PES Environmental, Inc.
Engineering & Environmental Services

D R A F T

MEMORANDUM

To: Mr. David Hopkins
Regis Homes Bay Area, LLC

From: Justin J. Patterson
Carl J. Michelsen, P.G., C.HG.
PES Environmental, Inc.

Date: February 12, 2015

Subject: Report of Results
Subsurface Investigation
39155 and 39183 State Street, Fremont, California

Project No.: 1098.007.01.012

This memorandum presents the results of Phase II testing conducted at the vacant property located at 39155 and 39183 State Street in Fremont, California (the site; see Plate 1). PES recently prepared a Phase I Environmental Site Assessment (ESA) for the site, and based on the results of the ESA, soil and soil vapor sampling and analysis were performed as part of Phase II activities. The objective of the investigation was to evaluate the chemical characteristics of the soil and soil vapor beneath the site to assess if they have been impacted by prior site usage or potential off-site sources of contamination. The site, which covers an area of approximately 6.9 acres, consists of two adjacent asphalt-paved lots with several landscaped areas. The site was formerly occupied by a Nob Hill grocery store/Payless drug store building which was demolished in 2001. The site has been vacant since then and is currently owned by the City of Fremont. The planned redevelopment of the site includes commercial buildings with subsurface parking along the northwestern portion of the site, and slab-on-grade residential buildings to the southeast[1].

INVESTIGATION METHODS

The investigation was conducted in three phases in October and December 2014, and January 2015. A corresponding work plan for each phase of site investigation was submitted to the Alameda County Water District (ACWD) on September 26, 2014, December 2, 2014,

[1] KTGY Group, Inc., 2013. *Conceptual Site Plan- Alternate 2 – Downtown Fremont*.

and January 26, 2014[2]. The investigations included completing 40 borings (B1 through B40) for soil and/or soil vapor sample collection. The approximate locations of the borings are shown on Plate 2. The pre-field activities, sampling methods, analytical testing methods, and analytical results are discussed below. Drilling and sampling activities were conducted under the direction of a California-registered geologist.

Field Preparation Activities

Drilling permits were obtained from ACWD prior to drilling. Copies of the drilling permits are included as Attachment A to this report. PES contacted Underground Service Alert at least 48 hours prior to the start of drilling activities. C. Cruz Sub-Surface Locators, Inc. (C. Cruz) of Milpitas, California, a private utility locating company, was retained to clear each of the boring locations for subsurface utilities or other features. Additionally, PES coordinated with TEG – Northern California, Inc. (TEG) of Rancho Cordova, California, a licensed drilling contractor possessing a valid C-57 California water well contractor's license, to schedule the drilling, sampling, and mobile laboratory services. A site-specific Health and Safety Plan was prepared for the investigation. For the third phase of the investigation, several borings were advanced along State Street and in the sidewalk adjacent to the site. Accordingly, PES obtained an encroachment permit from the City of Fremont and retained a traffic control subcontractor to perform flagging and lane closure services.

Sampling and Analytical Procedures

Under subcontract to PES, TEG utilized a track-mounted direct-push drilling rig to advance the borings to depths ranging from 5 to 45 feet below ground surface (bgs). Deep borings (e.g., to depths of 45 bgs) were advanced as deep as possible using the available direct push equipment in an attempt to sample groundwater. Unfortunately, the drill rig met with refusal and no groundwater was encountered; no groundwater was sampled as had been planned in the initial work plan (PES, 2014a).

Ten (10) soil borings were advanced across the site. The soil borings were sampled at two depth intervals (1 to 2 feet bgs and 3 to 4 feet bgs) for chemical analysis. The deeper soil sample was put on hold at the laboratory pending the results of the shallow soil sample analysis.

[2] PES, 2014a. *Work Plan for Limited Site Investigation, 39155 and 39183 State Street, Fremont, California.* September 26; PES, 2014b. *Work Plan for Supplemental Site Investigation, 39155 and 39183 State Street, Fremont, California*. December 2; PES, 2015. *Work Plan for Supplemental Soil Vapor Investigation, 39155 and 39183 State Street, Fremont, California.* January 26.

Continuous soil cores were collected by driving a 4-foot long by 2-inch outside-diameter open-tube sampler into undisturbed soil. The open-tube sampler was lined with one 4-foot long, clear acetate sample sleeve. Soil samples were collected for non-volatile compounds in the acetate sample sleeve. The acetate sample sleeve was cut at the appropriate depth interval into a 12-inch long section, and sealed with Teflon liners and plastic end caps to prevent moisture and/or contaminant loss. Soil samples submitted for analysis by U.S. Environmental Protection Agency (U. S. EPA) Test Method 8260B were collected in accordance with U.S. EPA Test Method 5035 using Terracore™ samplers.

The soil samples were labeled to indicate project location, job number, boring number, sample number, and time and date collected and then immediately placed in a thermally-insulated cooler containing ice. The soil samples were picked up by a courier that transported them under chain of custody protocol to Curtis & Tompkins, Ltd. (C&T) of Emeryville, California, a California state-certified laboratory for the requested chemical analyses. Soil samples were analyzed for organochlorine pesticides by U.S. EPA Test Method 8081, total lead and arsenic by U.S. EPA Test Method 6010, and volatile organic compounds (VOCs) by U.S. EPA Test Method 8260B.

Soil vapor borings were sampled in accordance with the most current guidance document: *Advisory - Active Soil Gas Investigations,* published by the California Environmental Protection Agency (Department of Toxic Substances Control (DTSC), California Regional Water Quality Control Board – Los Angeles Region, and RWQCB – San Francisco Region), dated April 2012.

A majority of the on-site soil vapor borings were collected at a depth of 5 feet bgs. In addition, three (3) on-site samples were collected at a depth of 10 feet bgs. Soil gas samples collected alongside the sanitary sewer utility that runs from northwest to southeast along the approximate centerline of State Street were collected at a depth of approximately 9 feet bgs to coincide with the approximate depth of the sewer line. Lastly, soil gas samples collected in the sidewalk north of the subject property, adjacent to a sanitary sewer lateral and a storm drain lateral that formerly serviced the site, were collected at depths of 8.75 and 6 feet bgs, respectively.

Soil vapor samples were analyzed by TEG's mobile laboratory for VOCs by U.S. EPA Test Method 8260B.

To reduce the potential for cross-contamination between sampling locations, downhole drilling and sampling equipment were thoroughly cleaned prior to initiating work and between sampling locations. Sampling equipment was washed in a dilute Alconox (or equivalent) solution, rinsed with potable water, and final rinsed with distilled water between each sampling location. Direct-push drilling equipment was decontaminated with a high-pressure hot water

wash between sampling locations. Upon completion of sampling activities, each borehole was grouted to the surface with neat cement in accordance with ACWD requirements and with the oversight of the ACWD.

ANALYTICAL RESULTS

Copies of the laboratory analytical reports and chain-of-custody documentation are presented in Attachment B. A summary of the analytical results for the soil and soil vapor samples are summarized in Tables 1 through 3.

Soil Vapor Samples

As indicated on Table 1, several VOCs were identified during the soil vapor investigation. However, only benzene and tetrachloroethylene (PCE) were detected above the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Tier 1 environmental screening levels (ESLs) for soil gas in a residential land use setting.

To further evaluate the data, site-specific vapor intrusion screening levels (e.g., Tier 2 screening levels) for benzene and PCE (160 micrograms per cubic meter [$\mu g/m^3$] and 1,260 $\mu g/m^3$, respectively) were calculated for the residential land use scenario based on the observed subsurface soil conditions (clay soils) and using the Department of Toxic Substances Control (DTSC) vapor intrusion model.[3] A copy of the output for the DTSC Vapor Intrusion Screening Model – Soil Gas is provided in Attachment C. Two on-site samples exceed the site-specific vapor intrusion screening level for PCE (1,260 $\mu g/m^3$); borings B21 (8,500 $\mu g/m^3$) and B30 (1,700 $\mu g/m^3$), located adjacent to State Street. The only boring that exceeded the site-specific screening level for benzene was boring B4, located in the southern portion of the site. The concentration of benzene detected (480 $\mu g/m^3$), slightly exceeds the site-specific vapor intrusion screening level of 160 $\mu g/m^3$.

As shown on Plate 3 and summarized on Table 1, all of the soil vapor samples collected within State Street (adjacent to the sewer) and in the sidewalk contained PCE and all detections exceed the residential ESL. The maximum off-site concentration of PCE was 23,000 $\mu g/m^3$ in boring B38.

[3] DTSC, 2014. Department of Toxic Substance Control, Vapor Intrusion Screening Model - Soil Gas. December. The default soil type was adjusted to reflect the site-specific soil type (clay) that is present within the top 5 feet of the site.

Soil Samples

As indicated on Table 2, total lead was detected in all ten shallow soil samples, at concentrations ranging from 5.1 milligrams per kilogram (mg/kg) to 13 mg/kg. The residential ESL for lead (80 mg/kg) was not exceeded and the detections likely represent background conditions.

Total arsenic was detected in all ten shallow soil samples, at concentrations ranging from 4.3 mg/kg to 8.2 mg/kg. The residential ESL for arsenic (0.39 mg/kg) was exceeded in each sample. However, all detections are below the established background concentration for Bay Area soils of 11 mg/kg.[4]

Soil samples identified concentrations of the organochlorine pesticides endrin and dieldrin in 6 out of 16 samples that exceed the ESL for residential land use. However, no samples exceed the direct exposure soil screening levels for a residential exposure scenario[5].

As indicated on Table 3, no VOCs were detected above their respective laboratory reporting limits, except for acetone. Acetone was detected at a concentration of 14 micrograms per kilogram (μg/Kg) in boring B3 at a depth of 1.0 to 2.0 feet bgs. This concentration is below the residential ESL.

DISCUSSION OF RESULTS AND CONCLUSIONS

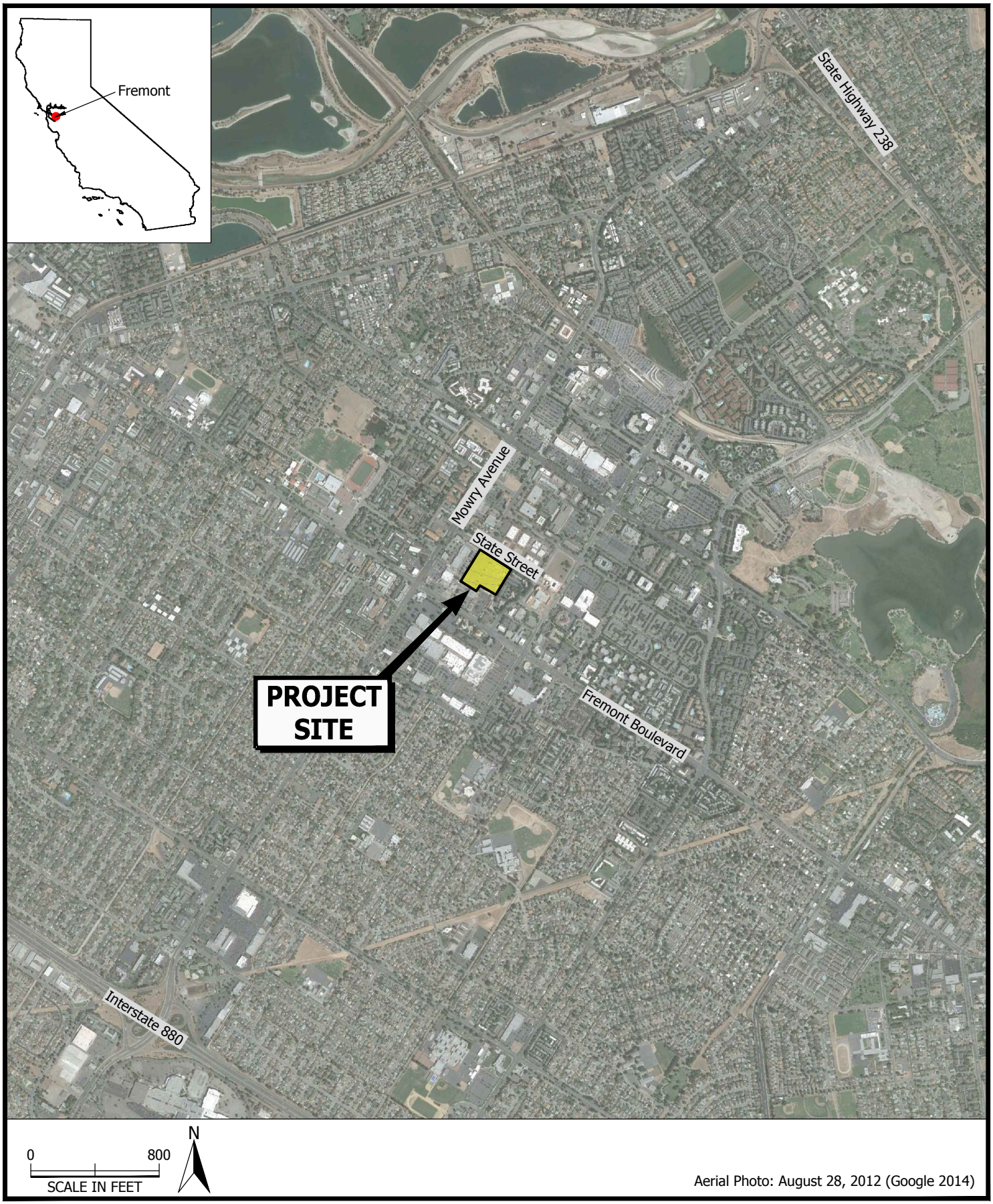
Based on the results of the investigation described herein, soil vapor PCE concentrations above the site-specific soil vapor screening level are limited to a small area on the northeastern portion of the site, adjacent to State Street. The pattern of detections and the high concentrations of PCE in soil vapor samples collected within State Street adjacent to the sewer line point to the State Street sewer as the source of the PCE in soil gas. In other words, a PCE vapor cloud appears to be emanating from the State Street sewer and has locally migrated onto the subject property. The only benzene detection that exceeded the site-specific soil vapor screening level was an isolated low concentration occurrence in the southern portion of the site. Testing in the vicinity of the sample was unable to identify a source area or widespread contamination.

[4] Dylan Durengé, 2011. Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region. December.

[5] December 2013 SFRWQCB ESLs, Table K-1 Direct Exposure Soil Screening Levels Residential Exposure Scenario.

