Volatile Organic Compounds
April 4th and 5th 2019

West Seattle Medical Clinic
4550 Fauntleroy Way
Seattle Washington

Donna McNeal, Industrial Hygienist
President

Dennis Rauschenberg, General Manager
Reviewer

Franciscan Heath System
Ms. Tahni Madden
1149 Market Street, 10-16
Tacoma, WA 98402

April 17, 2019

Prepared By:
NOW Environmental Services, INC
34004 9th Ave S Suite A-12
Federal Way, WA 98003
253-927-5233

Executive Summary

NOW Environmental Services (NOW) was retained by Franciscan Medical Health System to perform a follow-up to assessments preformed May 3rd 2018, May 23rd 2018, September 7th 2018, September 24th 2018 and January 18th 2019 for limited indoor air quality assessment of the West Seattle Medical Clinic located at 4550 Fauntleroy in Seattle, Washington. This follow up sampling is was to evaluate the effectiveness of a newly installed ventilation system meant to scrub gasoline fumes entering the building from soil contamination. The scrubbing system was first tested on January 18th 2019 and did not seem to be operating at its optimum. Franciscan Medical Health System requested another round of sampling after the system had been modified. This sampling was carried out April 4th to April 5th 2019 by NOW.

Sampling of various air quality parameters included broad spectrum of volatile organic analytes. To summarize the findings of the assessment, the facilities' indoor air quality (IAQ) can be characterized by the following significant points.

1. Evacuated canisters for vapor intrusion monitoring were utilized in the Storage Room and Exam Room 3 for a typical work shift of 8 hours and in the storage area and Exam Room 3 for 24 hours. These two areas were initially chosen because the general consensus of interviewed employees was these are areas have had the strongest odors though the employees generally that the odors had diminished since the addition of the scrubber to vent gasoline vapors form the soil under the building. The canisters were submitted to a laboratory for subsequent analysis via Mass Spectroscopy. The analytical method (USEPA Method TO-15) included analysis of a broad spectrum of volatile organic vapor analytes. Some chemicals were detected. Please see attached report for specific chemicals and associated levels.

1. Introduction

NOW Environmental Services (NOW) was retained on April 4th and 5th 2019 by Franciscan Medical Health System to perform a follow-up to assessments preformed May 3rd 2018, May 23rd 2018, September 7th 2018, September 24th 2018 and January 18th 2019 for limited indoor air quality assessment of the West Seattle Medical Clinic located at 4550 Fauntleroy in Seattle, Washington. This follow up sampling is was to evaluate the effectiveness of a newly installed ventilation system meant to scrub gasoline fumes entering the building from soil contamination. The system was modified after the testing in January had not shown the desired improvement in air quality.

The assessment was performed at the request of Tahni Madden, Property Manager for Franciscan Property Management Department.

2. Field Observations

It has been determined by additional testing not addressed in this report that there is gasoline contaminated soil in and around the building. Testing has shown that there is vapor intrusion into the building associated with this material. At times the odor from this intrusion have been quite noticeable. A vapor scrubber has been installed by Associate Environmental Group of Olympia, WA to divert gasoline vapors intruding the building envelop from contaminated soil under the building away from the building. Employees noted that the smell has not been particularly noticeable since the vapor scrubber has gone on line.

3. Air Assessment and Analytical Procedures

The following data has been collected over the past half a year. The sampling carried out on April 4th and 5th were taken after the vapor scrubber added to the building to divert gasoline vapors was modified.

3.1 Vapor Intrusion Volatile Organic Compounds

EXAM ROOM 3

Compound	5/3/18 ug/m3 8 hour sample	5/23/18 ug/m3 8 hour sample	9/7/18 ug/m3 8 hour sample	9/20/18 ug/m3 24 hour sample	1/18/19 ug/m3 8 hour sample	1/18/19 ug/m3 24 hour sample	4/4/19 ug/m3 24 hour sample	4/4/19 ug/m3 8 hour sample	Ecology Indoor Air Cleanup Levels ug/m3	OSHA Permissable Exposure Limit per 8 hr day ug/m3
Benzene	0.282	0.196	0.114	0.305	0.543	0.637	ND	ND	0.320	1,000
Ethyl benzene	0.997	ND	ND	ND	ND	ND	ND	ND	457	100,000
Gasoline Range Organics	6,430	268	22.9	6.16	41.5	42.9	73.2	60.3	140	300,000 (Proposed no current limit)
Heptane	143	3.03	ND	0.402	ND	ND	ND	ND	320	500,000
Xylene (o,m,p)	4.59	ND	ND	ND	ND	ND	ND	ND	45.7	100,000
Toluene	2.47	0.834	ND	1.13	4.54	1.95	1.75	1.79	2,290	200,000

