Environmental Resources Management

1218 3rd Ave, Suite 1412
Seattle, WA 98101
(425) 462-8591
(425) 455-3573 (fax)
www.erm.com

17 November 2014

Mr. Stephan Robinson
Dole Fresh Vegetables, Inc.
P.O. Box 2018
Monterey, CA 93942-2018

Subject: Final 2014 Soil Vapor Sampling Report
Former Birchmount Orchard Property
Wenatchee, Washington

Dear Mr. Robinson:

This report summarizes the results of soil vapor sampling activities completed by ERM-West, Inc. (ERM) in May 2014 at the former Dole Fresh Vegetables, Inc. (Dole) Birchmount Orchard facility at 3717 Crestview Road in Wenatchee, Washington (the "site"). The objective of the soil vapor sampling program was to evaluate whether current concentrations of residual volatile petroleum compounds in soil and groundwater would lead to unacceptable indoor air concentrations if structures were built on the site. These activities were completed under the terms of ERM's proposal to Dole dated 24 October 2013.

The migration of chemicals from the subsurface into overlying buildings is referred to as vapor intrusion (United Stated Environmental Protection Agency [USEPA] 2002). Elevated concentrations of volatile contaminants can vaporize from affected soil and/or groundwater beneath a site and diffuse through pore spaces in unsaturated soils toward regions of lower chemical concentration (Interstate Technology Regulatory Council 2007). The vapor intrusion pathway is potentially complete only for volatile organic compounds (VOCs) that can produce enough vapors to establish airborne vapor concentrations of unacceptable toxicity.

BACKGROUND

A release of petroleum product to soil and groundwater was identified at the site during removal of three underground storage tanks in 1993. Since that time, the nature and extent of petroleum impacts in soil and

groundwater have been characterized (ERM 2007), and four phases of remediation have been completed:

- Removal and on-site treatment of petroleum-contaminated soil in 1993 through 1994 (ERM 1994);
- Petroleum-contaminated groundwater extraction and treatment in 1995 through 1998 (ERM 2001);
- In situ chemical oxidation of petroleum-contaminated groundwater in 2000 (ERM 2001); and
- Dual-phase extraction to treat petroleum impacts in groundwater and within saturated soils at and below the water table in 2011 and 2012 (ERM 2012).

Based on the available data, remediation efforts have been effective in reducing petroleum-related contaminant concentrations in the vadose zone soils to less than the Model Toxics Control Act ([MTCA] Chapter 173-340 Washington Administrative Code [WAC]) Method A Soil Cleanup Levels for Unrestricted Land Uses (MTCA Table 740-1), but concentrations of gasoline-range petroleum hydrocarbons (TPH-G) and benzene in groundwater remain greater than the MTCA Method A Cleanup levels for Groundwater (MTCA Table 720-1)(ERM 2014).

The vicinity of the site is currently undergoing redevelopment with single-family residential homes. The soil vapor sampling program was completed to evaluate the potential for soil vapor intrusion issues related to the residual petroleum-related contaminants at the site with regard to the ongoing residential development in the area, and to the planned residential development for the site.

Soils at the site consist of approximately 7 to 15 feet of silt and sandy silt overlying medium to coarse sand that extends to depths ranging from 25 to 38 feet below ground surface (bgs). These unconsolidated sediments lie on top of weathered siltstone with scattered layers of weathered sandstone that extend to at least 80 feet bgs, the maximum depth of site exploration. Depth to groundwater within the area of residual petroleum contamination at the site typically ranges from 21 to 41 feet bgs.

SCOPE OF SERVICES

The scope of work performed as part of the soil vapor sampling program consisted of:

- Collection of 12 soil vapor samples from four soil borings (three samples per boring) for analysis of TPH-G; benzene, toluene, ethylbenzene, and xylenes (BTEX); and volatile petroleum hydrocarbons (VPH) by USEPA Method TO-15; and
- Evaluation of the soil vapor data collected from the site based on the shallow and deep soil vapor criteria and methodology provided in Washington State Department of Ecology's (Ecology) vapor intrusion guidance, with particular emphasis on compliance with MTCA vapor intrusion risk requirements[1].

REGULATORY FRAMEWORK

When the source of a contaminant is due to environmental contamination (as opposed to industrial use in the workplace), contaminant concentrations in indoor air are regulated under MTCA Chapter 173-340-750 WAC. Ecology has not yet published a final guidance document that confirms the process for establishing soil, groundwater, or soil vapor cleanup concentrations that are specifically protective of indoor air. However, Ecology has developed a draft guidance to address vapor intrusion concerns: *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* (Ecology 2009). The Ecology 2009 guidance approach has been applied to this site to evaluate whether a health risk from vapor intrusion is present. The initial step in Ecology's vapor intrusion evaluation process is to compare the site-specific soil vapor concentrations to screening levels based on either residential (unrestricted) or industrial land use. If site concentrations are less than the screening levels, then no health concern is likely to be present and Ecology does not require any further investigation or cleanup actions to address the vapor intrusion pathway. Because of the planned future residential use for the site, the soil vapor data have been compared to the residential (unrestricted) land use criteria, referred to hereafter as "screening levels."

[1] Chapters 173-340-357(3)(f)(i); 173-340-450(2)(c) & (3)(a)(i); 173-340-720(1)(c) & (1)(d)(iv); 173-340-740(3)(b)(iii)(C) & (3)(c)(iv); 173-340-745(2)(c) & (5)(b)(iii)(C); and 173-340-750 WAC.

The screening-level soil vapor action levels that assume future residential exposure are calculated using the equation below (Ecology 2009):

Soil Vapor Screening Level = Target Air Cleanup Level
x Attenuation Factor

Where:

Target Air Cleanup Level = MTCA Method B (Cleanup Levels and Risk Calculation [CLARC] Database)

Attenuation Factor = 0.1 (shallow soil vapor) or 0.01 (deep soil vapor)

The Ecology 2009 guidance includes screening levels for soil vapor up to a depth of 15 feet bgs (shallow soil vapor) and greater than 15 feet bgs (deep soil vapor). These levels are shown below. Screening levels for soil vapor 15 feet bgs or deeper are ten times the shallow soil vapor levels.

SOIL VAPOR SCREENING LEVELS
(ECOLOGY 2009, TABLE B-1)

Contaminant	MTCA Method B Air Cleanup Level	Shallow Soil Vapor Screening Levels[a]	Deep Soil Vapor Screening Levels[b]
C5-C8 Aliphatics	2700 micrograms per cubic meter (µg/m^3)	27,000 µg/m^3	270,000 µg/m^3
C9-C12 Aliphatics	140 µg/m^3	1,400 µg/m^3	14,000 µg/m^3
C9-C10 Aromatics	180 µg/m^3	1,800 µg/m^3	18,000 µg/m^3
TPH-G	None Available	1,400 µg/m^3[c]	14,000 µg/m^3[c]
Benzene	0.32 µg/m^3	3.2 µg/m^3	32 µg/m^3
Toluene	2,290 µg/m^3	22,900 µg/m^3	229,000 µg/m^3
Ethylbenzene	460 µg/m^3	4,600 µg/m^3	46,000 µg/m^3
Total Xylenes	46 µg/m^3	460 µg/m^3	4,600 µg/m^3

C = Carbon chain length

[a] Contaminant concentration in the soil vapor to a depth of 15 feet beneath a building expected to not result in a concentration greater than the air cleanup level in an overlying structure under most circumstances.

[b] Contaminant concentration in the soil vapor at depths greater than 15 feet beneath a building expected to not result in a concentration greater than the air cleanup level in an overlying structure under most circumstances.

[c] No Ecology screening level is available for TPH-G; the screening level provided is based on aliphatic hydrocarbons with carbon chain lengths of carbon(C)9-C12 from Table B-1 in Ecology 2009. The aliphatic C9-C12 screening levels are the lowest concentrations of the three fractions provided; thus, these are the most conservative to use as surrogates for TPH-G.

