LANGAN TREADWELL ROLLO

Memorandum

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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

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

DATE: 30 April 2015

PROJECT: Off-Property Vapor Intrusion Assessment
Buildings SU1-2 and SU1-3
Sunnyvale, California
Project Number: 750620721

SUBJECT: Results of Indoor Air Testing at Buildings SU1-2 and SU1-3, February 2015

Langan Treadwell Rollo, on behalf of Texas Instruments (TI), has completed indoor, pathway and ambient air testing at buildings identified as SU1-2 and SU1-3 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 our *Addendum to Work Plan for Off-Property Vapor Intrusion Assessment, Texas Instruments Incorporated, Buildings SU1-2 and SU1-3, Sunnyvale, California* dated 12 February 2015 (Work Plan Addendum).

Building and Area Description

Buildings SU1-2 and SU1-3 are zoned in a commercial/industrial area of Sunnyvale, California (Figure 1). Both buildings were constructed in 1976 and are approximately 19,000 square feet, single-story, slab on grade construction, and have multiple suites occupied by different tenants. Each suite generally consists of a front office space, and rear warehouse/storage space with roll-up truck doors. Building SU1-2 consists of 12 suites (Suite A through Suite M, Suites C and D are combined into one suite). Building SU1-3 also consists of 12 suites (Suite N through Suite Y). The current tenants and the nature of their business are presented in Table 1. Several of the tenants utilize the suites for storage and do not occupy the suites for more than a few

minutes during normal business hours (i.e. 8 AM to 5 PM). Additional tenant information associated with suites not proposed for sampling was included in the Work Plan Addendum.

Each suite has its own individual/single package heating, ventilation, and air conditioning (HVAC) unit containing its own heating and cooling devices for the front office areas. The warehouse/storage areas located in the rear of the suites do not contain air conditioners though some warehouses contain natural gas unit heaters suspended from the ceiling. We understand that each tenant independently controls the temperature (and associated HVAC systems in their suite) by thermostat and typically operates the HVAC system while the suite is occupied.

Groundwater is expected to be present at approximately 11 feet below ground surface with trichloroethene (TCE) concentrations beneath the buildings likely ranging from 100 to 200 micrograms/liter (µg/L).

Summary of Sampling Method/Approach

A building survey and inventory was completed at Buildings SU1-2 and SU1-3 on 18 March 2014 by Langan personnel in the presence of United States Environmental Protection Agency (USEPA) representative, Penny Reddy, and an owner representative. 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. With the exception of a floor drain located in Suite P in Building SU1-3, no other preferential pathways were identified during the building survey.

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. cubicle and laboratory 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. mechanical rooms, tunnels, bathrooms and areas outside elevators). 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 sampling locations is presented in Table 1. In accordance with the approved Work Plan Addendum, air samples were collected in summa

canisters over an 8-hour period on 17 and 22 February 2015, when the HVAC system was on and off[1], respectively. With the HVAC system operating, a total of three IA and one duplicate sample were collected from Suites B, E, and H located within Building SU1-2 and a total of two IA, one duplicate, and one PS were collected from Suites P, U and W within Building SU1-3. No samples were collected with HVAC systems operating from Suites L and R, as proposed in the work Plan Addendum, because the tenants were not available to provide access. All access coordination attempts were made by the property owner, per the owner's request. However, tenants did not always abide by access and sampling schedules that they arranged with the owner. As a result, access was not provided at all locations at agreed-upon times.

With HVAC systems off, three IAand one duplicate sample, were collected from SU1-2. In Building SU1-3, samples were not collected with HVAC systems off from Suites L, R, U or W as proposed in the Work Plan Addendum because access was not granted (i.e. the tenant did not show up to open the door). As stated above, all access coordination attempts were made by the property owner, per the owner's request. Despite efforts to coordinate with the tenants through the owner, access was ultimately not provided at those locations. No HVAC off sample was collected from Suite P because this business is open 7 days a week. 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 VOC analysis using method TO-15 with selective ion monitoring (SIM), in accordance with the Work Plan. 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 Levels (RALs), as defined in Table 2. USEPA recommends the use of the interim TCE indoor air accelerated RAL of 8 micrograms per cubic meter ($\mu g/m^3$) for an 8-hour workday for Commercial/Industrial land use.

Indoor and Pathway Air Sample Results

The locations of air samples collected at Buildings SU1-2 and SU1-3 are shown on Figure 2 and the detected concentrations are presented in Table 2.

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

Building SU1-2

Indoor air samples were collected in Suites B, E, and H from SU1-2 on 17 February (HVAC on) and 22 February (HVAC off). No samples were collected at Suite L, as proposed in the Work Plan Addendum, because access was not provided by that tenant at the agreed day and time.

Findings - HVAC On

- TCE was not detected above Water Board ESLs, USEPA RSLs or USEPA RALs in any of the samples collected. TCE was detected at concentrations of 0.65, 1.5, and 1.2 µg/m^3 in Suites B, E, and H, respectively.

- Ethylbenzene, 1,2-dichloroethane (1,2-DCA), toluene, tetrachloroethene (PCE), methylene chloride, trichlorofluoromethane, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113), and xylenes were detected in indoor air or pathway samples above laboratory reporting limits but below respective Water Board ESLs and USEPA RSLs (See Table 2).

- Chloroform was detected in all indoor air and pathway samples. One indoor air sample collected from Suite H (SU1-2-IA3-2015-02-17) had a chloroform concentration of 1.2 µg/m^3, which is above the USEPA's Industrial Air RSL (0.53 µg/m^3), but is below the Water Board's Commercial/Industrial Land Use ESL (2.3 µg/m^3). No other chloroform detections exceeded its associated ESL or RSL.

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

Findings - HVAC Off

- TCE was not detected above Water Board ESLs, USEPA RSLs, or USEPA RALs in any of the samples collected. TCE was detected at concentrations of 1.2, 0.95, and 1.1 µg/m^3 in Suites B, E, and H, respectively.

- Toluene, PCE, methylene chloride, trichlorofluoromethane, Freon 113, and xylenes were detected at or above laboratory reporting limits but below respective Water Board ESLs and USEPA RSLs (See Table 2).

- 1,2-DCA was detected in one indoor air sample collected from Suite B (SU1-2-IA1-2015-02-22) at a concentration of 0.57 µg/m^3, which is above the USEPA RSL of 0.47 µg/m^3, but below the Water Board ESL of 0.58 µg/m^3.

- Ethylbenzene was detected in one indoor air sample collected from Suite B (SU1-2-IA1-2015-02-22) at a concentration of 8.1 µg/m^3, which is above the USEPA RSL and Water Board ESL, both 4.9 µg/m^3.

- Chloroform was present slightly above the USEPA RSL of 0.53 µg/m^3, but is below the Water Board ESL of 2.3 µg/m^3 in one indoor air sample collected from Suite H (SU1-2-IA3-2015-02-22) at a concentration of 0.57 µg/m^3. Chloroform was detected below the Water Board ESL and USEPA RSL (at 0.51 µg/m^3) in the duplicate sample collected at this location (SU1-2-DUP1-2015-02-22). No other chloroform exceedances were noted.

- All other VOC concentrations were below the respective ESLs and RSLs.

Building SU1-3

Indoor air samples were collected in Suites U, and W, and one pathway sample was collected from Suite P in Building SU1-3 on 17 February 2015 with HVAC systems operating. A duplicate sample was also collected from Suite U. No samples were collected at Suite R, as proposed in the Work Plan Addendum, because access was not provided by the tenant. Per the owner's request, access requests were made by the owner. No samples were collected with the HVAC systems off, because the suites were either open 7 days a week (Suite P) or the tenants did not provide access on Sunday (Suite U and W).

Findings - HVAC On

- TCE was not detected above its Water Board ESL, USEPA RSL, or USEPA RALs in any of the samples collected. TCE was detected at concentrations of 1.2, 1.5, and 2.1 µg/m^3 in the primary and duplicate samples collected from Suites U and Suite P, respectively. TCE was not detected in the sample collected from Suite W.

- Toluene, PCE, 1,1,1-Trichloroethane (1,1,1-TCA), methylene chloride, trichlorofluoromethane, Freon 113, and xylenes were detected in indoor air or pathway samples at or above laboratory reporting limits but below respective Water Board ESLs and USEPA RSLs (See Table 2).

- Ethylbenzene was detected in the indoor air and duplicate samples collected from Suite U (SU1-3-IA1-2015-02-17 and SU1-3-DUP1-2015-02-17) at concentrations of 7.4 and 10 µg/m^3, respectively, which are above the USEPA RSL and Water Board ESL of 4.9 µg/m^3.