Attachments: Plates 1 through 3
Table 1 – Summary of Soil Vapor Analytical Results
Table 2 – Summary of Analytical Results for Soil – Metals and Pesticides
Table 3 – Summary of Analytical Results for Soil – VOCs
A – ACWD Drilling Permits
B – Laboratory Analytical Report and Chain of Custody Forms
C – Department of Toxic Substances Control, Vapor Intrusion Screening Model – Soil Gas, Residential Scenario; Tetrachloroethylene and Benzene

PLATES



Aerial Photo: August 28, 2012 (Google 2014)

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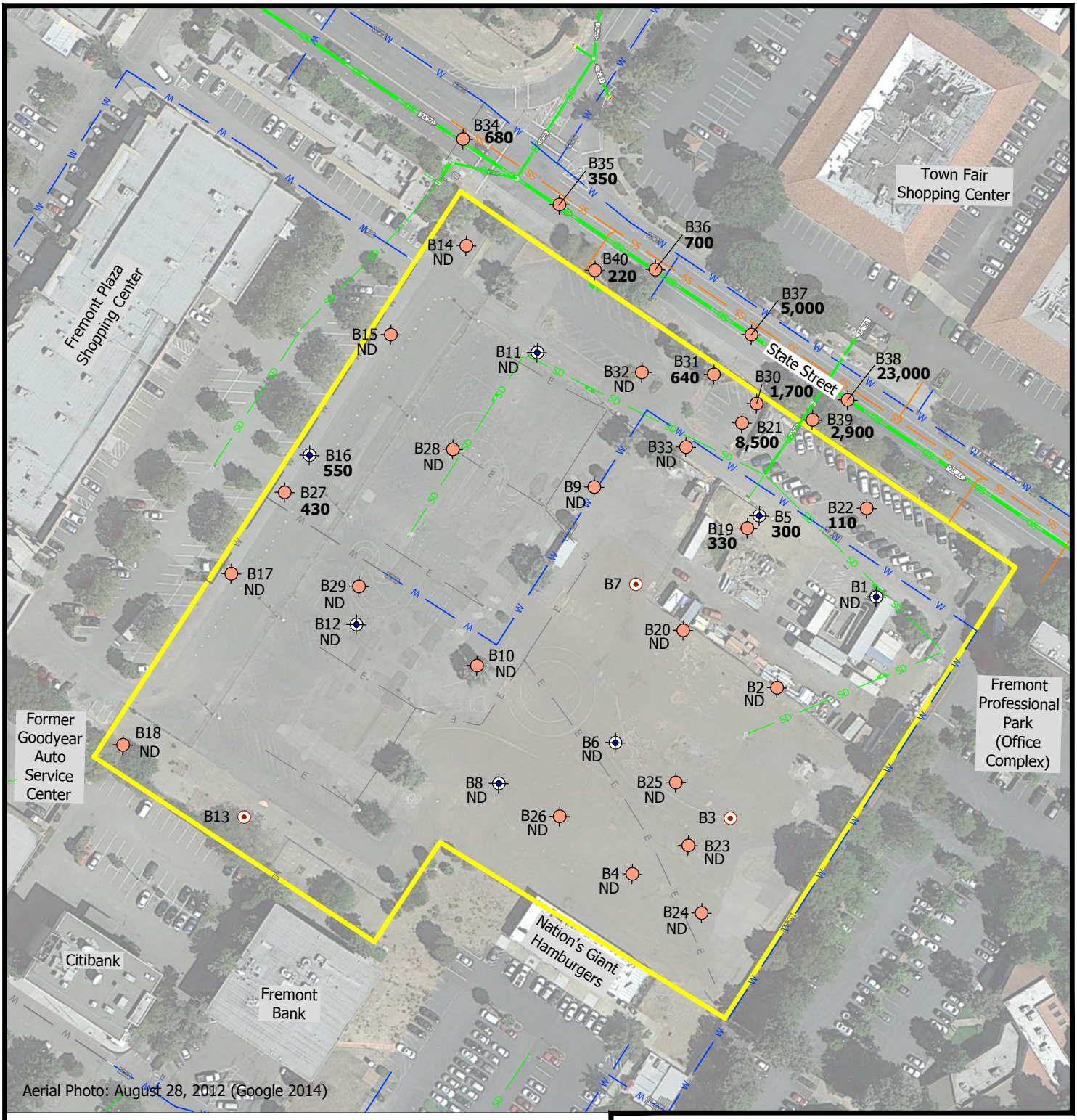
Site Location
39155 and 39183 State Street
Fremont, California

PLATE
1

1098.007.01.001	109800701012_PIIcIR_1	DRAFT	2/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Property Boundary
- B13 — Soil Sampling Location
- B17 — Soil Vapor Sampling Location
- B6 — Soil Vapor and Soil Sampling Location
- W — Water Line
- E — Electrical Line
- SD — Storm Drain Line
- SS — Sanitary Sewer Line

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SCALE IN FEET

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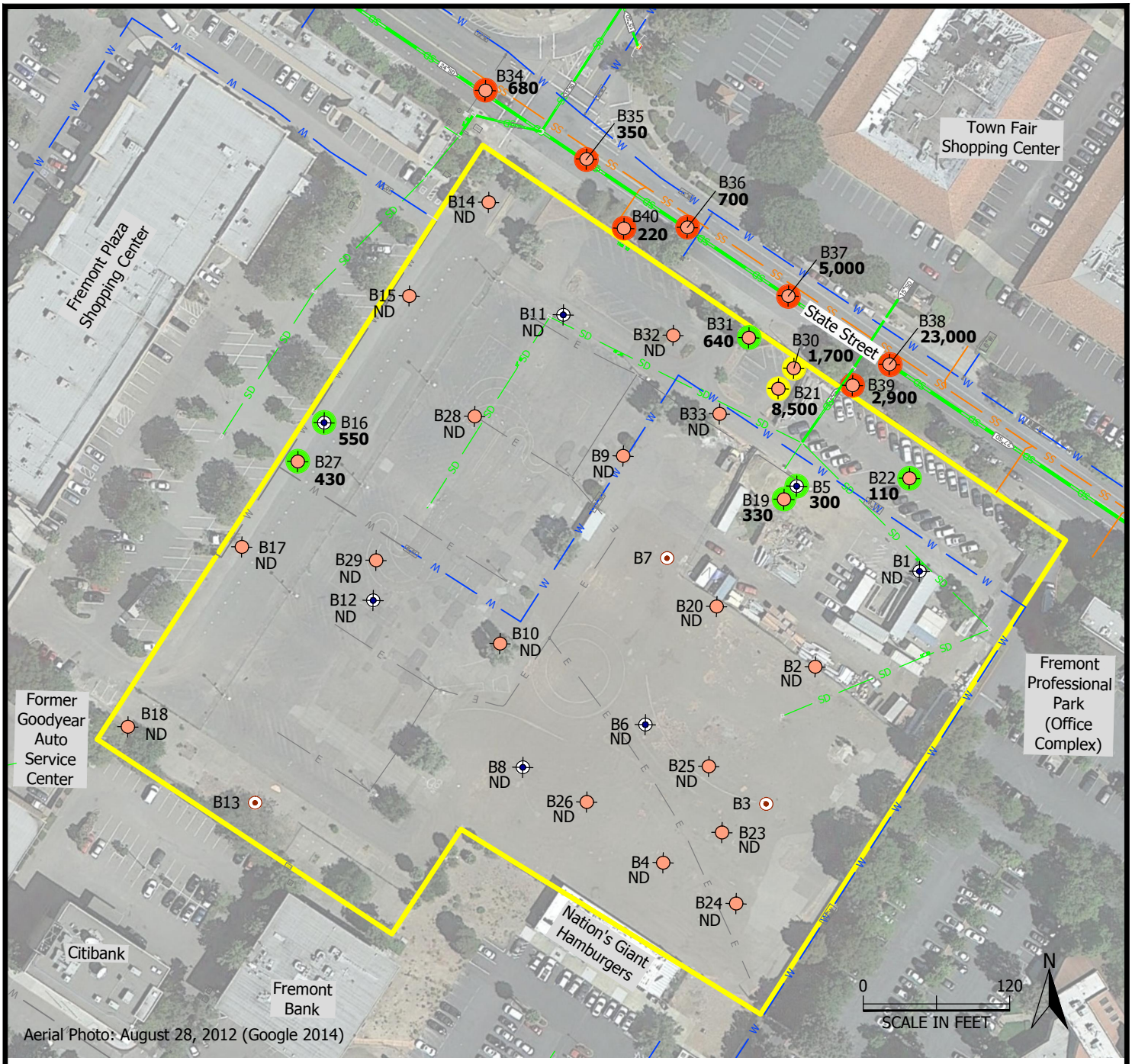
Site Plan and Sample Locations
39155 and 39183 State Street
Fremont, California

PLATE
2

1098.007.01.012	109800701012_PIIcIR_2-3	DRAFT	2/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Property Boundary
- B13 — Soil Sampling Location
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- W — Water Line
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- SD — Storm Drain Line
- SS — Sanitary Sewer Line

680 Concentration of tetrachloroethylene (PCE) in micrograms per cubic meter (µg/m^3)

ND Not detected at or above laboratory reporting limit.

Concentration is greater than residential ESL (210 µg/m^3).

Concentration is greater than site-specific vapor intrusion screening level for residential land use (1,260 µg/m^3).

Concentration is less than site-specific vapor intrusion screening level for residential land use.

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PCE Concentrations in Soil Vapor
39155 and 39183 State Street
Fremont, California

PLATE
3

1098.007.01.012	109800701012_PIIcIR_2-3	DRAFT	2/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

TABLES

Table 1
Summary of Soil Vapor Analytical Results
39155 and 39183 State Street
Fremont, California

Sample Location	Date Sampled	Sample Number	Sample Depth (feet bgs)	Purge Volume	PCE (µg/m^3)	Benzene (µg/m^3)	Toluene (µg/m^3)	Ethyl-benzene (µg/m^3)	m,p-Xylene (µg/m^3)	o-Xylene (µg/m^3)	Freon 11 (µg/m^3)	Freon 12 (µg/m^3)	Chloroform (µg/m^3)
On-Site													
B1	10/28/2014	B1-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	< 100	< 100	< 100
B2	10/28/2014	B2-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**120**	**1900**	< 100
B4	10/27/2014	B4-SV	5.0	1	< 100	**320**	**1800**	< 100	**360**	**140**	< 100	**1700**	**160**
				3	< 100	**480**	**1500**	**160**	**520**	**190**	< 100	**2300**	**160**
				5	< 100	**510**	**780**	**230**	**690**	**260**	< 100	**2100**	< 100
B5	10/27/2014	B5-SV	5.0	3	**300**	< 80	< 200	< 100	< 200	< 100	< 100	**1000**	< 100
B6	10/28/2014	B6-SV	5.0	3	< 100	**97**	< 200	< 100	< 200	< 100	< 100	**240**	< 100
B8	10/27/2014	B8-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**1600**	**6400**	< 100
B9	10/28/2014	B9-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**110**	< 100	< 100
B10	10/28/2014	B10-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**370**	**1400**	< 100
B11	10/28/2014	B11-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	< 100	**410**	< 100
B12	10/28/2014	B12-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**1100**	**4100**	< 100
B14	10/28/2014	B14-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	< 100	**390**	< 100
B15	10/28/2014	B15-SV	5.0	3	< 100	< 80	< 200	< 100	**420**	**150**	< 100	**1800**	< 100
B16	10/28/2014	B16-SV	5.0	3	**550**	< 80	< 200	< 100	< 200	< 100	**160**	**2300**	< 100
B17	10/28/2014	B17-SV	5.0	3	< 100	< 80	< 200	**220**	**1100**	**350**	**460**	**1900**	< 100
B18	10/28/2014	B18-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	< 100	**210**	< 100
B19	12/10/2014	B19-SV	10.0	3	**330**	< 80	< 200	< 100	< 200	< 100	< 100	**1500**	< 100
B20	12/10/2014	B20-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**320**	**3200**	< 100
B21	12/10/2014	B21-SV	5.0	3	**8500**	< 80	< 200	< 100	< 200	< 100	**150**	**2000**	< 100
B22	12/10/2014	B22-SV	5.0	3	**110**	< 80	**210**	< 100	< 200	< 100	< 100	**400**	< 100
B23	12/10/2014	B23-SV	10.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**590**	**2400**	< 100
B24	12/10/2014	B24-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**730**	**1600**	< 100
B25	12/10/2014	B25-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**480**	**2900**	< 100
B26	12/10/2014	B26-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**2300**	**4800**	< 100
B27	12/10/2014	B27-SV	10.0	3	**430**	< 80	< 200	< 100	< 200	< 100	**230**	**3900**	< 100
B28	12/10/2014	B28-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**220**	**4800**	< 100
B29	12/10/2014	B29-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	**290**	**2300**	< 100
B30	1/30/2015	B30-SV	5.0	3	**1700**	< 80	< 200	< 100	< 200	< 100	< 100	**1400**	< 100
B31	1/30/2015	B31-SV	5.0	3	**640**	< 80	< 200	< 100	< 200	< 100	< 100	**1200**	< 100
B32	1/30/2015	B32-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	< 100	**410**	< 100
B33	1/30/2015	B33-SV	5.0	3	< 100	< 80	< 200	< 100	< 200	< 100	< 100	< 100	< 100
Off-Site													
B34	1/30/2015	B34-SV	9.0	3	**680**	< 80	< 200	< 100	< 200	< 100	< 100	< 100	< 100
B35	1/30/2015	B35-SV	9.0	3	**350**	< 80	< 200	< 100	< 200	< 100	< 100	< 100	< 100
B36	1/30/2015	B36-SV	9.0	3	**700**	< 80	< 200	< 100	< 200	< 100	< 100	**130**	< 100
B37	1/30/2015	B37-SV	9.0	3	**5000**	< 80	< 200	< 100	< 200	< 100	< 100	**470**	< 100
B38	1/30/2015	B38-SV	9.0	3	**23000**	< 80	< 200	< 100	< 200	< 100	< 100	**170**	< 100
B39	1/30/2015	B39-SV	6.0	3	**2900**	< 80	< 200	< 100	< 200	< 100	< 100	**100**	< 100
B40	1/30/2015	B40-SV	8.75	3	**220**	< 80	< 200	< 100	< 200	< 100	< 100	**230**	< 100
Site-Specific Vapor Intrusion Screening Level for Residential Land Use (DTSC, 2014) [1]					1,260	160	NC	NC	NC	NC	NC	NC	NC
Residential land use ESL [2]					210	42	160,000	490	52,000	52,000	NE	NE	230
Commercial/Industrial land use ESL [3]					2,100	420	1,300,000	4,900	440,000	440,000	NE	NE	2,300

Notes:
Detections are shown in bold.
Results equal to or exceeding site-specific vapor intrusion screening level for residential land use (benzene and PCE only) or residential ESL (all other compounds and off-site samples) are shaded.
feet bgs: feet below ground surface.
µg/m^3: micrograms per cubic meter.
PCE: Tetrachloroethene.
Freon 11: Trichlorofluoromethane.
Freon 12: Dichlorodifluoromethane.
< 100: not detected at or above the indicated laboratory reporting limit.
1. DTSC, 2014. Department of Toxic Substance Control, Vapor Intrusion Screening Model - Soil Gas. December. Default soil type adjusted to reflect site-specific soil type (clay) in top 5 feet at site.
2. ESL = December 2013 Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB) Environmental Screening Levels (ESLs), Table E-2 Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion, Residential Land Use.
3. ESL = December 2013 SFRWQCB ESLs, Table E-2 Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion, Commercial/Industrial Land Use.
NE: Not established.
NC: Not calculated

Table 2
Summary of Analytical Results for Soil - Metals & Pesticides
39155 and 39183 State Street
Fremont, California