STORAGE

Compound	5/3/18 ug/m3 8 hour sample	5/23/18 ug/m3 8 hour sample	9/7/18 ug/m3 8 hour sample	9/20/18 ug/m3 24 hour sample	1/18/19 ug/m3 8 hour sample	1/18/19 ug/m3 24 hour sample	4/4/19 ug/m3 24 hour sample	4/4/19 ug/m3 8 hour sample	Ecology Indoor Air Cleanup Levels ug/m3	OSHA Permissable Exposure Limit per 8 hr day ug/m3
Benzene	0.305	-	0.110	0.165	0.458	0.820	ND	ND	0.320	1,000
Ethyl benzene	2.07	-	ND	ND	ND	ND	ND	ND	457	100,000
Gasoline Range Organics	7,902	-	28.0	18.1	74.4	55.9	73.2	60.3	140	300,000 (Proposed no current limit)
Heptane	234	-	ND	0.433	ND	ND	ND	ND	320	500,000
Xylene (o,m,p)	11.22	-	ND	1.232	ND	ND	ND	ND	45.7	100,000
Toluene	5.25	-	0.678	0.613	ND	1.97	1.75	1.79	2,290	200,000

Samples were collected in the pressurized mode, which air is drawn through the inlet and sampling system with a pump. The air is pumped into an initially evacuated SUMMA® passivated canister by the sample, which regulates the rate and duration of sampling. At the end of the sampling the period the canisters were pressurized to about 1 atmospheres absolute. Sampling duration for this assessment was for 8 hours or 24 hours, as noted, for 64 various compounds.

The samples were analyzed using gas chromatography/mass spectrometry (GC/MS) under an established QA/quality control (QC) program. Laboratory analytical procedures have been developed based on the concepts contain in both TO-15 and 8260B.

The TO-15 method is an EPA-recognized sampling concept for VOC sampling and speciation. This method of sampling was chosen because a relatively large sample volume can be collected, and multiple dilutions and re-analyses can occur to ensure identification and quantification of target VOCs within the working range of the method. The quantitation limits were set at 5 parts per billion or less.

3.2 Laboratory

Samples for VOCs were analyzed by the following accredited laboratory:

Vapor Intrusion Monitoring

Fremont Analytical of Seattle
3600 Fremont Avenue North
Seattle, Washington 98103
(206) 352-3790
Accreditation: Washington State Department of Ecology

4. General Discussion and Interpretation of Results

The following sections present a discussion of the results for the limited IAQ parameters obtained and the air samples collected for identification and analyses of volatile organic compounds over sampling preformed May 3rd 2018, May 23rd 2018, September 7th 2018, September 24th 2018, and January 18th 2019. After these sampling events it was determined that there was no exposure over the OSHA PEL. However, a vapor scrubber was added with the intent of lowing the vapor levels. The scrubbing system was first tested on January 18th 2019 and did not seem to be operating at its optimum. Franciscan Medical Health System requested another round of sampling after the system had been modified. This sampling was carried out April 4th to April 5th 2019 by NOW.

4.1 Volatile Organic Compounds

4.1.1 Vapor Intrusion

Evacuated canisters were utilized to capture a representative sample of the indoor air for subsequent analysis via Mass Spectroscopy. The analytical method (USEPA Method TO-15) included analysis of a broad spectrum of volatile organic vapor analytes as shown in Appendix A. Exact sampling locations were chosen by the by NOW Environmental' Donna McNeal based on the areas that had had the highest levels in the past and were the employees spent the most amount of time and have been kept consistent for comparison purposes.

The laboratory analytical report indicated that several compounds were found in the vapor intrusion monitoring. Only the chemicals that are associated with the soil contaminated were included.

5. Conclusions and Recommendations

Several compounds associated with gasoline have been identified through vapor intrusion, though at low levels. The vapor scrubber has lowered levels of VOC's to non-detect or close to the detection limit.

6. Limitations

Air sampling results are limited in that they represent airborne concentrations at the time of sample collection only. Changes in weather, operating procedures, ventilation, temperature, humidity, tenant practices and other conditions, including the inappropriate introduction of moisture, may cause variations in anticipated airborne chemical concentrations.

While this assessment was relatively comprehensive in the locations of concern, airborne contaminants may still be present that facilitate a faint, unpleasant odor in some individuals. There is no universal reaction to a measured amount of a particular material. People simply have different tolerance levels. Because of this, it is difficult to assign standards or even guidelines to set acceptable versus unacceptable levels of literally thousands of airborne pollutants present in indoor environments. Undetected contaminants could be present in differing amounts that hyper-sensitive individuals will find irritating or otherwise unpleasant.

NOW has performed the tasks set forth above in a thorough and professional manner consistent with industry guidelines and under supervision of a certified professional. OES cannot guarantee and does not warrant that this limited assessment has revealed all adverse environmental conditions affecting the site. Nor can NOW warrant that the assessment requested would satisfy the dictates of, or provide a legal defense in connection with, environmental laws or regulations.

The results reported and any opinions reached by NOW are for the benefit of the client. Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. It should be understood that changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge.