- 1,2-DCA was also detected slightly exceeding the USEPA RSL of 0.47 µg/m^3 and the Water Board ESL of 0.58 µg/m^3 in one indoor air sample and its duplicate sample collected from Suite U (SU1-3-IA1-2015-02-17 and SU1-3-DUP1-2015-02-17) at concentrations of 0.74 and 0.87 µg/m^3, respectively.

- 1,4-Dichlorobenzene (1,4-DCB) and cis-1,2-dichloroethene (cis-1,2-DCE) were detected only in pathway sample SU1-3-PS1-2015-02-17 at concentrations well below the respective Water Board ESLs and USEPA RSLs.

- Chloroform was detected in all indoor air and pathway samples, but exceeded the USEPA RSL of 0.53 µg/m^3 and the Water Board ESL of 2.3 µg/m^3 in only one pathway sample collected from Suite P (SU1-3-PS1-2015-02-17) at a concentration of 5.1 µg/m^3.

- All other VOC concentrations were below the respective ESLs and RSLs.

Ambient Air Sample Results

Two ambient samples (SU1-2-AA1-2015-02-17 and SU1-2-AA1-2015-02-22) were collected; one on 17 and one on 22 February 2015. Freon 113, ethylbenzene, methylene chloride, toluene, trichlorofluoromethane and xylenes were detected at or above laboratory reporting limits with concentrations ranging from 0.15 to 1.3 µg/m^3. All detected VOC concentrations were below the respective ESLs and RSLs.

Discussion and Recommendations

TCE was not detected above the Water Board's Commercial/Industrial Land Use ESL, the USEPA's Industrial Air RSLs or the USEPA's RAL in any of the samples collected, with both HVAC systems operating and not operating.

1,2-DCA and ethylbenzene were detected above screening levels in Suite B in Building SU1-2 with the HVAC off and in Suite U in Building SU1-3 when the HVAC was operating. The highest concentrations were present in Suite U, where 1,2-DCA and ethylbenzene were detected at 0.87 and 10 µg/m^3, respectively. Ethylbenzene and 1,2-DCA are generally not detected in nearby upgradient and downgradient groundwater monitoring wells 32A, 46A, 48A, MW-23A, and MW-57A (Figure 1). It should also be noted that ethylbenzene was also detected in the ambient air sample collected on 17 February 2015.

According to the Agency for Toxic Substance and Disease Registry (ATSDR), 1,2-DCA is used to make a variety of plastic and vinyl products including polyvinyl chloride (PVC) pipes, furniture and automobile upholstery, wall coverings, housewares, and automobile parts. Ethylbenzene can be found in gasoline, paints and inks, pesticides, carpet glues, varnishes and paints, tobacco products, and automotive products. Given that these compounds are not typically detected in groundwater samples from nearby monitoring wells, the fact that these chemicals are commonly used in commercial settings, and that ethylbenzene was also detected in ambient air, it is not likely that the 1,2-DCA and ethylbenzene detections are associated with vapor intrusion. These concentrations are likely associated with a small indoor source.

Low levels of chloroform were detected in indoor air samples from Suite H in Building SU1-2 during both the HVAC on and off sampling events, at concentrations ranging from 0.51 to 1.2 µg/m^3. Chloroform was detected at 5.1 µg/m^3 in the pathway sample from Suite P in Building SU1-3. Chloroform concentrations in indoor air are known to be associated with off gassing from municipal water supplies. This off gassing is likely the source of chloroform in the pathway sample which was collected in a room with a shower and washing machine. Furthermore, chloroform is generally not detected in nearby upgradient and downgradient

groundwater monitoring wells 32A, 46A, 48A, MW-23A, and MW-57A (Figure 1) and therefore, is not likely associated with vapor intrusion.

Based on the chemicals and concentrations detected in the indoor air samples at Buildings SU1-2 and SU1-3, we conclude that there is not a significant risk to building occupants and do not believe additional evaluation of the vapor intrusion pathway is warranted. The exceedances of 1,2-DCA, ethylbenzene, and chloroform are likely attributable to materials within the individual suites or off-gassing from the municipal water supply.

Attachments

Table 1 – Sampling and Analysis Plan
Table 2 – Indoor, Pathway and Ambient Air Analytical Results
Figure 1 – Site location
Figure 2 – Site Plan
Appendix A – Photographs
Appendix B – Laboratory Analytical Reports

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TABLES

Table 1
Sample Location Summary
Buildings SU1-2 and SU1-3
Sunnyvale, CA

Sample ID	Suite	Tenants	Nature of work	HVAC On	HVAC Off
Indoor Air Samples					
SU1-2-IA1-2015-02-17 SU1-2-IA1-2015-02-22	B	Around the Clock Service Inc.	Plumbing, HVAC installation, repair	X	X
SU1-2-IA2-2015-02-17 SU1-2-IA2-2015-02-22	E	APPRO Technology	Advanced Video Surveillance, monitoring, assembling, distributing	X	X
SU1-2-IA3-2015-02-17 SU1-2-IA3-2015-02-22	H	Farbex Construction	Construction	X	X
Not accessible for sampling	L	Eddie's House Cleaning	Janitorial	NS	NS
Not accessible for sampling	R	Celebrate Festival Inc	Restaurant Supplies	NS	NS
SU1-3-IA1-2015-02-17	U	CIB Securities	Guard and protection services	X	NS
SU1-3-IA2-2015-02-17	W	JMS Medical Supply	Supplier of diapers	X	NS
SU1-3-DUP1-2015-02-17	U	CIB Securities	Guard and protection services	X	n/a
SU1-2-DUP1-2015-02-22	H	Farbex Construction	Construction	n/a	X
Pathway Samples					
SU1-3-PS1-2015-02-17	P	SNV Aroma	Massage parlor	X	NS
Ambient Samples					
SU1-2-AA1-2015-02-17 SU1-2-AA1-2015-02-22	Outdoor	n/a	n/a	X	X
			Subtotal	10	10
			Total	20	

Notes:
n/a: not applicable
NS: not sampled

Table 2
Indoor, Pathway and Ambient Air Analytical Results
Buildings SU1-2 and SU1-3
Sunnyvale, California

Chemical of Concern	Suite	Sample Date	Ethylbenzene	1,4-DCB	1,2-DCA	Toluene	PCE	cis-1,2-DCE	Chloroform	1,1,1-TCA	Methylene Chloride	Trichlorofluoro-methane	1,1,2-Trichloro-1,2,2-Trifluoroethane	TCE [1]	o-Xylenes	m- and p-Xylenes	Total Xylenes	All Other VOCs
Unit			**µg/m³**															
ESL Indoor Air Commercial Land Use			**4.9**	**1.1**	**0.6**	**1,314**	**2.1**	**30.7**	**2.3**	**21,900**	**26.1**	**NE**	**NE**	**3**	**438**	**438**	**438**	**--**
RSL Air Industrial			**4.9**	**1.1**	**0.47**	**22,000**	**47**	**NE**	**0.53**	**22,000**	**1,200**	**3,100**	**130,000**	**3**	**440**	**440**	**440**	**--**
Building SU1-2																		
HVAC On																		
SU1-2-IA1-2015-02-17	B	2/17/2015	4	< 0.15	0.35	18	0.24	< 0.099	0.18	< 0.14	1.2	1.2	0.7	0.65	5.3	17	22	ND
SU1-2-IA2-2015-02-17	E	2/17/2015	1.3	< 0.15	0.25	6.9	0.24	< 0.099	0.32	< 0.14	1.1	1.4	1.9	1.5	1	2.6	3.6	ND
SU1-2-IA3-2015-02-17	H	2/17/2015	1.8	< 0.15	0.3	8	0.3	< 0.099	1.2	< 0.14	1	1.4	1.2	1.2	2.3	5.9	8.2	ND
SU1-2-AA1-2015-02-17		2/17/2015	0.15	< 0.15	< 0.10	1.2	< 0.17	< 0.099	< 0.12	< 0.14	0.37	1.1	0.48	< 0.13	0.17	0.41	0.58	ND
HVAC Off																		
SU1-2-IA1-2015-02-22	B	2/22/2015	**8.1**	< 0.15	0.57	40	0.17	< 0.099	0.2	< 0.14	1.7	1.5	2	1.2	9.9	30	39	ND
SU1-2-IA2-2015-02-22	E	2/22/2015	4.8	< 0.15	0.2	5.5	0.21	< 0.099	0.2	< 0.14	5.6	1.7	1.6	0.95	2.9	8.1	11	ND
SU1-2-IA3-2015-02-22	H	2/22/2015	1.4	< 0.15	0.23	5.7	0.29	< 0.099	0.57	< 0.14	0.93	1.5	1.7	1.1	1.8	4.4	6.2	ND
SU1-2-DUP1-2015-02-22	H	2/22/2015	1.4	< 0.15	0.22	5.4	0.28	< 0.099	0.51	< 0.14	0.9	1.5	1.6	1.1	1.8	4.2	6	ND
SU1-2-AA1-2015-02-22		2/22/2015	< 0.11	< 0.15	< 0.10	0.29	< 0.17	< 0.099	< 0.12	< 0.14	0.26	1.3	0.49	< 0.13	< 0.11	0.15	0.15	ND
Building SU1-3																		
HVAC On																		
SU1-3-IA1-2015-02-17	U	2/17/2015	**7.4**	< 0.15	**0.74**	15	0.27	< 0.099	0.31	0.19	1.3	1.3	0.71	1.2	6	13	19	ND
SU1-3-DUP1-2015-02-17	U	2/17/2015	**10**	< 0.15	**0.87**	18	0.25	< 0.099	0.31	0.23	1.4	1.2	0.74	1.5	8.2	18	26	ND
SU1-3-IA2-2015-02-17	W	2/17/2015	0.57	< 0.15	0.1	7.3	0.19	< 0.099	0.23	< 0.14	0.41	1.1	0.46	< 0.13	0.52	1.4	1.9	ND
SU1-3-PS1-2015-02-17	P	2/17/2015	0.44	0.44	0.12	2.7	0.32	0.21	**5.1**	0.16	1.1	1.1	1.3	2.1	0.47	1.3	1.8	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 8 hour work day is 8 µg/m³.