Sample Location	Sample Identification	Sample Depth (Feet bgs)	Date Collected	Metals		Pesticides						
				Arsenic (mg/Kg)	Lead (mg/Kg)	Endrin (µg/Kg)	DDD (µg/Kg)	DDE (µg/Kg)	DDT (µg/Kg)	Dieldrin (µg/Kg)	Heptachlor epoxide (µg/Kg)	alpha-Chlordane (µg/Kg)
B1	B1-1.0-2.0	1.0-2.0	10/27/2014	**5.3**	**5.1**	< 3.3	< 3.3	< 3.3	< 3.3	< 1.7	< 1.7	< 1.7
	B1-3.0-4.0	3.0-4.0	10/27/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
B3	B3-1.0-2.0	1.0-2.0	10/27/2014	**5.8**	**8.9**	**24 C**	**94 #**	**650**	**22**	< 1.7	< 1.7	**7.0**
	B3-3.0-4.0	3.0-4.0	10/27/2014	NA	NA	< 3.3	< 3.3	**28 #**	**18 #**	< 1.7	**1.8**	< 1.7
B5	B5-1.0-2.0	1.0-2.0	10/27/2014	**5.3**	**5.3**	< 3.3	< 3.3	< 3.3	< 3.3	< 1.7	< 1.7	< 1.7
	B5-3.0-4.0	3.0-4.0	10/27/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
B6	B6-1.0-2.0	1.0-2.0	10/28/2014	**8.2**	**13**	**48**	**86 #**	**430**	**89**	**2.1 C #**	< 1.8	**4.9**
	B6-3.0-4.0	3.0-4.0	10/28/2014	NA	NA	< 3.3	< 3.3	< 3.3	< 3.3	< 1.7	< 1.7	< 1.7
B7	B7-1.0-2.0	1.0-2.0	10/28/2014	**7.3**	**9.7**	**24 C**	**61 #**	**320**	**75**	< 1.7	< 1.7	< 1.7
	B7-3.0-4.0	3.0-4.0	10/28/2014	NA	NA	< 3.3	< 3.3	< 3.3	< 3.3	< 1.7	< 1.7	< 1.7
B8	B8-1.0-2.0	1.0-2.0	10/28/2014	**7.8**	**10**	**37**	**87 #**	**850 C**	**27**	**3.5 C #**	< 1.7	**9.6**
	B8-3.0-4.0	3.0-4.0	10/28/2014	NA	NA	< 8.5	< 8.5	**260 #**	**19 #**	**9.3 #**	< 17	< 17
B11	B11-1.0-2.0	1.0-2.0	10/29/2014	**4.3**	**5.3**	**27 C**	**6.1 C #**	**670 C**	**130**	< 1.7	< 1.7	**5.4**
	B11-3.0-4.0	3.0-4.0	10/29/2014	NA	NA	< 3.3	< 3.3	< 3.3	< 3.3	< 1.7	< 1.7	< 1.7
B12	B12-1.0-2.0	1.0-2.0	10/29/2014	**4.3**	**7.7**	< 33	< 33	**460**	**100**	< 17	< 17	< 17
	B12-3.0-4.0	3.0-4.0	10/29/2014	NA	NA	< 3.3	< 3.3	< 3.3	< 3.3	< 1.7	< 1.7	< 1.7
B13	B13-1.0-2.0	1.0-2.0	10/29/2014	**5.6**	**11**	< 17	< 17	**54**	< 17	< 17	< 17	< 8.5
	B13-3.0-4.0	3.0-4.0	10/29/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
B16	B16-1.0-2.0	1.0-2.0	10/29/2014	**4.7**	**5.3**	< 3.3	< 3.3	**21**	**7.7**	< 1.7	< 1.7	< 1.7
	B16-3.0-4.0	3.0-4.0	10/29/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA
Residential land use ESL [1]				0.39	80	0.65	2,400	1,700	1,700	2.3	14	440
Commercial/Industrial land use ESL [2]				0.96	320	0.65	6,000	4,000	4,000	2.3	14	950
Residential land use Human Health ESL [3]				0.39	80	23,000	2,400	1,700	1,700	34	61	440
Commercial/Industrial land use Human Health ESL [4]				0.96	320	23,000	6,000	4,200	4,200	67	240	950
Background Concentration				11 [5]	11.43 [6]	NE	NE	NE	NE	NE	NE	NE
TTLC values				500	1,000	200	1,000	1,000	1,000	8,000	4.7	2,500

Notes:

Detections are shown in bold.

Results equal to or exceeding regulatory screening level for residential land use and background concentrations are shaded.
Total Metals by U.S. EPA Test Methods 6010B and 7471A.
Pesticides by U.S. EPA Test Methods 8081A.
Feet bgs: Feet below ground surface.
DDD: dichlorodiphenyldichloroethane
DDE: dichlorodiphenyldichloroethylene
DDT: dichlorodiphenyltrichloroethane
mg/Kg: Milligrams per Kilogram.
µg/Kg: Micrograms per Kilogram.
< 3.3 : Not detected at or above the specified laboratory reporting limit.
Only metals and pesticides detected in one or more soil sample are presented on this table.
NA: Not Analyzed.
C: Presence confirmed, but RPD between columns exceeds 40%.
#: CCV drift outside limits; average CCV drigts within limits per method requirements.
1. ESL = December 2013 Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB) Environmental Screening Levels (ESLs), Table A-1 groundwater is a current or potential source of drinking water for Residential Land Use.
2. ESL= December 2013 SFRWQCB ESLs, Table A-2 Shallow Soils (<3m bgs) where groundwater is a current or potential source of drinking water for Commercial or Industrial Use.
3. ESL= December 2013 SFRWQCB ESLs, Table K-1 Direct Exposure Soil Screening Levels Residential Exposure Scenario.
4. ESL= December 2013 SFRWQCB ESLs, Table K-2 Direct Exposure Soil Screening Levels Commercial/Industrial Worker Exposure Scenario.
5. Dylan Durengé, 2011. Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region. December.
6. Christina Scott, 1991. Background Metal Concentrations in Soils in Northern Santa Clara County, California. December.
TTLC: Total Threshold Limit Concentration

Table 3
Summary of Analytical Results for Soil - VOCs
39155 and 39183 State Street
Fremont, California

Sample Location	Sample Identification	Sample Depth (Feet bgs)	Date Collected	VOCs
				Acetone (µg/Kg)
B1	B1-1.0-2.0	1.0-2.0	10/27/2014	< 16
	B1-3.0-4.0	3.0-4.0	10/27/2014	NA
B3	B3-1.0-2.0	1.0-2.0	10/27/2014	**14**
	B3-3.0-4.0	3.0-4.0	10/27/2014	NA
B5	B5-1.0-2.0	1.0-2.0	10/27/2014	< 14
	B5-3.0-4.0	3.0-4.0	10/27/2014	< 18
B6	B6-1.0-2.1	1.0-2.0	10/28/2014	< 16
	B6-3.0-4.1	3.0-4.0	10/28/2014	< 13
B7	B7-1.0-2.2	1.0-2.0	10/28/2014	< 13
	B7-3.0-4.2	3.0-4.0	10/28/2014	NA
B8	B8-1.0-2.3	1.0-2.0	10/28/2014	< 15
	B8-3.0-4.3	3.0-4.0	10/28/2014	NA
B11	B11-1.0-2.0	1.0-2.0	10/29/2014	< 14
	B11-3.0-4.0	3.0-4.0	10/29/2014	NA
B12	B12-1.0-2.0	1.0-2.0	10/29/2014	< 14
	B12-3.0-4.0	3.0-4.0	10/29/2014	NA
B13	B13-1.0-2.0	1.0-2.0	10/29/2014	< 18
	B13-3.0-4.0	3.0-4.0	10/29/2014	NA
B16	B16-1.0-2.0	1.0-2.0	10/29/2014	< 15
	B16-3.0-4.0	3.0-4.0	10/29/2014	< 16
Residential land use ESL [(1)]				500
Commercial/Industrial land use ESL [(2)]				500

Notes:
Detections are shown in bold.
VOCs: Volatile organic compounds by U.S. EPA Test Method 8260B.
Feet bgs: Feet below ground surface.
µg/Kg: Micrograms per Kilogram.
< 16 : Not detected at or above the specified laboratory reporting limit.
NA : Not Analyzed.
Only VOCs detected in one or more soil sample are presented on this table.
1. ESL = December 2013 Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB) Environmental Screening Levels (ESLs), Table A-1 Shallow Soils (<3m bgs) where groundwater is a current or potential source of drinking water for Residential Land Use.
2. ESL = December 2013 SFRWQCB ESLs, Table A-2 Shallow Soils (<3m bgs) where groundwater is a current or potential source of drinking water for Commercial or Industrial Use.

ATTACHMENT A

ACWD DRILLING PERMITS

ALAMEDA COUNTY WATER DISTRICT
43885 South Grimmer Blvd. • P.O. Box 5110
Fremont, CA 94537-5110
Permitting & Scheduling (510) 668-4460

APPLICATION FOR DRILLING PERMIT

ACWD ORDINANCE NO. 2010-01

Application Received Date: 9/29/14 By: PM | Permit Issued Date: 10/23/14 | Permit Expiration Date: 12/23/14 | Job No. 1450 | Permit No. 2014-0448 | Well No. N/A

JOB ADDRESS: 39155 and 39183 State Street, Fremont, CA

PROPERTY OWNER
NAME: City of Fremont / Jessica von Borck - Assistant City Manager
ADDRESS: 3300 Capitol Avenue, Fremont, CA 94537
TELEPHONE: 510-284-4008

CONSULTING ENGINEER
NAME: Carl Michelsen - PES Environmental
ADDRESS: 1682 Novato Blvd, Suite 100, Novato, CA 94947
TELEPHONE: 415-899-1600 RG/CEG/RCE NO. PG 5172

DRILLING CONTRACTOR
NAME: TEG - Northern California
ADDRESS: 11350 Monier Park, Rancho Cordova, CA 95742
E-MAIL ADDRESS: henry@tegncal.com
TELEPHONE: 916-853-8010 STATE LIC. NO. 706568

When properly signed

THIS APPLICATION IS A VALID PERMIT

to perform only work described below at the given job address, in accordance with ACWD Ordinance No. 2010-01 and all other applicable laws and regulations. Discontinuation of work may result in revocation of permit. ***Permittee must schedule the work in advance with ACWD.*** *ACWD's approval of drawings, designs, specifications, work plans, reports or incidental work and materials shall not relieve the permittee of responsibility for the technical adequacy of the work. Except for special circumstances, all work to be inspected must be performed within ACWD work hours – 7:00 a.m. to 4:30 p.m., Monday through Friday.*

PLEASE CHECK TYPE OF PROPOSED WORK

Each well or other excavation requires a separate permit application form unless otherwise indicated. Only one specific type of work can be checked per permit application.

WELLS	EXPLORATORY HOLES	OTHER EXCAVATIONS
☐ CONSTRUCTION ☐ REPAIR ☐ DESTRUCTION	☑ CONSTRUCT./DESTRUCT.	☐ CONSTRUCTION ☐ REPAIR ☐ DESTRUCTION
☐ Water Well	*Multiple exploratory holes of the same type may be grouped together on the same permit application form.*	☐ Cathodic Protection Well ☐ Inclinometer
Monitoring Well:		☐ Vibrating Wire Piezometer ☐ Elevator Shaft
☐ Chemical Investigation	☐ Chemical Investigation	*Multiple other excavations of the same type may be grouped together on the same permit application form for the following:*
☐ Injection Well (for Chemical Cleanup)	☐ Injection Boreholes	☐ Cleanup Site Excavation(s) ☐ Wick Drains
☐ Geotechnical Investigation	☑ Soil Vapor Sampling	☐ Shaft, Tunnel, or Directional Borehole (s) ☐ Support Piers, Piles, or Caissons
☐ Geothermal Heat Exchange Well	☐ Geotechnical Investigation	☐ Other: Quantity:
☐ Dewatering Well *(Multiple dewatering wells may be grouped together on the same permit application form)*	Quantity: 18	
Quantity:		

DESCRIPTION OF PROPOSED WORK: Using a direct-push drilling rig advance 18 borings to a depth of 5 feet below grade to collect soil vapor samples.

TOTAL ESTIMATED COST $

PERMIT CONDITIONS: Exploratory Boreholes to be backfilled from bottom of borehole to surface with neat cement

FEES: ☑ Private ☐ City ☐ Governmental Agency

GUARANTEE OF PERFORMANCE: ☐ Cash Deposit ☐ Bond

REFUND: Amount $ Reason:

FEES/DEPOSIT: Date Received 9/29/14 $2,680.00 Check No. 49785 Cash

Estimated Amount $ 1410
Actual Amount $ 1410
Difference $ 0

ACWD SITE NO. 0690

APPROVED FOR SCHEDULING BY: SZ DATE: 9/30/2014 APPROVED BY: SZ for MMM DATE: 10/23/2014

I hereby agree to comply with all conditions of this permit in accordance with ACWD Ordinance No. 2010-01 and to furnish the District a completed copy of D.W.R. Drillers Report (form 188) within sixty (60) days after completion as well as any chemical testing results within thirty (30) days after completion.

Title: Principal Geochemist Signature: Carl J. Michelsen Date: 9/26/14

Representing: PES Environmental, Inc. Name (printed): Carl Michelsen

ALAMEDA COUNTY WATER DISTRICT
43885 South Grimmer Blvd. • P.O. Box 5110
Fremont, CA 94537-5110
Permitting & Scheduling (510) 668-4460

APPLICATION FOR DRILLING PERMIT

ACWD ORDINANCE NO. 2010-01

Application Received Date: 9/29/14 By: PR | Permit Issued Date: 10/23/14 | Permit Expiration Date: 12/23/14 | Job No. 1450 | Permit No. 2014-0447 | Well No. N/A

JOB ADDRESS: 39155 and 39183 State St., Fremont, CA

PROPERTY OWNER
NAME: City of Fremont / Jessica van Bock - Assistant City Manager
ADDRESS: 3300 Capitol Avenue, Fremont, CA 94537
TELEPHONE: 510-284-4008

CONSULTING ENGINEER
NAME: Carl Michelsen - PES Environmental
ADDRESS: 1682 Novato Blvd, Suite 100, Novato, CA 94947
TELEPHONE: 415-899-1600 RG/CEG/RCE NO. PG 5172

DRILLING CONTRACTOR
NAME: TEG - Northern California
ADDRESS: 11350 Monier Park, Rancho Cordova, CA 95742
E-MAIL ADDRESS: henry@tegncal.com
TELEPHONE: 916-853-8010 STATE LIC. NO. 706564

When properly signed

THIS APPLICATION IS A VALID PERMIT

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PLEASE CHECK TYPE OF PROPOSED WORK

Each well or other excavation requires a separate permit application form unless otherwise indicated. Only one specific type of work can be checked per permit application.

WELLS	EXPLORATORY HOLES	OTHER EXCAVATIONS
☐ CONSTRUCTION ☐ REPAIR ☐ DESTRUCTION	☑ CONSTRUCT./DESTRUCT.	☐ CONSTRUCTION ☐ REPAIR ☐ DESTRUCTION
☐ Water Well	*Multiple exploratory holes of the same type may be grouped together on the same permit application form.*	☐ Cathodic Protection Well ☐ Inclinometer
Monitoring Well:		☐ Vibrating Wire Piezometer ☐ Elevator Shaft
☐ Chemical Investigation	☑ Chemical Investigation	*Multiple other excavations of the same type may be grouped together on the same permit application form for the following:*
☐ Injection Well (for Chemical Cleanup)	☐ Injection Boreholes	☐ Cleanup Site Excavation(s) ☐ Wick Drains
☐ Geotechnical Investigation	☐ Soil Vapor Sampling	☐ Shaft, Tunnel, or Directional Borehole (s) ☐ Support Piers, Piles, or Caissons
☐ Geothermal Heat Exchange Well	☐ Geotechnical Investigation	
☐ Dewatering Well *(Multiple dewatering wells may be grouped together on the same permit application form)*	Quantity: 16	☐ Other: Quantity:
Quantity:		

DESCRIPTION OF PROPOSED WORK: Using a direct-push drilling rig advance 16 borings to depths of 5 or 30 feet below grade to collect soil and groundwater samples

TOTAL ESTIMATED COST $

PERMIT CONDITIONS: Exploratory Boreholes to be backfilled from bottom of borehole to surface with Neat Cement

FEES: ☒ Private ☐ City ☐ Governmental Agency

GUARANTEE OF PERFORMANCE: ☐ Cash Deposit ☐ Bond

REFUND: Amount $ Reason:

FEES/DEPOSIT: Date Received 9/29/14 Estimated Amount $1270
#2,680.00 Check No. 49785 Actual Amount $1270
Cash Difference $ 0

ACWD SITE NO. 0690

APPROVED FOR SCHEDULING BY: SZ DATE: 9/30/2014 APPROVED BY: SZ for MAM DATE: 10/23/2014

I hereby agree to comply with all conditions of this permit in accordance with ACWD Ordinance No. 2010-01 and to furnish the District a completed copy of D.W.R. Drillers Report (form 188) within sixty (60) days after completion as well as any chemical testing results within thirty (30) days after completion.