The services provided do not constitute a complete and comprehensive assessment of indoor air quality, and the information obtained is relevant for the time and date the services were performed. The findings and conclusions as presented in this letter are based on the services provided. No warranty, express or implied, is intended regarding the results of this report and any subsequent reports, correspondence, or consultation. The services summarized herein were performed in accordance with the local standard of care in the geographic region at the time the services were rendered

Attachment 1

Vapor Intrusion Laboratory Findings April 4, 2019

Attachment 1

Vapor Intrusion Laboratory Findings April 4, 2019

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Orion Environmental Services
Donna McNeal
34004 9th Ave S
Federal Way, WA 98003

RE: Franciscan Health
Work Order Number: 1904082

April 12, 2019

Attention Donna McNeal:

Fremont Analytical, Inc. received 4 sample(s) on 4/5/2019 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method TO-15

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
Laboratory Director

Fremont Analytical

Date: *04/12/2019*

CLIENT: Orion Environmental Services
Project: Franciscan Health
Work Order: 1904082

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1904082-001	Room 3-01	04/04/2019 8:07 AM	04/05/2019 8:30 AM
1904082-002	Storage-02	04/04/2019 8:05 AM	04/05/2019 8:30 AM
1904082-003	Storage-03	04/04/2019 8:05 AM	04/05/2019 8:30 AM
1904082-004	Room 3-04	04/04/2019 8:07 AM	04/05/2019 8:30 AM

Case Narrative

WO#: **1904082**
Date: **4/12/2019**

CLIENT: Orion Environmental Services
Project: Franciscan Health

WorkOrder Narrative:
I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Air samples are reported in ppbv and ug/m3.

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

Note: Gasoline Range Organics reported in ug/m3 should be considered an estimate. The estimated molecular weight of gasoline used in the equation = 100

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Fremont Analytical

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Room 3-01
Lab ID: 1904082-001A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	04/05/2019	AD
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	04/05/2019	AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	04/05/2019	AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	04/05/2019	AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	04/05/2019	AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	04/05/2019	AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	04/05/2019	AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	04/05/2019	AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	04/05/2019	AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	04/05/2019	AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	04/05/2019	AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	04/05/2019	AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	04/05/2019	AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	04/05/2019	AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	04/05/2019	AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	04/05/2019	AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	04/05/2019	AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95		EPA-TO-15	04/05/2019	AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	04/05/2019	AD
Isopropyl Alcohol	<1.00	<2.46	1.00	2.46		EPA-TO-15	04/05/2019	AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	04/05/2019	AD
Acetone	9.42	22.4	1.00	2.38		EPA-TO-15	04/05/2019	AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	04/05/2019	AD
Benzene	<0.0895	<0.286	0.0895	0.286		EPA-TO-15	04/05/2019	AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	04/05/2019	AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	04/05/2019	AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	04/05/2019	AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	04/05/2019	AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	04/05/2019	AD
Carbon tetrachloride	0.0762	0.480	0.0657	0.413		EPA-TO-15	04/05/2019	AD

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Room 3-01
Lab ID: 1904082-001A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	04/05/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	04/05/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	04/05/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	04/05/2019 AD
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	04/05/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	04/05/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	04/05/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	04/05/2019 AD
Dichlorodifluoromethane (CFC-12)	0.561	2.77	0.400	1.98		EPA-TO-15	04/05/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	04/05/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	04/05/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	04/05/2019 AD
Gasoline Range Organics	17.9	73.2	1.00	4.09		EPA-TO-15	04/05/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	04/05/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	04/05/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	04/05/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	04/05/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	04/05/2019 AD
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	04/05/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	04/05/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	04/05/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	04/05/2019 AD
Propylene	0.787	1.35	0.400	0.688		EPA-TO-15	04/05/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	04/05/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	04/05/2019 AD
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	04/05/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	04/05/2019 AD
Toluene	0.466	1.75	0.400	1.51		EPA-TO-15	04/05/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	04/05/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	04/05/2019 AD

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Room 3-01
Lab ID: 1904082-001A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Trichloroethene (TCE)	0.114	0.612	0.0649	0.349		EPA-TO-15	04/05/2019	AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	04/05/2019	AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	04/05/2019	AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	04/05/2019	AD
Surr: 4-Bromofluorobenzene	117 %Rec	--	70-130	--		EPA-TO-15	04/05/2019	AD

Fremont Analytical

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Storage-02
Lab ID: 1904082-002A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	04/05/2019 AD
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	04/05/2019 AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	04/05/2019 AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	04/05/2019 AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	04/05/2019 AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	04/05/2019 AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	04/05/2019 AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	04/05/2019 AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	04/05/2019 AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	04/05/2019 AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	04/05/2019 AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	04/05/2019 AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	04/05/2019 AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	04/05/2019 AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	04/05/2019 AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	04/05/2019 AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	04/05/2019 AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95		EPA-TO-15	04/05/2019 AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	04/05/2019 AD
Isopropyl Alcohol	<1.00	<2.46	1.00	2.46		EPA-TO-15	04/05/2019 AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	04/05/2019 AD
Acetone	9.52	22.6	1.00	2.38		EPA-TO-15	04/05/2019 AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	04/05/2019 AD
Benzene	<0.0895	<0.286	0.0895	0.286		EPA-TO-15	04/05/2019 AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	04/05/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	04/05/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	04/05/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	04/05/2019 AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	04/05/2019 AD
Carbon tetrachloride	0.0770	0.484	0.0657	0.413		EPA-TO-15	04/05/2019 AD