µg/m3 - Micrograms per cubic meter

< 0.15 Compound not detected above the indicated reporting limit

ESL: Environmental Screening Level San Francisco Bay Regional Water Quality Control Board

RSL: Regional Screening Level United States Environmetal Protection Agency (USEPA)

ND - Not detected. Compounds not detected included chlorobenzene, 1,2,4-TCB, trans-1,2-DCE, MTBE, 1,3-DCB, chloroethane, vinyl chloride, 1,1-DCA, 1,1-DCE, 1,1,2-TCA, 1,2,3-TCB, and 1,2-DCB. Labortory reporting limits ranged from less than 0.026 to 0.19 µg/m³.

NE - Not established

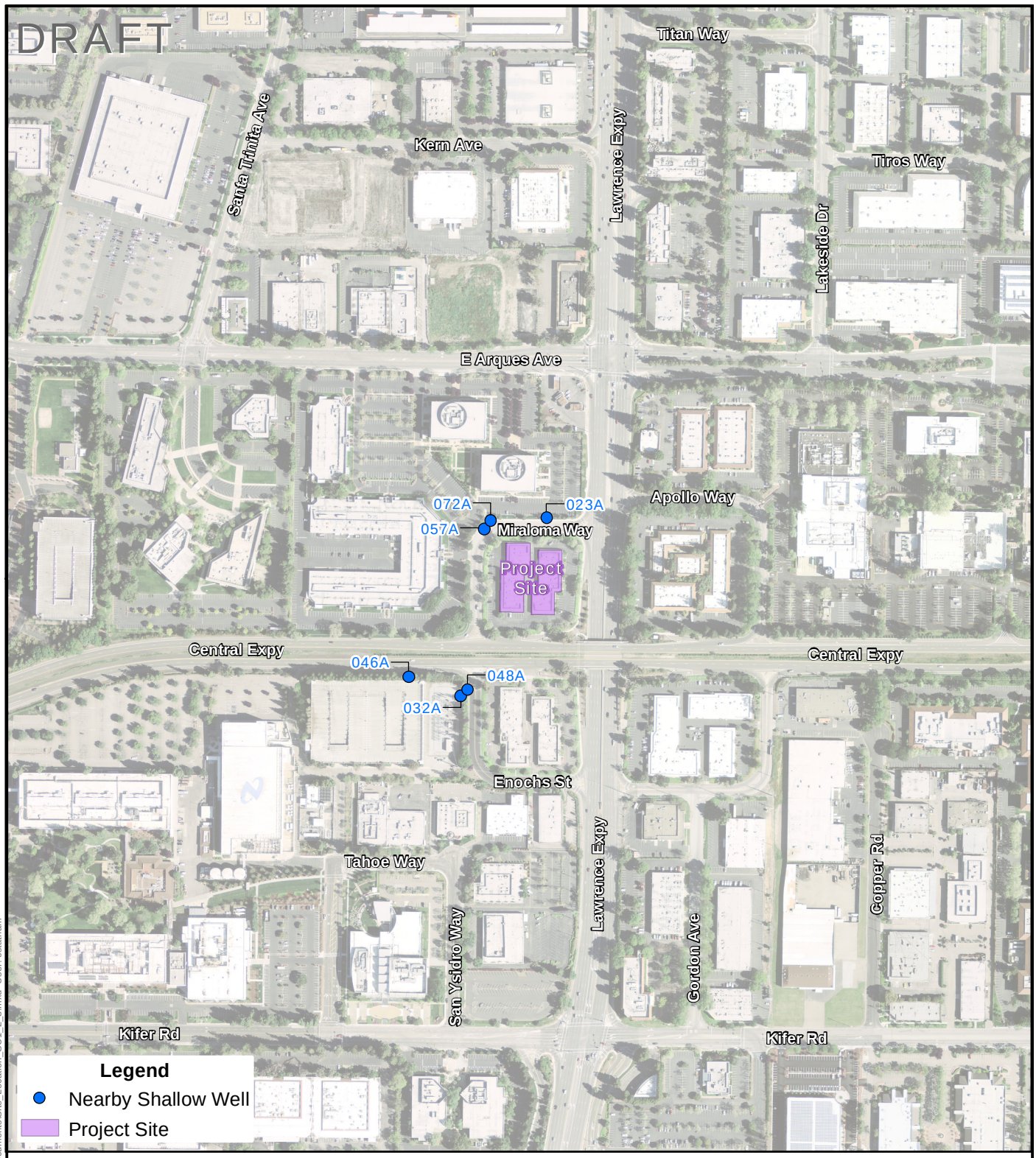
1,2,3-TCB: 1,2,3-trichlorobenzene
1,2,4-TCB: 1,2,4-trichlorobenzene
1,2-DCB: 1,2-dichlorobenzene
1,3-DCB: 1,3-dichlorobenzene
1,4-DCB: 1,4-dichlorobenzene
MTBE: methyl tert-butyl ether
1,1,1-TCA: 1,1,1-trichloroethane
1,1,2-TCA: 1,1,2-trichloroethane
1,2-DCA: 1,2-dichloroethane
1,1-DCA: 1,1-dichloroethane
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.