Note that the guidance levels shown above do not take biodegradation into account. BTEX can biodegrade significantly in the vadose zone under favorable conditions (USEPA 2012). Ecology allows an additional attenuation factor of ten, above the guidance levels shown above, when subsurface conditions favor biodegradation (Ecology 2009). For example, under favorable conditions for biodegradation, Ecology would not consider deep (greater than 15 feet bgs) soil vapor concentrations of benzene to be a potential concern for vapor intrusion unless concentrations were greater than 320 $\mu g/m^3$. Conditions favoring biodegradation can either be demonstrated by collecting oxygen readings in the vadose zone and showing that the oxygen content is at least 4 percent, or can be demonstrated by collecting multiple depth samples that empirically show attenuation (i.e., contaminant concentrations decrease with decrease in depth of samples).

SOIL VAPOR SAMPLING PROCEDURES

Soil vapor sampling was completed at the site on 15 and 16 May 2014. On those dates, vertical profile soil vapor samples were collected using standard American Society for Testing and Materials Method D7663-12. Drilling of the borings for soil vapor sample collection was completed by Cascade Drilling, Inc. of Woodinville, Washington, using a direct-push drilling rig. An ERM geologist provided oversight of the drilling activities and collected the soil vapor samples from the boreholes.

Four vertical soil vapor sampling borings were completed in the area with the highest known concentrations of petroleum-related contaminants in groundwater based on the most recent groundwater monitoring results (ERM 2014). Prior to drilling, groundwater level measurements were taken from nearby monitoring wells to verify the depth to groundwater. Depth to groundwater for the site monitoring wells is presented in Table 1. Figure 1 shows the location of the groundwater monitoring and recovery wells and the soil vapor sampling borings, and includes the benzene and TPH-G data from the most recent groundwater sampling event (October 2013).

The borings were prepared for soil vapor sample collection by driving a soil vapor sampler to the target depth and then retracting the drilling rods to expose the sample collection probe. Separate, adjacent borings were drilled to collect samples from discrete depths at each location. High density polyethylene tubing was attached to the sampling port to

ensure vapor was sampled from the desired depth only. Prior to sample collection, ambient air in the tubing was purged using a Gilian 5000 Personal Air Sampling Pump with an attached 200 milliliters per minute (mL/min) flow regulator. Soil vapor samples were collected at each boring to evaluate the maximum vapor concentrations present in vadose-zone soils. The soil vapor samples were collected from three depths at each location:

- In the uppermost silt layer at approximately 5 to 6.5 feet bgs;
- In the sand layer at approximately 15 feet bgs; and
- Immediately above the water table at approximately 20 to 25 feet bgs.

After a purge of at least 5 minutes was completed, tubing was immediately connected to dedicated 200 mL/min flow regulators attached to the top of each sample collection Summa canister prior to sample collection. The collection canisters were 6-liter stainless-steel and had been evacuated to an initial vacuum of greater than 25 inches of mercury. The canister valve was opened to allow soil vapor to enter the canister up to a 30-minute period. The final vacuum, which was a minimum of 5 inches mercury as required by the sampling method, was recorded at the end of the sampling period and the valves were closed.

Summa canister samples were shipped to Eurofins Air Toxics, Incorporated (Air Toxics) laboratory in Folsom, California under chain-of-custody procedures. Air Toxics analyzed the samples for TPH-G and BTEX using USEPA Method TO-15 and for aliphatic and aromatic fractions of VPH using Modified TO-15 air petroleum hydrocarbons (APH). TPH-G analysis done via standard TO-15 measures all hydrocarbons within a carbon chain length range of C3-C12, referenced to a gasoline standard. Modified TO-15 APH measures six specific fractionation ranges (four aliphatic and two aromatic) between C5 and C12.

Chain-of-custody and laboratory quality assurance/quality control documentation is included with the laboratory data reports in Attachment A.

SOIL VAPOR SAMPLING RESULTS

Soil vapor sample laboratory analysis results by standard TO-15 are provided in Table 2 for all samples. The single detection (VP-1-20) from the modified TO-15 APH analysis is also included in Table 2. Each of the detected concentrations is equal to or less than the applicable screening levels for the depth interval from which the sample was collected.

TPH-G was detected in 11 out of 12 samples, with concentrations ranging from 330 µg/m^3 to 1,800 µg/m^3. In contrast, the fractionation results had detections in only 1 out of 12 samples (two of the six fractions were detected in the VP-1-20 sample at concentrations of 100 µg/m^3 and 230 µg/m^3, well below fractionation-specific screening levels). The differing results in the two analytical methods are likely due to the following:

- The TPH-G contains carbon chain lengths not captured in the fractionation (i.e., aliphatics less than C5 and aromatics less than C8 – note that aromatics less than or equal to C8 include BTEX and BTEX concentrations are included in the TPH-G total); and
- Concentrations of the fractions are present below the analytical reporting limit and were thus reported as "not detected" but were included in the over-all chromatogram analysis for TPH-G.

CONCLUSIONS

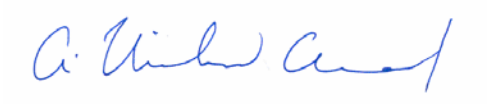
The highest concentrations of petroleum hydrocarbons in soil vapor samples collected from the site were in the deepest samples collected adjacent to the monitoring wells, with the highest concentrations of dissolved petroleum hydrocarbons detected in the most recent groundwater samples collected from those wells. These results indicate conditions favoring biodegradation are present in the vadose zone, as three of the four borings show decreasing contaminant concentrations in soil vapor samples with decreasing depth. None of the soil vapor concentrations detected is greater than the applicable unrestricted use screening levels.

The results of the soil vapor sampling demonstrate that concentrations of petroleum-related compounds in soil vapor are compliant with MTCA requirements and Ecology guidance for potential future

residential development of the site. In addition, because the data reflect that vadose zone soil conditions support biodegradation of hydrocarbon vapors, the Ecology 2009 guidance indicates that the screening levels summarized above could be ten times higher than those shown in Table 2, providing further support there are no vapor intrusion concerns for residential development at the site.

We appreciate the opportunity to provide environmental services to Dole. If you have questions regarding this summary, please contact Mr. Mike Arnold at (425) 761-2603 or Mr. Dave Edwards at (425) 214-0452.

Sincerely,



A. Michael Arnold, R.Hg.
Project Manager

David P. Edwards
Partner-in-Charge

AMA/DPE/pm/0130850

Attachments

REFERENCES

Environmental Resources Management (ERM). 1994. *Independent Remedial Action Soil Bioremediation Cleanup Report, Birchmount Orchard Facility, 3717 Crestview Drive, Wenatchee, Washingto*n. Prepared for Wells & Wade Company. September.

ERM. 2001. *Remedial Action Report, In Situ Chemical Oxidation, Former Birchmount Orchard Facility, Wenatchee, Washington.* 29 May.

ERM. 2007. *Supplemental Site Investigation Report, Former Birchmount Orchard Facility, 3717 Crestview Road, Wenatchee, Washington.* Prepared for Dole Fresh Vegetables, Inc. September.

ERM. 2012. *Remedial Action Progress Report, Former Former Birchmount Orchard Facility, Wenatchee, Washington*. 8 August.

ERM. 2014. *2013 Groundwater Monitoring Report, Former Birchmount Orchard Property, Wenatchee, Washington*. 21 February.

Interstate Technology Regulatory Council. 2007. *Vapor Intrusion Pathway: A Practical Guideline.* Prepared by the Vapor Intrusion Team. Washington, D.C. January.

United States Environmental Protection Agency (USEPA). 2002. *Draft Guidance for Evaluating Vapor Intrusion to Indoor Air Pathway From Groundwater and Soils.* OSWER. EPA-530-D-02-004. November.