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Storage-02
Lab ID: 1904082-002A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	04/05/2019	AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	04/05/2019	AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	04/05/2019	AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	04/05/2019	AD
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	04/05/2019	AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	04/05/2019	AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	04/05/2019	AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	04/05/2019	AD
Dichlorodifluoromethane (CFC-12)	0.564	2.79	0.400	1.98		EPA-TO-15	04/05/2019	AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	04/05/2019	AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	04/05/2019	AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	04/05/2019	AD
Gasoline Range Organics	17.3	70.7	1.00	4.09		EPA-TO-15	04/05/2019	AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	04/05/2019	AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	04/05/2019	AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	04/05/2019	AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	04/05/2019	AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	04/05/2019	AD
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	04/05/2019	AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	04/05/2019	AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	04/05/2019	AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	04/05/2019	AD
Propylene	0.728	1.25	0.400	0.688		EPA-TO-15	04/05/2019	AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	04/05/2019	AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	04/05/2019	AD
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	04/05/2019	AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	04/05/2019	AD
Toluene	0.519	1.96	0.400	1.51		EPA-TO-15	04/05/2019	AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	04/05/2019	AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	04/05/2019	AD

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Storage-02
Lab ID: 1904082-002A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	04/05/2019	AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	04/05/2019	AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	04/05/2019	AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	04/05/2019	AD
Surr: 4-Bromofluorobenzene	112 %Rec	--	70-130	--		EPA-TO-15	04/05/2019	AD

Fremont Analytical

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Storage-03
Lab ID: 1904082-003A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	04/05/2019	AD
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	04/05/2019	AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	04/05/2019	AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	04/05/2019	AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	04/05/2019	AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	04/05/2019	AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	04/05/2019	AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	04/05/2019	AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	04/05/2019	AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	04/05/2019	AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	04/05/2019	AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	04/05/2019	AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	04/05/2019	AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	04/05/2019	AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	04/05/2019	AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	04/05/2019	AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	04/05/2019	AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95		EPA-TO-15	04/05/2019	AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	04/05/2019	AD
Isopropyl Alcohol	<1.00	<2.46	1.00	2.46		EPA-TO-15	04/05/2019	AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	04/05/2019	AD
Acetone	9.59	22.8	1.00	2.38		EPA-TO-15	04/05/2019	AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	04/05/2019	AD
Benzene	<0.0895	<0.286	0.0895	0.286		EPA-TO-15	04/05/2019	AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	04/05/2019	AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	04/05/2019	AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	04/05/2019	AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	04/05/2019	AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	04/05/2019	AD
Carbon tetrachloride	0.0758	0.477	0.0657	0.413		EPA-TO-15	04/05/2019	AD

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Storage-03
Lab ID: 1904082-003A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	04/05/2019	AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	04/05/2019	AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	04/05/2019	AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	04/05/2019	AD
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	04/05/2019	AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	04/05/2019	AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	04/05/2019	AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	04/05/2019	AD
Dichlorodifluoromethane (CFC-12)	0.539	2.67	0.400	1.98		EPA-TO-15	04/05/2019	AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	04/05/2019	AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	04/05/2019	AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	04/05/2019	AD
Gasoline Range Organics	14.7	60.3	1.00	4.09		EPA-TO-15	04/05/2019	AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	04/05/2019	AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	04/05/2019	AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	04/05/2019	AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	04/05/2019	AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	04/05/2019	AD
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	04/05/2019	AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	04/05/2019	AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	04/05/2019	AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	04/05/2019	AD
Propylene	0.850	1.46	0.400	0.688		EPA-TO-15	04/05/2019	AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	04/05/2019	AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	04/05/2019	AD
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	04/05/2019	AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	04/05/2019	AD
Toluene	0.475	1.79	0.400	1.51		EPA-TO-15	04/05/2019	AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	04/05/2019	AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	04/05/2019	AD

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Storage-03
Lab ID: 1904082-003A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	04/05/2019	AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	04/05/2019	AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	04/05/2019	AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	04/05/2019	AD
Surr: 4-Bromofluorobenzene	110 %Rec	--	70-130	--		EPA-TO-15	04/05/2019	AD

Fremont Analytical

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Room 3-04
Lab ID: 1904082-004A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	04/06/2019	AD
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	04/06/2019	AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	04/06/2019	AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	04/06/2019	AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	04/06/2019	AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	04/06/2019	AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	04/06/2019	AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	04/06/2019	AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	04/06/2019	AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	04/06/2019	AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	04/06/2019	AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	04/06/2019	AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	04/06/2019	AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	04/06/2019	AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	04/06/2019	AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	04/06/2019	AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	04/06/2019	AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95		EPA-TO-15	04/06/2019	AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	04/06/2019	AD
Isopropyl Alcohol	<1.00	<2.46	1.00	2.46		EPA-TO-15	04/06/2019	AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	04/06/2019	AD
Acetone	8.70	20.7	1.00	2.38		EPA-TO-15	04/06/2019	AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	04/06/2019	AD
Benzene	<0.0895	<0.286	0.0895	0.286		EPA-TO-15	04/06/2019	AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	04/06/2019	AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	04/06/2019	AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	04/06/2019	AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	04/06/2019	AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	04/06/2019	AD
Carbon tetrachloride	0.0767	0.482	0.0657	0.413		EPA-TO-15	04/06/2019	AD