0 250 500 1,000
Feet

N

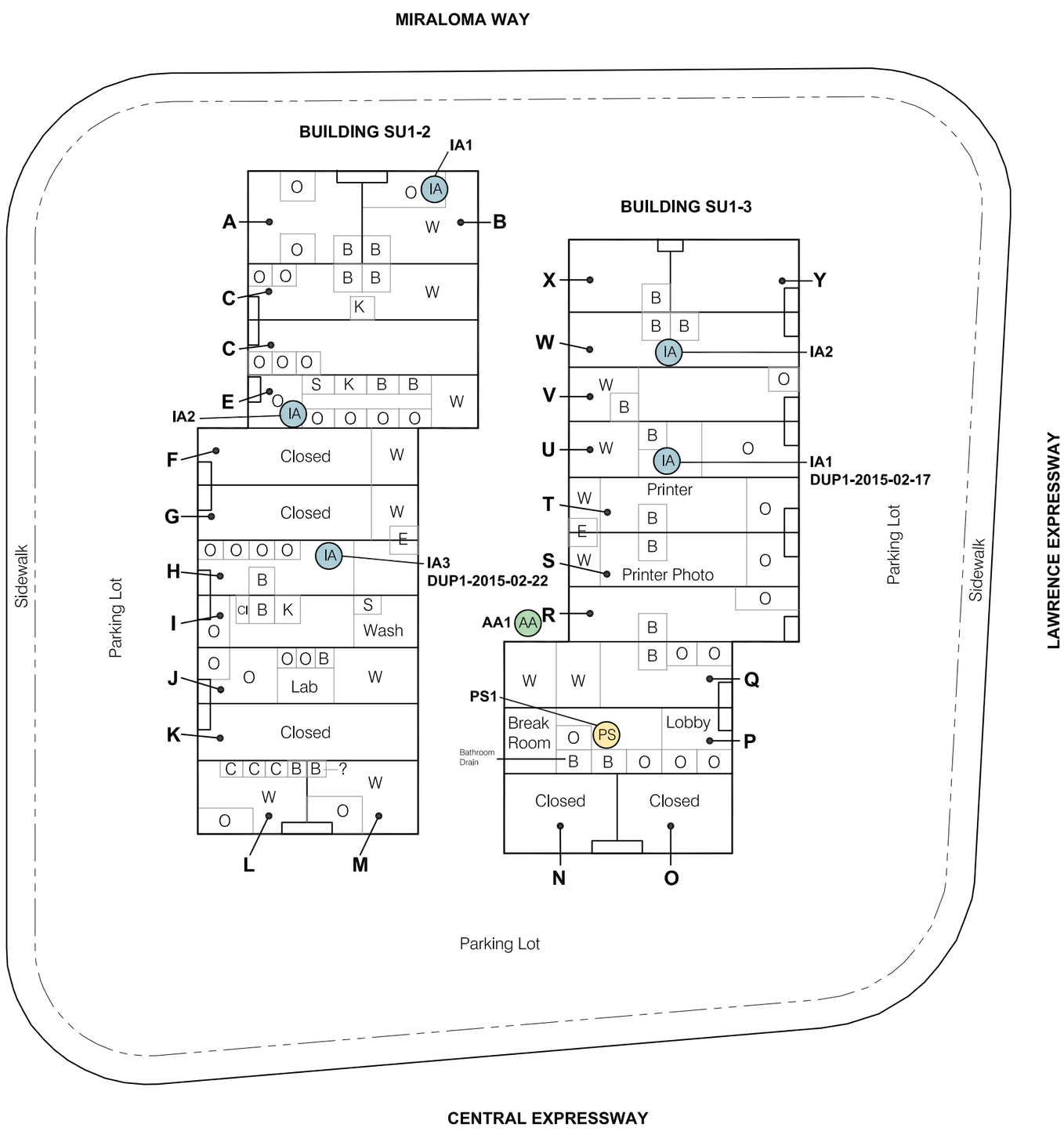
BUILDING SU1-2 & SU1-3
Sunnyvale, California

SITE LOCATION MAP

LANGAN TREADWELL ROLLO

Date 3/24/2015	Project 750620720	Figure 1

\\langan.com\data\OA\data7\750620720\ArcGIS\ArcMap_Documents\Site_Location_SU1_2_3.mxd User: cstatham



EXPLANATION

A	Suite designation (interior dimension not to scale)
B	Bathroom
C	Cubicle
Cl	Closet
E	Electrical Room
O	Office space
W	Warehouse/storage
K	Kitchen area
S	Storage
IA	Indoor air sample location
PS	Pathway air sample location
AA	Ambient air sample location
— - - —	Site Boundary

BUILDING SU1-2

Suite Name	Tenants
N	J&L EDM
O	Not available/Did not visit
P	SNV Aroma
Q	Rank Technology Corp.
R	Celebrate Festival Inc.
S & T	Bay Graphics
U	CIB Securities
V	Semilinks Inc
W & X	JMS Medical Supply
Y	MTI Mericatech

BUILDING SU1-3

Suite Name	Tenants
A	Awards by Norm
B	Around the Clock Service Inc.
C	AVUE
E	APPRO Technology
F	ABC Remodel
G	EMS
H	Farbex Construction
I	Merrymaids
J	Skincare Products
K	Semitrack Services
L	Eddie's House Cleaning
M	Madhuban

0 50 Feet

Approximate scale

BUILDINGS SU1-2 AND SU1-3
Sunnyvale, California

SAMPLING LOCATIONS

Date 03/23/15 | Project No. 750620721 | Figure 2

LANGAN TREADWELL ROLLO

\\langan.com\data\OA\data7\750620721\Cadd Data – 750620721\2D-DesignFiles\Environmental\750620721-N-SP0102.dwg 3/26/15

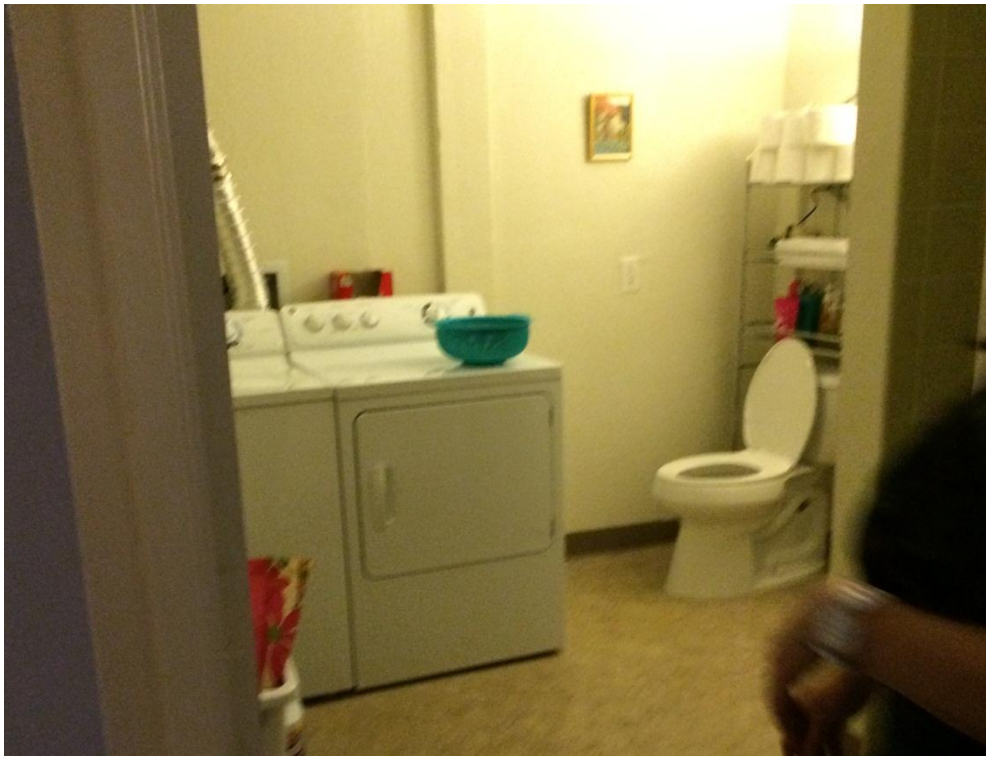
APPENDIX A

PHOTOGRAPHS

SU1-2 (left) and SU1-3 (right) overhead doors and back entrances

SU1-2-IA1 at Suite B

SU1-2-IA3 and SU1-2-DUP1-2015-02-22 at Suite H



SU1-3-PS1 located on top of washing machine in Suite P
(shower stall in same room not pictured)

SU1-3-1A2 at Suite W warehouse

SU1-2-AA1 on top of transformer in between Buildings SU1-2 and SU1-3

APPENDIX B

LABORATORY ANALYTICAL REPORTS

eurofins | Calscience

Supplemental Report 1

The original report has been revised/corrected.

WORK ORDER NUMBER: 15-02-1362

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Treadwell & Rollo - A Langan Company

Client Project Name: Texas Instruments off-property SUI-2 and SUI-3 / 750620719

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

Vikas Patel

Approved for release on 03/04/2015 by:
Vikas Patel
Project Manager

ResultLink

Email your PM

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Work Order Number: 15-02-1362

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Work Order Narrative

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 02/19/15. They were assigned to Work Order 15-02-1362.

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.

