LANGAN TREADWELL ROLLO

Memorandum

555 Montgomery Street, Suite 1300 San Francisco, CA 94111 T: 415.955.5200 F: 415.955.5201

TO: Max Shahbazian, PG
Regional Water Quality Control Board, San Francisco Bay Region

Melanie Morash
United States Environmental Protection Agency

CC: Hector Vargas, Jon Weisberg and Elma Fung, Texas Instruments Incorporated

Shaun Moore and Heather O'Cleirigh, Advanced Micro Devices Inc.
Peter Bennett, Haley & Aldrich

FROM: Joshua Graber, Senior Project Manager
Dorinda Shipman, Principal, PG, CHG

DATE: 24 April 2015

PROJECT: Off-Property Vapor Intrusion Assessment
Buildings SU3-1
Sunnyvale, California
Project Number: 750620720

SUBJECT: Results of Indoor Air Testing at Buildings SU3-1, February and March 2015

Langan Treadwell Rollo (Langan), on behalf of Texas Instruments (TI) and Advanced Micro Devices (AMD), has completed indoor, pathway and ambient air testing for the building identified as SU3-1 (site) in our *Work Plan for Off-Property Vapor Intrusion Assessment, National Semiconductor and Monolithic Memories Superfund Sites Operable Unit 1, Subunits 1 and 3* dated 28 August 2014 (Work Plan). The sampling and analysis were conducted in general accordance with our Work Plan and *Addendum to Work Plan for Off-Property Vapor Intrusion Assessment, Building SU3-1, Sunnyvale, California* dated 23 February 2015 (Work Plan Addendum).

Building and Area Description

Building SU3-1 is zoned in a commercial/industrial area of Sunnyvale, California (Figure 1). The single-story building is constructed with a slab-on-grade and is approximately 12,000 square feet in area. The building is occupied by a retail banking branch office. The center of the building consists of the banking lobby and banking operations. The remainder of the building consists of storage rooms, janitor closets, conference rooms, restrooms, an employee break/lunch room, and a vault and safe deposit box area. Based on sampling data obtained during the 2014 groundwater monitoring event, groundwater is expected to be present at approximately 9 to 11

feet below ground surface with trichloroethene (TCE) concentrations beneath the building likely ranging from 100 to 200 micrograms/liter (µg/L).

Summary of Sampling Method/Approach

A building survey and inventory was completed at Building SU3-1 on 11 February 2015 by Langan personnel in the presence of a United States Environmental Protection Agency (USEPA) representative, Melanie Morash. The building surveys consisted of building walk-throughs with a part per billion (ppb) level photoionization detector (PID) to determine if specific areas contained measureable or elevated concentrations of volatile organic compounds (VOCs) or if building slab penetrations were possibly acting as preferential pathways for vapor intrusion. Potential preferential pathways may include: gaps and cracks in building foundations, slab penetrations (such as piping and utility lines), floor drains, elevators, sumps, fire suppression lines, crawl spaces, and sanitary sewer cleanouts. The following potential preferential pathways were identified during the building survey:

- One floor drain in the restroom on the southern side of the building;
- One floor drain and one clean-out in the janitorial/storage room;
- One floor drain and one sanitary sewer clean-out in the men's restroom;
- One floor drain in the women's restroom; and
- Electrical and communication conduit penetrations in the janitorial and storage rooms.

As described in the Work Plan Addendum, two types of air sample locations were identified during the building walk-throughs: 1) indoor air (IA); and 2) pathway air samples (PS). The IA samples (identified in Table 1 with an 'IA' in the sample designation) were collected from building areas that are normally occupied throughout the day during working hours (i.e. offices, work cubicles and production areas). Pathway samples (identified in Table 1 with a 'PS' in the sample designation) were collected from areas not normally occupied for an 8-hour period (i.e. storage rooms and bathrooms). The proposed sample locations and sampling rationale were approved by the Regional Water Quality Control Board, San Francisco Bay Region (Water Board) and the USEPA prior to conducting the sampling.

Due to the multitude of influences on indoor air quality, one ambient air (AA) sample was collected on the same day as the indoor air and pathway samples were collected. For the purposes of field quality assurance/quality control (QA/QC), one field duplicate sample (DUP) was collected on the same day as the indoor air and pathway samples were collected.

A summary of the air samples collected and the location from which they were collected is presented in Table 1. Air samples were collected in summa canisters over an 8-hour period on 27 February 2015 and 1 March 2015, when the HVAC system was on and off[1], respectively.

[1] HVAC units were turned off at least 36 hours prior to starting sample collection with HVAC off.

Due to roof accessibility issues, ambient air samples were collected near ground level. A total of six samples were collected from SU3-1 on each day. Sample locations are shown on Figure 2. Photographs taken at the time of air sampling are presented in Appendix A.

Following sample collection, summa canisters were delivered to Eurofins, a State of California certified laboratory for analysis of selected VOCs using method TO-15 analysis with selective ion monitoring (SIM). Certified laboratory reports and chain-of-custody records are presented in Appendix B.

Screening Criteria

Indoor air sample results were compared to both the USEPA's Industrial Air Regional Screening Levels (RSLs) (revised in January 2015) and the Water Board's Commercial/Industrial Land Use Environmental Screening Levels (ESLs) (revised in December 2013). Both the Water Board ESLs and USEPA RSLs are calculated using standard exposure assumptions and published toxicity values. These screening values are calculated assuming a target incremental lifetime cancer risk of 10^{-6} (i.e., one-in-a-million) and/or a target non-cancer hazard index of 1.

TCE results were also compared to the USEPA's interim accelerated Response Action Level (RAL), as defined in Table 2. USEPA recommends the use of the interim TCE indoor air accelerated RAL of 7 micrograms per cubic meter (µg/m^3) for a 10-hour Commercial/Industrial workday.

Indoor and Pathway Air Sample Results

The locations of air samples collected at Building SU3-1 are shown on Figure 2 and the detected results are presented in Table 2.

<u>Findings - HVAC On</u>

- TCE was not detected above Water Board ESLs, USEPA RSLs or RALs in any of the samples collected. TCE concentrations ranged from less than 0.13 to 1.3 µg/m^3 in indoor air samples and was detected at concentrations of 0.74 and 2.0 µg/m^3 in pathway samples PS-2 (collected from the Men's bathroom) and PS-1 (collected from the janitor's room/closet), respectively.

- 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113), chloroethane, ethylbenzene, methylene chloride, tetrachloroethene (PCE), trichlorofluoromethane, toluene and xylenes were detected at or above laboratory reporting limits but below their respective Water Board ESLs and USEPA RSLs with concentrations ranging from 0.083 to 1.6 µg/m^3.

- Chloroform was detected in one pathway air sample (SU3-1-PS1-2015-02-27) at a concentration of 0.55 µg/m^3, which is slightly above the USEPA's RSL (0.53 µg/m^3), but is below the Water Board's ESL (2.3 µg/m^3). All other chloroform detections were below both the Water Board ESL and USEPA RSL.

- All other VOC concentrations were below their respective Water Board ESLs and USEPA RSLs.

Findings - HVAC Off

- TCE was not detected above Water Board ESLs, USEPA RSLs or RALs in any samples collected. TCE concentrations ranged from 1.8 to 2.2 µg/m^3 in indoor air samples and was detected at concentrations of 1.8 and 1.9 µg/m^3 in pathway samples PS-2 (collected from the Men's bathroom) and PS-1 (collected from the janitor's room/closet), respectively.

- 1,1,1-Trichloroethane (1,1,1-TCA), Freon 113, 1,2-dichloroethane (1,2-DCA), cis-1,2-dichloroethene (cis-1,2-DCE), ethylbenzene, methylene chloride, toluene, trans-1,2-dichloroethenetoluene (trans-1,2-DCE), trichlorofluoromethane, and xylenes were detected at or above laboratory reporting limits but below their respective Water Board ESLs and USEPA RSLs with concentrations ranging from 0.1 to 5.3 µg/m^3.

- Chloroform was detected in one pathway air sample collected from the janitor's room/closet (SU3-1-PS1-2015-03-01,) at a concentration of 0.91 µg/m^3, which is above the USEPA RSL of 0.53 µg/m^3, but below its Water Board ESL of 2.3 µg/m^3. All other chloroform detections were below both the ESL and RSL.

- PCE was detected in one indoor air sample (SU3-1-IA2-2015-03-01) at a concentration of 2.7 µg/m^3, which is slightly above the Water Board ESL of 2.1 µg/m^3, but below the USEPA RSL of 47 µg/m^3. Since PCE was detected in all other indoor air and pathway samples at very low concentrations ranging from 0.2 to 0.31 µg/m^3, which are all significantly below both the Water Board ESL and USEPA RSL, we believe this result is associated with an indoor source. As another point of comparison, PCE was not detected above the laboratory reporting limit of 0.17 µg/m^3 in any indoor air samples, including at the IA-2 location, with HVAC systems operating.

- All other VOC concentrations were below their respective Water Board ESLs and USEPA RSLs.

Ambient Air Sample Results

Two ambient samples (SU3-1-AA1-2015-02-27 and SU3-1-AA1-2015-03-01) were collected on 27 February 2015 and 1 March 2015. Freon 113, 1,2-DCA, chloroethane, chloroform, methylene chloride, PCE, toluene, trichlorofluoromethane and xylenes were detected at or above laboratory reporting limits in one or both ambient samples with concentrations ranging from 0.066 to 1.5 µg/m^3. All detected VOCs were below their respective ESLs and RSLs.

Discussion and Recommendations

No compounds, with the exception of chloroform, were detected above the Water Board's Commercial/Industrial Land Use ESL, the USEPA's Industrial Air RSLs or RALs in any indoor air or pathway samples collected with the HVAC systems operating normally. Low levels of chloroform were detected in pathway air samples from the janitorial closet (PS-1) during both HVAC on and off events. Chloroform was detected at 0.55 µg/m^3 with the HVAC on and 0.91 µg/m^3 with the HVAC off. Chloroform concentrations in indoor air are known to be associated with off-gassing from municipal water supplies, which is the likely source of chloroform in the pathway samples considering that there is a janitorial sink at this location. Furthermore, chloroform is generally not detected in nearby upgradient and downgradient groundwater monitoring wells 101A, 103A, LF21, MM37A (Figure 1) and therefore, is not likely associated with vapor intrusion. The chloroform detections are likely attributable to off-gassing from the municipal water supply at the janitorial sink.