USEPA 2012. *Petroleum Hydrocarbons And Chlorinated Hydrocarbons Differ In Their Potential For Vapor Intrusion*. Office of Underground Storage Tanks, Washington, DC. March.

Washington State Department of Ecology. 2009. *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action*. Review Draft. October.

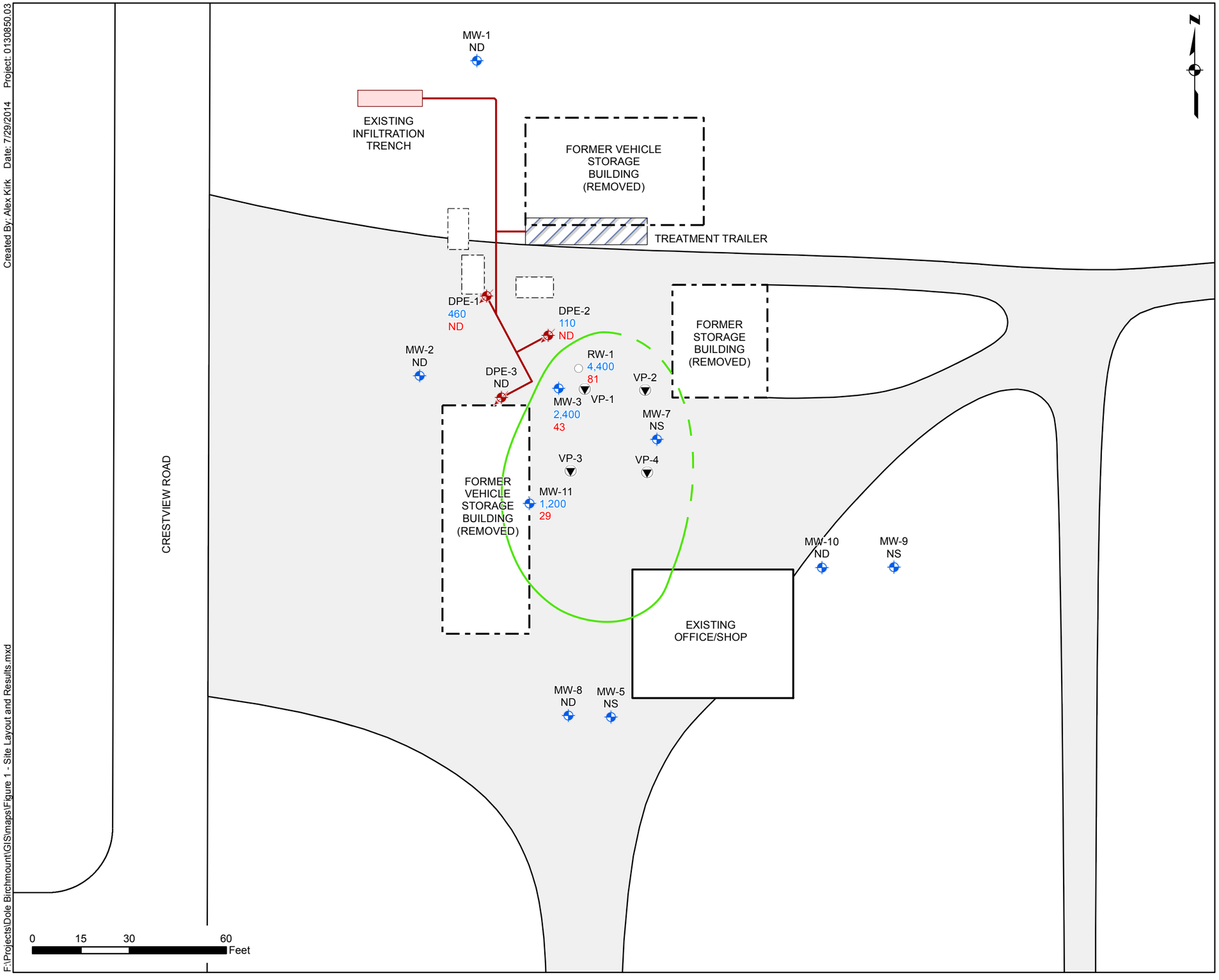
Washington State Department of Ecology. 2014. Cleanup Levels and Risk Calculations Database. https://fortress.wa.gov/ecy/clarc/FocusSheets/TCE%20PCE%20Oct%202004%20Final.pdf

THIS PAGE INTENTIONALLY LEFT BLANK

Figures

Created By: Alex Kirk Date: 7/29/2014 Project: 0130850.03

F:\Projects\Dole Birchmount\GIS\maps\Figure 1 - Site Layout and Results.mxd



Legend

- Monitoring Well
- Recovery Well
- DPE Well
- Soil Vapor Sample Boring
- Approximate Extent of TPH-G and Benzene in Groundwater Greater than MTCA Method A Cleanup Levels 2 October 2013, Dashed where inferred.
- Infiltration Trench
- DPE System Piping
- Former UST (Location Approximate)
- Existing Buildings
- Former Buildings
- Treatment_Trailer
- Gravel/Dirt Driveway

Notes:
- All results given in micrograms per liter (ug/L)
- 110: Gasoline-Range Petroleum Hydrocarbons (TPH-G) in Groundwater 2 Oct. 2013
- 43: Benzene in Groundwater 2 Oct. 2013
- ND: Constituents not detected in groundwater, 2 Oct. 2013
- NS: No groundwater sample collected, well dry, 2 Oct. 2013

Figure 1
Site Layout
Former Birchmount Orchard Facility
Wenatchee, Washington

Environmental Resources Management
1218 Third Avenue, Suite 1412
Seattle, Washington, 98101
ERM

Tables

Table 1

Depth to Groundwater
Former Birchmount Orchard Property
Wenatchee, Washington

Well Number	Date Measured	Depth to Groundwater Feet (bgs)
MW-1	5/15/2014	20.24
MW-2	5/15/2014	25.13
MW-3	5/15/2014	22.72
MW-5	5/15/2014	Dry
MW-7	5/15/2014	Dry
MW-8	5/15/2014	40.82
MW-9	5/15/2014	Dry
MW-10	5/15/2014	51.52
MW-11	5/15/2014	26.89
RW-1	5/15/2014	22.18
DPE-1	5/15/2014	NM
DPE-2	5/15/2014	NM
DPE-3	5/15/2014	NM

Notes:

bgs = Below ground surface

NM = Not measured

Table 2

Summary of Soil Vapor Analytical Results
Former Birchmount Orchard Property
Wenatchee, Washington

Sample Locations	Benzene	Ethylbenzene	Toluene	m,p-Xylenes	o- Xylenes	TPH-G	Petroleum Hydrocarbons[1]	
							>C6 - C8 Aliphatics	>C10 - C12 Aliphatics
VP-1-5	<5.8	10	5.8	42	20	720	<150	<250
VP-1-15	<4.9	<8.0	<7.0	28	15	1,100	<150	<260
VP-1-20	7.5	8.0	16	30	13	1,800	100	230
VP-2-6.5	<6.0	<8.2	<7.1	15	11	740	<160	<260
VP-2-15	<6.9	<9.4	<8.2	11	<9.4	<440	<180	<300
VP-2-20	<8.5	<12	16	14	<12	580	<170	<280
VP-3-6.5	<3.0	<4.0	<3.5	11	5.8	360	<77	<130
VP-3-15	2.9	<3.9	4.0	6.3	<3.9	670	<73	<120
VP-3-25	11	17	20	100	49	1,700	<190	<320
VP-4-6.5	<2.8	<3.8	3.5	10	6.1	330	<72	<120
VP-4-15	<2.8	<3.9	<3.4	9.3	5.7	470	<73	<120
VP-4-25	<2.8	<3.9	4.6	9.6	6.1	560	<72	<120
Screening Levels - Shallow/Deep[2]:	**3.2 / 32**	**4,600 / 46,000**	**22,000/ 220,000**	**460/ 4,600**		**1,400 / 14,000[3]**	**NS**	**NS**

Notes:

Results reported in micrograms of chemical per cubic meter of air (ug/m^3).