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Sample Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order:	15-02-1362
		Project Name:	Texas Instruments off-property SUI-2 and SUI-3 / 750620719
		PO Number:	
		Date/Time Received:	02/19/15 10:30
		Number of Containers:	8
Attn:	Joshua Graber		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SU1-2-IA1-2015-02-17	15-02-1362-1	02/17/15 16:32	1	Air
SU1-2-IA2-2015-02-17	15-02-1362-2	02/17/15 16:26	1	Air
SU1-2-IA3-2015-02-17	15-02-1362-3	02/17/15 17:05	1	Air
SU1-3-IA1-2015-02-17	15-02-1362-4	02/17/15 16:50	1	Air
SU1-3-IA2-2015-02-17	15-02-1362-5	02/17/15 16:16	1	Air
SU1-3-DUP1-2015-02-17	15-02-1362-6	02/17/15 00:00	1	Air
SU1-3-PS1-2015-02-17	15-02-1362-7	02/17/15 16:10	1	Air
SU1-2-AA1-2015-02-17	15-02-1362-8	02/17/15 17:00	1	Air

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Detections Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order:	15-02-1362
		Project Name:	Texas Instruments off-property SUI-2 and SUI-3 / 750620719
		Received:	02/19/15
Attn:	Joshua Graber		Page 1 of 4

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SU1-2-IA1-2015-02-17 (15-02-1362-1)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.70		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.35		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.18		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	4.0		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.2		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.24		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	18		0.75	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.65		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	5.3		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	17		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	22		0.11	ug/m3	EPA TO-15 SIM	N/A
SU1-2-IA2-2015-02-17 (15-02-1362-2)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.9		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.25		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.32		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	1.3		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.1		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.24		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	6.9		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.5		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	1.0		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.6		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	3.6		0.11	ug/m3	EPA TO-15 SIM	N/A

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Detections Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order:	15-02-1362
		Project Name:	Texas Instruments off-property SUI-2 and SUI-3 / 750620719
		Received:	02/19/15
Attn:	Joshua Graber		Page 2 of 4

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SU1-2-IA3-2015-02-17 (15-02-1362-3)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.30		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	1.2		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	1.8		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.0		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.30		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	8.0		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.2		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	2.3		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	5.9		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	8.2		0.11	ug/m3	EPA TO-15 SIM	N/A
SU1-3-IA1-2015-02-17 (15-02-1362-4)						
1,1,1-Trichloroethane	0.19		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	0.74		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.31		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	7.4		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.3		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.27		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	15		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.2		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	6.0		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	13		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	19		0.11	ug/m3	EPA TO-15 SIM	N/A

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Detections Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order:	15-02-1362
		Project Name:	Texas Instruments off-property SUI-2 and SUI-3 / 750620719
		Received:	02/19/15
Attn:	Joshua Graber		Page 3 of 4

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SU1-3-IA2-2015-02-17 (15-02-1362-5)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.46		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	0.23		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.57		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.41		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.19		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	7.3		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.1		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.52		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.4		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	1.9		0.11	ug/m3	EPA TO-15 SIM	N/A
SU1-3-DUP1-2015-02-17 (15-02-1362-6)						
1,1,1-Trichloroethane	0.23		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.74		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.87		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.31		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	10		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.4		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.25		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	18		1.9	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.5		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	8.2		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	18		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	26		0.11	ug/m3	EPA TO-15 SIM	N/A

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Detections Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order:	15-02-1362
		Project Name:	Texas Instruments off-property SUI-2 and SUI-3 / 750620719
		Received:	02/19/15
Attn:	Joshua Graber		Page 4 of 4

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SU1-3-PS1-2015-02-17 (15-02-1362-7)						
1,1,1-Trichloroethane	0.16		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.3		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.12		0.10	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.44		0.15	ug/m3	EPA TO-15 SIM	N/A
Chloroform	5.1		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.44		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.1		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.32		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	2.7		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	2.1		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.1		0.14	ug/m3	EPA TO-15 SIM	N/A
c-1,2-Dichloroethene	0.21		0.099	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.47		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.3		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	1.8		0.11	ug/m3	EPA TO-15 SIM	N/A
SU1-2-AA1-2015-02-17 (15-02-1362-8)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.48		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	0.37		0.087	ug/m3	EPA TO-15 SIM	N/A
Toluene	1.2		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.1		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.17		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.41		0.11	ug/m3	EPA TO-15 SIM	N/A
Xylenes (total)	0.58		0.11	ug/m3	EPA TO-15 SIM	N/A

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 1 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-2-IA1-2015-02-17	**15-02-1362-1-A**	**02/17/15 16:32**	**Air**	**GC/MS HH**	**N/A**	**02/19/15 23:10**	**120219L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	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	0.35	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	0.18	0.12	1.00	
Ethylbenzene	4.0	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.2	0.087	1.00	
Tetrachloroethene	0.24	0.17	1.00	
Trichloroethene	0.65	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	5.3	0.11	1.00	
p/m-Xylene	17	0.11	1.00	
Xylenes (total)	22	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	106	37-163	
1,4-Bromofluorobenzene	96	45-153	
Toluene-d8	102	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 2 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-2-IA1-2015-02-17	**15-02-1362-1-A**	**02/17/15 16:32**	**Air**	**GC/MS DD**	**N/A**	**02/23/15 19:11**	**150223L01**

Parameter	Result	RL	DF	Qualifiers
Toluene	18	0.75	4.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	105	37-163	
1,4-Bromofluorobenzene	98	45-153	
Toluene-d8	98	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 3 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-2-IA2-2015-02-17	**15-02-1362-2-A**	**02/17/15 16:26**	**Air**	**GC/MS HH**	**N/A**	**02/20/15 00:04**	**120219L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.9	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	0.25	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	0.32	0.12	1.00	
Ethylbenzene	1.3	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.1	0.087	1.00	
Tetrachloroethene	0.24	0.17	1.00	
Toluene	6.9	0.19	1.00	
Trichloroethene	1.5	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	1.0	0.11	1.00	
p/m-Xylene	2.6	0.11	1.00	
Xylenes (total)	3.6	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	100	37-163	
1,4-Bromofluorobenzene	96	45-153	
Toluene-d8	102	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 4 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-2-IA3-2015-02-17	**15-02-1362-3-A**	**02/17/15 17:05**	**Air**	**GC/MS HH**	**N/A**	**02/20/15 00:58**	**120219L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2	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	0.30	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	1.2	0.12	1.00	
Ethylbenzene	1.8	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.0	0.087	1.00	
Tetrachloroethene	0.30	0.17	1.00	
Toluene	8.0	0.19	1.00	
Trichloroethene	1.2	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	2.3	0.11	1.00	
p/m-Xylene	5.9	0.11	1.00	
Xylenes (total)	8.2	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	98	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 5 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-3-IA1-2015-02-17	**15-02-1362-4-A**	**02/17/15 16:50**	**Air**	**GC/MS HH**	**N/A**	**02/20/15 01:49**	**120219L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	0.19	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	0.74	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	0.31	0.12	1.00	
Ethylbenzene	7.4	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.3	0.087	1.00	
Tetrachloroethene	0.27	0.17	1.00	
Toluene	15	0.19	1.00	
Trichloroethene	1.2	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	6.0	0.11	1.00	
p/m-Xylene	13	0.11	1.00	
Xylenes (total)	19	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	103	37-163	
1,4-Bromofluorobenzene	99	45-153	
Toluene-d8	99	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 6 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-3-IA2-2015-02-17	**15-02-1362-5-A**	**02/17/15 16:16**	**Air**	**GC/MS HH**	**N/A**	**02/20/15 02:41**	**120219L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.46	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	0.23	0.12	1.00	
Ethylbenzene	0.57	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.41	0.087	1.00	
Tetrachloroethene	0.19	0.17	1.00	
Toluene	7.3	0.19	1.00	
Trichloroethene	ND	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	0.52	0.11	1.00	
p/m-Xylene	1.4	0.11	1.00	
Xylenes (total)	1.9	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	100	45-153	
Toluene-d8	97	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 7 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-3-DUP1-2015-02-17	**15-02-1362-6-A**	**02/17/15 00:00**	**Air**	**GC/MS HH**	**N/A**	**02/20/15 03:35**	**120219L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	0.23	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.74	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	0.87	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	0.31	0.12	1.00	
Ethylbenzene	10	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.4	0.087	1.00	
Tetrachloroethene	0.25	0.17	1.00	
Trichloroethene	1.5	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	8.2	0.11	1.00	
p/m-Xylene	18	0.11	1.00	
Xylenes (total)	26	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	98	45-153	
Toluene-d8	93	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 8 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-3-DUP1-2015-02-17	**15-02-1362-6-A**	**02/17/15 00:00**	**Air**	**GC/MS HH**	**N/A**	**02/20/15 07:07**	**120219L02**

Parameter	Result	RL	DF	Qualifiers
Toluene	18	1.9	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	95	37-163	
1,4-Bromofluorobenzene	93	45-153	
Toluene-d8	93	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 9 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-3-PS1-2015-02-17	**15-02-1362-7-A**	**02/17/15 16:10**	**Air**	**GC/MS HH**	**N/A**	**02/20/15 04:31**	**120219L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	0.16	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.3	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	0.12	0.10	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	0.44	0.15	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	5.1	0.12	1.00	
Ethylbenzene	0.44	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.1	0.087	1.00	
Tetrachloroethene	0.32	0.17	1.00	
Toluene	2.7	0.19	1.00	
Trichloroethene	2.1	0.13	1.00	
Trichlorofluoromethane	1.1	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	0.21	0.099	1.00	
o-Xylene	0.47	0.11	1.00	
p/m-Xylene	1.3	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	95	37-163	
1,4-Bromofluorobenzene	103	45-153	
Toluene-d8	95	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 10 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-2-AA1-2015-02-17	**15-02-1362-8-A**	**02/17/15 17:00**	**Air**	**GC/MS HH**	**N/A**	**02/20/15 05:25**	**120219L02**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.48	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	0.37	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	1.2	0.19	1.00	
Trichloroethene	ND	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	0.17	0.11	1.00	
p/m-Xylene	0.41	0.11	1.00	
Xylenes (total)	0.58	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	94	37-163	
1,4-Bromofluorobenzene	98	45-153	
Toluene-d8	95	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 11 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-151**	**N/A**	**Air**	**GC/MS HH**	**N/A**	**02/19/15 20:36**	**120219L02**