PCE was detected slightly above its Water Board ESL at a concentration of 2.7 µg/m^3 in one indoor air sample (IA-2) when the HVAC system was off. In all other indoor air and pathway sample locations with HVAC off, PCE was detected at very low concentrations between 0.2 to 0.31 µg/m^3. It should also be noted that PCE was not detected above the laboratory detection limit of 0.17 µg/m^3 in any of the indoor air samples (including the sample collected from IA-2) with HVAC units operating. Also of note, is that HVAC off PCE concentrations at all locations, except IA-2, were only slightly elevated (generally less than 0.1 µg/m^3 increases) relative to their corresponding HVAC on concentrations. Additionally, 2014 groundwater monitoring results, show that PCE was not detected in nearby upgradient and downgradient groundwater monitoring wells 101A, LF21 and MM37A). PCE has generally been either either non-detect or less than 5 µg/L at these locations previously. PCE has been detected in well 103A at less than 5 µg/L since 2004 and was detected at 2.8 µg/L in 2014. This suggests that the elevated PCE HVAC off concentration detected at IA-2 is associated with an indoor source.

According to the Agency for Toxic Substance and Disease Registry (ATSDR), PCE is a manufactured chemical that is widely used for dry cleaning of fabrics and for metal-degreasing. It is also used to make other chemicals and is used in some consumer products. Considering the ASTDR information along with the aforementioned very low concentrations of PCE in groundwater and low PCE concentrations in pathway samples (all PCE concentrations in pathway samples equal to or less than the PCE concentration in ambient air sample AA1-2015-03-01), an indoor air source, perhaps related to dry-cleaned clothing or cleaning products, is a more likely explanation for the PCE concentration at IA-2 versus vapor intrusion from groundwater.

With HVAC systems operating normally, there were no Water Board ESL exceedances and the only USEPA RSL exceedance was chloroform in a pathway sample located inside a janitorial closet, which can be attributed to off-gassing of municipal water. Therefore, we conclude that there is not a significant risk to building occupants under the normal HVAC operating condition.

Because PCE was detected with the HVAC system off at a concentration above the ESL in sample IA-2, a summer sampling event is recommended with HVAC off.

Attachments: Table 1 – Sampling and Analysis Plan
Table 2 – Summary of Analytical Results
Figure 1 – Site location
Figure 2 – Site Plan
Appendix A – Photographs
Appendix B – Laboratory Analytical Reports

750620724.05 JDG

TABLES

Table 1
Sample Summary
Building SU3-1
Sunnyvale, CA

Sample ID	Location Notes	HVAC On	HVAC Off
Indoor Air Samples			
SU3-1-IA1-2015-02-27 SU3-1-IA1-2015-03-01	Near Investment Consulting Area	X	X
SU3-1-IA2-2015-02-27 SU3-1-IA2-2015-03-01	Near Operations and Vault Area	X	X
SU3-1-DUP1-2015-02-27 SU3-1-DUP1-2015-03-01	IA-1 Duplicate	X	X
Pathway Samples			
SU3-1-PS1-2015-02-27 SU3-1-PS1-2015-03-01	In Janitor's Storage Room	X	X
SU3-1-PS2-2015-02-27 SU3-1-PS2-2015-03-01	In Men's Restroom	X	X
Ambient Samples			
SU3-1-AA1-2015-02-27 SU3-1-AA1-2015-03-01	Near southwest emergency exit	X	X
	Subtotal	6	6
	Total	12	

Notes:
HVAC - heating, ventilation, and air conditioning

Table 2
Indoor, Pathway and Ambient Air Analytical Results
Building SU3-1
Sunnyvale, California

Chemical of Concern	Sample Date	1,1,1-TCA	1,1,2-Trichloro-1,2,2-Trifluoroethane	1,2-DCA	Chloro-ethane	Chloroform	cis-1,2-DCE	trans-1,2-DCE	Ethyl-benzene	Methylene Chloride	PCE	Toluene	TCE [1]	Trichlorofluoro-methane	m- and p-Xylenes	o-xylene	Total Xylenes	All Other VOCs
Unit		µg/m3																
ESL Indoor Air Commercial Land Use		**21,900**	**NE**	**0.58**	**131,400**	**2.3**	**31**	**263**	**4.9**	**26**	**2.1**	**1,314**	**3**	**NE**	**438**	**438**	**438**	**--**
RSL Air Industrial		**22,000**	**130,000**	**0.47**	**44,000**	**0.53**	**NE**	**NE**	**4.9**	**1,200**	**47**	**22,000**	**3**	**3,100**	**440**	**440**	**440**	**--**
HVAC On																		
SU3-1-IA1-2015-02-27	2/27/2015	< 0.14	0.65	< 0.1	< 0.066	0.16	< 0.099	< 0.099	0.13	0.38	< 0.17	0.77	1.3	1.1	0.36	0.19	0.6	ND
SU3-1-DUP1-2015-02-27	2/27/2015	< 0.14	0.68	< 0.1	0.083	0.2	< 0.099	< 0.099	0.19	0.48	< 0.17	1.1	1.4	1.3	0.51	0.25	0.8	ND
SU3-1-IA2-2015-02-27	2/27/2015	< 0.14	0.56	< 0.1	< 0.066	< 0.12	< 0.099	< 0.099	0.15	0.5	< 0.17	0.83	< 0.13	1.2	0.4	0.16	0.6	ND
SU3-1-PS1-2015-02-27	2/27/2015	< 0.14	0.65	< 0.1	< 0.066	0.55	< 0.099	< 0.099	0.24	0.54	0.24	1.6	2	1.2	0.74	0.34	1.1	ND
SU3-1-PS2-2015-02-27	2/27/2015	< 0.14	0.61	< 0.1	< 0.066	0.22	< 0.099	< 0.099	0.22	0.47	0.2	1.4	0.74	1.2	0.7	0.33	1.0	ND
SU3-1-AA1-2015-02-27	2/27/2015	< 0.14	0.67	0.10	0.066	< 0.12	< 0.099	< 0.099	< 0.11	0.45	< 0.17	0.59	< 0.13	1.5	0.29	0.13	0.4	ND
HVAC Off																		
SU3-1-IA1-2015-03-01	3/1/2015	0.28	0.69	< 0.1	< 0.066	0.37	< 0.099	< 0.099	0.4	0.65	0.2	2.7	1.8	1.4	1.1	0.54	1.6	ND
SU3-1-DUP1-2015-03-01	3/1/2015	0.29	0.68	< 0.1	< 0.066	0.37	< 0.099	< 0.099	0.4	0.22	0.26	2.6	2	1.3	1	0.57	1.6	ND
SU3-1-IA2-2015-03-01	3/1/2015	0.33	0.73	0.11	< 0.066	0.44	< 0.099	< 0.099	0.43	5.3	**2.7**	3.5	2.2	1.4	1.2	0.63	1.8	ND
SU3-1-PS1-2015-03-01	3/1/2015	0.62	0.7	0.1	< 0.066	0.91	< 0.099	< 0.099	0.71	0.61	0.31	4	1.9	1.4	1.7	0.7	2.4	ND
SU3-1-PS2-2015-03-01	3/1/2015	0.25	0.71	0.31	< 0.066	0.35	0.14	0.21	0.53	0.57	0.22	3.1	1.8	1.5	3.1	0.9	4	ND
SU3-1-AA1-2015-03-01	3/1/2015	< 0.14	0.55	< 0.1	< 0.066	0.16	< 0.099	< 0.099	< 0.11	0.35	0.31	0.51	< 0.13	1.2	0.3	0.12	0.42	ND

Notes:

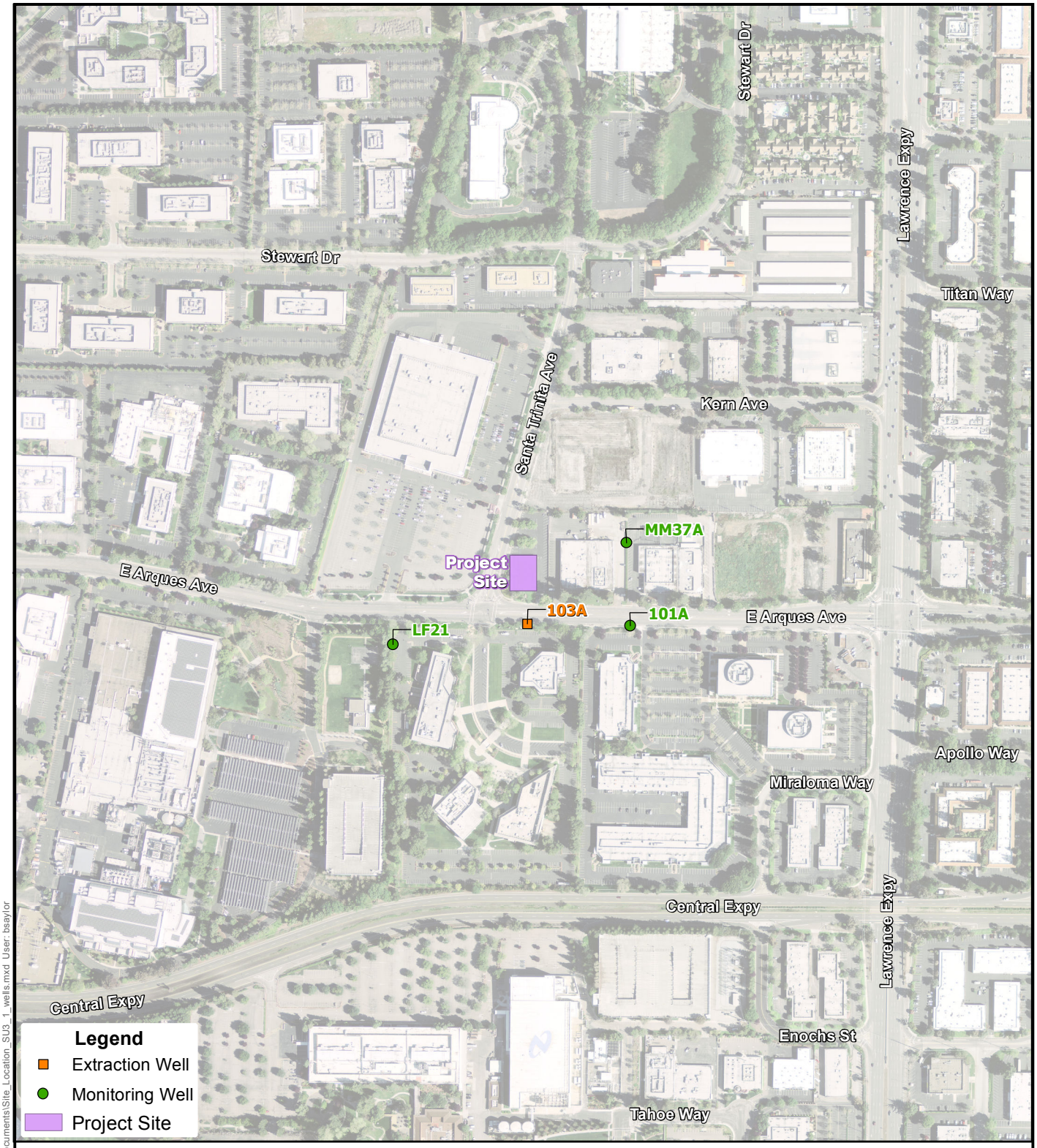
1 - USEPA recommends the use of interim indoor air accelerated Response Action Level (RAL) for TCE inhalation exposure from subsurface vapor intrusion. The Commercial/Industrial acclerated RALs for a 10 hour work day is 7 $\mu g/m^3$.
µg/m3 - Micrograms per cubic meter
< Compound not detected above reporting limit
ESL: Environmental Screening Level. San Francisco Bay Regional Water Quality Control Board (Water Board)
RSL: Regional Screening Level. United States Environmental Protection Agency (USEPA)
ND - Not detected. Compounds not detected included chlorobenzene, 1,2,4-TCB, MTBE, 1,3-DCB, vinyl chloride, 1,1-DCA, 1,1-DCE, 1,1,2-TCA, 1,2,3-TCB, 1,2-DCB, and 1,4-DCB. Non-detect results ranged from less than 0.026 to 0.19 µg/m3.
NE - Not established