[1]C = Carbon atoms in molecule; C5 - C6 and >C10 - C8 aliphatics, >C8 - C10 and >C10 - C12 aromatics not detected in samples.

[2]Shallow screening levels are applied to samples collected at <15 feet below ground surface; deep screening levels are applied to samples collected at > 15 feet below ground surface.

[3]No Ecology screening level is available for TPH-G; a surrogate screening level is provided is based on the screening standard for aliphatic hydrocarbons >C9-C12. See text for details.

NS = No standard published.

TPH-G = Gasoline-range petroleum hydrocarbons.

Attachment A
Laboratory Analytical Results

eurofins | Air Toxics

6/3/2014
Ms. Sharon Quiring
ERM-West
1218 Third Avenue, Suite 1412

Seattle WA 98101

Project Name: Dole VI Sampling
Project #: D130850.03
Workorder #: 1405347A

Dear Ms. Sharon Quiring

The following report includes the data for the above referenced project for sample(s) received on 5/19/2014 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

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

Regards,

Kelly Buettner

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1405347A

Work Order Summary

CLIENT:	Ms. Sharon Quiring ERM-West 1218 Third Avenue, Suite 1412 Seattle, WA 98101	**BILL TO:**	Accounts Payable ERM-West 1277 Treat Blvd Suite 500 Walnut Creek, CA 94597
PHONE:	425-462-8591	**P.O. #**	0130850.03
FAX:		**PROJECT #**	D130850.03 Dole VI Sampling
DATE RECEIVED:	05/19/2014	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	06/03/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VP-3-6.5	TO-15	8.4 "Hg	5.1 psi
02A	VP-3-15	TO-15	7.6 "Hg	5 psi
03A	VP-3-25	TO-15	8.2 "Hg	4.9 psi
04A	VP-1-5	TO-15	7.6 "Hg	5.1 psi
05A	VP-1-15	TO-15	8.4 "Hg	4.9 psi
06A	VP-1-20	TO-15	9.4 "Hg	5 psi
07A	VP-2-6.5	TO-15	8.8 "Hg	5 psi
08A	VP-2-15	TO-15	6.9 "Hg	4.9 psi
09A	VP-2-20	TO-15	5.5 "Hg	5 psi
10A	VP-4-6.5	TO-15	7.1 "Hg	4.9 psi
11A	VP-4-15	TO-15	7.6 "Hg	4.9 psi
12A	VP-4-25	TO-15	7.3 "Hg	4.9 psi
13A	Lab Blank	TO-15	NA	NA
13B	Lab Blank	TO-15	NA	NA
14A	CCV	TO-15	NA	NA
14B	CCV	TO-15	NA	NA
15A	LCS	TO-15	NA	NA
15AA	LCSD	TO-15	NA	NA
15B	LCS	TO-15	NA	NA
15BB	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Rayos DATE: 06/03/14

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-13-6, UT NELAP CA009332013-4, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
ERM-West
Workorder# 1405347A

Twelve 6 Liter Summa Canister samples were received on May 19, 2014. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A single point calibration for TPH referenced to Gasoline was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

Dilution was performed on samples VP-3-25, VP-1-5, VP-1-15, VP-2-6.5, VP-2-15, and VP-2-20 due to the presence of high level non-target species.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

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

Client Sample ID: VP-3-6.5

Lab ID#: 1405347A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
m,p-Xylene	0.94	2.6	4.1	11
o-Xylene	0.94	1.3	4.1	5.8
TPH ref. to Gasoline (MW=100)	47	87	190	360

Client Sample ID: VP-3-15

Lab ID#: 1405347A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.90	0.91	2.8	2.9
Toluene	0.90	1.1	3.4	4.0
m,p-Xylene	0.90	1.4	3.9	6.3
TPH ref. to Gasoline (MW=100)	45	160	180	670

Client Sample ID: VP-3-25

Lab ID#: 1405347A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	2.3	3.4	7.3	11
Toluene	2.3	5.4	8.6	20
Ethyl Benzene	2.3	3.9	10	17
m,p-Xylene	2.3	24	10	100
o-Xylene	2.3	11	10	49
TPH ref. to Gasoline (MW=100)	110	420	470	1700

Client Sample ID: VP-1-5

Lab ID#: 1405347A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethyl Benzene	1.8	2.3	7.8	10
m,p-Xylene	1.8	9.8	7.8	42
o-Xylene	1.8	4.6	7.8	20
TPH ref. to Gasoline (MW=100)	90	180	370	720

eurofins | Air Toxics

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

Client Sample ID: VP-1-15

Lab ID#: 1405347A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
m,p-Xylene	1.8	6.6	8.0	28
o-Xylene	1.8	3.4	8.0	15
TPH ref. to Gasoline (MW=100)	92	280	380	1100

Client Sample ID: VP-1-20

Lab ID#: 1405347A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.98	2.4	3.1	7.5
Toluene	0.98	4.3	3.7	16
Ethyl Benzene	0.98	1.8	4.2	8.0
m,p-Xylene	0.98	6.9	4.2	30
o-Xylene	0.98	3.0	4.2	13
TPH ref. to Gasoline (MW=100)	49	450	200	1800

Client Sample ID: VP-2-6.5

Lab ID#: 1405347A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
m,p-Xylene	1.9	3.5	8.2	15
o-Xylene	1.9	2.5	8.2	11
TPH ref. to Gasoline (MW=100)	95	180	390	740

Client Sample ID: VP-2-15

Lab ID#: 1405347A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
m,p-Xylene	2.2	2.6	9.4	11

Client Sample ID: VP-2-20

Lab ID#: 1405347A-09A

eurofins | Air Toxics

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

Client Sample ID: VP-2-20

Lab ID#: 1405347A-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	2.7	4.3	10	16
m,p-Xylene	2.7	3.2	12	14
TPH ref. to Gasoline (MW=100)	130	140	540	580

Client Sample ID: VP-4-6.5

Lab ID#: 1405347A-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	0.88	0.94	3.3	3.5
m,p-Xylene	0.88	2.4	3.8	10
o-Xylene	0.88	1.4	3.8	6.1
TPH ref. to Gasoline (MW=100)	44	81	180	330

Client Sample ID: VP-4-15

Lab ID#: 1405347A-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
m,p-Xylene	0.89	2.1	3.9	9.3
o-Xylene	0.89	1.3	3.9	5.7
TPH ref. to Gasoline (MW=100)	44	120	180	470

Client Sample ID: VP-4-25

Lab ID#: 1405347A-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	0.88	1.2	3.3	4.6
m,p-Xylene	0.88	2.2	3.8	9.6
o-Xylene	0.88	1.4	3.8	6.1
TPH ref. to Gasoline (MW=100)	44	140	180	560

eurofins | Air Toxics

Client Sample ID: VP-3-6.5

Lab ID#: 1405347A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052919**	**Date of Collection: 5/15/14 11:50:00 AM**	
Dil. Factor:	**1.87**	**Date of Analysis: 5/29/14 04:17 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.94	Not Detected	3.0	Not Detected
Toluene	0.94	Not Detected	3.5	Not Detected
Ethyl Benzene	0.94	Not Detected	4.0	Not Detected
m,p-Xylene	0.94	2.6	4.1	11
o-Xylene	0.94	1.3	4.1	5.8
TPH ref. to Gasoline (MW=100)	47	87	190	360