Title: Principal Geochemist Signature: Carl J. Michelsen Date: 9/26/14

Representing: PES Environmental, Inc. (Print Name) Carl Michelsen

ALAMEDA COUNTY WATER DISTRICT
43885 South Grimmer Blvd. • P.O. Box 5110
Fremont, CA 94537-5110
Permitting & Scheduling (510) 668-4460

APPLICATION FOR DRILLING PERMIT

ACWD ORDINANCE NO. 2010-01

Application Received Date:	By:	Permit Issued Date:	Permit Expiration Date:	Job No.	Permit No. / Well No.

JOB ADDRESS: 39155 and 39183 State Street, Fremont, CA

PROPERTY OWNER
NAME: City of Fremont / Jessica Von Bock - Assistant City Manager
ADDRESS: 3300 Capitol Avenue, Fremont, CA 94537
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CONSULTING ENGINEER
NAME: Carl Michelsen - PES Environmental
ADDRESS: 1682 Novato Blvd, Suite 100, Novato, CA, 94947
TELEPHONE: 415-899-1600 RG/CEG/RCE NO. PG 5172

DRILLING CONTRACTOR
NAME: TEG - Northern California
ADDRESS: 11350 Monier Park, Rancho Cordova, CA, 95742
E-MAIL ADDRESS: henry@tegnCal.com
TELEPHONE: 916-853-8010 STATE LIC. NO. 706568

When properly signed

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to perform only work described below at the given job address, in accordance with ACWD Ordinance No. 2010-01 and all other applicable laws and regulations. Discontinuation of work may result in revocation of permit. ***Permittee must schedule the work in advance with ACWD.*** *ACWD's approval of drawings, designs, specifications, work plans, reports or incidental work and materials shall not relieve the permittee of responsibility for the technical adequacy of the work. Except for special circumstances, all work to be inspected must be performed within ACWD work hours – 7:00 a.m. to 4:30 p.m., Monday through Friday.*

PLEASE CHECK TYPE OF PROPOSED WORK

Each well or other excavation requires a separate permit application form unless otherwise indicated. Only one specific type of work can be checked per permit application.

WELLS	EXPLORATORY HOLES	OTHER EXCAVATIONS
☐ CONSTRUCTION ☐ REPAIR ☐ DESTRUCTION	☑ CONSTRUCT./DESTRUCT.	☐ CONSTRUCTION ☐ REPAIR ☐ DESTRUCTION
☐ Water Well	*Multiple exploratory holes of the same type may be grouped together on the same permit application form.*	☐ Cathodic Protection Well ☐ Inclinometer
Monitoring Well:		☐ Vibrating Wire Piezometer ☐ Elevator Shaft
☐ Chemical Investigation	☐ Chemical Investigation	*Multiple other excavations of the same type may be grouped together on the same permit application form for the following:*
☐ Injection Well (for Chemical Cleanup)	☐ Injection Boreholes	☐ Cleanup Site Excavation(s) ☐ Wick Drains
☐ Geotechnical Investigation	☑ Soil Vapor Sampling	☐ Shaft, Tunnel, or Directional Borehole (s) ☐ Support Piers, Piles, or Caissons
☐ Geothermal Heat Exchange Well	☐ Geotechnical Investigation	
☐ Dewatering Well *(Multiple dewatering wells may be grouped together on the same permit application form)*	Quantity: 11	☐ Other: Quantity:
Quantity:		

DESCRIPTION OF PROPOSED WORK:
Using a direct-push drilling rig advance 11 borings to depths of 5 or 10 feet below grade to collect soil vapor samples

TOTAL ESTIMATED COST $

PERMIT CONDITIONS:

FEES: ☐ Private ☐ City ☐ Governmental Agency

GUARANTEE OF PERFORMANCE: ☐ Cash Deposit ☐ Bond

REFUND: Amount $ Reason:

FEES/ DEPOSIT: Date Received Estimated Amount $ Check No. Actual Amount $ Cash Difference $

ACWD SITE NO.

APPROVED FOR SCHEDULING BY: DATE: APPROVED BY: DATE:

I hereby agree to comply with all conditions of this permit in accordance with ACWD Ordinance No. 2010-01 and to furnish the District a completed copy of D.W.R. Drillers Report (form 188) within sixty (60) days after completion as well as any chemical testing results within thirty (30) days after completion.

Title: Principal Geochemist Signature: Carl J. Michelsen Date: December 2, 2014

Representing: PES Environmental, Inc. Name (printed): Carl Michelsen

ACWD #458 11-12

ATTACHMENT B

LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY FORMS

CURTIS & TOMPKINS


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 262033
ANALYTICAL REPORT

PES Environmental, Inc.
1682 Novato Boulevard
Novato, CA 94947

Project : 1098.007.01.001
Location : 39155 & 39183 State St., Fremont
Level : II

Sample ID	Lab ID
B1-1.0-2.0	262033-001
B1-3.0-4.0	262033-002
B3-1.0-2.0	262033-003
B3-3.0-4.0	262033-004
B5-1.0-2.0	262033-005
B5-3.0-4.0	262033-006

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Will Rice Date: 11/04/2014

Will S Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**262033**
Client:	**PES Environmental, Inc.**
Project:	**1098.007.01.001**
Location:	**39155 & 39183 State St., Fremont**
Request Date:	**10/27/14**
Samples Received:	**10/27/14**

This data package contains sample and QC results for four soil samples, requested for the above referenced project on 10/27/14. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
Matrix spikes were not performed for this analysis in batch 216939 due to insufficient sample amount. No other analytical problems were encountered.

Pesticides (EPA 8081A):
All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. All samples underwent florisil cleanup using EPA Method 3620C. No analytical problems were encountered.

Metals (EPA 6010B):
Lead was detected above the RL in the method blank for batch 216863; this analyte was detected in samples at a level at least 10 times that of the blank. No other analytical problems were encountered.

PES Environmental, Inc.
Engineering & Environmental Services

262033

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: Curtis & Tompkins
JOB NUMBER: 1098-007-01-001
NAME / LOCATION: 37155 & 37183 State St, Fremont
PROJECT MANAGER: Carl Michelson

SAMPLERS: Gavin Creps / Matt Eddy
RECORDER: Gavin Creps

DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX: Vapor	Water	Soil	Sedim't	# of Containers & Preservatives: Unpres.	EnCore	H_2SO_4	HNO_3	HCl	Methanol	40 mL VOA	DEPTH IN FEET
14	10	27	1125	B1-1.0-2.0			X		1					1	2	
14	10	27	1140	B1-3.0-4.0			X		1					1	2	HOLD
14	10	27	1415	B3-1.0-2.0			X		1					1	2	
14	10	27	1420	B3-3.0-4.0			X		1					1	2	HOLD
14	10	27	1435	B5-1.0-2.0			X		1					1	2	
14	10	27	1440	B5-3.0-4.0			X		1					1	2	HOLD

wipe 10/27/14

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)
							Organochlorine Pesticides
							Total Lead
							Arsenic
							X
							X
							X
							X
							X
							X

NOTES

Turn Around Time: Standard

Terra core kit submitted for samples B1-1.0-2.0, B3-1.0-2.0 & B5-3.0-4.0 please hold for instruction;

Page 1 of 1

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	10/27/14	1515
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	10/27/14	1800
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

extract on ice cold RC

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 262033 Date Received 10/27/14 Number of coolers 1
Client DES Project 1098-007-01-001

Date Opened 10/27 By (print) PJ (sign)
Date Logged in " " By (print) (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
   Shipping info
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many Name Date
2B. Were custody seals intact upon arrival? YES NO (N/A)
3. Were custody papers dry and intact when received? (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe)

   ☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
   ☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

   Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C)

   ☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

   ☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? (YES) NO
   If YES, what time were they transferred to freezer? 1950
9. Did all bottles arrive unbroken/unopened? (YES) NO
10. Are there any missing / extra samples? YES (NO)
11. Are samples in the appropriate containers for indicated tests? (YES) NO
12. Are sample labels present, in good condition and complete? (YES) NO
13. Do the sample labels agree with custody papers? (YES) NO
14. Was sufficient amount of sample sent for tests requested? (YES) NO
15. Are the samples appropriately preserved? (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? YES NO (N/A)
17. Did you document your preservative check? YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? YES NO (N/A)
21. Was the client contacted concerning this sample delivery? YES (NO)
   If YES, Who was called? By Date:

COMMENTS

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 262033

Results for any subcontracted analyses are not included in this summary.

Client : PES Environmental, Inc.
Project : 1098.007.01.001
Location : 39155 & 39183 State St., Fremont

Client Sample ID : B1-1.0-2.0 Laboratory Sample ID : 262033-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Arsenic	5.3		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	5.1		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : B3-1.0-2.0 Laboratory Sample ID : 262033-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Acetone	14		13	ug/Kg	As Recd	0.6640	EPA 8260B	EPA 5035
4,4'-DDE	650		33	ug/Kg	As Recd	10.00	EPA 8081A	EPA 3550B
Endrin	24	C	3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDD	94	#	3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDT	22		3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
alpha-Chlordane	7.0		1.7	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
Arsenic	5.8		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	8.9		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : B5-1.0-2.0 Laboratory Sample ID : 262033-005

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Arsenic	5.3		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	5.3		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : B5-3.0-4.0 Laboratory Sample ID : 262033-006

No Detections

# = CCV drift outside limits; average CCV drift within limits per method requiremer
C = Presence confirmed, but RPD between columns exceeds 40%

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B1-1.0-2.0	Diln Fac:	0.7764
Lab ID:	262033-001	Batch#:	216939
Matrix:	Soil	Sampled:	10/27/14
Units:	ug/Kg	Received:	10/27/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Freon 12	ND	7.8
Chloromethane	ND	7.8
Vinyl Chloride	ND	7.8
Bromomethane	ND	7.8
Chloroethane	ND	7.8
Trichlorofluoromethane	ND	3.9
Acetone	ND	16
Freon 113	ND	3.9
1,1-Dichloroethene	ND	3.9
Methylene Chloride	ND	16
Carbon Disulfide	ND	3.9
MTBE	ND	3.9
trans-1,2-Dichloroethene	ND	3.9
Vinyl Acetate	ND	39
1,1-Dichloroethane	ND	3.9
2-Butanone	ND	7.8
cis-1,2-Dichloroethene	ND	3.9
2,2-Dichloropropane	ND	3.9
Chloroform	ND	3.9
Bromochloromethane	ND	3.9
1,1,1-Trichloroethane	ND	3.9
1,1-Dichloropropene	ND	3.9
Carbon Tetrachloride	ND	3.9
1,2-Dichloroethane	ND	3.9
Benzene	ND	3.9
Trichloroethene	ND	3.9
1,2-Dichloropropane	ND	3.9
Bromodichloromethane	ND	3.9
Dibromomethane	ND	3.9
4-Methyl-2-Pentanone	ND	7.8
cis-1,3-Dichloropropene	ND	3.9
Toluene	ND	3.9
trans-1,3-Dichloropropene	ND	3.9
1,1,2-Trichloroethane	ND	3.9
2-Hexanone	ND	7.8
1,3-Dichloropropane	ND	3.9
Tetrachloroethene	ND	3.9

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B1-1.0-2.0	Diln Fac:	0.7764
Lab ID:	262033-001	Batch#:	216939
Matrix:	Soil	Sampled:	10/27/14
Units:	ug/Kg	Received:	10/27/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Dibromochloromethane	ND	3.9
1,2-Dibromoethane	ND	3.9
Chlorobenzene	ND	3.9
1,1,1,2-Tetrachloroethane	ND	3.9
Ethylbenzene	ND	3.9
m,p-Xylenes	ND	3.9
o-Xylene	ND	3.9
Styrene	ND	3.9
Bromoform	ND	3.9
Isopropylbenzene	ND	3.9
1,1,2,2-Tetrachloroethane	ND	3.9
1,2,3-Trichloropropane	ND	3.9
Propylbenzene	ND	3.9
Bromobenzene	ND	3.9
1,3,5-Trimethylbenzene	ND	3.9
2-Chlorotoluene	ND	3.9
4-Chlorotoluene	ND	3.9
tert-Butylbenzene	ND	3.9
1,2,4-Trimethylbenzene	ND	3.9
sec-Butylbenzene	ND	3.9
para-Isopropyl Toluene	ND	3.9
1,3-Dichlorobenzene	ND	3.9
1,4-Dichlorobenzene	ND	3.9
n-Butylbenzene	ND	3.9
1,2-Dichlorobenzene	ND	3.9
1,2-Dibromo-3-Chloropropane	ND	3.9
1,2,4-Trichlorobenzene	ND	3.9
Hexachlorobutadiene	ND	3.9
Naphthalene	ND	3.9
1,2,3-Trichlorobenzene	ND	3.9

Surrogate	%REC	Limits
Dibromofluoromethane	111	76-128
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	90	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B3-1.0-2.0	Diln Fac:	0.6640
Lab ID:	262033-003	Batch#:	216939
Matrix:	Soil	Sampled:	10/27/14
Units:	ug/Kg	Received:	10/27/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Freon 12	ND	6.6
Chloromethane	ND	6.6
Vinyl Chloride	ND	6.6
Bromomethane	ND	6.6
Chloroethane	ND	6.6
Trichlorofluoromethane	ND	3.3
Acetone	14	13
Freon 113	ND	3.3
1,1-Dichloroethene	ND	3.3
Methylene Chloride	ND	13
Carbon Disulfide	ND	3.3
MTBE	ND	3.3
trans-1,2-Dichloroethene	ND	3.3
Vinyl Acetate	ND	33
1,1-Dichloroethane	ND	3.3
2-Butanone	ND	6.6
cis-1,2-Dichloroethene	ND	3.3
2,2-Dichloropropane	ND	3.3
Chloroform	ND	3.3
Bromochloromethane	ND	3.3
1,1,1-Trichloroethane	ND	3.3
1,1-Dichloropropene	ND	3.3
Carbon Tetrachloride	ND	3.3
1,2-Dichloroethane	ND	3.3
Benzene	ND	3.3
Trichloroethene	ND	3.3
1,2-Dichloropropane	ND	3.3
Bromodichloromethane	ND	3.3
Dibromomethane	ND	3.3
4-Methyl-2-Pentanone	ND	6.6
cis-1,3-Dichloropropene	ND	3.3
Toluene	ND	3.3
trans-1,3-Dichloropropene	ND	3.3
1,1,2-Trichloroethane	ND	3.3
2-Hexanone	ND	6.6
1,3-Dichloropropane	ND	3.3
Tetrachloroethene	ND	3.3

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B3-1.0-2.0	Diln Fac:	0.6640
Lab ID:	262033-003	Batch#:	216939
Matrix:	Soil	Sampled:	10/27/14
Units:	ug/Kg	Received:	10/27/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Dibromochloromethane	ND	3.3
1,2-Dibromoethane	ND	3.3
Chlorobenzene	ND	3.3
1,1,1,2-Tetrachloroethane	ND	3.3
Ethylbenzene	ND	3.3
m,p-Xylenes	ND	3.3
o-Xylene	ND	3.3
Styrene	ND	3.3
Bromoform	ND	3.3
Isopropylbenzene	ND	3.3
1,1,2,2-Tetrachloroethane	ND	3.3
1,2,3-Trichloropropane	ND	3.3
Propylbenzene	ND	3.3
Bromobenzene	ND	3.3
1,3,5-Trimethylbenzene	ND	3.3
2-Chlorotoluene	ND	3.3
4-Chlorotoluene	ND	3.3
tert-Butylbenzene	ND	3.3
1,2,4-Trimethylbenzene	ND	3.3
sec-Butylbenzene	ND	3.3
para-Isopropyl Toluene	ND	3.3
1,3-Dichlorobenzene	ND	3.3
1,4-Dichlorobenzene	ND	3.3
n-Butylbenzene	ND	3.3
1,2-Dichlorobenzene	ND	3.3
1,2-Dibromo-3-Chloropropane	ND	3.3
1,2,4-Trichlorobenzene	ND	3.3
Hexachlorobutadiene	ND	3.3
Naphthalene	ND	3.3
1,2,3-Trichlorobenzene	ND	3.3