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Room 3-04
Lab ID: 1904082-004A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	04/06/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	04/06/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	04/06/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	04/06/2019 AD
Chloromethane	0.528	1.09	0.500	1.03		EPA-TO-15	04/06/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	04/06/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	04/06/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	04/06/2019 AD
Dichlorodifluoromethane (CFC-12)	0.562	2.78	0.400	1.98		EPA-TO-15	04/06/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	04/06/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	04/06/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	04/06/2019 AD
Gasoline Range Organics	16.4	67.1	1.00	4.09		EPA-TO-15	04/06/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	04/06/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	04/06/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	04/06/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	04/06/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	04/06/2019 AD
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	04/06/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	04/06/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	04/06/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	04/06/2019 AD
Propylene	0.794	1.37	0.400	0.688		EPA-TO-15	04/06/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	04/06/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	04/06/2019 AD
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	04/06/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	04/06/2019 AD
Toluene	0.436	1.64	0.400	1.51		EPA-TO-15	04/06/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	04/06/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	04/06/2019 AD

Client: Orion Environmental Services
WorkOrder: 1904082
Project: Franciscan Health

Client Sample ID: Room 3-04
Lab ID: 1904082-004A
Sample Type: Summa Canister

Date Sampled: 4/4/2019
Date Received: 4/5/2019

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	04/06/2019	AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	04/06/2019	AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	04/06/2019	AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	04/06/2019	AD
Surr: 4-Bromofluorobenzene	96.7 %Rec	--	70-130	--		EPA-TO-15	04/06/2019	AD

Work Order: 1904082
CLIENT: Orion Environmental Services
Project: Franciscan Health

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **LCS-R50558** SampType: **LCS** Units: **ppbv** Prep Date: **4/5/2019** RunNo: **50558**
Client ID: **LCSW** Batch ID: **R50558** Analysis Date: **4/5/2019** SeqNo: **992825**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	80.7	1.00	72.00	0	112	70	130				
Propylene	1.65	0.400	2.000	0	82.7	70	130				
Dichlorodifluoromethane (CFC-12)	2.26	0.400	2.000	0	113	70	130				
Chloromethane	2.10	0.500	2.000	0	105	70	130				
Dichlorotetrafluoroethane (CFC-114)	2.17	0.400	2.000	0	109	70	130				
Vinyl chloride	1.81	0.107	2.000	0	90.4	70	130				
1,3-Butadiene	1.93	0.500	2.000	0	96.4	70	130				
Bromomethane	2.01	0.500	2.000	0	100	70	130				
Trichlorofluoromethane (CFC-11)	2.29	0.400	2.000	0	115	70	130				
Chloroethane	1.88	0.400	2.000	0	94.1	70	130				
Acrolein	1.89	0.500	2.000	0	94.4	70	130				
1,1-Dichloroethene (DCE)	1.69	0.400	2.000	0	84.5	70	130				
Acetone	2.39	1.00	2.000	0	119	70	130				
Isopropyl Alcohol	2.49	1.00	2.000	0	124	70	130				
Methylene chloride	2.29	2.00	2.000	0	115	70	130				
Carbon disulfide	2.04	1.50	2.000	0	102	70	130				
trans-1,2-Dichloroethene	1.79	0.200	2.000	0	89.5	70	130				
Methyl tert-butyl ether (MTBE)	2.12	0.400	2.000	0	106	70	130				
n-Hexane	1.83	0.400	2.000	0	91.4	70	130				
1,1-Dichloroethane	1.95	0.200	2.000	0	97.4	70	130				
Vinyl acetate	2.14	1.00	2.000	0	107	70	130				
cis-1,2-Dichloroethene	2.08	0.200	2.000	0	104	70	130				
(MEK) 2-Butanone	2.05	1.00	2.000	0	103	70	130				
Ethyl acetate	1.71	1.00	2.000	0	85.3	70	130				
Chloroform	2.15	0.200	2.000	0	108	70	130				
Tetrahydrofuran	2.01	0.400	2.000	0	100	70	130				
1,1,1-Trichloroethane	2.02	0.400	2.000	0	101	70	130				
Carbon tetrachloride	2.20	0.0657	2.000	0	110	70	130				
1,2-Dichloroethane	2.33	0.200	2.000	0	117	70	130				
Benzene	1.76	0.0895	2.000	0	88.2	70	130				
Cyclohexane	1.88	0.400	2.000	0	93.9	70	130				

Work Order: 1904082
CLIENT: Orion Environmental Services
Project: Franciscan Health