Container Type: 6 Liter Summa Canister

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

eurofins | Air Toxics

Client Sample ID: VP-3-15

Lab ID#: 1405347A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052920**	**Date of Collection: 5/15/14 12:35:00 PM**	
Dil. Factor:	**1.79**	**Date of Analysis: 5/29/14 04:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.90	0.91	2.8	2.9
Toluene	0.90	1.1	3.4	4.0
Ethyl Benzene	0.90	Not Detected	3.9	Not Detected
m,p-Xylene	0.90	1.4	3.9	6.3
o-Xylene	0.90	Not Detected	3.9	Not Detected
TPH ref. to Gasoline (MW=100)	45	160	180	670

Container Type: 6 Liter Summa Canister

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

eurofins | Air Toxics

Client Sample ID: VP-3-25

Lab ID#: 1405347A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053008**	**Date of Collection: 5/15/14 1:40:00 PM**	
Dil. Factor:	**4.59**	**Date of Analysis: 5/30/14 11:29 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	2.3	3.4	7.3	11
Toluene	2.3	5.4	8.6	20
Ethyl Benzene	2.3	3.9	10	17
m,p-Xylene	2.3	24	10	100
o-Xylene	2.3	11	10	49
TPH ref. to Gasoline (MW=100)	110	420	470	1700

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: VP-1-5

Lab ID#: 1405347A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052923**	**Date of Collection: 5/15/14 2:38:00 PM**	
Dil. Factor:	**3.61**	**Date of Analysis: 5/29/14 07:58 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.8	Not Detected	5.8	Not Detected
Toluene	1.8	Not Detected	6.8	Not Detected
Ethyl Benzene	1.8	2.3	7.8	10
m,p-Xylene	1.8	9.8	7.8	42
o-Xylene	1.8	4.6	7.8	20
TPH ref. to Gasoline (MW=100)	90	180	370	720

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	110	70-130

eurofins | Air Toxics

Client Sample ID: VP-1-15

Lab ID#: 1405347A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052924**	**Date of Collection: 5/15/14 3:22:00 PM**	
Dil. Factor:	**3.70**	**Date of Analysis: 5/29/14 08:20 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.8	Not Detected	5.9	Not Detected
Toluene	1.8	Not Detected	7.0	Not Detected
Ethyl Benzene	1.8	Not Detected	8.0	Not Detected
m,p-Xylene	1.8	6.6	8.0	28
o-Xylene	1.8	3.4	8.0	15
TPH ref. to Gasoline (MW=100)	92	280	380	1100

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	106	70-130

eurofins | Air Toxics

Client Sample ID: VP-1-20

Lab ID#: 1405347A-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052925**	**Date of Collection: 5/15/14 4:10:00 PM**	
Dil. Factor:	**1.95**	**Date of Analysis: 5/29/14 08:42 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.98	2.4	3.1	7.5
Toluene	0.98	4.3	3.7	16
Ethyl Benzene	0.98	1.8	4.2	8.0
m,p-Xylene	0.98	6.9	4.2	30
o-Xylene	0.98	3.0	4.2	13
TPH ref. to Gasoline (MW=100)	49	450	200	1800

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	106	70-130

eurofins | Air Toxics

Client Sample ID: VP-2-6.5

Lab ID#: 1405347A-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052926**	**Date of Collection: 5/15/14 5:01:00 PM**	
Dil. Factor:	**3.79**	**Date of Analysis: 5/29/14 09:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.9	Not Detected	6.0	Not Detected
Toluene	1.9	Not Detected	7.1	Not Detected
Ethyl Benzene	1.9	Not Detected	8.2	Not Detected
m,p-Xylene	1.9	3.5	8.2	15
o-Xylene	1.9	2.5	8.2	11
TPH ref. to Gasoline (MW=100)	95	180	390	740

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	105	70-130

eurofins | Air Toxics

Client Sample ID: VP-2-15

Lab ID#: 1405347A-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053009**	**Date of Collection: 5/16/14 7:31:00 AM**	
Dil. Factor:	**4.33**	**Date of Analysis: 5/30/14 11:51 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	2.2	Not Detected	6.9	Not Detected
Toluene	2.2	Not Detected	8.2	Not Detected
Ethyl Benzene	2.2	Not Detected	9.4	Not Detected
m,p-Xylene	2.2	2.6	9.4	11
o-Xylene	2.2	Not Detected	9.4	Not Detected
TPH ref. to Gasoline (MW=100)	110	Not Detected	440	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	110	70-130

eurofins | Air Toxics

Client Sample ID: VP-2-20

Lab ID#: 1405347A-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053010**	**Date of Collection: 5/16/14 8:20:00 AM**	
Dil. Factor:	**5.33**	**Date of Analysis: 5/30/14 12:12 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	2.7	Not Detected	8.5	Not Detected
Toluene	2.7	4.3	10	16
Ethyl Benzene	2.7	Not Detected	12	Not Detected
m,p-Xylene	2.7	3.2	12	14
o-Xylene	2.7	Not Detected	12	Not Detected
TPH ref. to Gasoline (MW=100)	130	140	540	580

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: VP-4-6.5

Lab ID#: 1405347A-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052929**	**Date of Collection: 5/16/14 9:14:00 AM**	
Dil. Factor:	**1.75**	**Date of Analysis: 5/29/14 10:08 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.88	Not Detected	2.8	Not Detected
Toluene	0.88	0.94	3.3	3.5
Ethyl Benzene	0.88	Not Detected	3.8	Not Detected
m,p-Xylene	0.88	2.4	3.8	10
o-Xylene	0.88	1.4	3.8	6.1
TPH ref. to Gasoline (MW=100)	44	81	180	330

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: VP-4-15

Lab ID#: 1405347A-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052930**	**Date of Collection: 5/16/14 10:01:00 AM**	
Dil. Factor:	**1.78**	**Date of Analysis: 5/29/14 10:30 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.89	Not Detected	2.8	Not Detected
Toluene	0.89	Not Detected	3.4	Not Detected
Ethyl Benzene	0.89	Not Detected	3.9	Not Detected
m,p-Xylene	0.89	2.1	3.9	9.3
o-Xylene	0.89	1.3	3.9	5.7
TPH ref. to Gasoline (MW=100)	44	120	180	470

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	110	70-130

eurofins | Air Toxics

Client Sample ID: VP-4-25

Lab ID#: 1405347A-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052931**	**Date of Collection: 5/16/14 10:50:00 AM**	
Dil. Factor:	**1.76**	**Date of Analysis: 5/29/14 10:52 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.88	Not Detected	2.8	Not Detected
Toluene	0.88	1.2	3.3	4.6
Ethyl Benzene	0.88	Not Detected	3.8	Not Detected
m,p-Xylene	0.88	2.2	3.8	9.6
o-Xylene	0.88	1.4	3.8	6.1
TPH ref. to Gasoline (MW=100)	44	140	180	560

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	109	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1405347A-13A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052912**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/29/14 01:29 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	101	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1405347A-13B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053007**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 10:57 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	100	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1405347A-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052902**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/29/14 07:59 AM**	

Compound	%Recovery
Benzene	110
Toluene	109
Ethyl Benzene	113
m,p-Xylene	116
o-Xylene	118
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	106	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1405347A-14B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053002**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 08:31 AM**	

Compound	%Recovery
Benzene	94
Toluene	92
Ethyl Benzene	93
m,p-Xylene	94
o-Xylene	96
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	104	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1405347A-15A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052905**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/29/14 09:17 AM**	

Compound	%Recovery	Method Limits
Benzene	105	70-130
Toluene	101	70-130
Ethyl Benzene	106	70-130
m,p-Xylene	108	70-130
o-Xylene	108	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	99	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1405347A-15AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052906**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/29/14 09:51 AM**	

Compound	%Recovery	Method Limits
Benzene	103	70-130
Toluene	100	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	106	70-130
o-Xylene	110	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	99	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1405347A-15B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 08:52 AM**	

Compound	%Recovery	Method Limits
Benzene	105	70-130
Toluene	99	70-130
Ethyl Benzene	103	70-130
m,p-Xylene	104	70-130
o-Xylene	106	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	102	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1405347A-15BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053004**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 09:14 AM**	