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	103	37-163	
1,4-Bromofluorobenzene	84	45-153	
Toluene-d8	98	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 12 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-152**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**02/23/15 15:42**	**150223L01**

Parameter	Result	RL	DF	Qualifiers
Toluene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	105	37-163	
1,4-Bromofluorobenzene	95	45-153	
Toluene-d8	96	73-121	

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

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Quality Control - LCS/LCSD

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-152	**LCS**	**Air**	**GC/MS DD**	**N/A**	**02/23/15 14:04**	**150223L01**
099-15-214-152	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**02/23/15 14:53**	**150223L01**

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	2.116	78	2.097	77	50-150	33-167	1	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.094	81	3.106	81	50-150	33-167	0	0-30	
1,1,2-Trichloroethane	2.728	2.042	75	2.092	77	27-171	3-195	2	0-38	
1,1-Dichloroethane	2.024	1.544	76	1.553	77	50-150	33-167	1	0-30	
1,1-Dichloroethene	1.982	1.646	83	1.628	82	50-150	33-167	1	0-30	
1,2-Dichloroethane	2.024	1.580	78	1.622	80	28-166	5-189	3	0-40	
Chlorobenzene	2.302	1.775	77	1.760	76	50-150	33-167	1	0-30	
Chloroethane	1.319	1.149	87	1.270	96	50-150	33-167	10	0-30	
Chloroform	2.441	1.864	76	1.898	78	50-150	33-167	2	0-30	
Ethylbenzene	2.171	1.628	75	1.638	75	27-153	6-174	1	0-46	
Methyl-t-Butyl Ether (MTBE)	1.803	1.356	75	1.319	73	50-150	33-167	3	0-30	
Methylene Chloride	1.737	1.357	78	1.354	78	50-150	33-167	0	0-30	
Tetrachloroethene	3.391	3.055	90	3.001	88	34-154	14-174	2	0-33	
Toluene	1.884	1.434	76	1.419	75	28-154	7-175	1	0-42	
Trichloroethene	2.687	2.039	76	2.031	76	43-139	27-155	0	0-31	
Trichlorofluoromethane	2.809	2.428	86	2.637	94	50-150	33-167	8	0-30	
Vinyl Chloride	1.278	1.233	96	1.225	96	44-140	28-156	1	0-33	
c-1,2-Dichloroethene	1.982	1.505	76	1.500	76	35-165	13-187	0	0-35	
o-Xylene	2.171	1.693	78	1.647	76	22-160	0-183	3	0-48	
p/m-Xylene	4.342	3.314	76	3.269	75	21-165	0-189	1	0-51	
t-1,2-Dichloroethene	1.982	1.439	73	1.456	73	50-150	33-167	1	0-30	
1,2,3-Trichlorobenzene	3.711	3.137	85	3.070	83	50-150	33-167	2	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

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Quality Control - LCS/LCSD

Treadwell & Rollo - A Langan Company		Date Received:	02/19/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1362
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-151	**LCS**	**Air**	**GC/MS HH**	**N/A**	**02/19/15 17:56**	**120219L02**
099-15-214-151	**LCSD**	**Air**	**GC/MS HH**	**N/A**	**02/19/15 18:45**	**120219L02**

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	2.597	95	2.566	94	50-150	33-167	1	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.354	88	3.287	86	50-150	33-167	2	0-30	
1,1,2-Trichloroethane	2.728	2.395	88	2.346	86	27-171	3-195	2	0-38	
1,1-Dichloroethane	2.024	1.668	82	1.638	81	50-150	33-167	2	0-30	
1,1-Dichloroethene	1.982	1.657	84	1.636	83	50-150	33-167	1	0-30	
1,2-Dichloroethane	2.024	1.721	85	1.695	84	28-166	5-189	1	0-40	
Chlorobenzene	2.302	1.891	82	1.875	81	50-150	33-167	1	0-30	
Chloroethane	1.319	1.608	122	1.598	121	50-150	33-167	1	0-30	
Chloroform	2.441	2.070	85	2.041	84	50-150	33-167	1	0-30	
Ethylbenzene	2.171	1.658	76	1.615	74	27-153	6-174	3	0-46	
Methyl-t-Butyl Ether (MTBE)	1.803	1.261	70	1.245	69	50-150	33-167	1	0-30	
Methylene Chloride	1.737	1.433	83	1.403	81	50-150	33-167	2	0-30	
Tetrachloroethene	3.391	2.731	81	2.712	80	34-154	14-174	1	0-33	
Toluene	1.884	1.571	83	1.575	84	28-154	7-175	0	0-42	
Trichloroethene	2.687	2.224	83	2.194	82	43-139	27-155	1	0-31	
Trichlorofluoromethane	2.809	2.425	86	2.382	85	50-150	33-167	2	0-30	
Vinyl Chloride	1.278	1.065	83	1.034	81	44-140	28-156	3	0-33	
c-1,2-Dichloroethene	1.982	1.548	78	1.523	77	35-165	13-187	2	0-35	
o-Xylene	2.171	1.769	81	1.712	79	22-160	0-183	3	0-48	
p/m-Xylene	4.342	3.489	80	3.428	79	21-165	0-189	2	0-51	
t-1,2-Dichloroethene	1.982	1.519	77	1.493	75	50-150	33-167	2	0-30	
1,2,3-Trichlorobenzene	3.711	2.911	78	2.876	78	50-150	33-167	1	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

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Summa Canister Vacuum Summary

Work Order: 15-02-1362

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
SU1-2-IA1-2015-02-17	-29.70 in Hg	-4.60 in Hg	SIM049	Summa Canister 6L
SU1-2-IA2-2015-02-17	-29.70 in Hg	-6.80 in Hg	SIM018	Summa Canister 6L
SU1-2-IA3-2015-02-17	-29.70 in Hg	-6.80 in Hg	D844	Summa Canister 6L
SU1-3-IA1-2015-02-17	-29.60 in Hg	-3.50 in Hg	SIM009	Summa Canister 6L
SU1-3-IA2-2015-02-17	-29.70 in Hg	-4.10 in Hg	D250	Summa Canister 6L
SU1-3-DUP1-2015-02-17	-29.70 in Hg	-6.10 in Hg	D129	Summa Canister 6L
SU1-3-PS1-2015-02-17	-29.70 in Hg	-6.20 in Hg	SIM006	Summa Canister 6L
SU1-2-AA1-2015-02-17	-29.80 in Hg	-6.80 in Hg	SIM080	Summa Canister 6L

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Sample Analysis Summary Report

Work Order: 15-02-1362

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

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Glossary of Terms and Qualifiers

Work Order: 15-02-1362 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.

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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: **15-02-1362**

DATE: 2/17/15
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

CLIENT PROJECT NAME / NO.: Texas Instruments Off-Property SU1-2 and SU1-3
P.O. NO.: 750620719
PROJECT CONTACT: Joshua Graber
LAB CONTACT OR QUOTE NO.:
PROJECT ADDRESS:
SAMPLER(S): (PRINT) Annie Lee
CITY: Sunnyvale STATE: CA ZIP:

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:
Please analyze for site-specific TO-15 list, attached for reference.