Surrogate	%REC	Limits
Dibromofluoromethane	113	76-128
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	91	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B5-1.0-2.0	Diln Fac:	0.7143
Lab ID:	262033-005	Batch#:	216939
Matrix:	Soil	Sampled:	10/27/14
Units:	ug/Kg	Received:	10/27/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Freon 12	ND	7.1
Chloromethane	ND	7.1
Vinyl Chloride	ND	7.1
Bromomethane	ND	7.1
Chloroethane	ND	7.1
Trichlorofluoromethane	ND	3.6
Acetone	ND	14
Freon 113	ND	3.6
1,1-Dichloroethene	ND	3.6
Methylene Chloride	ND	14
Carbon Disulfide	ND	3.6
MTBE	ND	3.6
trans-1,2-Dichloroethene	ND	3.6
Vinyl Acetate	ND	36
1,1-Dichloroethane	ND	3.6
2-Butanone	ND	7.1
cis-1,2-Dichloroethene	ND	3.6
2,2-Dichloropropane	ND	3.6
Chloroform	ND	3.6
Bromochloromethane	ND	3.6
1,1,1-Trichloroethane	ND	3.6
1,1-Dichloropropene	ND	3.6
Carbon Tetrachloride	ND	3.6
1,2-Dichloroethane	ND	3.6
Benzene	ND	3.6
Trichloroethene	ND	3.6
1,2-Dichloropropane	ND	3.6
Bromodichloromethane	ND	3.6
Dibromomethane	ND	3.6
4-Methyl-2-Pentanone	ND	7.1
cis-1,3-Dichloropropene	ND	3.6
Toluene	ND	3.6
trans-1,3-Dichloropropene	ND	3.6
1,1,2-Trichloroethane	ND	3.6
2-Hexanone	ND	7.1
1,3-Dichloropropane	ND	3.6
Tetrachloroethene	ND	3.6

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B5-1.0-2.0	Diln Fac:	0.7143
Lab ID:	262033-005	Batch#:	216939
Matrix:	Soil	Sampled:	10/27/14
Units:	ug/Kg	Received:	10/27/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Dibromochloromethane	ND	3.6
1,2-Dibromoethane	ND	3.6
Chlorobenzene	ND	3.6
1,1,1,2-Tetrachloroethane	ND	3.6
Ethylbenzene	ND	3.6
m,p-Xylenes	ND	3.6
o-Xylene	ND	3.6
Styrene	ND	3.6
Bromoform	ND	3.6
Isopropylbenzene	ND	3.6
1,1,2,2-Tetrachloroethane	ND	3.6
1,2,3-Trichloropropane	ND	3.6
Propylbenzene	ND	3.6
Bromobenzene	ND	3.6
1,3,5-Trimethylbenzene	ND	3.6
2-Chlorotoluene	ND	3.6
4-Chlorotoluene	ND	3.6
tert-Butylbenzene	ND	3.6
1,2,4-Trimethylbenzene	ND	3.6
sec-Butylbenzene	ND	3.6
para-Isopropyl Toluene	ND	3.6
1,3-Dichlorobenzene	ND	3.6
1,4-Dichlorobenzene	ND	3.6
n-Butylbenzene	ND	3.6
1,2-Dichlorobenzene	ND	3.6
1,2-Dibromo-3-Chloropropane	ND	3.6
1,2,4-Trichlorobenzene	ND	3.6
Hexachlorobutadiene	ND	3.6
Naphthalene	ND	3.6
1,2,3-Trichlorobenzene	ND	3.6

Surrogate	%REC	Limits
Dibromofluoromethane	116	76-128
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	91	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B5-3.0-4.0	Diln Fac:	0.8993
Lab ID:	262033-006	Batch#:	216939
Matrix:	Soil	Sampled:	10/27/14
Units:	ug/Kg	Received:	10/27/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Freon 12	ND	9.0
Chloromethane	ND	9.0
Vinyl Chloride	ND	9.0
Bromomethane	ND	9.0
Chloroethane	ND	9.0
Trichlorofluoromethane	ND	4.5
Acetone	ND	18
Freon 113	ND	4.5
1,1-Dichloroethene	ND	4.5
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.5
MTBE	ND	4.5
trans-1,2-Dichloroethene	ND	4.5
Vinyl Acetate	ND	45
1,1-Dichloroethane	ND	4.5
2-Butanone	ND	9.0
cis-1,2-Dichloroethene	ND	4.5
2,2-Dichloropropane	ND	4.5
Chloroform	ND	4.5
Bromochloromethane	ND	4.5
1,1,1-Trichloroethane	ND	4.5
1,1-Dichloropropene	ND	4.5
Carbon Tetrachloride	ND	4.5
1,2-Dichloroethane	ND	4.5
Benzene	ND	4.5
Trichloroethene	ND	4.5
1,2-Dichloropropane	ND	4.5
Bromodichloromethane	ND	4.5
Dibromomethane	ND	4.5
4-Methyl-2-Pentanone	ND	9.0
cis-1,3-Dichloropropene	ND	4.5
Toluene	ND	4.5
trans-1,3-Dichloropropene	ND	4.5
1,1,2-Trichloroethane	ND	4.5
2-Hexanone	ND	9.0
1,3-Dichloropropane	ND	4.5
Tetrachloroethene	ND	4.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B5-3.0-4.0	Diln Fac:	0.8993
Lab ID:	262033-006	Batch#:	216939
Matrix:	Soil	Sampled:	10/27/14
Units:	ug/Kg	Received:	10/27/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Dibromochloromethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Chlorobenzene	ND	4.5
1,1,1,2-Tetrachloroethane	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
Styrene	ND	4.5
Bromoform	ND	4.5
Isopropylbenzene	ND	4.5
1,1,2,2-Tetrachloroethane	ND	4.5
1,2,3-Trichloropropane	ND	4.5
Propylbenzene	ND	4.5
Bromobenzene	ND	4.5
1,3,5-Trimethylbenzene	ND	4.5
2-Chlorotoluene	ND	4.5
4-Chlorotoluene	ND	4.5
tert-Butylbenzene	ND	4.5
1,2,4-Trimethylbenzene	ND	4.5
sec-Butylbenzene	ND	4.5
para-Isopropyl Toluene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
n-Butylbenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5
1,2-Dibromo-3-Chloropropane	ND	4.5
1,2,4-Trichlorobenzene	ND	4.5
Hexachlorobutadiene	ND	4.5
Naphthalene	ND	4.5
1,2,3-Trichlorobenzene	ND	4.5

Surrogate	%REC	Limits
Dibromofluoromethane	113	76-128
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	90	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	216939
Units:	ug/Kg	Analyzed:	10/30/14
Diln Fac:	1.000		

Type: BS Lab ID: QC763689

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	29.85	119	68-135
Benzene	25.00	29.28	117	80-127
Trichloroethene	25.00	29.28	117	77-129
Toluene	25.00	27.34	109	79-125
Chlorobenzene	25.00	29.42	118	78-120

Surrogate	%REC	Limits
Dibromofluoromethane	104	76-128
1,2-Dichloroethane-d4	97	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	88	79-128

Type: BSD Lab ID: QC763690

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	24.75	28.34	115	68-135	4	35
Benzene	24.75	28.13	114	80-127	3	20
Trichloroethene	24.75	27.49	111	77-129	5	20
Toluene	24.75	26.32	106	79-125	3	23
Chlorobenzene	24.75	28.45	115	78-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	76-128
1,2-Dichloroethane-d4	95	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	90	79-128

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC763691	Batch#:	216939
Matrix:	Soil	Analyzed:	10/30/14
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC763691	Batch#:	216939
Matrix:	Soil	Analyzed:	10/30/14
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	112	76-128
1,2-Dichloroethane-d4	97	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	90	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B1-1.0-2.0	Batch#:	216966
Lab ID:	262033-001	Sampled:	10/27/14
Matrix:	Soil	Received:	10/27/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received	Analyzed:	10/31/14
Diln Fac:	1.000		

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	1.7
4,4'-DDE	ND	3.3
Endrin	ND	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	60

Surrogate	%REC	Limits
TCMX	90	42-134
Decachlorobiphenyl	63	29-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B3-1.0-2.0	Batch#:	216971
Lab ID:	262033-003	Sampled:	10/27/14
Matrix:	Soil	Received:	10/27/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received		

Cleanup Method: EPA 3620B

Analyte	Result	RL	Diln Fac	Analyzed
alpha-BHC	ND	1.7	1.000	10/31/14
beta-BHC	ND	1.7	1.000	10/31/14
gamma-BHC	ND	1.7	1.000	10/31/14
delta-BHC	ND	1.7	1.000	10/31/14
Heptachlor	ND	1.7	1.000	10/31/14
Aldrin	ND	1.7	1.000	10/31/14
Heptachlor epoxide	ND	1.7	1.000	10/31/14
Endosulfan I	ND	1.7	1.000	10/31/14
Dieldrin	ND	1.7	1.000	10/31/14
4,4'-DDE	650	33	10.00	11/03/14
Endrin	24 C	3.3	1.000	10/31/14
Endosulfan II	ND	3.3	1.000	10/31/14
Endosulfan sulfate	ND	3.3	1.000	10/31/14
4,4'-DDD	94 #	3.3	1.000	10/31/14
Endrin aldehyde	ND	3.3	1.000	10/31/14
4,4'-DDT	22	3.3	1.000	10/31/14
alpha-Chlordane	7.0	1.7	1.000	10/31/14
gamma-Chlordane	ND	1.7	1.000	10/31/14
Methoxychlor	ND	17	1.000	10/31/14
Toxaphene	ND	60	1.000	10/31/14

Surrogate	%REC	Limits	Diln Fac	Analyzed
TCMX	83	42-134	1.000	10/31/14
Decachlorobiphenyl	98	29-122	1.000	10/31/14

#= CCV drift outside limits; average CCV drift within limits per method requirements
C= Presence confirmed, but RPD between columns exceeds 40%
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B5-1.0-2.0	Batch#:	216971
Lab ID:	262033-005	Sampled:	10/27/14
Matrix:	Soil	Received:	10/27/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received	Analyzed:	11/01/14
Diln Fac:	1.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	1.7
4,4'-DDE	ND	3.3
Endrin	ND	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	61

Surrogate	%REC	Limits
TCMX	93	42-134
Decachlorobiphenyl	77	29-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC763802	Batch#:	216966
Matrix:	Soil	Prepared:	10/30/14
Units:	ug/Kg	Analyzed:	10/31/14

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	1.7
4,4'-DDE	ND	3.3
Endrin	ND	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	61

Surrogate	%REC	Limits
TCMX	84	42-134
Decachlorobiphenyl	66	29-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC763806	Batch#:	216966
Matrix:	Soil	Prepared:	10/30/14
Units:	ug/Kg	Analyzed:	11/03/14

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.32	10.18	76	46-120
Heptachlor	13.32	10.02	75	41-124
Aldrin	13.32	9.616	72	48-122
Dieldrin	13.32	10.60	80	39-142
Endrin	13.32	10.04	75	45-138
4,4'-DDT	13.32	10.46	78	32-145

Surrogate	%REC	Limits
TCMX	77	42-134
Decachlorobiphenyl	70	29-122

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B1-1.0-2.0	Batch#:	216966
MSS Lab ID:	262033-001	Sampled:	10/27/14
Matrix:	Soil	Received:	10/27/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received	Analyzed:	11/03/14
Diln Fac:	1.000		

Type: MS Lab ID: QC763807

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	<0.2161	13.32	8.961	67	42-136
Heptachlor	<0.1915	13.32	8.469	64	40-144
Aldrin	<0.2048	13.32	8.229	62	45-143
Dieldrin	<0.3979	13.32	8.774	66	47-145
Endrin	<0.5603	13.32	9.061	68	46-150
4,4'-DDT	<0.4731	13.32	9.715	73	30-157

Surrogate	%REC	Limits
TCMX	69	42-134
Decachlorobiphenyl	54	29-122

Type: MSD Lab ID: QC763808

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	13.17	9.315	71	42-136	5	40
Heptachlor	13.17	8.249	63	40-144	1	46
Aldrin	13.17	8.469	64	45-143	4	41
Dieldrin	13.17	9.216	70	47-145	6	36
Endrin	13.17	9.454	72	46-150	5	41
4,4'-DDT	13.17	9.393	71	30-157	2	52

Surrogate	%REC	Limits
TCMX	69	42-134
Decachlorobiphenyl	58	29-122

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC763826	Batch#:	216971
Matrix:	Soil	Prepared:	10/30/14
Units:	ug/Kg	Analyzed:	10/31/14

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	1.7
4,4'-DDE	ND	3.3
Endrin	ND #	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND #	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	60

Surrogate	%REC	Limits
TCMX	79	42-134
Decachlorobiphenyl	76	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC763827	Batch#:	216971
Matrix:	Soil	Prepared:	10/30/14
Units:	ug/Kg	Analyzed:	10/31/14

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.16	8.724	66	46-120
Heptachlor	13.16	8.756	67	41-124
Aldrin	13.16	8.759	67	48-122
Dieldrin	13.16	9.881	75	39-142
Endrin	13.16	8.476 #	64	45-138
4,4'-DDT	13.16	12.14	92	32-145

Surrogate	%REC	Limits
TCMX	69	42-134
Decachlorobiphenyl	70	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	ZZZZZZZZZZ	Batch#:	216971
MSS Lab ID:	261950-005	Sampled:	10/22/14
Matrix:	Soil	Received:	10/22/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received	Analyzed:	10/31/14
Diln Fac:	1.000		

Type: MS Cleanup Method: EPA 3620B
Lab ID: QC763828

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	<0.2161	13.43	10.08	75	42-136
Heptachlor	0.4999	13.43	11.37	81	40-144
Aldrin	1.313	13.43	10.59	69	45-143
Dieldrin	0.3453	13.43	11.13	80	47-145
Endrin	0.8832	13.43	9.246 #	62	46-150
4,4'-DDT	7.043	13.43	23.14	120	30-157

Surrogate	%REC	Limits
TCMX	83	42-134
Decachlorobiphenyl	82	29-122

Type: MSD Cleanup Method: EPA 3620B
Lab ID: QC763829

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	13.28	8.591	65	42-136	15	40
Heptachlor	13.28	10.29	74	40-144	9	46
Aldrin	13.28	9.044	58	45-143	15	41
Dieldrin	13.28	9.432	68	47-145	15	36
Endrin	13.28	8.304 #	56	46-150	10	41
4,4'-DDT	13.28	16.32	70	30-157	34	52

Surrogate	%REC	Limits
TCMX	73	42-134
Decachlorobiphenyl	66	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Arsenic

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Arsenic	Batch#:	216863
Matrix:	Soil	Sampled:	10/27/14
Units:	mg/Kg	Received:	10/27/14
Basis:	as received	Prepared:	10/28/14
Diln Fac:	1.000	Analyzed:	10/29/14

Field ID	Type	Lab ID	Result	RL
B1-1.0-2.0	SAMPLE	262033-001	5.3	0.23
B3-1.0-2.0	SAMPLE	262033-003	5.8	0.24
B5-1.0-2.0	SAMPLE	262033-005	5.3	0.25
	BLANK	QC763400	ND	0.25

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Lead

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	216863
Matrix:	Soil	Sampled:	10/27/14
Units:	mg/Kg	Received:	10/27/14
Basis:	as received	Prepared:	10/28/14
Diln Fac:	1.000	Analyzed:	10/29/14

Field ID	Type	Lab ID	Result	RL
B1-1.0-2.0	SAMPLE	262033-001	5.1	0.23
B3-1.0-2.0	SAMPLE	262033-003	8.9	0.24
B5-1.0-2.0	SAMPLE	262033-005	5.3	0.25
	BLANK	QC763400	0.25 b	0.25

b= See narrative
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Arsenic

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Arsenic	Diln Fac:	5.000
Field ID:	ZZZZZZZZZZ	Batch#:	216863
MSS Lab ID:	262002-001	Sampled:	10/24/14
Matrix:	Soil	Received:	10/24/14
Units:	mg/Kg	Prepared:	10/28/14
Basis:	as received	Analyzed:	10/29/14

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC763401		50.00	49.50	99	80-120		
BSD	QC763402		50.00	57.08	114	80-120	14	20
MS	QC763403	<0.06853	48.54	52.54	108	72-120		
MSD	QC763404		49.50	50.88	103	72-120	5	30

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	262033	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Lead	Diln Fac:	5.000
Field ID:	ZZZZZZZZZZ	Batch#:	216863
MSS Lab ID:	262002-001	Sampled:	10/24/14
Matrix:	Soil	Received:	10/24/14
Units:	mg/Kg	Prepared:	10/28/14
Basis:	as received	Analyzed:	10/29/14

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC763401		50.00	47.42	95	80-120		
BSD	QC763402		50.00	53.81	108	80-120	13	20
MS	QC763403	<0.06569	48.54	48.54	100	52-122		
MSD	QC763404		49.50	46.84	95	52-122	6	49

RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 262069
ANALYTICAL REPORT

PES Environmental, Inc.
1682 Novato Boulevard
Novato, CA 94947

Project : 1098.007.01.001
Location : State Street, Fremont
Level : II

Sample ID	Lab ID
B6-1.0-2.0	262069-001
B6-3.0-4.0	262069-002
B7-1.0-2.0	262069-003
B7-3.0-4.0	262069-004
B8-1.0-2.0	262069-005
B8-3.0-4.0	262069-006

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Will Rice Date: 11/04/2014

Will S Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**262069**
Client:	**PES Environmental, Inc.**
Project:	**1098.007.01.001**
Location:	**State Street, Fremont**
Request Date:	**10/28/14**
Samples Received:	**10/28/14**

This data package contains sample and QC results for four soil samples, requested for the above referenced project on 10/28/14. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
Matrix spikes were not performed for this analysis in batch 216939 due to insufficient sample amount. No other analytical problems were encountered.