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **LCS-R50558** SampType: **LCS** Units: **ppbv** Prep Date: **4/5/2019** RunNo: **50558**
Client ID: **LCSW** Batch ID: **R50558** Analysis Date: **4/5/2019** SeqNo: **992825**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	1.89	0.0649	2.000	0	94.4	70	130				
1,2-Dichloropropane	2.21	0.500	2.000	0	110	70	130				
Methyl methacrylate	1.92	0.400	2.000	0	96.1	70	130				
Dichlorobromomethane	2.17	0.300	2.000	0	108	70	130				
1,4-Dioxane	2.60	0.400	2.000	0	130	70	130				
cis-1,3-dichloropropene	2.27	0.400	2.000	0	113	70	130				
Toluene	1.99	0.400	2.000	0	99.4	70	130				
trans-1,3-dichloropropene	2.24	0.500	2.000	0	112	70	130				
1,1,2-Trichloroethane (TCA)	2.26	0.500	2.000	0	113	70	130				
Tetrachloroethene (PCE)	2.38	0.200	2.000	0	119	70	130				
Dibromochloromethane	2.39	0.500	2.000	0	119	70	130				
1,2-Dibromoethane (EDB)	2.23	0.200	2.000	0	112	70	130				
Chlorobenzene	2.11	0.200	2.000	0	106	70	130				
Ethylbenzene	1.85	0.400	2.000	0	92.7	70	130				
m,p-Xylene	3.50	0.800	4.000	0	87.5	70	130				
o-Xylene	1.68	0.400	2.000	0	83.8	70	130				
Styrene	1.63	0.400	2.000	0	81.7	70	130				
Bromoform	2.10	0.200	2.000	0	105	70	130				
1,1,2,2-Tetrachloroethane	2.21	0.300	2.000	0	110	70	130				
1,3,5-Trimethylbenzene	1.75	0.300	2.000	0	87.4	70	130				
1,2,4-Trimethylbenzene	1.66	0.300	2.000	0	83.1	70	130				
Benzyl chloride	1.88	0.500	2.000	0	94.0	70	130				
4-Ethyltoluene	1.78	0.400	2.000	0	88.9	70	130				
1,3-Dichlorobenzene	1.66	0.300	2.000	0	82.9	70	130				
1,4-Dichlorobenzene	1.60	0.300	2.000	0	79.8	70	130				
1,2-Dichlorobenzene	1.57	0.400	2.000	0	78.6	70	130				
1,2,4-Trichlorobenzene	1.97	0.300	2.000	0	98.6	70	130				
Hexachlorobutadiene	2.16	1.00	2.000	0	108	70	130				
Naphthalene	2.08	0.100	2.000	0	104	70	130				
2-Hexanone	2.49	1.00	2.000	0	124	70	130				
4-Methyl-2-pentanone (MIBK)	2.00	1.00	2.000	0	99.8	70	130				

Work Order: 1904082
CLIENT: Orion Environmental Services
Project: Franciscan Health

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **LCS-R50558**	SampType: **LCS**			Units: **ppbv**		Prep Date: **4/5/2019**		RunNo: **50558**			
Client ID: **LCSW**	Batch ID: **R50558**					Analysis Date: **4/5/2019**		SeqNo: **992825**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
CFC-113	2.24	0.400	2.000	0	112	70	130				
Heptane	1.94	0.400	2.000	0	96.8	70	130				
Surr: 4-Bromofluorobenzene	3.97		4.000		99.2	70	130				

Sample ID **MB-R50558**	SampType: **MBLK**			Units: **ppbv**		Prep Date: **4/5/2019**		RunNo: **50558**			
Client ID: **MBLKW**	Batch ID: **R50558**					Analysis Date: **4/5/2019**		SeqNo: **992834**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	ND	1.00									
Propylene	ND	0.400									
Dichlorodifluoromethane (CFC-12)	ND	0.400									
Chloromethane	ND	0.500									
Dichlorotetrafluoroethane (CFC-114)	ND	0.400									
Vinyl chloride	ND	0.107									
1,3-Butadiene	ND	0.500									
Bromomethane	ND	0.500									
Trichlorofluoromethane (CFC-11)	ND	0.400									
Chloroethane	ND	0.400									
Acrolein	ND	0.500									
1,1-Dichloroethene (DCE)	ND	0.400									
Acetone	ND	1.00									
Isopropyl Alcohol	ND	1.00									
Methylene chloride	ND	2.00									
Carbon disulfide	ND	1.50									
trans-1,2-Dichloroethene	ND	0.200									
Methyl tert-butyl ether (MTBE)	ND	0.400									
n-Hexane	ND	0.400									
1,1-Dichloroethane	ND	0.200									
Vinyl acetate	ND	1.00									
cis-1,2-Dichloroethene	ND	0.200									

Work Order: 1904082
CLIENT: Orion Environmental Services
Project: Franciscan Health