1,2,3-TCB: 1,2,3-trichlorobenzene
1,2,4-TCB: 1,2,4-trichlorobenzene
1,2-DCB: 1,2-dichlorobenzene
1,3-DCB: 1,3-dichlorobenzene
1,4-DCB: 1,4-dichlorobenzene
MTBE: methyl tert-butyl ether
1,1,1-TCA: 1,1,1-trichloroethane
1,1,2-TCA: 1,1,2-trichloroethane
1,2-DCA: 1,2-dichloroethane
1,1-DCA: 1,1-dichloroethane
1,1,2-Trichloro-1,2,2-Trifluoroethane: Freon 113
PCE: tetrachloroethene
TCE: trichloroethene
cis-1,2-DCE: cis-1,2-dichloroethene
trans-1,2-DCE: trans-1,2-dichloroethene
1,1-DCE: 1,1-dichloroethene

Exceedance Summary:

10 - Result Exceeds ESL Indoor Air Commercial Land Use
10 - Result Exceeds RSL Air Industrial

FIGURES



Notes:

1. Aerial Orthophoto mosaic is provided by Santa Clara County and the United States Geological Survey (USGS). Imagery was captured in April, 2011.
2. Map displayed in California State Plane Coordinate System, Zone III, North American Datum of 1983 (NAD83), US Survey Feet.
3. All locations are considered accurate.

0 250 500 1,000
Feet

N

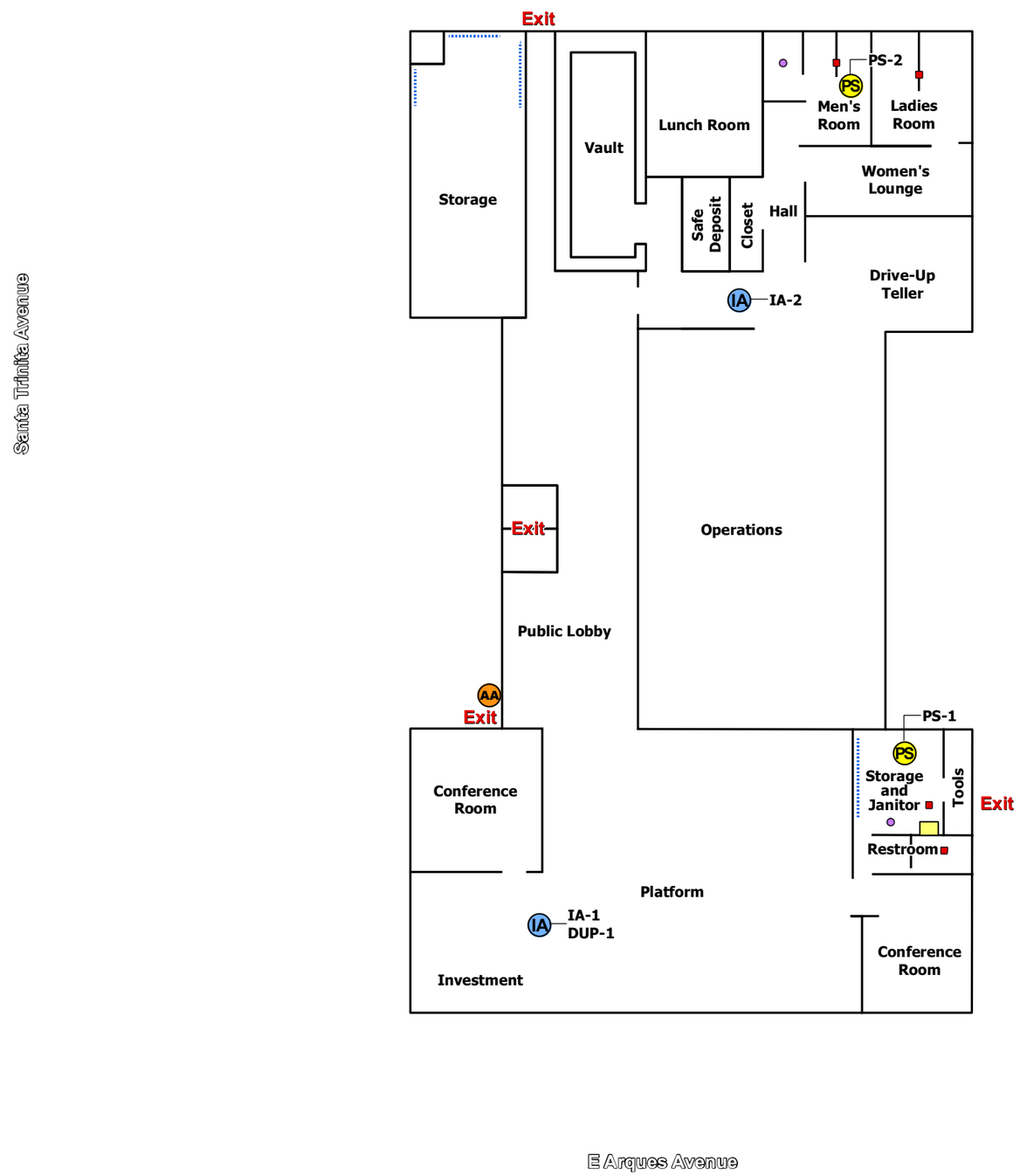
BUILDING SU3-1
Sunnyvale, California

SITE LOCATION MAP

LANGAN TREADWELL ROLLO

Date 4/1/2015	Project 750620720	Figure 1

\\langan.com\data\OA\data7\750620720\ArcGIS\ArcMap_Documents\Site_Location_SU3_1_wells.mxd User: bsaylor



Legend

- Ambient Air
- Indoor Air
- Pathway Sample
- Clean out
- Floor Drain
- Sink
- Wall
- Conduit Penetrations
- Building Footprint

Notes:

1. Digitized from building evacuation map. No guarantee to accuracy or current layout.
2. Map displayed in California State Plane Coordinate System , Zone III, North American Datum of 1983 (NAD83) , US Survey Feet.

0 7.5 15 30
Feet

BUILDING SU3-1
Sunnyvale, California

SAMPLING LOCATIONS

Date 4/10/2015	Project 750620724	Figure 2

LANGAN TREADWELL ROLLO

\\langan.com\data\OA\data\750620724\ArcGIS\ArcMap_Documents\Building_SU3_1_FloorPlan.mxd User: bsaylor

APPENDIX A

PHOTOGRAPHS

IA-1 Location

IA-2 Location

PS-1 location – Janitorial room

PS-2 location – Men's room

AA-1 located on west side of building

APPENDIX B

LABORATORY ANALYTICAL REPORTS

eurofins | Calscience

WORK ORDER NUMBER: 15-03-0109

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Treadwell & Rollo - A Langan Company

Client Project Name: TI SU3-1

Attention: Joshua Graber
555 Montgomery St., Suite 1300
San Francisco, CA 94111-2554

Vikas Patel

Approved for release on 03/11/2015 by:
Vikas Patel
Project Manager

ResultLink

Email your PM

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

eurofins | Calscience

Contents

Client Project Name: TI SU3-1
Work Order Number: 15-03-0109

1 Work Order Narrative. 3

2 Sample Summary. 4

3 Detections Summary. 5

4 Client Sample Data. 7
4.1 EPA TO-15 SIM (Air). 7

5 Quality Control Sample Data. 16
5.1 LCS/LCSD. 16

6 Summa Canister Vacuum Summary. 19

7 Sample Analysis Summary. 20

8 Glossary of Terms and Qualifiers. 21

9 Chain-of-Custody/Sample Receipt Form. 22

eurofins | Calscience

Work Order Narrative

Work Order: 15-03-0109 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/03/15. They were assigned to Work Order 15-03-0109.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Return to Contents

eurofins | Calscience

Sample Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order:	15-03-0109
		Project Name:	TI SU3-1
		PO Number:	
		Date/Time Received:	03/03/15 10:30
		Number of Containers:	6
Attn:	Joshua Graber		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SU3-1-IA1-2015-02-27	15-03-0109-1	02/27/15 17:55	1	Air
SU3-1-IA2-2015-02-27	15-03-0109-2	02/27/15 18:25	1	Air
SU3-1-DUP1-2015-02-27	15-03-0109-3	02/27/15 17:55	1	Air
SU3-1-PS1-2015-02-27	15-03-0109-4	02/27/15 18:05	1	Air
SU3-1-PS2-2015-02-27	15-03-0109-5	02/27/15 18:10	1	Air
SU3-1-AA1-2015-02-27	15-03-0109-6	02/27/15 18:30	1	Air

Return to Contents

eurofins | Calscience

Detections Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order: Project Name: Received:	15-03-0109 TI SU3-1 03/03/15
Attn:	Joshua Graber		

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SU3-1-IA1-2015-02-27 (15-03-0109-1)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.65		0.19	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.16		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.13		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.38		0.087	ug/m3	EPA TO-15 SIM	N/A
Toluene	0.77		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.3		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.1		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.19		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.36		0.11	ug/m3	EPA TO-15 SIM	N/A
SU3-1-IA2-2015-02-27 (15-03-0109-2)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.56		0.19	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.15		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.50		0.087	ug/m3	EPA TO-15 SIM	N/A
Toluene	0.83		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.2		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.16		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.40		0.11	ug/m3	EPA TO-15 SIM	N/A
SU3-1-DUP1-2015-02-27 (15-03-0109-3)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.68		0.19	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.083		0.066	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.20		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.19		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.48		0.087	ug/m3	EPA TO-15 SIM	N/A
Toluene	1.1		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.4		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.3		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.25		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.51		0.11	ug/m3	EPA TO-15 SIM	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order: Project Name: Received:	15-03-0109 TI SU3-1 03/03/15
Attn:	Joshua Graber		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SU3-1-PS1-2015-02-27 (15-03-0109-4)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.65		0.19	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.55		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.24		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.54		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.24		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	1.6		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	2.0		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.2		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.34		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.74		0.11	ug/m3	EPA TO-15 SIM	N/A
SU3-1-PS2-2015-02-27 (15-03-0109-5)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61		0.19	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.22		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.22		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.47		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.20		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	1.4		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.74		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.2		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.33		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.70		0.11	ug/m3	EPA TO-15 SIM	N/A
SU3-1-AA1-2015-02-27 (15-03-0109-6)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.67		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.10		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.066		0.066	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.45		0.087	ug/m3	EPA TO-15 SIM	N/A
Toluene	0.59		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.13		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.29		0.11	ug/m3	EPA TO-15 SIM	N/A

Subcontracted analyses, if any, are not included in this summary.