Pesticides (EPA 8081A):
All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. All samples underwent florisil cleanup using EPA Method 3620C. No analytical problems were encountered.

Metals (EPA 6010B):
No analytical problems were encountered.

262069

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: Curtis & Tompkins
JOB NUMBER: 1098-007-01-001
NAME / LOCATION: State Street, Fremont
PROJECT MANAGER: Carl Michelson
SAMPLERS: Gavin Creps
RECORDER: Gavin Creps

YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	Vapor	Water	Soil	Sedim't	Unpres.	EnCore	H_2SO_4	HNO_3	HCl	Methanol	USCBW	DEPTH IN FEET	EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Organochlorine Pesticides	Total Lead	Arsenic
14	10	28	1255	B6-1.0-2.0			X		1					1	2										X	X	X
↓	↓	↓	1300	B6-3.0-4.0			X		1					1	2	HOLD											
↓	↓	↓	1340	B7-1.0-2.0			X		1					1	2										X	X	X
↓	↓	↓	1350	B7-3.0-4.0			X		1					1	2	HOLD											
↓	↓	↓	1435	B8-1.0-2.0			X		1					1	2										X	X	X
↓	↓	↓	1440	B8-3.0-4.0			X		1					1	2	HOLD											

NOTES

Turn Around Time: Standard

Terra core set submitted for samples 1.0-2.0
please hold for instruction

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
[signature]	[signature]	10/28/14	1450
[signature]	[signature]	10/28/14	1800

DISPATCHED BY: (Signature)	DATE	TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT:

Page 1 of 1

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

m+a IT on ice cold

COOLER RECEIPT CHECKLIST Curtis & Tompkins, Ltd.

Login # 262069 Date Received 10/28/14 Number of coolers 1
Client PES Project 1098.007-01-001

Date Opened 10/28 By (print) " FJ " (sign) " "
Date Logged in " " By (print) " " (sign) " "

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C
Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 2.8°
☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun
☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ (YES) NO
If YES, what time were they transferred to freezer? 10/28/14 @ 21:21
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 262069

Results for any subcontracted analyses are not included in this summary.

Client : PES Environmental, Inc.
Project : 1098.007.01.001
Location : State Street, Fremont

Client Sample ID : B6-1.0-2.0 Laboratory Sample ID : 262069-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Dieldrin	2.1	#,C	1.7	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDE	430		33	ug/Kg	As Recd	10.00	EPA 8081A	EPA 3550B
Endrin	48		33	ug/Kg	As Recd	10.00	EPA 8081A	EPA 3550B
4,4'-DDD	86	#	3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDT	89		3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
alpha-Chlordane	4.9		1.7	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
Arsenic	8.2		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	13		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : B6-3.0-4.0 Laboratory Sample ID : 262069-002

No Detections

Client Sample ID : B7-1.0-2.0 Laboratory Sample ID : 262069-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
4,4'-DDE	320		33	ug/Kg	As Recd	10.00	EPA 8081A	EPA 3550B
Endrin	24	C	3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDD	61	#	3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDT	75		3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
Arsenic	7.3		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	9.7		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : B8-1.0-2.0 Laboratory Sample ID : 262069-005

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Dieldrin	3.5	#,C	1.7	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDE	850	C	33	ug/Kg	As Recd	10.00	EPA 8081A	EPA 3550B
Endrin	37		3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDD	87	#	3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDT	27		3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
alpha-Chlordane	9.6		1.7	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
Arsenic	7.8		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	10		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

# = CCV drift outside limits; average CCV drift within limits per method requirements
C = Presence confirmed, but RPD between columns exceeds 40%

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B6-1.0-2.0	Diln Fac:	0.7949
Lab ID:	262069-001	Batch#:	216939
Matrix:	Soil	Sampled:	10/28/14
Units:	ug/Kg	Received:	10/28/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Freon 12	ND	7.9
Chloromethane	ND	7.9
Vinyl Chloride	ND	7.9
Bromomethane	ND	7.9
Chloroethane	ND	7.9
Trichlorofluoromethane	ND	4.0
Acetone	ND	16
Freon 113	ND	4.0
1,1-Dichloroethene	ND	4.0
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.0
MTBE	ND	4.0
trans-1,2-Dichloroethene	ND	4.0
Vinyl Acetate	ND	40
1,1-Dichloroethane	ND	4.0
2-Butanone	ND	7.9
cis-1,2-Dichloroethene	ND	4.0
2,2-Dichloropropane	ND	4.0
Chloroform	ND	4.0
Bromochloromethane	ND	4.0
1,1,1-Trichloroethane	ND	4.0
1,1-Dichloropropene	ND	4.0
Carbon Tetrachloride	ND	4.0
1,2-Dichloroethane	ND	4.0
Benzene	ND	4.0
Trichloroethene	ND	4.0
1,2-Dichloropropane	ND	4.0
Bromodichloromethane	ND	4.0
Dibromomethane	ND	4.0
4-Methyl-2-Pentanone	ND	7.9
cis-1,3-Dichloropropene	ND	4.0
Toluene	ND	4.0
trans-1,3-Dichloropropene	ND	4.0
1,1,2-Trichloroethane	ND	4.0
2-Hexanone	ND	7.9
1,3-Dichloropropane	ND	4.0
Tetrachloroethene	ND	4.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B6-1.0-2.0	Diln Fac:	0.7949
Lab ID:	262069-001	Batch#:	216939
Matrix:	Soil	Sampled:	10/28/14
Units:	ug/Kg	Received:	10/28/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Dibromochloromethane	ND	4.0
1,2-Dibromoethane	ND	4.0
Chlorobenzene	ND	4.0
1,1,1,2-Tetrachloroethane	ND	4.0
Ethylbenzene	ND	4.0
m,p-Xylenes	ND	4.0
o-Xylene	ND	4.0
Styrene	ND	4.0
Bromoform	ND	4.0
Isopropylbenzene	ND	4.0
1,1,2,2-Tetrachloroethane	ND	4.0
1,2,3-Trichloropropane	ND	4.0
Propylbenzene	ND	4.0
Bromobenzene	ND	4.0
1,3,5-Trimethylbenzene	ND	4.0
2-Chlorotoluene	ND	4.0
4-Chlorotoluene	ND	4.0
tert-Butylbenzene	ND	4.0
1,2,4-Trimethylbenzene	ND	4.0
sec-Butylbenzene	ND	4.0
para-Isopropyl Toluene	ND	4.0
1,3-Dichlorobenzene	ND	4.0
1,4-Dichlorobenzene	ND	4.0
n-Butylbenzene	ND	4.0
1,2-Dichlorobenzene	ND	4.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	4.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	4.0

Surrogate	%REC	Limits
Dibromofluoromethane	117	76-128
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	89	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B6-3.0-4.0	Diln Fac:	0.6485
Lab ID:	262069-002	Batch#:	216939
Matrix:	Soil	Sampled:	10/28/14
Units:	ug/Kg	Received:	10/28/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Freon 12	ND	6.5
Chloromethane	ND	6.5
Vinyl Chloride	ND	6.5
Bromomethane	ND	6.5
Chloroethane	ND	6.5
Trichlorofluoromethane	ND	3.2
Acetone	ND	13
Freon 113	ND	3.2
1,1-Dichloroethene	ND	3.2
Methylene Chloride	ND	13
Carbon Disulfide	ND	3.2
MTBE	ND	3.2
trans-1,2-Dichloroethene	ND	3.2
Vinyl Acetate	ND	32
1,1-Dichloroethane	ND	3.2
2-Butanone	ND	6.5
cis-1,2-Dichloroethene	ND	3.2
2,2-Dichloropropane	ND	3.2
Chloroform	ND	3.2
Bromochloromethane	ND	3.2
1,1,1-Trichloroethane	ND	3.2
1,1-Dichloropropene	ND	3.2
Carbon Tetrachloride	ND	3.2
1,2-Dichloroethane	ND	3.2
Benzene	ND	3.2
Trichloroethene	ND	3.2
1,2-Dichloropropane	ND	3.2
Bromodichloromethane	ND	3.2
Dibromomethane	ND	3.2
4-Methyl-2-Pentanone	ND	6.5
cis-1,3-Dichloropropene	ND	3.2
Toluene	ND	3.2
trans-1,3-Dichloropropene	ND	3.2
1,1,2-Trichloroethane	ND	3.2
2-Hexanone	ND	6.5
1,3-Dichloropropane	ND	3.2
Tetrachloroethene	ND	3.2

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B6-3.0-4.0	Diln Fac:	0.6485
Lab ID:	262069-002	Batch#:	216939
Matrix:	Soil	Sampled:	10/28/14
Units:	ug/Kg	Received:	10/28/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Dibromochloromethane	ND	3.2
1,2-Dibromoethane	ND	3.2
Chlorobenzene	ND	3.2
1,1,1,2-Tetrachloroethane	ND	3.2
Ethylbenzene	ND	3.2
m,p-Xylenes	ND	3.2
o-Xylene	ND	3.2
Styrene	ND	3.2
Bromoform	ND	3.2
Isopropylbenzene	ND	3.2
1,1,2,2-Tetrachloroethane	ND	3.2
1,2,3-Trichloropropane	ND	3.2
Propylbenzene	ND	3.2
Bromobenzene	ND	3.2
1,3,5-Trimethylbenzene	ND	3.2
2-Chlorotoluene	ND	3.2
4-Chlorotoluene	ND	3.2
tert-Butylbenzene	ND	3.2
1,2,4-Trimethylbenzene	ND	3.2
sec-Butylbenzene	ND	3.2
para-Isopropyl Toluene	ND	3.2
1,3-Dichlorobenzene	ND	3.2
1,4-Dichlorobenzene	ND	3.2
n-Butylbenzene	ND	3.2
1,2-Dichlorobenzene	ND	3.2
1,2-Dibromo-3-Chloropropane	ND	3.2
1,2,4-Trichlorobenzene	ND	3.2
Hexachlorobutadiene	ND	3.2
Naphthalene	ND	3.2
1,2,3-Trichlorobenzene	ND	3.2

Surrogate	%REC	Limits
Dibromofluoromethane	117	76-128
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	89	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B7-1.0-2.0	Diln Fac:	0.6536
Lab ID:	262069-003	Batch#:	216939
Matrix:	Soil	Sampled:	10/28/14
Units:	ug/Kg	Received:	10/28/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Freon 12	ND	6.5
Chloromethane	ND	6.5
Vinyl Chloride	ND	6.5
Bromomethane	ND	6.5
Chloroethane	ND	6.5
Trichlorofluoromethane	ND	3.3
Acetone	ND	13
Freon 113	ND	3.3
1,1-Dichloroethene	ND	3.3
Methylene Chloride	ND	13
Carbon Disulfide	ND	3.3
MTBE	ND	3.3
trans-1,2-Dichloroethene	ND	3.3
Vinyl Acetate	ND	33
1,1-Dichloroethane	ND	3.3
2-Butanone	ND	6.5
cis-1,2-Dichloroethene	ND	3.3
2,2-Dichloropropane	ND	3.3
Chloroform	ND	3.3
Bromochloromethane	ND	3.3
1,1,1-Trichloroethane	ND	3.3
1,1-Dichloropropene	ND	3.3
Carbon Tetrachloride	ND	3.3
1,2-Dichloroethane	ND	3.3
Benzene	ND	3.3
Trichloroethene	ND	3.3
1,2-Dichloropropane	ND	3.3
Bromodichloromethane	ND	3.3
Dibromomethane	ND	3.3
4-Methyl-2-Pentanone	ND	6.5
cis-1,3-Dichloropropene	ND	3.3
Toluene	ND	3.3
trans-1,3-Dichloropropene	ND	3.3
1,1,2-Trichloroethane	ND	3.3
2-Hexanone	ND	6.5
1,3-Dichloropropane	ND	3.3
Tetrachloroethene	ND	3.3

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B7-1.0-2.0	Diln Fac:	0.6536
Lab ID:	262069-003	Batch#:	216939
Matrix:	Soil	Sampled:	10/28/14
Units:	ug/Kg	Received:	10/28/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Dibromochloromethane	ND	3.3
1,2-Dibromoethane	ND	3.3
Chlorobenzene	ND	3.3
1,1,1,2-Tetrachloroethane	ND	3.3
Ethylbenzene	ND	3.3
m,p-Xylenes	ND	3.3
o-Xylene	ND	3.3
Styrene	ND	3.3
Bromoform	ND	3.3
Isopropylbenzene	ND	3.3
1,1,2,2-Tetrachloroethane	ND	3.3
1,2,3-Trichloropropane	ND	3.3
Propylbenzene	ND	3.3
Bromobenzene	ND	3.3
1,3,5-Trimethylbenzene	ND	3.3
2-Chlorotoluene	ND	3.3
4-Chlorotoluene	ND	3.3
tert-Butylbenzene	ND	3.3
1,2,4-Trimethylbenzene	ND	3.3
sec-Butylbenzene	ND	3.3
para-Isopropyl Toluene	ND	3.3
1,3-Dichlorobenzene	ND	3.3
1,4-Dichlorobenzene	ND	3.3
n-Butylbenzene	ND	3.3
1,2-Dichlorobenzene	ND	3.3
1,2-Dibromo-3-Chloropropane	ND	3.3
1,2,4-Trichlorobenzene	ND	3.3
Hexachlorobutadiene	ND	3.3
Naphthalene	ND	3.3
1,2,3-Trichlorobenzene	ND	3.3

