO-15	7.0 "Hg	10 psi
03A	Lab Blank	Modified TO-15	NA	NA
03B	Lab Blank	Modified TO-15	NA	NA
04A	CCV	Modified TO-15	NA	NA
04B	CCV	Modified TO-15	NA	NA
05A	LCS	Modified TO-15	NA	NA
05AA	LCSD	Modified TO-15	NA	NA
05B	LCS	Modified TO-15	NA	NA
05BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 07/09/21

Technical Director

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

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified TO-15
GeoSyntec Consultants
Workorder# 2106638

Two 1 Liter Summa Canister (100% Certified) samples were received on June 25, 2021. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

Requirement	***TO-15***	***ATL Modifications***
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

Sample identification for sample VMWK-062421 was not provided on the sample tag. Therefore the information on the Chain of Custody was used to process and report the sample.

Analytical Notes

Dilution was performed on sample VMWK-062421 due to the presence of high level target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

UJ- Non-detected compound associated with low bias in the CCV

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

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VMWJ2-062421

Lab ID#: 2106638-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.21	0.38	1.1	2.0

Client Sample ID: VMWK-062421

Lab ID#: 2106638-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	4.4	82	17	330
Trichloroethene	4.4	1400	24	7500
Tetrachloroethene	4.4	71	30	480

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Client Sample ID: VMWJ2-062421

Lab ID#: 2106638-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**v062922**	**Date of Collection: 6/24/21 1:10:00 PM**	
Dil. Factor:	**2.06**	**Date of Analysis: 6/29/21 10:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.21	Not Detected	0.53	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.82	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Trichloroethene	0.21	0.38	1.1	2.0
Tetrachloroethene	0.21	Not Detected	1.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: VMWK-062421

Lab ID#: 2106638-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a070619**	**Date of Collection: 6/24/21 1:40:00 PM**	
Dil. Factor:	**8.77**	**Date of Analysis: 7/6/21 11:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	4.4	Not Detected	11	Not Detected
1,1-Dichloroethene	4.4	Not Detected	17	Not Detected
cis-1,2-Dichloroethene	4.4	82	17	330
Trichloroethene	4.4	1400	24	7500
Tetrachloroethene	4.4	71	30	480

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2106638-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**v062906**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/29/21 09:39 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2106638-03B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a070606**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/6/21 12:41 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: CCV

Lab ID#: 2106638-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**v062902**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/29/21 06:58 AM**	

Compound	%Recovery
Vinyl Chloride	77
1,1-Dichloroethene	85
cis-1,2-Dichloroethene	87
Trichloroethene	104
Tetrachloroethene	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	82	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	88	70-130

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Client Sample ID: CCV

Lab ID#: 2106638-04B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a070602**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/6/21 10:37 AM**	

Compound	%Recovery
Vinyl Chloride	91
1,1-Dichloroethene	84
cis-1,2-Dichloroethene	86
Trichloroethene	94
Tetrachloroethene	94

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCS

Lab ID#: 2106638-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**v062903**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/29/21 07:38 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	82	70-130
1,1-Dichloroethene	93	70-130
cis-1,2-Dichloroethene	94	70-130
Trichloroethene	110	70-130
Tetrachloroethene	99	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	84	70-130

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Client Sample ID: LCSD

Lab ID#: 2106638-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**v062904**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/29/21 08:18 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	83	70-130
1,1-Dichloroethene	90	70-130
cis-1,2-Dichloroethene	92	70-130
Trichloroethene	109	70-130
Tetrachloroethene	99	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	85	70-130

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Client Sample ID: LCS

Lab ID#: 2106638-05B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a070603**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/6/21 11:02 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	95	70-130
1,1-Dichloroethene	90	70-130
cis-1,2-Dichloroethene	89	70-130
Trichloroethene	99	70-130
Tetrachloroethene	101	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCSD

Lab ID#: 2106638-05BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a070604**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/6/21 11:28 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	98	70-130
1,1-Dichloroethene	91	70-130
cis-1,2-Dichloroethene	93	70-130
Trichloroethene	99	70-130
Tetrachloroethene	99	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	98	70-130