Return to Contents

* MDL is shown

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI SU3-1			Page 1 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-IA1-2015-02-27	**15-03-0109-1-A**	**02/27/15 17:55**	**Air**	**GC/MS DD**	**N/A**	**03/05/15 01:37**	**150304L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.65	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.16	0.12	1.00	
Ethylbenzene	0.13	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.38	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	0.77	0.19	1.00	
Trichloroethene	1.3	0.13	1.00	
Trichlorofluoromethane	1.1	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	0.19	0.11	1.00	
p/m-Xylene	0.36	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	95	37-163	
1,4-Bromofluorobenzene	97	45-153	
Toluene-d8	108	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI SU3-1			Page 2 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-IA2-2015-02-27	**15-03-0109-2-A**	**02/27/15 18:25**	**Air**	**GC/MS HH**	**N/A**	**03/09/15 19:41**	**150309L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.56	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	ND	0.12	1.00	
Ethylbenzene	0.15	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.50	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	0.83	0.19	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	1.2	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	0.16	0.11	1.00	
p/m-Xylene	0.40	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	97	37-163	
1,4-Bromofluorobenzene	107	45-153	
Toluene-d8	95	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI SU3-1			Page 3 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-DUP1-2015-02-27	**15-03-0109-3-A**	**02/27/15 17:55**	**Air**	**GC/MS HH**	**N/A**	**03/10/15 15:58**	**150310L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.68	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	0.083	0.066	1.00	
Chloroform	0.20	0.12	1.00	
Ethylbenzene	0.19	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.48	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	1.1	0.19	1.00	
Trichloroethene	1.4	0.13	1.00	
Trichlorofluoromethane	1.3	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	0.25	0.11	1.00	
p/m-Xylene	0.51	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	101	37-163	
1,4-Bromofluorobenzene	104	45-153	
Toluene-d8	105	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI SU3-1			Page 4 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-PS1-2015-02-27	**15-03-0109-4-A**	**02/27/15 18:05**	**Air**	**GC/MS HH**	**N/A**	**03/09/15 20:32**	**150309L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.65	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.55	0.12	1.00	
Ethylbenzene	0.24	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.54	0.087	1.00	
Tetrachloroethene	0.24	0.17	1.00	
Toluene	1.6	0.19	1.00	
Trichloroethene	2.0	0.13	1.00	
Trichlorofluoromethane	1.2	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	0.34	0.11	1.00	
p/m-Xylene	0.74	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	105	45-153	
Toluene-d8	102	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI SU3-1			Page 5 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-PS2-2015-02-27	**15-03-0109-5-A**	**02/27/15 18:10**	**Air**	**GC/MS HH**	**N/A**	**03/09/15 21:23**	**150309L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.22	0.12	1.00	
Ethylbenzene	0.22	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.47	0.087	1.00	
Tetrachloroethene	0.20	0.17	1.00	
Toluene	1.4	0.19	1.00	
Trichloroethene	0.74	0.13	1.00	
Trichlorofluoromethane	1.2	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	0.33	0.11	1.00	
p/m-Xylene	0.70	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	96	37-163	
1,4-Bromofluorobenzene	108	45-153	
Toluene-d8	96	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI SU3-1			Page 6 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-AA1-2015-02-27	**15-03-0109-6-A**	**02/27/15 18:30**	**Air**	**GC/MS HH**	**N/A**	**03/09/15 22:18**	**150309L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.67	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	0.10	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	0.066	0.066	1.00	
Chloroform	ND	0.12	1.00	
Ethylbenzene	ND	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.45	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	0.59	0.19	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	1.5	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	0.13	0.11	1.00	
p/m-Xylene	0.29	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	107	37-163	
1,4-Bromofluorobenzene	108	45-153	
Toluene-d8	111	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI SU3-1			Page 7 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-168**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**03/04/15 22:50**	**150304L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	ND	0.12	1.00	
Ethylbenzene	ND	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	ND	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	ND	0.19	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	ND	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	ND	0.11	1.00	
p/m-Xylene	ND	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	96	37-163	
1,4-Bromofluorobenzene	91	45-153	
Toluene-d8	99	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI SU3-1			Page 8 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-167**	**N/A**	**Air**	**GC/MS HH**	**N/A**	**03/09/15 17:57**	**150309L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	ND	0.12	1.00	
Ethylbenzene	ND	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	ND	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	ND	0.19	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	ND	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	ND	0.11	1.00	
p/m-Xylene	ND	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	97	37-163	
1,4-Bromofluorobenzene	105	45-153	
Toluene-d8	105	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI SU3-1			Page 9 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-169**	**N/A**	**Air**	**GC/MS HH**	**N/A**	**03/10/15 14:12**	**150310L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	ND	0.12	1.00	
Ethylbenzene	ND	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	ND	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	ND	0.19	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	ND	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	ND	0.11	1.00	
p/m-Xylene	ND	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	99	37-163	
1,4-Bromofluorobenzene	101	45-153	
Toluene-d8	106	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Quality Control - LCS/LCSD

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: TI SU3-1			Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-168	**LCS**	**Air**	**GC/MS DD**	**N/A**	**03/04/15 18:54**	**150304L01**
099-15-214-168	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**03/04/15 19:44**	**150304L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,1-Trichloroethane	2.728	2.378	87	2.428	89	50-150	33-167	2	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.722	97	3.737	98	50-150	33-167	0	0-30	
1,1,2-Trichloroethane	2.728	2.557	94	2.575	94	27-171	3-195	1	0-38	
1,1-Dichloroethane	2.024	1.880	93	1.900	94	50-150	33-167	1	0-30	
1,1-Dichloroethene	1.982	1.972	99	1.970	99	50-150	33-167	0	0-30	
1,2-Dichloroethane	2.024	1.903	94	1.887	93	28-166	5-189	1	0-40	
Chlorobenzene	2.302	2.175	94	2.215	96	50-150	33-167	2	0-30	
Chloroethane	1.319	1.179	89	1.150	87	50-150	33-167	3	0-30	
Chloroform	2.441	2.219	91	2.251	92	50-150	33-167	1	0-30	
Ethylbenzene	2.171	2.264	104	2.176	100	27-153	6-174	4	0-46	
Methyl-t-Butyl Ether (MTBE)	1.803	1.568	87	1.677	93	50-150	33-167	7	0-30	
Methylene Chloride	1.737	1.609	93	1.598	92	50-150	33-167	1	0-30	
Tetrachloroethene	3.391	2.941	87	3.146	93	34-154	14-174	7	0-33	
Toluene	1.884	1.688	90	1.932	103	28-154	7-175	13	0-42	
Trichloroethene	2.687	2.467	92	2.512	93	43-139	27-155	2	0-31	
Trichlorofluoromethane	2.809	2.459	88	2.446	87	50-150	33-167	1	0-30	
Vinyl Chloride	1.278	1.126	88	1.173	92	44-140	28-156	4	0-33	
c-1,2-Dichloroethene	1.982	1.871	94	1.858	94	35-165	13-187	1	0-35	
o-Xylene	2.171	2.270	105	2.250	104	22-160	0-183	1	0-48	
p/m-Xylene	4.342	4.606	106	4.642	107	21-165	0-189	1	0-51	
t-1,2-Dichloroethene	1.982	1.799	91	1.790	90	50-150	33-167	1	0-30	
1,2,3-Trichlorobenzene	3.711	3.968	107	4.278	115	50-150	33-167	8	0-30	

Total number of LCS compounds: 22
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Return to Contents

eurofins | Calscience

Quality Control - LCS/LCSD

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: TI SU3-1			Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-167	**LCS**	**Air**	**GC/MS HH**	**N/A**	**03/09/15 15:20**	**150309L02**
099-15-214-167	**LCSD**	**Air**	**GC/MS HH**	**N/A**	**03/09/15 16:11**	**150309L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,1-Trichloroethane	2.728	2.876	105	2.909	107	50-150	33-167	1	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.763	98	3.845	100	50-150	33-167	2	0-30	
1,1,2-Trichloroethane	2.728	2.625	96	2.703	99	27-171	3-195	3	0-38	
1,1-Dichloroethane	2.024	1.976	98	2.007	99	50-150	33-167	2	0-30	
1,1-Dichloroethene	1.982	1.988	100	2.047	103	50-150	33-167	3	0-30	
1,2-Dichloroethane	2.024	2.029	100	2.059	102	28-166	5-189	1	0-40	
Chlorobenzene	2.302	2.181	95	2.214	96	50-150	33-167	1	0-30	
Chloroethane	1.319	1.040	79	1.046	79	50-150	33-167	1	0-30	
Chloroform	2.441	2.381	98	2.417	99	50-150	33-167	2	0-30	
Ethylbenzene	2.171	2.334	108	2.153	99	27-153	6-174	8	0-46	
Methyl-t-Butyl Ether (MTBE)	1.803	1.938	108	1.968	109	50-150	33-167	2	0-30	
Methylene Chloride	1.737	1.659	96	1.692	97	50-150	33-167	2	0-30	
Tetrachloroethene	3.391	2.826	83	2.881	85	34-154	14-174	2	0-33	
Toluene	1.884	1.737	92	1.774	94	28-154	7-175	2	0-42	
Trichloroethene	2.687	2.684	100	2.692	100	43-139	27-155	0	0-31	
Trichlorofluoromethane	2.809	2.689	96	2.717	97	50-150	33-167	1	0-30	
Vinyl Chloride	1.278	1.225	96	1.264	99	44-140	28-156	3	0-33	
c-1,2-Dichloroethene	1.982	1.926	97	1.957	99	35-165	13-187	2	0-35	
o-Xylene	2.171	2.180	100	2.140	99	22-160	0-183	2	0-48	
p/m-Xylene	4.342	4.403	101	4.189	96	21-165	0-189	5	0-51	
t-1,2-Dichloroethene	1.982	1.927	97	1.932	97	50-150	33-167	0	0-30	
1,2,3-Trichlorobenzene	3.711	3.181	86	3.063	83	50-150	33-167	4	0-30	