Surrogate	%REC	Limits
Dibromofluoromethane	114	76-128
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	89	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B8-1.0-2.0	Diln Fac:	0.7386
Lab ID:	262069-005	Batch#:	216939
Matrix:	Soil	Sampled:	10/28/14
Units:	ug/Kg	Received:	10/28/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Freon 12	ND	7.4
Chloromethane	ND	7.4
Vinyl Chloride	ND	7.4
Bromomethane	ND	7.4
Chloroethane	ND	7.4
Trichlorofluoromethane	ND	3.7
Acetone	ND	15
Freon 113	ND	3.7
1,1-Dichloroethene	ND	3.7
Methylene Chloride	ND	15
Carbon Disulfide	ND	3.7
MTBE	ND	3.7
trans-1,2-Dichloroethene	ND	3.7
Vinyl Acetate	ND	37
1,1-Dichloroethane	ND	3.7
2-Butanone	ND	7.4
cis-1,2-Dichloroethene	ND	3.7
2,2-Dichloropropane	ND	3.7
Chloroform	ND	3.7
Bromochloromethane	ND	3.7
1,1,1-Trichloroethane	ND	3.7
1,1-Dichloropropene	ND	3.7
Carbon Tetrachloride	ND	3.7
1,2-Dichloroethane	ND	3.7
Benzene	ND	3.7
Trichloroethene	ND	3.7
1,2-Dichloropropane	ND	3.7
Bromodichloromethane	ND	3.7
Dibromomethane	ND	3.7
4-Methyl-2-Pentanone	ND	7.4
cis-1,3-Dichloropropene	ND	3.7
Toluene	ND	3.7
trans-1,3-Dichloropropene	ND	3.7
1,1,2-Trichloroethane	ND	3.7
2-Hexanone	ND	7.4
1,3-Dichloropropane	ND	3.7
Tetrachloroethene	ND	3.7

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B8-1.0-2.0	Diln Fac:	0.7386
Lab ID:	262069-005	Batch#:	216939
Matrix:	Soil	Sampled:	10/28/14
Units:	ug/Kg	Received:	10/28/14
Basis:	as received	Analyzed:	10/30/14

Analyte	Result	RL
Dibromochloromethane	ND	3.7
1,2-Dibromoethane	ND	3.7
Chlorobenzene	ND	3.7
1,1,1,2-Tetrachloroethane	ND	3.7
Ethylbenzene	ND	3.7
m,p-Xylenes	ND	3.7
o-Xylene	ND	3.7
Styrene	ND	3.7
Bromoform	ND	3.7
Isopropylbenzene	ND	3.7
1,1,2,2-Tetrachloroethane	ND	3.7
1,2,3-Trichloropropane	ND	3.7
Propylbenzene	ND	3.7
Bromobenzene	ND	3.7
1,3,5-Trimethylbenzene	ND	3.7
2-Chlorotoluene	ND	3.7
4-Chlorotoluene	ND	3.7
tert-Butylbenzene	ND	3.7
1,2,4-Trimethylbenzene	ND	3.7
sec-Butylbenzene	ND	3.7
para-Isopropyl Toluene	ND	3.7
1,3-Dichlorobenzene	ND	3.7
1,4-Dichlorobenzene	ND	3.7
n-Butylbenzene	ND	3.7
1,2-Dichlorobenzene	ND	3.7
1,2-Dibromo-3-Chloropropane	ND	3.7
1,2,4-Trichlorobenzene	ND	3.7
Hexachlorobutadiene	ND	3.7
Naphthalene	ND	3.7
1,2,3-Trichlorobenzene	ND	3.7

Surrogate	%REC	Limits
Dibromofluoromethane	115	76-128
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	89	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	216939
Units:	ug/Kg	Analyzed:	10/30/14
Diln Fac:	1.000		

Type: BS Lab ID: QC763689

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	29.85	119	68-135
Benzene	25.00	29.28	117	80-127
Trichloroethene	25.00	29.28	117	77-129
Toluene	25.00	27.34	109	79-125
Chlorobenzene	25.00	29.42	118	78-120

Surrogate	%REC	Limits
Dibromofluoromethane	104	76-128
1,2-Dichloroethane-d4	97	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	88	79-128

Type: BSD Lab ID: QC763690

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	24.75	28.34	115	68-135	4	35
Benzene	24.75	28.13	114	80-127	3	20
Trichloroethene	24.75	27.49	111	77-129	5	20
Toluene	24.75	26.32	106	79-125	3	23
Chlorobenzene	24.75	28.45	115	78-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	76-128
1,2-Dichloroethane-d4	95	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	90	79-128

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC763691	Batch#:	216939
Matrix:	Soil	Analyzed:	10/30/14
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC763691	Batch#:	216939
Matrix:	Soil	Analyzed:	10/30/14
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	112	76-128
1,2-Dichloroethane-d4	97	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	90	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B6-1.0-2.0	Batch#:	216971
Lab ID:	262069-001	Sampled:	10/28/14
Matrix:	Soil	Received:	10/28/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received		

Cleanup Method: EPA 3620B

Analyte	Result	RL	Diln Fac	Analyzed
alpha-BHC	ND	1.7	1.000	11/01/14
beta-BHC	ND	1.7	1.000	11/01/14
gamma-BHC	ND	1.7	1.000	11/01/14
delta-BHC	ND	1.7	1.000	11/01/14
Heptachlor	ND	1.7	1.000	11/01/14
Aldrin	ND	1.7	1.000	11/01/14
Heptachlor epoxide	ND	1.7	1.000	11/01/14
Endosulfan I	ND	1.7	1.000	11/01/14
Dieldrin	2.1 C #	1.7	1.000	11/01/14
4,4'-DDE	430	33	10.00	11/03/14
Endrin	48	33	10.00	11/03/14
Endosulfan II	ND	3.3	1.000	11/01/14
Endosulfan sulfate	ND	3.3	1.000	11/01/14
4,4'-DDD	86 #	3.3	1.000	11/01/14
Endrin aldehyde	ND	3.3	1.000	11/01/14
4,4'-DDT	89	3.3	1.000	11/01/14
alpha-Chlordane	4.9	1.7	1.000	11/01/14
gamma-Chlordane	ND	1.7	1.000	11/01/14
Methoxychlor	ND	17	1.000	11/01/14
Toxaphene	ND	59	1.000	11/01/14

Surrogate	%REC	Limits	Diln Fac	Analyzed
TCMX	98	42-134	1.000	11/01/14
Decachlorobiphenyl	91	29-122	1.000	11/01/14

#= CCV drift outside limits; average CCV drift within limits per method requirements
C= Presence confirmed, but RPD between columns exceeds 40%
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B7-1.0-2.0	Batch#:	216971
Lab ID:	262069-003	Sampled:	10/28/14
Matrix:	Soil	Received:	10/28/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received		

Cleanup Method: EPA 3620B

Analyte	Result	RL	Diln Fac	Analyzed
alpha-BHC	ND	1.7	1.000	11/01/14
beta-BHC	ND	1.7	1.000	11/01/14
gamma-BHC	ND	1.7	1.000	11/01/14
delta-BHC	ND	1.7	1.000	11/01/14
Heptachlor	ND	1.7	1.000	11/01/14
Aldrin	ND	1.7	1.000	11/01/14
Heptachlor epoxide	ND	1.7	1.000	11/01/14
Endosulfan I	ND	1.7	1.000	11/01/14
Dieldrin	ND	1.7	1.000	11/01/14
4,4'-DDE	320	33	10.00	11/03/14
Endrin	24 C	3.3	1.000	11/01/14
Endosulfan II	ND	3.3	1.000	11/01/14
Endosulfan sulfate	ND	3.3	1.000	11/01/14
4,4'-DDD	61 #	3.3	1.000	11/01/14
Endrin aldehyde	ND	3.3	1.000	11/01/14
4,4'-DDT	75	3.3	1.000	11/01/14
alpha-Chlordane	ND	1.7	1.000	11/01/14
gamma-Chlordane	ND	1.7	1.000	11/01/14
Methoxychlor	ND	17	1.000	11/01/14
Toxaphene	ND	59	1.000	11/01/14

Surrogate	%REC	Limits	Diln Fac	Analyzed
TCMX	94	42-134	1.000	11/01/14
Decachlorobiphenyl	88	29-122	1.000	11/01/14

#= CCV drift outside limits; average CCV drift within limits per method requirements
C= Presence confirmed, but RPD between columns exceeds 40%
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B8-1.0-2.0	Batch#:	216971
Lab ID:	262069-005	Sampled:	10/28/14
Matrix:	Soil	Received:	10/28/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received		

Cleanup Method: EPA 3620B

Analyte	Result	RL	Diln Fac	Analyzed
alpha-BHC	ND	1.7	1.000	11/01/14
beta-BHC	ND	1.7	1.000	11/01/14
gamma-BHC	ND	1.7	1.000	11/01/14
delta-BHC	ND	1.7	1.000	11/01/14
Heptachlor	ND	1.7	1.000	11/01/14
Aldrin	ND	1.7	1.000	11/01/14
Heptachlor epoxide	ND	1.7	1.000	11/01/14
Endosulfan I	ND	1.7	1.000	11/01/14
Dieldrin	3.5 C #	1.7	1.000	11/01/14
4,4'-DDE	850 C	33	10.00	11/03/14
Endrin	37	3.3	1.000	11/01/14
Endosulfan II	ND	3.3	1.000	11/01/14
Endosulfan sulfate	ND	3.3	1.000	11/01/14
4,4'-DDD	87 #	3.3	1.000	11/01/14
Endrin aldehyde	ND	3.3	1.000	11/01/14
4,4'-DDT	27	3.3	1.000	11/01/14
alpha-Chlordane	9.6	1.7	1.000	11/01/14
gamma-Chlordane	ND	1.7	1.000	11/01/14
Methoxychlor	ND	17	1.000	11/01/14
Toxaphene	ND	60	1.000	11/01/14

Surrogate	%REC	Limits	Diln Fac	Analyzed
TCMX	89	42-134	1.000	11/01/14
Decachlorobiphenyl	90	29-122	1.000	11/01/14

#= CCV drift outside limits; average CCV drift within limits per method requirements
C= Presence confirmed, but RPD between columns exceeds 40%
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC763826	Batch#:	216971
Matrix:	Soil	Prepared:	10/30/14
Units:	ug/Kg	Analyzed:	10/31/14

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	1.7
4,4'-DDE	ND	3.3
Endrin	ND #	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND #	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	60

Surrogate	%REC	Limits
TCMX	79	42-134
Decachlorobiphenyl	76	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC763827	Batch#:	216971
Matrix:	Soil	Prepared:	10/30/14
Units:	ug/Kg	Analyzed:	10/31/14

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.16	8.724	66	46-120
Heptachlor	13.16	8.756	67	41-124
Aldrin	13.16	8.759	67	48-122
Dieldrin	13.16	9.881	75	39-142
Endrin	13.16	8.476 #	64	45-138
4,4'-DDT	13.16	12.14	92	32-145

Surrogate	%REC	Limits
TCMX	69	42-134
Decachlorobiphenyl	70	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	ZZZZZZZZZZ	Batch#:	216971
MSS Lab ID:	261950-005	Sampled:	10/22/14
Matrix:	Soil	Received:	10/22/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received	Analyzed:	10/31/14
Diln Fac:	1.000		

Type: MS Cleanup Method: EPA 3620B
Lab ID: QC763828

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	<0.2161	13.43	10.08	75	42-136
Heptachlor	0.4999	13.43	11.37	81	40-144
Aldrin	1.313	13.43	10.59	69	45-143
Dieldrin	0.3453	13.43	11.13	80	47-145
Endrin	0.8832	13.43	9.246 #	62	46-150
4,4'-DDT	7.043	13.43	23.14	120	30-157

Surrogate	%REC	Limits
TCMX	83	42-134
Decachlorobiphenyl	82	29-122

Type: MSD Cleanup Method: EPA 3620B
Lab ID: QC763829

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	13.28	8.591	65	42-136	15	40
Heptachlor	13.28	10.29	74	40-144	9	46
Aldrin	13.28	9.044	58	45-143	15	41
Dieldrin	13.28	9.432	68	47-145	15	36
Endrin	13.28	8.304 #	56	46-150	10	41
4,4'-DDT	13.28	16.32	70	30-157	34	52

Surrogate	%REC	Limits
TCMX	73	42-134
Decachlorobiphenyl	66	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Arsenic

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Arsenic	Batch#:	216908
Matrix:	Soil	Sampled:	10/28/14
Units:	mg/Kg	Received:	10/28/14
Basis:	as received	Prepared:	10/29/14
Diln Fac:	1.000	Analyzed:	11/03/14

Field ID	Type	Lab ID	Result	RL
B6-1.0-2.0	SAMPLE	262069-001	8.2	0.25
B7-1.0-2.0	SAMPLE	262069-003	7.3	0.25
B8-1.0-2.0	SAMPLE	262069-005	7.8	0.23
	BLANK	QC763575	ND	0.25

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Lead

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	216908
Matrix:	Soil	Sampled:	10/28/14
Units:	mg/Kg	Received:	10/28/14
Basis:	as received	Prepared:	10/29/14
Diln Fac:	1.000	Analyzed:	11/03/14

Field ID	Type	Lab ID	Result	RL
B6-1.0-2.0	SAMPLE	262069-001	13	0.25
B7-1.0-2.0	SAMPLE	262069-003	9.7	0.25
B8-1.0-2.0	SAMPLE	262069-005	10	0.23
	BLANK	QC763575	ND	0.25

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Arsenic

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Arsenic	Diln Fac:	5.000
Field ID:	ZZZZZZZZZZ	Batch#:	216908
MSS Lab ID:	262048-001	Sampled:	10/24/14
Matrix:	Soil	Received:	10/28/14
Units:	mg/Kg	Prepared:	10/29/14
Basis:	as received	Analyzed:	11/03/14

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC763576		50.00	52.92	106	80-120		
BSD	QC763577		50.00	53.25	107	80-120	1	20
MS	QC763578	3.446	52.08	57.24	103	72-120		
MSD	QC763579		47.17	52.98	105	72-120	2	30

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	262069	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Lead	Diln Fac:	5.000
Field ID:	ZZZZZZZZZZ	Batch#:	216908
MSS Lab ID:	262048-001	Sampled:	10/24/14
Matrix:	Soil	Received:	10/28/14
Units:	mg/Kg	Prepared:	10/29/14
Basis:	as received	Analyzed:	11/03/14

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC763576		50.00	49.85	100	80-120		
BSD	QC763577		50.00	50.36	101	80-120	1	20
MS	QC763578	2.355	52.08	53.82	99	52-122		
MSD	QC763579		47.17	49.57	100	52-122	1	49

RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 262098
ANALYTICAL REPORT

PES Environmental, Inc.	Project	: 1098.007.01.001
1682 Novato Boulevard	Location	: 39155 & 39183 State St., Fremont
Novato, CA 94947	Level	: II

Sample ID	Lab ID
B16-1.0-2.0	262098-001
B16-3.0-4.0	262098-002
B11-1.0-2.0	262098-003
B11-3.0-4..0	262098-004
B12-1.0-2.0	262098-005
B12-3.0-4.0	262098-006
B13-1.0-2.0	262098-007
B13-3.0-4..0	262098-008

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____ Date: 11/05/2014

Will S Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**262098**
Client:	**PES Environmental, Inc.**
Project:	**1098.007.01.001**
Location:	**39155 & 39183 State St., Fremont**
Request Date:	**10/30/14**
Samples Received:	**10/30/14**

This data package contains sample and QC results for five soil samples, requested for the above referenced project on 10/30/14. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

Pesticides (EPA 8081A):
All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. All samples underwent florisil cleanup using EPA Method 3620C. B12-1.0-2.0 (lab # 262098-005) and B13-1.0-2.0 (lab # 262098-007) were diluted due to the color of the sample extracts. No other analytical problems were encountered.