REQUESTED ANALYSES

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 SIM (Site-Specific List)
1		SU1-2-1A1-2015-02-17	I	SIM049	6L	FC112	2/17/15	0856	< -30	2/17/15	1632	-5	X
2	SU1-2-	1A2-2015-02-17	I	SIM018	6L	FC206	↓	0850	< -30	↓	1626	-7	X
3	SU1-2-	1A3-2015-02-17	I	D844	6L	FC213	↓	0922	< -30	↓	1705	-8	X
4	SU1-3-	1A1-2015-02-17	I	SIM009	6L	FC369	↓	0912	< -30	↓	1650	-7.5	X
5	SU1-3-	1A2-2015-02-17	I	D250	6L	FC242	↓	0842	< -30	↓	1616	-5	X
6	SU1-3-	DUP1-2015-02-17	I	D129	6L	FC381	↓	—	< -30	↓	—	-8	X
7	SU1-3-	PS1-2015-02-17	I	SIM006	6L	FC391	↓	0836	< -30	↓	1610	-8	X
8	SU1-2-	AA1-2015-02-17	A	SIM080	6L	FC122	↓	0902	-29	↓	1700	-6	X

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature]	[signature]		
GSO	[signature] ECI	02/19/15	1030

2014-07-01 Revision

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1362

GSO GOLDEN STATE OVERNIGHT

800-322-5555 www.gso.com

Ship From
LANGAN TREADWELL ROLLO
JOSHUA GRABER
555 MONTGOMERY ST
SUITE 1300
SAN FRANCISCO, CA 94111

Ship To
CAL SCIENCE
KRISTEN BECKLEY
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:
750620719
Delivery Instructions:

Signature Type: NOT REQUIRED

Tracking #: 526976638 **PDS**

ORC **A**

GARDEN GROVE

D92845A

34280887

Print Date: 2/18/2015 7:20 AM

Package 1 of 2

GSO GOLDEN STATE OVERNIGHT

800-322-5555 www.gso.com

Ship From
LANGAN TREADWELL ROLLO
JOSHUA GRABER
555 MONTGOMERY ST
SUITE 1300
SAN FRANCISCO, CA 94111

Ship To
CAL SCIENCE
KRISTEN BECKLEY
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:
750620719
Delivery Instructions:

Signature Type: NOT REQUIRED

Tracking #: 526976639 **PDS**

ORC **A**

GARDEN GROVE

D92845A

34280888

Print Date: 2/18/2015 7:20 AM

Package 2 of 2

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

1362

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 So 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 workplaces with longer work schedules.

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WORK ORDER #: 15-02-1362

SAMPLE RECEIPT FORM

Cooler 2 of 6

CLIENT: Langan Treadwell + Rollo

DATE: 02/19/15

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: 300

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present (Box) ☐ N/A Checked by: 300

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 300

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:** 300

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 800

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:** 300

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Supplemental Report 1

The original report has been revised/corrected.

WORK ORDER NUMBER: 15-02-1670

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Treadwell & Rollo - A Langan Company

Client Project Name: Texas Instruments off-property SUI-2 and SUI-3 / 750620719

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

Vikas Patel

Approved for release on 03/04/2015 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.

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Client Project Name: Texas Instruments off-property SUI-2 and SUI-3 / 750620719
Work Order Number: 15-02-1670

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3 Detections Summary. 5

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Work Order Narrative

Work Order: 15-02-1670 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 02/24/15. They were assigned to Work Order 15-02-1670.

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.

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Sample Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order:	15-02-1670
		Project Name:	Texas Instruments off-property SUI-2 and SUI-3 / 750620719
		PO Number:	
		Date/Time Received:	02/24/15 10:35
		Number of Containers:	5
Attn:	Annie Lee		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SU1-2-IA2-2015-02-22	15-02-1670-1	02/22/15 17:40	1	Air
SU1-2-AA1-2015-02-22	15-02-1670-2	02/22/15 16:25	1	Air
SU1-2-IA3-2015-02-22	15-02-1670-3	02/22/15 16:35	1	Air
SU1-2-DUP1-2015-02-22	15-02-1670-4	02/22/15 00:00	1	Air
SU1-2-IA1-2015-02-22	15-02-1670-5	02/22/15 16:30	1	Air

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Detections Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order:	15-02-1670
		Project Name:	Texas Instruments off-property SUI-2 and SUI-3 / 750620719
		Received:	02/24/15
Attn:	Annie Lee		Page 1 of 2

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SU1-2-IA2-2015-02-22 (15-02-1670-1)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.20		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.20		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	4.8		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	5.6		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.21		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	5.5		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.95		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.7		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	2.9		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	8.1		0.11	ug/m3	EPA TO-15 SIM	N/A
SU1-2-AA1-2015-02-22 (15-02-1670-2)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.49		0.19	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.26		0.087	ug/m3	EPA TO-15 SIM	N/A
Toluene	0.29		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.3		0.14	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.15		0.11	ug/m3	EPA TO-15 SIM	N/A
SU1-2-IA3-2015-02-22 (15-02-1670-3)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.7		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.23		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.57		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	1.4		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.93		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.29		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	5.7		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.1		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.8		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	4.4		0.11	ug/m3	EPA TO-15 SIM	N/A

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Detections Summary

Client:	Treadwell & Rollo - A Langan Company 555 Montgomery St., Suite 1300 San Francisco, CA 94111-2554	Work Order:	15-02-1670
		Project Name:	Texas Instruments off-property SUI-2 and SUI-3 / 750620719
		Received:	02/24/15
Attn:	Annie Lee		Page 2 of 2

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SU1-2-DUP1-2015-02-22 (15-02-1670-4)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.22		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.51		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	1.4		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.90		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.28		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	5.4		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.1		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.8		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	4.2		0.11	ug/m3	EPA TO-15 SIM	N/A
SU1-2-IA1-2015-02-22 (15-02-1670-5)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	2.0		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.57		0.10	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.20		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	8.1		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.7		0.087	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.17		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	40		1.9	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.2		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	9.9		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	30		0.11	ug/m3	EPA TO-15 SIM	N/A

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/24/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1670
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 1 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-2-IA2-2015-02-22	**15-02-1670-1-A**	**02/22/15 17:40**	**Air**	**GC/MS DD**	**N/A**	**02/24/15 20:35**	**150224L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6	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	0.20	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	0.20	0.12	1.00	
Ethylbenzene	4.8	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	5.6	0.087	1.00	
Tetrachloroethene	0.21	0.17	1.00	
Toluene	5.5	0.19	1.00	
Trichloroethene	0.95	0.13	1.00	
Trichlorofluoromethane	1.7	0.14	1.00	
Vinyl Chloride	ND	0.026	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
o-Xylene	2.9	0.11	1.00	
p/m-Xylene	8.1	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	102	37-163	
1,4-Bromofluorobenzene	98	45-153	
Toluene-d8	95	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/24/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1670
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 2 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-2-AA1-2015-02-22	**15-02-1670-2-A**	**02/22/15 16:25**	**Air**	**GC/MS DD**	**N/A**	**02/24/15 21:29**	**150224L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.49	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	0.26	0.087	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	0.29	0.19	1.00	
Trichloroethene	ND	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	ND	0.11	1.00	
p/m-Xylene	0.15	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	106	37-163	
1,4-Bromofluorobenzene	93	45-153	
Toluene-d8	96	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/24/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1670
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 3 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-2-IA3-2015-02-22	**15-02-1670-3-A**	**02/22/15 16:35**	**Air**	**GC/MS DD**	**N/A**	**02/24/15 22:24**	**150224L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.7	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	0.23	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	0.57	0.12	1.00	
Ethylbenzene	1.4	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.93	0.087	1.00	
Tetrachloroethene	0.29	0.17	1.00	
Toluene	5.7	0.19	1.00	
Trichloroethene	1.1	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	1.8	0.11	1.00	
p/m-Xylene	4.4	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	104	37-163	
1,4-Bromofluorobenzene	98	45-153	
Toluene-d8	97	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/24/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1670
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 4 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-2-DUP1-2015-02-22	**15-02-1670-4-A**	**02/22/15 00:00**	**Air**	**GC/MS DD**	**N/A**	**02/24/15 23:18**	**150224L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6	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	0.22	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	0.51	0.12	1.00	
Ethylbenzene	1.4	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.90	0.087	1.00	
Tetrachloroethene	0.28	0.17	1.00	
Toluene	5.4	0.19	1.00	
Trichloroethene	1.1	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	1.8	0.11	1.00	
p/m-Xylene	4.2	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	105	37-163	
1,4-Bromofluorobenzene	99	45-153	
Toluene-d8	98	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/24/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1670
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 5 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-2-IA1-2015-02-22	**15-02-1670-5-A**	**02/22/15 16:30**	**Air**	**GC/MS DD**	**N/A**	**02/25/15 00:18**	**150224L01**

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	2.0	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	0.57	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	0.20	0.12	1.00	
Ethylbenzene	8.1	0.11	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.7	0.087	1.00	
Tetrachloroethene	0.17	0.17	1.00	
Trichloroethene	1.2	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	9.9	0.11	1.00	
p/m-Xylene	30	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	102	37-163	
1,4-Bromofluorobenzene	101	45-153	
Toluene-d8	99	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/24/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1670
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 6 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SU1-2-IA1-2015-02-22	**15-02-1670-5-A**	**02/22/15 16:30**	**Air**	**GC/MS DD**	**N/A**	**02/25/15 09:10**	**150224L01**