Total number of LCS compounds: 22
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS/LCSD

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0109
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: TI SU3-1			Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-169	**LCS**	**Air**	**GC/MS HH**	**N/A**	**03/10/15 10:53**	**150310L01**
099-15-214-169	**LCSD**	**Air**	**GC/MS HH**	**N/A**	**03/10/15 11:41**	**150310L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,1-Trichloroethane	2.728	3.111	114	3.055	112	50-150	33-167	2	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	4.041	105	4.023	105	50-150	33-167	0	0-30	
1,1,2-Trichloroethane	2.728	2.887	106	2.834	104	27-171	3-195	2	0-38	
1,1-Dichloroethane	2.024	2.110	104	2.106	104	50-150	33-167	0	0-30	
1,1-Dichloroethene	1.982	2.138	108	2.160	109	50-150	33-167	1	0-30	
1,2-Dichloroethane	2.024	2.186	108	2.191	108	28-166	5-189	0	0-40	
Chlorobenzene	2.302	2.385	104	2.246	98	50-150	33-167	6	0-30	
Chloroethane	1.319	1.487	113	1.412	107	50-150	33-167	5	0-30	
Chloroform	2.441	2.556	105	2.552	105	50-150	33-167	0	0-30	
Ethylbenzene	2.171	2.460	113	2.197	101	27-153	6-174	11	0-46	
Methyl-t-Butyl Ether (MTBE)	1.803	2.047	114	2.082	115	50-150	33-167	2	0-30	
Methylene Chloride	1.737	1.776	102	1.776	102	50-150	33-167	0	0-30	
Tetrachloroethene	3.391	3.104	92	2.948	87	34-154	14-174	5	0-33	
Toluene	1.884	1.904	101	1.809	96	28-154	7-175	5	0-42	
Trichloroethene	2.687	2.850	106	2.786	104	43-139	27-155	2	0-31	
Trichlorofluoromethane	2.809	2.881	103	2.868	102	50-150	33-167	0	0-30	
Vinyl Chloride	1.278	1.274	100	1.297	102	44-140	28-156	2	0-33	
c-1,2-Dichloroethene	1.982	2.063	104	2.076	105	35-165	13-187	1	0-35	
o-Xylene	2.171	2.327	107	2.180	100	22-160	0-183	7	0-48	
p/m-Xylene	4.342	4.682	108	4.266	98	21-165	0-189	9	0-51	
t-1,2-Dichloroethene	1.982	2.051	103	2.055	104	50-150	33-167	0	0-30	
1,2,3-Trichlorobenzene	3.711	3.315	89	3.159	85	50-150	33-167	5	0-30	

Total number of LCS compounds: 22
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Summa Canister Vacuum Summary

Work Order: 15-03-0109

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
SU3-1-IA1-2015-02-27	-29.70 in Hg	-5.50 in Hg	D269	Summa Canister 6L
SU3-1-IA2-2015-02-27	-29.70 in Hg	-4.00 in Hg	D087	Summa Canister 6L
SU3-1-DUP1-2015-02-27	-29.70 in Hg	-0.50 in Hg	D090	Summa Canister 6L
SU3-1-PS1-2015-02-27	-29.70 in Hg	-5.00 in Hg	D667	Summa Canister 6L
SU3-1-PS2-2015-02-27	-29.80 in Hg	-4.00 in Hg	D845	Summa Canister 6L
SU3-1-AA1-2015-02-27	-29.70 in Hg	-6.00 in Hg	D234	Summa Canister 6L

Return to Contents

eurofins | Calscience

Sample Analysis Summary Report

Work Order: 15-03-0109

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA TO-15 SIM	N/A	460	GC/MS DD	2
EPA TO-15 SIM	N/A	866	GC/MS HH	2

Return to Contents

eurofins | Calscience

Glossary of Terms and Qualifiers

Work Order: 15-03-0109 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Return to Contents

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

AIR CHAIN-OF-CUSTODY RECORD

WO NO. / LAB USE ONLY: **15-03-0109**

DATE: 2/27/15

PAGE: 1 OF 1

LABORATORY CLIENT: Langan Treadwell Rollo

ADDRESS: 555 Montgomery St. Ste. 1300

CITY: San Francisco STATE: CA ZIP: 94111

TEL: 415-955 5200 E-MAIL: ALee@Langan.com

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"): ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD: ☐ COELT EDF ☐ OTHER UNITS:

CLIENT PROJECT NAME / NO.: TI SU3-1

P.O. NO.: 950620920

PROJECT CONTACT: Josh Graber

LAB CONTACT OR QUOTE NO.:

PROJECT ADDRESS:

SAMPLER(S): (PRINT) Nancy Tu

CITY: Sunnyvale STATE: CA ZIP:

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES: TO-15 site specific list

LAB USE ONLY	SAMPLE ID	FIELD ID / POINT OF COLLECTION	MATRIX: Indoor (I) Soil Vap. (SV) Ambient (A)	SAMPLING EQUIPMENT: Media ID	Canister Size 6L or 1L	Flow Controller ID	START SAMPLING INFORMATION: Date	Time (24 hr clock)	Canister Pressure (in Hg)	STOP SAMPLING INFORMATION: Date	Time (24 hr clock)	Canister Pressure (in Hg)	TO-15 site specific list
1	SU3-1-IA1-	2015-02-27	I	D269	6L	FC364	2/27/15	1015	-30	2/27/15	1755	-7	X
2	SU3-1-IA2-	2015-02-27	I	D087		FC300		1030	-30		1825	-7	
3	SU3-1-~~IA3~~ DUP1-	2015-02-27	I	D090		FC388		1020	-30		1755	0	
4	SU3-1-PS1-	2015-02-27	I	D667		FC113		1025	-30		1805	-5	
5	SU3-1-PS2-	2015-02-27	I	D845		FC61		1035	-30		1810	-6	
6	SU3-1-AA1-	2015-02-27	A	D234	6L	FC386	2/27/15	1040	-30	2/27/15	1830	-6	X

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	D. Lund	3/2/15	9:10
(GSO)	[signature] EM	3/3/15	1030

2014-07-01 Revision

Return to Contents

0109

Langan Project: 731606705

Table 3
Screening Criteria for Comparison of Indoor Air Results
Operable Unit 1
Texas Instruments Incorporated
Santa Clara, California

Chemical of Concern	PCE	TCE [8]	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	1,1,1-TCA	1,1,2-TCA	1,1-DCA	1,2-DCA	Chloro-ethane	1,1-DCE	Methylene Chloride	Chloroform	1,2,3-TCB	1,2,4-TCB	1,2-DCB	1,3-DCB	1,4-DCB	MTBE	Chloro-benzene	Toluene	Ethyl-benzene	Total Xylenes	Trichloro-fluro-methane	Freon 113
Laboratory Reporting Limit	0.17	0.13	0.099	0.099	0.026	0.14	0.14	0.10	0.10	0.086	0.099	0.087	0.12	0.19	0.19	0.15	0.15	0.15	0.09	0.12	0.19	0.11	0.11	0.14	0.19
Background/Outdoor Ambient																									
Background (Outdoor Ambient)	(to be determined)																								
Short-Term Health Based Screening Criteria[1]																									
Acute Exposure MRL[2]	1,357	NE	810	810	1,278	10,914	NE	NE	NE	39,583	NE	NE	488	NE	NE	NE	NE	12,025	7,211	NE	3,768	21,710	8,685	NE	NE
Intermediate Exposure MRL[3]	NE	NE	810	810	77	3,820	NE	NE	NE	NE	79	NE	244	NE	NE	NE	NE	1,203	2,524	NE	NE	8,684	2,605	NE	NE
USEPA Regional Screening Levels [4]																									
Residential Screening Level [5]	11	0.48	NE	NE	0.17	5,200	0.18	1.8	0.11	10,000	210	100	0.12	NE	2.1	210	NE	0.26	9.4	52	5,200	1.1	100	730	31,000
Industrial/Commercial Screening Level [6]	47	3	NE	NE	2.8	22,000	0.77	7.7	0.47	44,000	880	1,200	0.53	NE	8.8	880	NE	1.1	47	220	22,000	4.9	440	3,100	130,000
RWQCB Environmental Screening Level [7]																									
Residential	0.41	0.59	7.3	63	0.031	5,200	0.15	1.5	0.12	31,000	210	5.2	0.46	NE	4.2	210	NE	0.22	9.4	1,000	310	0.97	100	NE	NE
Commercial or Industrial	2.1	3.0	31	260	0.16	22,000	0.77	7.7	0.58	130,000	880	26	2.3	NE	18	880	NE	1.1	47	4,400	1,300	4.9	440	NE	NE

Notes:
Units in micrograms per cubic meter (μg/m^3) at 25° Celsius and 1 atmosphere.