Compound	%Recovery	Method Limits
Benzene	106	70-130
Toluene	100	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	105	70-130
o-Xylene	105	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	103	70-130

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Mike Arnold
Collected by: (Print and Sign) Matt Cundell
Company: EPM Email: mike.arnold@epmnw.com
Address: 1218 3rd Ave Ste 1412 City: Seattle State: WA Zip: 98101
Phone: 425 462 8591 Fax:

Project Info:
P.O. #: 0139850.03
Project #: 0139850.03
Project Name: Duke VI Sampling

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psig)
01A	VP-3-6.5	34272	5/15/14	1150	(2)	-29.0	-7.0		
02A	VP-3-15	34980		1235		-29.0	-5.5		
03A	VP-3-25	24485		1340		-29.5	-5.0		
04A	VP-1-5	34468		1438		-28.0	-5.5		
05A	VP-1-15	34185		1522		-30.0	-7.0		
06A	VP-1-20	32124		1610		-29.8	-7.5		
07A	VP-2-6.5	21015		1701		-29.5	-7.0		
08A	VP-2-15	SC416	5/16/14	0731		-29.0	-6.5		
09A	VP-2-20	5567		0820		-27.5	-6.0		
10A	VP-4-6.5	12685		0914		-29.5	-7.0		

Relinquished by: (signature) Date/Time: 5/16/14, 1230 — Received by: (signature) Date/Time: 5/19/14 0745
Relinquished by: (signature) Date/Time — Received by: (signature) Date/Time

Notes:
(1) Units are Hg"
(2) Analyses requested: TPH-G, benzene, ethylbenzene, toluene, xylenes, volatile petroleum hydrocarbons by TO-15

Lab Use Only: Shipper Name: Fedex | Air Bill #: | Temp (°C): NA | Condition: Good | Custody Seals Intact? Yes No None | Work Order #: 1405347

Form 7083 rev 11

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that samples are being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Mike Arnold
Collected by: (Print and Sign) Matt Crandell
Company: ERM 1218 3rd Ave ste 1412 Email: mike.arnold@erm.com
Address: ERM City: Seattle State: WA Zip: 98101
Phone: 425.462.8591 Fax:

Project Info:
P.O. # 0130850103
Project # 0130850.03
Project Name: Dole VI Sampling

Turn Around Time:
Normal
Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas:
N2 Ar He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psig)
14A	VP-4-15	2417	5/16/14	1001	(2)	-29.5	-6.0		
15A	VP-4-25	34233	"	1050	"	-29.5	-6.0		

5/16/14

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Matt Crandell	5/16/14, 1230	FedEx	5/19/14 1005
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes: (1) Units are "Hg
(2) Analyses requested: TPH-G, benzene, ethylbenzene, toluene, xylenes, volatile petroleum hydrocarbons by TO-15

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx		NA	Good	Yes No (None)	140377

Form 1293 rev. 11

eurofins | Air Toxics

5/30/2014

Ms. Sharon Quiring
ERM-West
1218 Third Avenue, Suite 1412

Seattle WA 98101

Project Name: Dole VI Sampling
Project #: D130850.03
Workorder #: 1405347B

Dear Ms. Sharon Quiring

The following report includes the data for the above referenced project for sample(s) received on 5/19/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 APH are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

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

Regards,

Kelly Buettner

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1405347B

Work Order Summary

CLIENT:	Ms. Sharon Quiring ERM-West 1218 Third Avenue, Suite 1412 Seattle, WA 98101	**BILL TO:**	Accounts Payable ERM-West 1277 Treat Blvd Suite 500 Walnut Creek, CA 94597
PHONE:	425-462-8591	**P.O. #**	0130850.03
FAX:		**PROJECT #**	D130850.03 Dole VI Sampling
DATE RECEIVED:	05/19/2014	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	05/30/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VP-3-6.5	Modified TO-15 APH	8.4 "Hg	5.1 psi
01B	VP-3-6.5	Modified TO-15 APH	8.4 "Hg	5.1 psi
02A	VP-3-15	Modified TO-15 APH	7.6 "Hg	5 psi
02B	VP-3-15	Modified TO-15 APH	7.6 "Hg	5 psi
03A	VP-3-25	Modified TO-15 APH	8.2 "Hg	4.9 psi
03B	VP-3-25	Modified TO-15 APH	8.2 "Hg	4.9 psi
04A	VP-1-5	Modified TO-15 APH	7.6 "Hg	5.1 psi
04B	VP-1-5	Modified TO-15 APH	7.6 "Hg	5.1 psi
05A	VP-1-15	Modified TO-15 APH	8.4 "Hg	4.9 psi
05B	VP-1-15	Modified TO-15 APH	8.4 "Hg	4.9 psi
06A	VP-1-20	Modified TO-15 APH	9.4 "Hg	5 psi
06B	VP-1-20	Modified TO-15 APH	9.4 "Hg	5 psi
07A	VP-2-6.5	Modified TO-15 APH	8.8 "Hg	5 psi
07B	VP-2-6.5	Modified TO-15 APH	8.8 "Hg	5 psi
08A	VP-2-15	Modified TO-15 APH	6.9 "Hg	4.9 psi
08B	VP-2-15	Modified TO-15 APH	6.9 "Hg	4.9 psi
09A	VP-2-20	Modified TO-15 APH	5.5 "Hg	5 psi
09B	VP-2-20	Modified TO-15 APH	5.5 "Hg	5 psi
10A	VP-4-6.5	Modified TO-15 APH	7.1 "Hg	4.9 psi
10B	VP-4-6.5	Modified TO-15 APH	7.1 "Hg	4.9 psi
11A	VP-4-15	Modified TO-15 APH	7.6 "Hg	4.9 psi
11B	VP-4-15	Modified TO-15 APH	7.6 "Hg	4.9 psi
12A	VP-4-25	Modified TO-15 APH	7.3 "Hg	4.9 psi

Continued on next page

eurofins | Air Toxics

WORK ORDER #: 1405347B

Work Order Summary

CLIENT:	Ms. Sharon Quiring ERM-West 1218 Third Avenue, Suite 1412 Seattle, WA 98101	**BILL TO:**	Accounts Payable ERM-West 1277 Treat Blvd Suite 500 Walnut Creek, CA 94597
PHONE:	425-462-8591	**P.O. #**	0130850.03
FAX:		**PROJECT #**	D130850.03 Dole VI Sampling
DATE RECEIVED:	05/19/2014	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	05/30/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
12B	VP-4-25	Modified TO-15 APH	7.3 "Hg	4.9 psi
13A	Lab Blank	Modified TO-15 APH	NA	NA
13B	Lab Blank	Modified TO-15 APH	NA	NA
13C	Lab Blank	Modified TO-15 APH	NA	NA
13D	Lab Blank	Modified TO-15 APH	NA	NA
14A	CCV	Modified TO-15 APH	NA	NA
14B	CCV	Modified TO-15 APH	NA	NA
14C	CCV	Modified TO-15 APH	NA	NA
14D	CCV	Modified TO-15 APH	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 05/30/14

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-13-6, UT NELAP CA009332013-4, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 & VPH Fractions
ERM-West
Workorder# 1405347B

Twelve 6 Liter Summa Canister samples were received on May 19, 2014. The laboratory performed analysis via EPA Method TO-15 and Air Toxics VPH (Volatile Petroleum Hydrocarbon) methods for the Determination of VPH Fractions using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. This method is designed to measure gaseous phase aliphatic and aromatic compounds in ambient air and soil gas collected in stainless steel Summa canisters. Air Toxics VPH method is a hybrid of EPA TO-15, MADEP APH and WSDE VPH methods. Chromatographic peaks were identified via mass spectrum as either aliphatic or aromatic petroleum hydrocarbons and included in the appropriate range as defined by the method. The volatile Aliphatic hydrocarbons are collectively quantified within the C5 to C6 range, C6 to C8 range, C8 to C10 range and the C10 to C12 range. Additionally, the volatile Aromatic hydrocarbons are collectively quantified within the C8 to C10 range and the C10 to C12 range. The Aromatic ranges refer to the equivalent carbon (EC) ranges.