Parameter	Result	RL	DF	Qualifiers
Toluene	40	1.9	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	104	37-163	
1,4-Bromofluorobenzene	98	45-153	
Toluene-d8	99	73-121	

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

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Analytical Report

Treadwell & Rollo - A Langan Company		Date Received:	02/24/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1670
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 7 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-153**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**02/24/15 19:42**	**150224L01**

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	103	37-163	
1,4-Bromofluorobenzene	93	45-153	
Toluene-d8	98	73-121	

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

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Quality Control - LCS/LCSD

Treadwell & Rollo - A Langan Company		Date Received:	02/24/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1670
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-153	**LCS**	**Air**	**GC/MS DD**	**N/A**	**02/24/15 17:05**	**150224L01**
099-15-214-153	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**02/24/15 17:54**	**150224L01**

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	2.262	83	2.258	83	50-150	33-167	0	0-30	
1,1,2,2-Tetrachloroethane	3.433	3.058	89	2.992	87	50-150	33-167	2	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.425	89	3.515	92	50-150	33-167	3	0-30	
1,1,2-Trichloroethane	2.728	2.209	81	2.247	82	27-171	3-195	2	0-38	
1,1-Dichloroethane	2.024	1.714	85	1.717	85	50-150	33-167	0	0-30	
1,1-Dichloroethene	1.982	1.769	89	1.812	91	50-150	33-167	2	0-30	
1,1-Difluoroethane	1.351	1.387	103	1.389	103	50-150	33-167	0	0-30	
1,2,4-Trimethylbenzene	2.458	2.168	88	2.070	84	50-150	33-167	5	0-30	
1,2-Dichloroethane	2.024	1.768	87	1.783	88	28-166	5-189	1	0-40	
1,3,5-Trimethylbenzene	2.458	2.250	92	2.140	87	50-150	33-167	5	0-30	
1,4-Dioxane	1.802	1.521	84	1.592	88	60-140	47-153	5	0-30	
4-Ethyltoluene	2.458	2.108	86	2.007	82	50-150	33-167	5	0-30	
Benzene	1.597	1.295	81	1.295	81	27-153	6-174	0	0-34	
Bromodichloromethane	3.350	2.845	85	2.871	86	50-150	33-167	1	0-30	
Carbon Tetrachloride	3.146	2.714	86	2.760	88	7-187	0-217	2	0-31	
Chlorobenzene	2.302	1.943	84	1.929	84	50-150	33-167	1	0-30	
Chloroethane	1.319	1.283	97	1.378	104	50-150	33-167	7	0-30	
Chloroform	2.441	2.169	89	2.174	89	50-150	33-167	0	0-30	
Chloromethane	1.033	1.001	97	1.092	106	50-150	33-167	9	0-30	
Dibromochloromethane	4.259	3.769	88	3.746	88	50-150	33-167	1	0-30	
Dichlorodifluoromethane	2.473	2.399	97	2.257	91	50-150	33-167	6	0-30	
Ethylbenzene	2.171	1.826	84	1.801	83	27-153	6-174	1	0-46	
Hexachloro-1,3-Butadiene	5.333	4.785	90	4.622	87	50-150	33-167	3	0-30	
Methyl-t-Butyl Ether (MTBE)	1.803	1.378	76	1.383	77	50-150	33-167	0	0-30	
Methylene Chloride	1.737	1.472	85	1.522	88	50-150	33-167	3	0-30	
Naphthalene	2.621	1.820	69	1.753	67	50-150	33-167	4	0-30	
Tetrachloroethene	3.391	3.321	98	3.308	98	34-154	14-174	0	0-33	
Toluene	1.884	1.610	85	1.614	86	28-154	7-175	0	0-42	
Trichloroethene	2.687	2.146	80	2.123	79	43-139	27-155	1	0-31	
Trichlorofluoromethane	2.809	2.791	99	2.848	101	50-150	33-167	2	0-30	
Vinyl Chloride	1.278	1.257	98	1.398	109	44-140	28-156	11	0-33	
c-1,2-Dichloroethene	1.982	1.666	84	1.692	85	35-165	13-187	2	0-35	
o-Xylene	2.171	1.891	87	1.826	84	22-160	0-183	4	0-48	
p/m-Xylene	4.342	3.685	85	3.670	85	21-165	0-189	0	0-51	
t-1,2-Dichloroethene	1.982	1.624	82	1.637	83	50-150	33-167	1	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Treadwell & Rollo - A Langan Company		Date Received:	02/24/15
555 Montgomery St., Suite 1300		Work Order:	15-02-1670
San Francisco, CA 94111-2554		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Texas Instruments off-property SUI-2 and SUI-3 / 750620719			Page 2 of 2

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,3-Trichlorobenzene	3.711	3.305	89	3.163	85	50-150	33-167	4	0-30	
1,2,3-Trichloropropane	3.015	2.709	90	2.609	87	50-150	33-167	4	0-30	

Total number of LCS compounds: 37
Total number of ME compounds: 0
Total number of ME compounds allowed: 2
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Summa Canister Vacuum Summary

Work Order: 15-02-1670

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
SU1-2-IA2-2015-02-22	-29.80 in Hg	0.00 in Hg	D381	Summa Canister 6L
SU1-2-AA1-2015-02-22	-29.70 in Hg	-4.00 in Hg	SIM100	Summa Canister 6L
SU1-2-IA3-2015-02-22	-29.70 in Hg	-5.50 in Hg	D181	Summa Canister 6L
SU1-2-DUP1-2015-02-22	-29.80 in Hg	-6.50 in Hg	SIM010	Summa Canister 6L
SU1-2-IA1-2015-02-22	-29.70 in Hg	-6.00 in Hg	D493	Summa Canister 6L

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Glossary of Terms and Qualifiers

Work Order: 15-02-1670

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.

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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: **15-02-1670**

DATE: 2/22/15
PAGE: 1 OF 1

LABORATORY CLIENT: Langan Treadwell Rollo
ADDRESS: 555 Montgomery St. Ste 1300
CITY: San Francisco STATE: CA ZIP: 94111
TEL: 415-955-5285 E-MAIL: alee@langan.com

CLIENT PROJECT NAME / NO.: T1 Off-Property SU1-2, SU1-3
P.O. NO.: 750620719
PROJECT CONTACT: Annie Lee
LAB CONTACT OR QUOTE NO.:
PROJECT ADDRESS:
SAMPLER(S): (PRINT) Annie Lee + Liz Kimbrell
CITY: Sunnyvale STATE: CA ZIP:

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:
Please see attached site-specific analyte list.

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	SU1-2-1A2-2015-02-22		I	D381	6L	FC198	2/22/15	0825	-28	2/22/15	1740	0	X
2	SU1-2-AA1-2015-02-22		A	SIM100	6L	FC104	2/22/15	0830	<-30	2/22/15	1625	-7	X
3	SU1-2-1A3-2015-02-22		I	D181	6L	FC57	2/22/15	0852	<-30	2/22/15	1635	-6.5	X
4	SU1-2-DUP1-2015-02-22		I	SIM010	6L	FC329	2/22/15	—	<-30	2/22/15	—	-8	X
5	SU1-2-1A1-2015-02-22		I	D493	6L	FC214	2/22/15	0901	<-30	2/22/15	1630	-8	X

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature) (GSO)	Received by: (Signature/Affiliation) EG	Date: 2/24/15	Time: 1035

2014-07-01 Revision

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(670)

GSO GOLDEN STATE OVERNIGHT

800-322-5555 www.gso.com

Ship From
LANGAN TREADWELL ROLLO
ANNIE LEE
555 MONTGOMERY ST
SUITE 1300

Tracking #: 527021375

PDS

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GSO GOLDEN STATE OVERNIGHT

800-322-5555 www.gso.com

Ship From
LANGAN TREADWELL ROLLO
ANNIE LEE
555 MONTGOMERY ST
SUITE 1300
SAN FRANCISCO, CA 94111

Tracking #: 527021377

PDS

Ship To
CAL SCIENCE
KRISTEN BECKLEY
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

ORC A

GARDEN GROVE

COD: $0.00
Weight: 0 lb(s)
Reference:
750620721
Delivery Instructions:

D92845A

Signature Type: NOT REQUIRED

34447152

Print Date: 2/23/2015 9:45 AM

Package 3 of 3

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WORK ORDER #: 15-02-1670

SAMPLE RECEIPT FORM

Cooler 0 of 0

CLIENT: Langan Treadwell Rollo

DATE: 02/24/15

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:** 977

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:** 977

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

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:** [illegible]

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