PCE - tetrachloroethene
TCE - trichloroethene
cis-1,2-DCE - cis-1,2-dichloroethene
trans-1,2-DCE - trans-1,2-dichloroethene
1,1,1-TCA - 1,1,1-trichloroethane
1,1,2-TCA - 1,1,2-trichloroethane
1,1-DCA - 1,1-dichloroethane
1,2-DCA - 1,2-dichloroethane
1,1-DCE - 1,1-dichloroethene
chloroethane - ethyl chloride
Methylene Choride - Dichloromethane
1,2,3-TCB - 1;2,3-trichlorobenzene
1,2,4-TCB - 1,2,4-trichlorobenzene
1,2-DCB - 1,2-dichlorobenzene
1,3-DCB - 1,3-dichlorobenzene
1,4-DCB - 1,4-dichlorobenzene
Freon 11 - trichlorofluoromethane
Freon 113 - trichlorotrifluoroethane
NE - Not established
RSL - Regional Screening Level
ESL - Environmental Screening Level

[1] - Short-term health risk based screening criteria obtained from the Agency for Toxic Substances & Disease Registry (ATSDR), Minimal Risk Levels (MRLs) for hazardous substances (July 2013) available at http://www.atsdr.cdc.gov/mrls/index.html)
[2] - Acute screening levels (Acute MRLs) are derived for exposure durations of 1 to 14 days.
[3] - Intermediate MRLs are derived for exposure durations of >14 to 364 days
[4] - Long-term health risk based screening criteria obtained from the United States Environmental Protection Agency (USEPA), Regional Screening (RSLs) for chemical contaminants, THQ = 1.0 (May 2014).
http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_MAY2014.pdf
[5] - Residential screening levels (Residential Air RSLs) are derived for exposure durations of 350 days per year and 30 years.
[6] - Commercial/Industrial screening levels (Industrial Air RSLs) are derived for exposure durations of 8 hours per day, 250 days per year and 25 years.
[7] - Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) indoor air from Table E-3, December 2013.
[8] - USEPA recommends the use of Interim TCE Indoor Air Short-Term Response Action Levels for TCE Inhalation exposure from subsurface vapor intrusion at South Bay National Priority List Sites. Commercial/Industrial prompt response action levels are calculated as the time-weighted average from the RfC - 9 μg/m^3 for an 8-hour workday; 7 μg/m^3 for a 10-hour workday. Based on input from commercial building owners and tenants, EPA Region 9 recommends use of the 10-hour workday for determining the appropriate response action levels for Commercial/Industrial buildings at the South Bay Sites. Time-weighted adjustments can be made as needed for workplaces with longer work schedules.

Return to Contents

0109

GSO GOLDEN STATE OVERNIGHT

800-322-5555 www.gso.com

Ship From
LANGAN TREADWELL ROLLO
DIANE EVANS
501 14TH ST- 3RD FLOOR

Tracking #: 527100135

CPS

GSO GOLDEN STATE OVERNIGHT

800-322-5555 www.gso.com

Ship From
LANGAN TREADWELL ROLLO
DIANE EVANS
501 14TH ST- 3RD FLOOR
OAKLAND, CA 94612

Ship To
EUROFINS
SAMPLE TESTING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:
750620720/LAB (OAK)
Delivery Instructions:

Signature Type: REQUIRED

Tracking #: 527100012

CPS

ORC **A**

GARDEN GROVE

D92845A

34743793

Print Date: 3/2/2015 11:16 AM

Return to Contents

eurofins | Calscience

WORK ORDER #: 15-03-0 1 0 9

SAMPLE RECEIPT FORM

Cooler 0 of 0

CLIENT: Langan Treadwell Rollo

DATE: 03/03/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature _____.____ °C + 0.2 °C (CF) = _____.____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☑ Air ☐ Filter Checked by: 836

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present (Box) ☐ N/A Checked by: 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 972

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☑Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 972

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** JMG

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** JMG

Return to Contents

eurofins | Calscience

WORK ORDER NUMBER: 15-03-0110

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Treadwell & Rollo - A Langan Company

Client Project Name: TI Off - Property SU3-1

Attention: Annie Lee
555 Montgomery St., Suite 1300
San Francisco, CA 94111-2554

Vikas Patel

Approved for release on 03/11/2015 by:
Vikas Patel
Project Manager

ResultLink

Email your PM

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

eurofins | Calscience

Contents

Client Project Name: TI Off - Property SU3-1
Work Order Number: 15-03-0110

1 Work Order Narrative. 3

2 Sample Summary. 4

3 Detections Summary. 5

4 Client Sample Data. 8
4.1 EPA TO-15 SIM (Air). 8

5 Quality Control Sample Data. 17
5.1 LCS/LCSD. 17

6 Summa Canister Vacuum Summary. 20

7 Sample Analysis Summary. 21

8 Glossary of Terms and Qualifiers. 22

9 Chain-of-Custody/Sample Receipt Form. 23

eurofins | Calscience

Work Order Narrative

Work Order: 15-03-0110 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/03/15. They were assigned to Work Order 15-03-0110.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Return to Contents

eurofins | Calscience

Sample Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order:	15-03-0110
		Project Name:	TI Off - Property SU3-1
		PO Number:	
		Date/Time Received:	03/03/15 10:30
		Number of Containers:	6
Attn:	Annie Lee		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SU3-1-AA1-2015-03-01	15-03-0110-1	03/01/15 17:33	1	Air
SU3-1-IA2-2015-03-01	15-03-0110-2	03/01/15 17:00	1	Air
SU3-1-PS2-2015-03-01	15-03-0110-3	03/01/15 17:27	1	Air
SU3-1-IA1-2015-03-01	15-03-0110-4	03/01/15 17:25	1	Air
SU3-1-DUP1-2015-03-01	15-03-0110-5	03/01/15 17:25	1	Air
SU3-1-PS1-2015-03-01	15-03-0110-6	03/01/15 17:30	1	Air

Return to Contents

eurofins | Calscience

Detections Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order: Project Name: Received:	15-03-0110 TI Off - Property SU3-1 03/03/15
Attn:	Annie Lee		

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SU3-1-AA1-2015-03-01 (15-03-0110-1)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.55		0.19	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.16		0.12	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.35		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.31		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	0.51		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.2		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.12		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.30		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	0.42		0.11	ug/m3	EPA TO-15 SIM	N/A
SU3-1-IA2-2015-03-01 (15-03-0110-2)						
1,1,1-Trichloroethane	0.33		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.73		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.11		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.44		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.43		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	5.3		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	2.7		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.5		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	2.2		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.4		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.63		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.2		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	1.8		0.11	ug/m3	EPA TO-15 SIM	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order: Project Name: Received:	15-03-0110 TI Off - Property SU3-1 03/03/15
Attn:	Annie Lee		

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SU3-1-PS2-2015-03-01 (15-03-0110-3)						
1,1,1-Trichloroethane	0.25		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.71		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.31		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.35		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.53		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.57		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.22		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.1		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.8		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
c-1,2-Dichloroethene	0.14		0.099	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.90		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	3.1		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	4.0		0.11	ug/m3	EPA TO-15 SIM	N/A
t-1,2-Dichloroethene	0.21		0.099	ug/m3	EPA TO-15 SIM	N/A
SU3-1-IA1-2015-03-01 (15-03-0110-4)						
1,1,1-Trichloroethane	0.28		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.69		0.19	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.37		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.40		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.65		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.20		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	2.7		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.8		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.4		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.54		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.1		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	1.6		0.11	ug/m3	EPA TO-15 SIM	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order: Project Name: Received:	15-03-0110 TI Off - Property SU3-1 03/03/15
Attn:	Annie Lee		

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SU3-1-DUP1-2015-03-01 (15-03-0110-5)						
1,1,1-Trichloroethane	0.29		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.68		0.19	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.37		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.40		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.22		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.26		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	2.6		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	2.0		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.3		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.57		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.0		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	1.6		0.11	ug/m3	EPA TO-15 SIM	N/A
SU3-1-PS1-2015-03-01 (15-03-0110-6)						
1,1,1-Trichloroethane	0.62		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.70		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.10		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.91		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.71		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.61		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.31		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.0		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.9		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.4		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.70		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.7		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	2.4		0.11	ug/m3	EPA TO-15 SIM	N/A

Subcontracted analyses, if any, are not included in this summary.

Return to Contents

* MDL is shown

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI Off - Property SU3-1			Page 1 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-AA1-2015-03-01	**15-03-0110-1-A**	**03/01/15 17:33**	**Air**	**GC/MS HH**	**N/A**	**03/09/15 23:13**	**150309L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.55	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.16	0.12	1.00	
Ethylbenzene	ND	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.35	0.087	1.00	
Tetrachloroethene	0.31	0.17	1.00	
Toluene	0.51	0.19	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	1.2	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	0.12	0.11	1.00	
p/m-Xylene	0.30	0.11	1.00	
Xylenes (total)	0.42	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	95	37-163	
1,4-Bromofluorobenzene	115	45-153	
Toluene-d8	92	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI Off - Property SU3-1			Page 2 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-IA2-2015-03-01	**15-03-0110-2-A**	**03/01/15 17:00**	**Air**	**GC/MS HH**	**N/A**	**03/10/15 00:06**	**150309L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	0.33	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.73	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	0.11	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.44	0.12	1.00	
Ethylbenzene	0.43	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	5.3	0.087	1.00	
Tetrachloroethene	2.7	0.17	1.00	
Toluene	3.5	0.19	1.00	
Trichloroethene	2.2	0.13	1.00	
Trichlorofluoromethane	1.4	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	0.63	0.11	1.00	
p/m-Xylene	1.2	0.11	1.00	
Xylenes (total)	1.8	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	96	37-163	
1,4-Bromofluorobenzene	104	45-153	
Toluene-d8	108	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI Off - Property SU3-1			Page 3 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-PS2-2015-03-01	**15-03-0110-3-A**	**03/01/15 17:27**	**Air**	**GC/MS HH**	**N/A**	**03/10/15 01:00**	**150309L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	0.25	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.71	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	0.31	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.35	0.12	1.00	
Ethylbenzene	0.53	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.57	0.087	1.00	
Tetrachloroethene	0.22	0.17	1.00	
Toluene	3.1	0.19	1.00	
Trichloroethene	1.8	0.13	1.00	
Trichlorofluoromethane	1.5	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	0.14	0.099	1.00	
o-Xylene	0.90	0.11	1.00	
p/m-Xylene	3.1	0.11	1.00	
Xylenes (total)	4.0	0.11	1.00	
t-1,2-Dichloroethene	0.21	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	97	37-163	
1,4-Bromofluorobenzene	111	45-153	
Toluene-d8	100	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI Off - Property SU3-1			Page 4 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-IA1-2015-03-01	**15-03-0110-4-A**	**03/01/15 17:25**	**Air**	**GC/MS HH**	**N/A**	**03/10/15 15:06**	**150310L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	0.28	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.69	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.37	0.12	1.00	
Ethylbenzene	0.40	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.65	0.087	1.00	
Tetrachloroethene	0.20	0.17	1.00	
Toluene	2.7	0.19	1.00	
Trichloroethene	1.8	0.13	1.00	
Trichlorofluoromethane	1.4	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	0.54	0.11	1.00	
p/m-Xylene	1.1	0.11	1.00	
Xylenes (total)	1.6	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	101	37-163	
1,4-Bromofluorobenzene	109	45-153	
Toluene-d8	108	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI Off - Property SU3-1			Page 5 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-DUP1-2015-03-01	**15-03-0110-5-A**	**03/01/15 17:25**	**Air**	**GC/MS DD**	**N/A**	**03/05/15 00:40**	**150304L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	0.29	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.68	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.37	0.12	1.00	
Ethylbenzene	0.40	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.22	0.087	1.00	
Tetrachloroethene	0.26	0.17	1.00	
Toluene	2.6	0.19	1.00	
Trichloroethene	2.0	0.13	1.00	
Trichlorofluoromethane	1.3	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	0.57	0.11	1.00	
p/m-Xylene	1.0	0.11	1.00	
Xylenes (total)	1.6	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	96	37-163	
1,4-Bromofluorobenzene	99	45-153	
Toluene-d8	95	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI Off - Property SU3-1			Page 6 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU3-1-PS1-2015-03-01	**15-03-0110-6-A**	**03/01/15 17:30**	**Air**	**GC/MS HH**	**N/A**	**03/10/15 01:52**	**150309L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	0.62	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.70	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	0.10	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.91	0.12	1.00	
Ethylbenzene	0.71	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.61	0.087	1.00	
Tetrachloroethene	0.31	0.17	1.00	
Toluene	4.0	0.19	1.00	
Trichloroethene	1.9	0.13	1.00	
Trichlorofluoromethane	1.4	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	0.70	0.11	1.00	
p/m-Xylene	1.7	0.11	1.00	
Xylenes (total)	2.4	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	97	37-163	
1,4-Bromofluorobenzene	107	45-153	
Toluene-d8	101	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI Off - Property SU3-1			Page 7 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-168**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**03/04/15 22:50**	**150304L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	ND	0.12	1.00	
Ethylbenzene	ND	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	ND	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	ND	0.19	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	ND	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	ND	0.11	1.00	
p/m-Xylene	ND	0.11	1.00	
Xylenes (total)	ND	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	96	37-163	
1,4-Bromofluorobenzene	91	45-153	
Toluene-d8	99	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI Off - Property SU3-1			Page 8 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-167**	**N/A**	**Air**	**GC/MS HH**	**N/A**	**03/09/15 17:57**	**150309L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	ND	0.12	1.00	
Ethylbenzene	ND	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	ND	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	ND	0.19	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	ND	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	ND	0.11	1.00	
p/m-Xylene	ND	0.11	1.00	
Xylenes (total)	ND	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	97	37-163	
1,4-Bromofluorobenzene	105	45-153	
Toluene-d8	105	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: TI Off - Property SU3-1			Page 9 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-169**	**N/A**	**Air**	**GC/MS HH**	**N/A**	**03/10/15 14:12**	**150310L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
1,2,4-Trichlorobenzene	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	ND	0.12	1.00	
Ethylbenzene	ND	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	ND	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	ND	0.19	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	ND	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	ND	0.11	1.00	
p/m-Xylene	ND	0.11	1.00	
Xylenes (total)	ND	0.11	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2,3-Trichlorobenzene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	99	37-163	
1,4-Bromofluorobenzene	101	45-153	
Toluene-d8	106	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Quality Control - LCS/LCSD