Aliphatic data is calculated from the Total Ion chromatogram which has been reprocessed in a duplicate file differentiated from the original by the addition of an alphanumeric extension. The Aromatic calculation also uses the information contained in the associated Extracted Ion file.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples VP-3-25, VP-1-5, VP-1-15, VP-2-6.5, VP-2-15 and VP-2-20 due to matrix interference.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

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

Client Sample ID: VP-3-6.5

Lab ID#: 1405347B-01A

No Detections Were Found.

Client Sample ID: VP-3-6.5

Lab ID#: 1405347B-01B

No Detections Were Found.

Client Sample ID: VP-3-15

Lab ID#: 1405347B-02A

No Detections Were Found.

Client Sample ID: VP-3-15

Lab ID#: 1405347B-02B

No Detections Were Found.

Client Sample ID: VP-3-25

Lab ID#: 1405347B-03A

No Detections Were Found.

Client Sample ID: VP-3-25

Lab ID#: 1405347B-03B

No Detections Were Found.

Client Sample ID: VP-1-5

Lab ID#: 1405347B-04A

No Detections Were Found.

Client Sample ID: VP-1-5

Lab ID#: 1405347B-04B

No Detections Were Found.

Client Sample ID: VP-1-15

Lab ID#: 1405347B-05A

eurofins | Air Toxics

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

Client Sample ID: VP-1-15

Lab ID#: 1405347B-05A

No Detections Were Found.

Client Sample ID: VP-1-15

Lab ID#: 1405347B-05B

No Detections Were Found.

Client Sample ID: VP-1-20

Lab ID#: 1405347B-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	20	25	80	100
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	20	33	140	230

Client Sample ID: VP-1-20

Lab ID#: 1405347B-06B

No Detections Were Found.

Client Sample ID: VP-2-6.5

Lab ID#: 1405347B-07A

No Detections Were Found.

Client Sample ID: VP-2-6.5

Lab ID#: 1405347B-07B

No Detections Were Found.

Client Sample ID: VP-2-15

Lab ID#: 1405347B-08A

No Detections Were Found.

Client Sample ID: VP-2-15

Lab ID#: 1405347B-08B

eurofins | Air Toxics

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

Client Sample ID: VP-2-15

Lab ID#: 1405347B-08B
No Detections Were Found.

Client Sample ID: VP-2-20

Lab ID#: 1405347B-09A
No Detections Were Found.

Client Sample ID: VP-2-20

Lab ID#: 1405347B-09B
No Detections Were Found.

Client Sample ID: VP-4-6.5

Lab ID#: 1405347B-10A
No Detections Were Found.

Client Sample ID: VP-4-6.5

Lab ID#: 1405347B-10B
No Detections Were Found.

Client Sample ID: VP-4-15

Lab ID#: 1405347B-11A
No Detections Were Found.

Client Sample ID: VP-4-15

Lab ID#: 1405347B-11B
No Detections Were Found.

Client Sample ID: VP-4-25

Lab ID#: 1405347B-12A
No Detections Were Found.

Client Sample ID: VP-4-25

Lab ID#: 1405347B-12B

eurofins | Air Toxics

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

Client Sample ID: VP-4-25

Lab ID#: 1405347B-12B

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: VP-3-6.5

Lab ID#: 1405347B-01A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052919a**	**Date of Collection: 5/15/14 11:50:00 AM**	
Dil. Factor:	**1.87**	**Date of Analysis: 5/29/14 04:17 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	19	Not Detected	60	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	19	Not Detected	77	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	19	Not Detected	110	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	19	Not Detected	130	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-3-6.5

Lab ID#: 1405347B-01B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052919c**	**Date of Collection: 5/15/14 11:50:00 AM**	
Dil. Factor:	**1.87**	**Date of Analysis: 5/29/14 04:17 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	19	Not Detected	92	Not Detected
>C10-C12 Aromatic Hydrocarbons	19	Not Detected	100	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-3-15

Lab ID#: 1405347B-02A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052920a**	**Date of Collection: 5/15/14 12:35:00 PM**	
Dil. Factor:	**1.79**	**Date of Analysis: 5/29/14 04:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	18	Not Detected	58	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	18	Not Detected	73	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	18	Not Detected	100	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	18	Not Detected	120	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-3-15

Lab ID#: 1405347B-02B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052920c**	**Date of Collection:**	**5/15/14 12:35:00 PM**
Dil. Factor:	**1.79**	**Date of Analysis:**	**5/29/14 04:39 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	18	Not Detected	88	Not Detected
>C10-C12 Aromatic Hydrocarbons	18	Not Detected	98	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-3-25

Lab ID#: 1405347B-03A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053008a**	**Date of Collection: 5/15/14 1:40:00 PM**	
Dil. Factor:	**4.59**	**Date of Analysis: 5/30/14 11:29 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	46	Not Detected	150	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	46	Not Detected	190	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	46	Not Detected	270	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	46	Not Detected	320	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-3-25

Lab ID#: 1405347B-03B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053008c**	**Date of Collection: 5/15/14 1:40:00 PM**	
Dil. Factor:	**4.59**	**Date of Analysis: 5/30/14 11:29 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	46	Not Detected	220	Not Detected
>C10-C12 Aromatic Hydrocarbons	46	Not Detected	250	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-1-5

Lab ID#: 1405347B-04A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052923a**	**Date of Collection: 5/15/14 2:38:00 PM**	
Dil. Factor:	**3.61**	**Date of Analysis: 5/29/14 07:58 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	36	Not Detected	120	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	36	Not Detected	150	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	36	Not Detected	210	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	36	Not Detected	250	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-1-5

Lab ID#: 1405347B-04B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052923c**	**Date of Collection: 5/15/14 2:38:00 PM**	
Dil. Factor:	**3.61**	**Date of Analysis: 5/29/14 07:58 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	36	Not Detected	180	Not Detected
>C10-C12 Aromatic Hydrocarbons	36	Not Detected	200	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-1-15

Lab ID#: 1405347B-05A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052924a**	**Date of Collection: 5/15/14 3:22:00 PM**	
Dil. Factor:	**3.70**	**Date of Analysis: 5/29/14 08:20 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	37	Not Detected	120	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	37	Not Detected	150	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	37	Not Detected	220	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	37	Not Detected	260	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-1-15

Lab ID#: 1405347B-05B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052924c**	**Date of Collection: 5/15/14 3:22:00 PM**	
Dil. Factor:	**3.70**	**Date of Analysis: 5/29/14 08:20 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	37	Not Detected	180	Not Detected
>C10-C12 Aromatic Hydrocarbons	37	Not Detected	200	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-1-20

Lab ID#: 1405347B-06A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052925a**	**Date of Collection: 5/15/14 4:10:00 PM**	
Dil. Factor:	**1.95**	**Date of Analysis: 5/29/14 08:42 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	20	Not Detected	63	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	20	25	80	100
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	20	Not Detected	110	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	20	33	140	230

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-1-20

Lab ID#: 1405347B-06B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052925c**	**Date of Collection: 5/15/14 4:10:00 PM**	
Dil. Factor:	**1.95**	**Date of Analysis: 5/29/14 08:42 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	20	Not Detected	96	Not Detected
>C10-C12 Aromatic Hydrocarbons	20	Not Detected	110	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-2-6.5

Lab ID#: 1405347B-07A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052926a**	**Date of Collection: 5/15/14 5:01:00 PM**	
Dil. Factor:	**3.79**	**Date of Analysis: 5/29/14 09:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	38	Not Detected	120	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	38	Not Detected	160	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	38	Not Detected	220	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	38	Not Detected	260	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-2-6.5