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **MB-R50558**	SampType: **MBLK**	Units: **ppbv**	Prep Date: **4/5/2019**	RunNo: **50558**
Client ID: **MBLKW**	Batch ID: **R50558**		Analysis Date: **4/5/2019**	SeqNo: **992834**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
(MEK) 2-Butanone	ND	1.00									
Ethyl acetate	ND	1.00									
Chloroform	ND	0.200									
Tetrahydrofuran	ND	0.400									
1,1,1-Trichloroethane	ND	0.400									
Carbon tetrachloride	ND	0.0657									
1,2-Dichloroethane	ND	0.200									
Benzene	ND	0.0895									
Cyclohexane	ND	0.400									
Trichloroethene (TCE)	ND	0.0649									
1,2-Dichloropropane	ND	0.500									
Methyl methacrylate	ND	0.400									
Dichlorobromomethane	ND	0.300									
1,4-Dioxane	ND	0.400									
cis-1,3-dichloropropene	ND	0.400									
Toluene	ND	0.400									
trans-1,3-dichloropropene	ND	0.500									
1,1,2-Trichloroethane (TCA)	ND	0.500									
Tetrachloroethene (PCE)	ND	0.200									
Dibromochloromethane	ND	0.500									
1,2-Dibromoethane (EDB)	ND	0.200									
Chlorobenzene	ND	0.200									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	0.800									
o-Xylene	ND	0.400									
Styrene	ND	0.400									
Bromoform	ND	0.200									
1,1,2,2-Tetrachloroethane	ND	0.300									
1,3,5-Trimethylbenzene	ND	0.300									
1,2,4-Trimethylbenzene	ND	0.300									
Benzyl chloride	ND	0.500									

Work Order: 1904082
CLIENT: Orion Environmental Services
Project: Franciscan Health

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID	MB-R50558	SampType:	MBLK			Units:	ppbv	Prep Date:	4/5/2019	RunNo:	50558	
Client ID:	MBLKW	Batch ID:	R50558					Analysis Date:	4/5/2019	SeqNo:	992834	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Ethyltoluene		ND	0.400									
1,3-Dichlorobenzene		ND	0.300									
1,4-Dichlorobenzene		ND	0.300									
1,2-Dichlorobenzene		ND	0.400									
1,2,4-Trichlorobenzene		ND	0.300									
Hexachlorobutadiene		ND	1.00									
Naphthalene		ND	0.100									
2-Hexanone		ND	1.00									
4-Methyl-2-pentanone (MIBK)		ND	1.00									
CFC-113		ND	0.400									
Heptane		ND	0.400									
Surr: 4-Bromofluorobenzene		3.51		4.000		87.7	70	130				

Sample ID	1904082-001AREP	SampType:	REP			Units:	ppbv	Prep Date:	4/5/2019	RunNo:	50558	
Client ID:	Room 3-01	Batch ID:	R50558					Analysis Date:	4/5/2019	SeqNo:	992873	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics		16.2	1.00						17.90	10.3	30	
Propylene		0.779	0.400						0.7873	1.02	30	
Dichlorodifluoromethane (CFC-12)		0.560	0.400						0.5605	0.0410	30	
Chloromethane		ND	0.500						0		30	
Dichlorotetrafluoroethane (CFC-114)		ND	0.400						0		30	
Vinyl chloride		ND	0.107						0		30	
1,3-Butadiene		ND	0.500						0		30	
Bromomethane		ND	0.500						0		30	
Trichlorofluoromethane (CFC-11)		ND	0.400						0		30	
Chloroethane		ND	0.400						0		30	
Acrolein		ND	0.500						0		30	
1,1-Dichloroethene (DCE)		ND	0.400						0		30	
Acetone		9.35	1.00						9.418	0.752	30	

Work Order: 1904082
CLIENT: Orion Environmental Services
Project: Franciscan Health

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **1904082-001AREP**	SampType: **REP**	Units: **ppbv**	Prep Date: **4/5/2019**	RunNo: **50558**
Client ID: **Room 3-01**	Batch ID: **R50558**		Analysis Date: **4/5/2019**	SeqNo: **992873**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropyl Alcohol	ND	1.00						0		30	
Methylene chloride	ND	2.00						0		30	
Carbon disulfide	ND	1.50						0		30	
trans-1,2-Dichloroethene	ND	0.200						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.400						0		30	
n-Hexane	ND	0.400						0		30	
1,1-Dichloroethane	ND	0.200						0		30	
Vinyl acetate	ND	1.00						0		30	
cis-1,2-Dichloroethene	ND	0.200						0		30	
(MEK) 2-Butanone	ND	1.00						0		30	
Ethyl acetate	ND	1.00						0		30	
Chloroform	ND	0.200						0		30	
Tetrahydrofuran	ND	0.400						0		30	
1,1,1-Trichloroethane	ND	0.400						0		30	
Carbon tetrachloride	0.0794	0.0657						0.07622	4.07	30	
1,2-Dichloroethane	ND	0.200						0		30	
Benzene	ND	0.0895						0		30	
Cyclohexane	ND	0.400						0		30	
Trichloroethene (TCE)	0.117	0.0649						0.1139	2.80	30	
1,2-Dichloropropane	ND	0.500						0		30	
Methyl methacrylate	ND	0.400						0		30	
Dichlorobromomethane	ND	0.300						0		30	
1,4-Dioxane	ND	0.400						0		30	
cis-1,3-dichloropropene	ND	0.400						0		30	
Toluene	0.462	0.400						0.4657	0.876	30	
trans-1,3-dichloropropene	ND	0.500						0		30	
1,1,2-Trichloroethane (TCA)	ND	0.500						0		30	
Tetrachloroethene (PCE)	ND	0.200						0		30	
Dibromochloromethane	ND	0.500						0		30	
1,2-Dibromoethane (EDB)	ND	0.200						0		30	
Chlorobenzene	ND	0.200						0		30	