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: TI Off - Property SU3-1			Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-168	**LCS**	**Air**	**GC/MS DD**	**N/A**	**03/04/15 18:54**	**150304L01**
099-15-214-168	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**03/04/15 19:44**	**150304L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,1-Trichloroethane	2.728	2.378	87	2.428	89	50-150	33-167	2	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.722	97	3.737	98	50-150	33-167	0	0-30	
1,1,2-Trichloroethane	2.728	2.557	94	2.575	94	27-171	3-195	1	0-38	
1,1-Dichloroethane	2.024	1.880	93	1.900	94	50-150	33-167	1	0-30	
1,1-Dichloroethene	1.982	1.972	99	1.970	99	50-150	33-167	0	0-30	
1,2-Dichloroethane	2.024	1.903	94	1.887	93	28-166	5-189	1	0-40	
Chlorobenzene	2.302	2.175	94	2.215	96	50-150	33-167	2	0-30	
Chloroethane	1.319	1.179	89	1.150	87	50-150	33-167	3	0-30	
Chloroform	2.441	2.219	91	2.251	92	50-150	33-167	1	0-30	
Ethylbenzene	2.171	2.264	104	2.176	100	27-153	6-174	4	0-46	
Methyl-t-Butyl Ether (MTBE)	1.803	1.568	87	1.677	93	50-150	33-167	7	0-30	
Methylene Chloride	1.737	1.609	93	1.598	92	50-150	33-167	1	0-30	
Tetrachloroethene	3.391	2.941	87	3.146	93	34-154	14-174	7	0-33	
Toluene	1.884	1.688	90	1.932	103	28-154	7-175	13	0-42	
Trichloroethene	2.687	2.467	92	2.512	93	43-139	27-155	2	0-31	
Trichlorofluoromethane	2.809	2.459	88	2.446	87	50-150	33-167	1	0-30	
Vinyl Chloride	1.278	1.126	88	1.173	92	44-140	28-156	4	0-33	
c-1,2-Dichloroethene	1.982	1.871	94	1.858	94	35-165	13-187	1	0-35	
o-Xylene	2.171	2.270	105	2.250	104	22-160	0-183	1	0-48	
p/m-Xylene	4.342	4.606	106	4.642	107	21-165	0-189	1	0-51	
t-1,2-Dichloroethene	1.982	1.799	91	1.790	90	50-150	33-167	1	0-30	
1,2,3-Trichlorobenzene	3.711	3.968	107	4.278	115	50-150	33-167	8	0-30	

Total number of LCS compounds: 22
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS/LCSD

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: TI Off - Property SU3-1			Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-167	**LCS**	**Air**	**GC/MS HH**	**N/A**	**03/09/15 15:20**	**150309L02**
099-15-214-167	**LCSD**	**Air**	**GC/MS HH**	**N/A**	**03/09/15 16:11**	**150309L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,1-Trichloroethane	2.728	2.876	105	2.909	107	50-150	33-167	1	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.763	98	3.845	100	50-150	33-167	2	0-30	
1,1,2-Trichloroethane	2.728	2.625	96	2.703	99	27-171	3-195	3	0-38	
1,1-Dichloroethane	2.024	1.976	98	2.007	99	50-150	33-167	2	0-30	
1,1-Dichloroethene	1.982	1.988	100	2.047	103	50-150	33-167	3	0-30	
1,2-Dichloroethane	2.024	2.029	100	2.059	102	28-166	5-189	1	0-40	
Chlorobenzene	2.302	2.181	95	2.214	96	50-150	33-167	1	0-30	
Chloroethane	1.319	1.040	79	1.046	79	50-150	33-167	1	0-30	
Chloroform	2.441	2.381	98	2.417	99	50-150	33-167	2	0-30	
Ethylbenzene	2.171	2.334	108	2.153	99	27-153	6-174	8	0-46	
Methyl-t-Butyl Ether (MTBE)	1.803	1.938	108	1.968	109	50-150	33-167	2	0-30	
Methylene Chloride	1.737	1.659	96	1.692	97	50-150	33-167	2	0-30	
Tetrachloroethene	3.391	2.826	83	2.881	85	34-154	14-174	2	0-33	
Toluene	1.884	1.737	92	1.774	94	28-154	7-175	2	0-42	
Trichloroethene	2.687	2.684	100	2.692	100	43-139	27-155	0	0-31	
Trichlorofluoromethane	2.809	2.689	96	2.717	97	50-150	33-167	1	0-30	
Vinyl Chloride	1.278	1.225	96	1.264	99	44-140	28-156	3	0-33	
c-1,2-Dichloroethene	1.982	1.926	97	1.957	99	35-165	13-187	2	0-35	
o-Xylene	2.171	2.180	100	2.140	99	22-160	0-183	2	0-48	
p/m-Xylene	4.342	4.403	101	4.189	96	21-165	0-189	5	0-51	
t-1,2-Dichloroethene	1.982	1.927	97	1.932	97	50-150	33-167	0	0-30	
1,2,3-Trichlorobenzene	3.711	3.181	86	3.063	83	50-150	33-167	4	0-30	

Total number of LCS compounds: 22
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Return to Contents

eurofins | Calscience

Quality Control - LCS/LCSD

Treadwell & Rollo - A Langan Company		Date Received:	03/03/15
555 Montgomery St., Suite 1300		Work Order:	15-03-0110
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: TI Off - Property SU3-1			Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-169	**LCS**	**Air**	**GC/MS HH**	**N/A**	**03/10/15 10:53**	**150310L01**
099-15-214-169	**LCSD**	**Air**	**GC/MS HH**	**N/A**	**03/10/15 11:41**	**150310L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,1-Trichloroethane	2.728	3.111	114	3.055	112	50-150	33-167	2	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	4.041	105	4.023	105	50-150	33-167	0	0-30	
1,1,2-Trichloroethane	2.728	2.887	106	2.834	104	27-171	3-195	2	0-38	
1,1-Dichloroethane	2.024	2.110	104	2.106	104	50-150	33-167	0	0-30	
1,1-Dichloroethene	1.982	2.138	108	2.160	109	50-150	33-167	1	0-30	
1,2-Dichloroethane	2.024	2.186	108	2.191	108	28-166	5-189	0	0-40	
Chlorobenzene	2.302	2.385	104	2.246	98	50-150	33-167	6	0-30	
Chloroethane	1.319	1.487	113	1.412	107	50-150	33-167	5	0-30	
Chloroform	2.441	2.556	105	2.552	105	50-150	33-167	0	0-30	
Ethylbenzene	2.171	2.460	113	2.197	101	27-153	6-174	11	0-46	
Methyl-t-Butyl Ether (MTBE)	1.803	2.047	114	2.082	115	50-150	33-167	2	0-30	
Methylene Chloride	1.737	1.776	102	1.776	102	50-150	33-167	0	0-30	
Tetrachloroethene	3.391	3.104	92	2.948	87	34-154	14-174	5	0-33	
Toluene	1.884	1.904	101	1.809	96	28-154	7-175	5	0-42	
Trichloroethene	2.687	2.850	106	2.786	104	43-139	27-155	2	0-31	
Trichlorofluoromethane	2.809	2.881	103	2.868	102	50-150	33-167	0	0-30	
Vinyl Chloride	1.278	1.274	100	1.297	102	44-140	28-156	2	0-33	
c-1,2-Dichloroethene	1.982	2.063	104	2.076	105	35-165	13-187	1	0-35	
o-Xylene	2.171	2.327	107	2.180	100	22-160	0-183	7	0-48	
p/m-Xylene	4.342	4.682	108	4.266	98	21-165	0-189	9	0-51	
t-1,2-Dichloroethene	1.982	2.051	103	2.055	104	50-150	33-167	0	0-30	
1,2,3-Trichlorobenzene	3.711	3.315	89	3.159	85	50-150	33-167	5	0-30	