Lab ID#: 1405347B-07B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052926c**	**Date of Collection: 5/15/14 5:01:00 PM**	
Dil. Factor:	**3.79**	**Date of Analysis: 5/29/14 09:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	38	Not Detected	190	Not Detected
>C10-C12 Aromatic Hydrocarbons	38	Not Detected	210	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-2-15

Lab ID#: 1405347B-08A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053009a**	**Date of Collection: 5/16/14 7:31:00 AM**	
Dil. Factor:	**4.33**	**Date of Analysis: 5/30/14 11:51 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	43	Not Detected	140	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	43	Not Detected	180	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	43	Not Detected	250	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	43	Not Detected	300	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-2-15

Lab ID#: 1405347B-08B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053009c**	**Date of Collection:**	**5/16/14 7:31:00 AM**
Dil. Factor:	**4.33**	**Date of Analysis:**	**5/30/14 11:51 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	43	Not Detected	210	Not Detected
>C10-C12 Aromatic Hydrocarbons	43	Not Detected	240	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-2-20

Lab ID#: 1405347B-09A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053010a**	**Date of Collection: 5/16/14 8:20:00 AM**	
Dil. Factor:	**4.10**	**Date of Analysis: 5/30/14 12:12 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	41	Not Detected	130	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	41	Not Detected	170	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	41	Not Detected	240	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	41	Not Detected	280	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-2-20

Lab ID#: 1405347B-09B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053010c**	**Date of Collection: 5/16/14 8:20:00 AM**	
Dil. Factor:	**4.10**	**Date of Analysis: 5/30/14 12:12 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	41	Not Detected	200	Not Detected
>C10-C12 Aromatic Hydrocarbons	41	Not Detected	220	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-4-6.5

Lab ID#: 1405347B-10A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052929a**	**Date of Collection: 5/16/14 9:14:00 AM**	
Dil. Factor:	**1.75**	**Date of Analysis: 5/29/14 10:08 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	18	Not Detected	57	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	18	Not Detected	72	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	18	Not Detected	100	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	18	Not Detected	120	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-4-6.5

Lab ID#: 1405347B-10B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052929c**	**Date of Collection: 5/16/14 9:14:00 AM**	
Dil. Factor:	**1.75**	**Date of Analysis: 5/29/14 10:08 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	18	Not Detected	86	Not Detected
>C10-C12 Aromatic Hydrocarbons	18	Not Detected	96	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-4-15

Lab ID#: 1405347B-11A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052930a**	**Date of Collection: 5/16/14 10:01:00 AM**	
Dil. Factor:	**1.78**	**Date of Analysis: 5/29/14 10:30 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	18	Not Detected	58	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	18	Not Detected	73	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	18	Not Detected	100	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	18	Not Detected	120	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-4-15

Lab ID#: 1405347B-11B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052930c**	**Date of Collection:**	**5/16/14 10:01:00 AM**
Dil. Factor:	**1.78**	**Date of Analysis:**	**5/29/14 10:30 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	18	Not Detected	88	Not Detected
>C10-C12 Aromatic Hydrocarbons	18	Not Detected	98	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-4-25

Lab ID#: 1405347B-12A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052931a**	**Date of Collection: 5/16/14 10:50:00 AM**	
Dil. Factor:	**1.76**	**Date of Analysis: 5/29/14 10:52 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	18	Not Detected	57	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	18	Not Detected	72	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	18	Not Detected	100	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	18	Not Detected	120	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: VP-4-25

Lab ID#: 1405347B-12B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052931c**	**Date of Collection:**	**5/16/14 10:50:00 AM**
Dil. Factor:	**1.76**	**Date of Analysis:**	**5/29/14 10:52 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	18	Not Detected	86	Not Detected
>C10-C12 Aromatic Hydrocarbons	18	Not Detected	97	Not Detected

Container Type: 6 Liter Summa Canister

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1405347B-13A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052912a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/29/14 01:29 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	10	Not Detected	32	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	10	Not Detected	41	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	10	Not Detected	58	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	10	Not Detected	70	Not Detected

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1405347B-13B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052912c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/29/14 01:29 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	10	Not Detected	49	Not Detected
>C10-C12 Aromatic Hydrocarbons	10	Not Detected	55	Not Detected

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1405347B-13C

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053007a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 10:57 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	10	Not Detected	32	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	10	Not Detected	41	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	10	Not Detected	58	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	10	Not Detected	70	Not Detected

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1405347B-13D

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053007c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 10:57 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	10	Not Detected	49	Not Detected
>C10-C12 Aromatic Hydrocarbons	10	Not Detected	55	Not Detected

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1405347B-14A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052909a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/29/14 11:07 AM**	

Compound	%Recovery
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	102
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	102
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	99
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	66

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1405347B-14B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17052909c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/29/14 11:07 AM**	

Compound	%Recovery
>C8-C10 Aromatic Hydrocarbons	106
>C10-C12 Aromatic Hydrocarbons	87

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1405347B-14C

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053006a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 10:21 AM**	

Compound	%Recovery
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	102
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	100
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	100
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	84

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1405347B-14D

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**17053006c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 10:21 AM**	

Compound	%Recovery
>C8-C10 Aromatic Hydrocarbons	105
>C10-C12 Aromatic Hydrocarbons	98

Container Type: NA - Not Applicable

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager Mike Arnold
Collected by: (Print and Sign) Matt Crandell
Company ERM Email mike.arnold@erm.com
Address 1218 3rd Ave City Seattle State WA Zip 98101
Phone 425 462 8591 ste 1412 Fax

Project Info:
P.O. # 0130850.03
Project # D130850.03
Project Name Dole VI Sampling

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial①	Final	Receipt	Final (psi)
01A	VP-3-6.5	34277	5/15/14	1150	②	-29.0	-7.0		
02A	VP-3-15	34280		1235		-29.0	-5.5		
03A	VP-3-25	24486		1340		-29.5	~~-30~~ -7.5		
04A	VP-1-5	34468		1438		-28.0	-5.5		
05A	VP-1-15	34185		1522		-30.0	-7.0		
06A	VP-1-20	32124		1610		-29.0	-7.5		
07A	VP-2-6.5	21015		1701		-29.5	-7.0		
08A	VP-2-15	SC416	5/16/14	~~0727~~ ⑩ 0731		-29.0	-6.5		
09A	VP-2-20	5567		0820		-29.5	-6.0		
10A	VP-4-6.5	12685		0914		-29.5	-7.0		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	5/16/14, 1230	~~[illegible]~~ TAT	5/19/14 1005
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes: ① units are Hg"
② Analyses requested: TPH-G, benzene, ethylbenzene, toluene, xylenes, volatile petroleum hydrocarbons by TO-15

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fedex		NA	Good	Yes No (None)	1405347

Form 1293 rev.11

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager Mike Arnold
Collected by: (Print and Sign) Matt Crandell
Company 1218 3rd Ave ste 1412 Email mike.arnold@erm.com
Address ERM City Seattle State WA Zip 98101
Phone 425.462.8591 Fax

Project Info:
P.O. # 0130950.03
Project # 0130850.03
Project Name Dole VI Sampling

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial (1)	Final	Receipt	Final (psi)
11A	VP-4-15	24217	5/16/14	1001	(2)	-29.5	-6.0		
12A	VP-4-25	34233	1	1050	1	-28.5	-6.0		
							5/16/14		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Matt Crandell	5/16/14, 1230	EAT	5/19/14 1005
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes: (1) Units are Hg"
(2) Analyses requested: TPH-G, benzene, ethylbenzene, toluene, xylenes, volatile petroleum hydrocarbons by TO-15

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fedex		NA	Good	Yes No (None)	1405347

Form 1293 rev.11