Work Order: 1904082
CLIENT: Orion Environmental Services
Project: Franciscan Health

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **1904082-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **4/5/2019** RunNo: **50558**
Client ID: **Room 3-01** Batch ID: **R50558** Analysis Date: **4/5/2019** SeqNo: **992873**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	ND	0.400						0		30	
m,p-Xylene	ND	0.800						0		30	
o-Xylene	ND	0.400						0		30	
Styrene	ND	0.400						0		30	
Bromoform	ND	0.200						0		30	
1,1,2,2-Tetrachloroethane	ND	0.300						0		30	
1,3,5-Trimethylbenzene	ND	0.300						0		30	
1,2,4-Trimethylbenzene	ND	0.300						0		30	
Benzyl chloride	ND	0.500						0		30	
4-Ethyltoluene	ND	0.400						0		30	
1,3-Dichlorobenzene	ND	0.300						0		30	
1,4-Dichlorobenzene	ND	0.300						0		30	
1,2-Dichlorobenzene	ND	0.400						0		30	
1,2,4-Trichlorobenzene	ND	0.300						0		30	
Hexachlorobutadiene	ND	1.00						0		30	
Naphthalene	ND	0.100						0		30	
2-Hexanone	ND	1.00						0		30	
4-Methyl-2-pentanone (MIBK)	ND	1.00						0		30	
CFC-113	ND	0.400						0		30	
Heptane	ND	0.400						0		30	
Surr: 4-Bromofluorobenzene	3.96		4.000		99.1	70	130		0		

Fremont Analytical

Sample Log-In Check List

Client Name:	**ORIONES**	Work Order Number:	**1904082**
Logged by:	**Clare Griggs**	Date Received:	**4/5/2019 8:30:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☐	No ☑	NA ☐
		Air Samples		
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☐	NA ☑
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☐	No ☑	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☑	No ☐	NA ☐

Person Notified:	Donna McNeal	Date	4/5/2019
By Whom:	Clare Griggs	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	No analysis selected on COC.		
Client Instructions:	Same as 1809393. VOCs & Gas by TO15 SCAN		

19. Additional remarks:

Item Information

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Air Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 4/5/19 Page: 1 of: 1

Laboratory Project No (Internal): 1904082

Project Name: FRANCISCAN HEALTH

Special Remarks:

Project No:

Client: ORION

Address: 34004 9th AVE S A-5

Location: FAUNTLEROY

City, State, Zip: FEDERAL WAY

Collected by: CAROLE SENG

Telephone: 253-952-6717

Reports to (PM): DONNA McNEAL

Air samples are disposed of one week after report is submitted to client unless otherwise requested. ☐ OK to Dispose ☐ Hold (fees may apply)

Fax:

Email (PM): DMCNEAL@ORIONES.NET

	Sample Name	Canister / Flow Reg Serial #	Sample Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Internal: Initial Evacuation Pressure (mtorr)	Field Initial Sample Pressure (" Hg)	Field Final Sample Pressure (" Hg)	Analysis: VOCs TO15 SCAN	VOCs TO15 SCAN LL	VOCs TO15 SIM	Siloxanes TO15	Sulfur TO15	Sulfur Ext. TO15	APH TO15	Helium	Major Gases 3C		Comments	Internal: Final Pressure ("Hg)
1	ROOM 3 -01	12665	4/4/19 807	SOO	6L	24hr	10mtorr	30	11												-2
		FR8-20					3/4/2019	4/4	4/5												
2	STORAGE -02	10867	4/4/19 805	805	6L	24hr	10mtorr	30	12												-2
		FR8-01					3/4/2019	4/4	4/5												
3	STORAGE -03	15423	4/4/19 805	400	6L	8hr	10mtorr	30	13												-6
		FR8-12					4/3/2019	4/4	4/4												
4	ROOM 3 -04	12668	4/4/19 807	405	6L	8hr	10mtorr	30	15												-8
		FR8-02					4/3/2019	4/4	4/4												
5																					

* Matrix Codes: AA = Ambient Air IA = Indoor Air L = Landfill S = Subslab / Soil Gas

** Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister CYL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished x [signature] Date/Time 4/5/19 825

Relinquished x Date/Time

Received x [signature] Date/Time 4/5/19 0830

Received x Date/Time

Turn-Around Time:

- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)