Total number of LCS compounds: 22
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Return to Contents

eurofins | Calscience

Summa Canister Vacuum Summary

Work Order: 15-03-0110

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
SU3-1-AA1-2015-03-01	-29.70 in Hg	-3.50 in Hg	D172	Summa Canister 6L
SU3-1-IA2-2015-03-01	-29.70 in Hg	-2.50 in Hg	D738	Summa Canister 6L
SU3-1-PS2-2015-03-01	-29.70 in Hg	-4.50 in Hg	D514	Summa Canister 6L
SU3-1-IA1-2015-03-01	-29.70 in Hg	-4.50 in Hg	SIM060	Summa Canister 6L
SU3-1-DUP1-2015-03-01	-29.70 in Hg	-5.00 in Hg	D772	Summa Canister 6L
SU3-1-PS1-2015-03-01	-29.70 in Hg	-6.00 in Hg	D111	Summa Canister 6L

Return to Contents

eurofins | Calscience

Sample Analysis Summary Report

Work Order: 15-03-0110

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA TO-15 SIM	N/A	460	GC/MS DD	2
EPA TO-15 SIM	N/A	866	GC/MS HH	2

Return to Contents

eurofins | Calscience

Glossary of Terms and Qualifiers

Work Order: 15-03-0110 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Return to Contents

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

AIR CHAIN-OF-CUSTODY RECORD

WO NO. / LAB USE ONLY: **15-03-0110**

DATE: 03/01/15
PAGE: 1 OF 2

LABORATORY CLIENT: Langan Treadwell Rollo
ADDRESS: 555 Montgomery Street, Suite 1300
CITY: San Francisco, STATE: CA ZIP: 94111
TEL: (415) 955 5200 E-MAIL: alee@langan.com

CLIENT PROJECT NAME / NO.: T1 Off-Property SU3-1
P.O. NO.: 750620720
PROJECT CONTACT: Annie Lee
LAB CONTACT OR QUOTE NO.:
PROJECT ADDRESS: SU3-1
SAMPLER(S): (PRINT) Wendy Kwong, Nancy Tu
CITY: Sunnyvale STATE: CA ZIP: 94085

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD: ☐ COELT EDF ☐ OTHER
UNITS:

SPECIAL INSTRUCTIONS:
See Table 3

REQUESTED ANALYSES: Tons (See attached list)

LAB USE ONLY	SAMPLE ID	FIELD ID / POINT OF COLLECTION	MATRIX: Indoor (I) Soil Vap. (SV) Ambient (A)	SAMPLING EQUIPMENT: Media ID	Canister Size 6L or 1L	Flow Controller ID	START SAMPLING INFORMATION: Date	Time (24 hr clock)	Canister Pressure (in Hg)	STOP SAMPLING INFORMATION: Date	Time (24 hr clock)	Canister Pressure (in Hg)	Tons (See attached list)
1	SU3-1-AA1-2015-03-01		A	D172	6L	FC83	03/01/15	0916	-30	03/01/15	1733	-6	X
2	SU3-1-IA2-2015-03-01		I	D738	6L	FC226	03/01/15	0923	-30	03/01/15	1700	-5	X
3	SU3-1-PS2-2015-03-01		I	D514	6L	FC68	03/01/15	0925	-30	03/01/15	1727	-5	X
4	SU3-1-IA1-2015-03-01		I	SIM060	6L	FC367	03/01/15	0928	-30	03/01/15	1725	-5	X
5	SU3-1-DUP1-2015-03-01		I	D772	6L	FC257	03/01/15	0928	-30	03/01/15	1725	-5	X
6	SU3-1-PS1-2015-03-01		I	D111	6L	FC33	03/01/15	0929	-30	03/01/15	1730	-6	X

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Wendy Kwong		3/3/15	
Relinquished by: (Signature) (GSO)	Received by: (Signature/Affiliation) PNeu / EG	3/3/15	1030
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

2014-07-01 Revision

Return to Contents

0110

Langan Project: 731606705

Table 3
Screening Criteria for Comparison of Indoor Air Results
Operable Unit 1
Texas Instruments Incorporated
Santa Clara, California

Chemical of Concern	PCE	TCE [8]	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	1,1,1-TCA	1,1,2-TCA	1,1-DCA	1,2-DCA	Chloro-ethane	1,1-DCE	Methylene Chloride	Chloroform	1,2,3-TCB	1,2,4-TCB	1,2-DCB	1,3-DCB	1,4-DCB	MTBE	Chloro-benzene	Toluene	Ethyl-benzene	Total Xylenes	Trichloro-fluro-methane	Freon 113
Laboratory Reporting Limit	0.17	0.13	0.099	0.099	0.026	0.14	0.14	0.10	0.10	0.066	0.099	0.087	0.12	0.19	0.19	0.15	0.15	0.15	0.09	0.12	0.19	0.11	0.11	0.14	0.19
Background/Outdoor Ambient																									
Background (Outdoor Ambient)	(to be determined)																								
Short-Term Health Based Screening Criteria[1]																									
Acute Exposure MRL[2]	1,357	NE	810	810	1,278	10,914	NE	NE	NE	39,583	NE	NE	488	NE	NE	NE	NE	12,025	7,211	NE	3,768	21,710	8,685	NE	NE
Intermediate Exposure MRL[3]	NE	NE	810	810	77	3,820	NE	NE	NE	NE	79	NE	244	NE	NE	NE	NE	1,203	2,524	NE	NE	8,684	2,605	NE	NE
USEPA Regional Screening Levels [4]																									
Residential Screening Level [5]	11	0.48	NE	NE	0.17	5,200	0.18	1.8	0.11	10,000	210	100	0.12	NE	2.1	210	NE	0.26	9.4	52	5,200	1.1	100	730	31,000
Industrial/Commercial Screening Level [6]	47	3	NE	NE	2.8	22,000	0.77	7.7	0.47	44,000	880	1,200	0.53	NE	8.8	880	NE	1.1	47	220	22,000	4.9	440	3,100	130,000
RWQCB Environmental Screening Level [7]																									
Residential	0.41	0.59	7.3	63	0.031	5,200	0.15	1.5	0.12	31,000	210	5.2	0.46	NE	4.2	210	NE	0.22	9.4	1,000	310	0.97	100	NE	NE
Commercial or Industrial	2.1	3.0	31	260	0.16	22,000	0.77	7.7	0.58	130,000	880	26	2.3	NE	18	880	NE	1.1	47	4,400	1,300	4.9	440	NE	NE

Notes:
Units in micrograms per cubic meter (µg/m^3) at 25° Celsius and 1 atmosphere.

PCE - tetrachloroethene
TCE - trichloroethene
cis-1,2-DCE - cis-1,2-dichloroethene
trans-1,2-DCE - trans-1,2-dichloroethene
1,1,1-TCA - 1,1,1-trichloroethane
1,1,2-TCA - 1,1,2-trichloroethane
1,1-DCA - 1,1-dichloroethane
1,2-DCA - 1,2-dichloroethane
1,1-DCE - 1,1-dichloroethene
chloroethane - ethyl chloride
Methylene Choride - Dichloromethane
1,2,3-TCB - 1,2,3-trichlorobenzene
1,2,4-TCB - 1,2,4-trichlorobenzene
1,2-DCB - 1,2-dichlorobenzene
1,3-DCB - 1,3-dichlorobenzene
1,4-DCB - 1,4-dichlorobenzene
Freon 11 - trichlorofluoromethane
Freon 113 - trichlorotrifluoroethane
NE - Not established
RSL - Regional Screening Level
ESL - Environmental Screening Level

[1] - Short-term health risk based screening criteria obtained from the Agency for Toxic Substances & Disease Registry (ATSDR), Minimal Risk Levels (MRLs) for hazardous substances (July 2013) available at http://www.atsdr.cdc.gov/mrls/index.html)
[2] - Acute screening levels (Acute MRLs) are derived for exposure durations of 1 to 14 days.
[3] - Intermediate MRLs are derived for exposure durations of >14 to 364 days
[4] - Long-term health risk based screening criteria obtained from the United States Environmental Protection Agency (USEPA), Regional Screening (RSLs) for chemical contaminants, THQ = 1.0 (May 2014).
http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_MAY2014.pdf
[5] - Residential screening levels (Residential Air RSLs) are derived for exposure durations of 350 days per year and 30 years.
[6] - Commercial/Industrial screening levels (Industrial Air RSLs) are derived for exposure durations of 8 hours per day, 250 days per year and 25 years.
[7] - Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) indoor air from Table E-3, December 2013.
[8] - USEPA recommends the use of Interim TCE Indoor Air Short-Term Response Action Levels for TCE Inhalation exposure from subsurface vapor intrusion at South Bay National Priority List Sites. Commercial/Industrial prompt response action levels are calculated as the time-weighted average from the RfC - 9 µg/m^3 for an 8-hour workday; 7 µg/m^3 for a 10-hour workday. Based on input from commercial building owners and tenants, EPA Region 9 recommends use of the 10-hour workday for determining the appropriate response action levels for Commercial/Industrial buildings at the South Bay Sites. Time-weighted adjustments can be made as needed for workplaces with longer work schedules.

0110

GSO GOLDEN STATE OVERNIGHT

800-322-5555 www.gso.com

Ship From
LANGAN TREADWELL ROLLO
DIANE EVANS
501 14TH ST- 3RD FLOOR
OAKLAND, CA 94612

Ship To

Tracking #: 527099964

CPS

GSO GOLDEN STATE OVERNIGHT

800-322-5555 www.gso.com

Ship From
LANGAN TREADWELL ROLLO
DIANE EVANS
501 14TH ST- 3RD FLOOR
OAKLAND, CA 94612

Ship To
EUROFINS
SAMPLE TESTING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:
750620720/LAB (OAK)
Delivery Instructions:

Signature Type: REQUIRED

Tracking #: 527100135

CPS

ORC **A**

GARDEN GROVE

D92845A

34743992

Print Date: 3/2/2015 11:21 AM

Return to Contents

eurofins | Calscience

WORK ORDER #: 15-03-0 1 1 0

SAMPLE RECEIPT FORM

Cooler 0 of 0

CLIENT: Langan Treadwell Rollo

DATE: 03/03/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature _____.____ °C + 0.2 °C (CF) = _____.____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☑ Air ☐ Filter **Checked by:** 836

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present (BOX) ☐ N/A **Checked by:** 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 972

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete (836 3/3/15)	☐	☑	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☑ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☑Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 972

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 836

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 836

Return to Contents