Metals (EPA 6010B):
No analytical problems were encountered.

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

262098

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: Curtis & Tompkins
SAMPLERS: Gavin Creps
JOB NUMBER: 1098-007-01-001
NAME / LOCATION: 39155 & 39183 State St. Freemont
PROJECT MANAGER: Carl Michelson
RECORDER: Gavin Creps

DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX: Vapor	Water	Soil	Sedim't	# of Containers & Preservatives: Unpres.	EnCore	H_2SO_4	HNO_3	HCl	Methanol	UPBW	DEPTH IN FEET
14	10	29	1200	B16-1.0-2.0			X		1					1	2	
			1205	B16-3.0-4.0			X		1					1	2	
			1225	B11-1.0-2.0			X		1					1	2	
			1230	B11-3.0-4.0			X		1					1	2	
			1245	B12-1.0-2.0			X		1					1	2	
			1250	B12-3.0-4.0			X		1					1	2	
			1310	B13-1.0-2.0			X		1					1	2	
			1315	B13-3.0-4.0			X		1					1	2	

ANALYSIS REQUESTED

EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Organochlorine Pesticides	Total Lead	Arsenic
		X					X	X	X	
		X								
		X					X	X	X	
		X								
		X					X	X	X	
		X								
		X					X	X	X	
		X								

NOTES

Turn Around Time: Standard

Page 1 of 1

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE 10/29/14	TIME 1345
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE 10/29/14	TIME 1640
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

Intact on ice cold RC

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 262098 Date Received 10/29 Number of coolers 1
Client PES Project 1098.007.01.001

Date Opened 10/29 By (print) EJ (sign)
Date Logged in 10/30 By (print) EJ (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
Shipping info

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many Name Date
2B. Were custody seals intact upon arrival? YES NO (N/A)
3. Were custody papers dry and intact when received? (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe)

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C)

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? (YES) NO
If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? (YES) NO
10. Are there any missing / extra samples? YES (NO)
11. Are samples in the appropriate containers for indicated tests? (YES) NO
12. Are sample labels present, in good condition and complete? (YES) NO
13. Do the sample labels agree with custody papers? (YES) NO
14. Was sufficient amount of sample sent for tests requested? (YES) NO
15. Are the samples appropriately preserved? (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? YES NO (N/A)
17. Did you document your preservative check? YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? (YES) NO N/A
20. Are bubbles > 6mm absent in VOA samples? YES NO (N/A)
21. Was the client contacted concerning this sample delivery? YES (NO)
If YES, Who was called? By Date:

COMMENTS

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 262098

Results for any subcontracted analyses are not included in this summary.

Client : PES Environmental, Inc.
Project : 1098.007.01.001
Location : 39155 & 39183 State St., Fremont

Client Sample ID : B16-1.0-2.0 Laboratory Sample ID : 262098-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
4,4'-DDE	21		3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDT	7.7		3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
Arsenic	4.7		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	5.3		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : B16-3.0-4.0 Laboratory Sample ID : 262098-002

No Detections

Client Sample ID : B11-1.0-2.0 Laboratory Sample ID : 262098-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
4,4'-DDE	670	C	33	ug/Kg	As Recd	10.00	EPA 8081A	EPA 3550B
Endrin	27	C	3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDD	6.1	#,C	3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDT	130		3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
alpha-Chlordane	5.4		1.7	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
Arsenic	4.3		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	5.3		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : B12-1.0-2.0 Laboratory Sample ID : 262098-005

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
4,4'-DDE	460		33	ug/Kg	As Recd	10.00	EPA 8081A	EPA 3550B
4,4'-DDT	100		33	ug/Kg	As Recd	10.00	EPA 8081A	EPA 3550B
Arsenic	4.3		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	7.7		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : B13-1.0-2.0 Laboratory Sample ID : 262098-007

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
4,4'-DDE	54		17	ug/Kg	As Recd	5.000	EPA 8081A	EPA 3550B
Arsenic	5.6		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	11		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

# = CCV drift outside limits; average CCV drift within limits per method requiremer
C = Presence confirmed, but RPD between columns exceeds 40%

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B16-1.0-2.0	Diln Fac:	0.7541
Lab ID:	262098-001	Batch#:	217040
Matrix:	Soil	Sampled:	10/29/14
Units:	ug/Kg	Received:	10/30/14
Basis:	as received	Analyzed:	11/03/14

Analyte	Result	RL
Freon 12	ND	7.5
Chloromethane	ND	7.5
Vinyl Chloride	ND	7.5
Bromomethane	ND	7.5
Chloroethane	ND	7.5
Trichlorofluoromethane	ND	3.8
Acetone	ND	15
Freon 113	ND	3.8
1,1-Dichloroethene	ND	3.8
Methylene Chloride	ND	15
Carbon Disulfide	ND	3.8
MTBE	ND	3.8
trans-1,2-Dichloroethene	ND	3.8
Vinyl Acetate	ND	38
1,1-Dichloroethane	ND	3.8
2-Butanone	ND	7.5
cis-1,2-Dichloroethene	ND	3.8
2,2-Dichloropropane	ND	3.8
Chloroform	ND	3.8
Bromochloromethane	ND	3.8
1,1,1-Trichloroethane	ND	3.8
1,1-Dichloropropene	ND	3.8
Carbon Tetrachloride	ND	3.8
1,2-Dichloroethane	ND	3.8
Benzene	ND	3.8
Trichloroethene	ND	3.8
1,2-Dichloropropane	ND	3.8
Bromodichloromethane	ND	3.8
Dibromomethane	ND	3.8
4-Methyl-2-Pentanone	ND	7.5
cis-1,3-Dichloropropene	ND	3.8
Toluene	ND	3.8
trans-1,3-Dichloropropene	ND	3.8
1,1,2-Trichloroethane	ND	3.8
2-Hexanone	ND	7.5
1,3-Dichloropropane	ND	3.8
Tetrachloroethene	ND	3.8

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B16-1.0-2.0	Diln Fac:	0.7541
Lab ID:	262098-001	Batch#:	217040
Matrix:	Soil	Sampled:	10/29/14
Units:	ug/Kg	Received:	10/30/14
Basis:	as received	Analyzed:	11/03/14

Analyte	Result	RL
Dibromochloromethane	ND	3.8
1,2-Dibromoethane	ND	3.8
Chlorobenzene	ND	3.8
1,1,1,2-Tetrachloroethane	ND	3.8
Ethylbenzene	ND	3.8
m,p-Xylenes	ND	3.8
o-Xylene	ND	3.8
Styrene	ND	3.8
Bromoform	ND	3.8
Isopropylbenzene	ND	3.8
1,1,2,2-Tetrachloroethane	ND	3.8
1,2,3-Trichloropropane	ND	3.8
Propylbenzene	ND	3.8
Bromobenzene	ND	3.8
1,3,5-Trimethylbenzene	ND	3.8
2-Chlorotoluene	ND	3.8
4-Chlorotoluene	ND	3.8
tert-Butylbenzene	ND	3.8
1,2,4-Trimethylbenzene	ND	3.8
sec-Butylbenzene	ND	3.8
para-Isopropyl Toluene	ND	3.8
1,3-Dichlorobenzene	ND	3.8
1,4-Dichlorobenzene	ND	3.8
n-Butylbenzene	ND	3.8
1,2-Dichlorobenzene	ND	3.8
1,2-Dibromo-3-Chloropropane	ND	3.8
1,2,4-Trichlorobenzene	ND	3.8
Hexachlorobutadiene	ND	3.8
Naphthalene	ND	3.8
1,2,3-Trichlorobenzene	ND	3.8

Surrogate	%REC	Limits
Dibromofluoromethane	108	76-128
1,2-Dichloroethane-d4	101	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	88	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B16-3.0-4.0	Diln Fac:	0.7837
Lab ID:	262098-002	Batch#:	217040
Matrix:	Soil	Sampled:	10/29/14
Units:	ug/Kg	Received:	10/30/14
Basis:	as received	Analyzed:	11/03/14

Analyte	Result	RL
Freon 12	ND	7.8
Chloromethane	ND	7.8
Vinyl Chloride	ND	7.8
Bromomethane	ND	7.8
Chloroethane	ND	7.8
Trichlorofluoromethane	ND	3.9
Acetone	ND	16
Freon 113	ND	3.9
1,1-Dichloroethene	ND	3.9
Methylene Chloride	ND	16
Carbon Disulfide	ND	3.9
MTBE	ND	3.9
trans-1,2-Dichloroethene	ND	3.9
Vinyl Acetate	ND	39
1,1-Dichloroethane	ND	3.9
2-Butanone	ND	7.8
cis-1,2-Dichloroethene	ND	3.9
2,2-Dichloropropane	ND	3.9
Chloroform	ND	3.9
Bromochloromethane	ND	3.9
1,1,1-Trichloroethane	ND	3.9
1,1-Dichloropropene	ND	3.9
Carbon Tetrachloride	ND	3.9
1,2-Dichloroethane	ND	3.9
Benzene	ND	3.9
Trichloroethene	ND	3.9
1,2-Dichloropropane	ND	3.9
Bromodichloromethane	ND	3.9
Dibromomethane	ND	3.9
4-Methyl-2-Pentanone	ND	7.8
cis-1,3-Dichloropropene	ND	3.9
Toluene	ND	3.9
trans-1,3-Dichloropropene	ND	3.9
1,1,2-Trichloroethane	ND	3.9
2-Hexanone	ND	7.8
1,3-Dichloropropane	ND	3.9
Tetrachloroethene	ND	3.9

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B16-3.0-4.0	Diln Fac:	0.7837
Lab ID:	262098-002	Batch#:	217040
Matrix:	Soil	Sampled:	10/29/14
Units:	ug/Kg	Received:	10/30/14
Basis:	as received	Analyzed:	11/03/14

Analyte	Result	RL
Dibromochloromethane	ND	3.9
1,2-Dibromoethane	ND	3.9
Chlorobenzene	ND	3.9
1,1,1,2-Tetrachloroethane	ND	3.9
Ethylbenzene	ND	3.9
m,p-Xylenes	ND	3.9
o-Xylene	ND	3.9
Styrene	ND	3.9
Bromoform	ND	3.9
Isopropylbenzene	ND	3.9
1,1,2,2-Tetrachloroethane	ND	3.9
1,2,3-Trichloropropane	ND	3.9
Propylbenzene	ND	3.9
Bromobenzene	ND	3.9
1,3,5-Trimethylbenzene	ND	3.9
2-Chlorotoluene	ND	3.9
4-Chlorotoluene	ND	3.9
tert-Butylbenzene	ND	3.9
1,2,4-Trimethylbenzene	ND	3.9
sec-Butylbenzene	ND	3.9
para-Isopropyl Toluene	ND	3.9
1,3-Dichlorobenzene	ND	3.9
1,4-Dichlorobenzene	ND	3.9
n-Butylbenzene	ND	3.9
1,2-Dichlorobenzene	ND	3.9
1,2-Dibromo-3-Chloropropane	ND	3.9
1,2,4-Trichlorobenzene	ND	3.9
Hexachlorobutadiene	ND	3.9
Naphthalene	ND	3.9
1,2,3-Trichlorobenzene	ND	3.9

Surrogate	%REC	Limits
Dibromofluoromethane	111	76-128
1,2-Dichloroethane-d4	101	80-137
Toluene-d8	93	80-120
Bromofluorobenzene	89	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B11-1.0-2.0	Diln Fac:	0.7032
Lab ID:	262098-003	Batch#:	217040
Matrix:	Soil	Sampled:	10/29/14
Units:	ug/Kg	Received:	10/30/14
Basis:	as received	Analyzed:	11/03/14

Analyte	Result	RL
Freon 12	ND	7.0
Chloromethane	ND	7.0
Vinyl Chloride	ND	7.0
Bromomethane	ND	7.0
Chloroethane	ND	7.0
Trichlorofluoromethane	ND	3.5
Acetone	ND	14
Freon 113	ND	3.5
1,1-Dichloroethene	ND	3.5
Methylene Chloride	ND	14
Carbon Disulfide	ND	3.5
MTBE	ND	3.5
trans-1,2-Dichloroethene	ND	3.5
Vinyl Acetate	ND	35
1,1-Dichloroethane	ND	3.5
2-Butanone	ND	7.0
cis-1,2-Dichloroethene	ND	3.5
2,2-Dichloropropane	ND	3.5
Chloroform	ND	3.5
Bromochloromethane	ND	3.5
1,1,1-Trichloroethane	ND	3.5
1,1-Dichloropropene	ND	3.5
Carbon Tetrachloride	ND	3.5
1,2-Dichloroethane	ND	3.5
Benzene	ND	3.5
Trichloroethene	ND	3.5
1,2-Dichloropropane	ND	3.5
Bromodichloromethane	ND	3.5
Dibromomethane	ND	3.5
4-Methyl-2-Pentanone	ND	7.0
cis-1,3-Dichloropropene	ND	3.5
Toluene	ND	3.5
trans-1,3-Dichloropropene	ND	3.5
1,1,2-Trichloroethane	ND	3.5
2-Hexanone	ND	7.0
1,3-Dichloropropane	ND	3.5
Tetrachloroethene	ND	3.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B11-1.0-2.0	Diln Fac:	0.7032
Lab ID:	262098-003	Batch#:	217040
Matrix:	Soil	Sampled:	10/29/14
Units:	ug/Kg	Received:	10/30/14
Basis:	as received	Analyzed:	11/03/14

Analyte	Result	RL
Dibromochloromethane	ND	3.5
1,2-Dibromoethane	ND	3.5
Chlorobenzene	ND	3.5
1,1,1,2-Tetrachloroethane	ND	3.5
Ethylbenzene	ND	3.5
m,p-Xylenes	ND	3.5
o-Xylene	ND	3.5
Styrene	ND	3.5
Bromoform	ND	3.5
Isopropylbenzene	ND	3.5
1,1,2,2-Tetrachloroethane	ND	3.5
1,2,3-Trichloropropane	ND	3.5
Propylbenzene	ND	3.5
Bromobenzene	ND	3.5
1,3,5-Trimethylbenzene	ND	3.5
2-Chlorotoluene	ND	3.5
4-Chlorotoluene	ND	3.5
tert-Butylbenzene	ND	3.5
1,2,4-Trimethylbenzene	ND	3.5
sec-Butylbenzene	ND	3.5
para-Isopropyl Toluene	ND	3.5
1,3-Dichlorobenzene	ND	3.5
1,4-Dichlorobenzene	ND	3.5
n-Butylbenzene	ND	3.5
1,2-Dichlorobenzene	ND	3.5
1,2-Dibromo-3-Chloropropane	ND	3.5
1,2,4-Trichlorobenzene	ND	3.5
Hexachlorobutadiene	ND	3.5
Naphthalene	ND	3.5
1,2,3-Trichlorobenzene	ND	3.5

Surrogate	%REC	Limits
Dibromofluoromethane	110	76-128
1,2-Dichloroethane-d4	103	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	89	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B12-1.0-2.0	Diln Fac:	0.6859
Lab ID:	262098-005	Batch#:	217040
Matrix:	Soil	Sampled:	10/29/14
Units:	ug/Kg	Received:	10/30/14
Basis:	as received	Analyzed:	11/03/14

Analyte	Result	RL
Freon 12	ND	6.9
Chloromethane	ND	6.9
Vinyl Chloride	ND	6.9
Bromomethane	ND	6.9
Chloroethane	ND	6.9
Trichlorofluoromethane	ND	3.4
Acetone	ND	14
Freon 113	ND	3.4
1,1-Dichloroethene	ND	3.4
Methylene Chloride	ND	14
Carbon Disulfide	ND	3.4
MTBE	ND	3.4
trans-1,2-Dichloroethene	ND	3.4
Vinyl Acetate	ND	34
1,1-Dichloroethane	ND	3.4
2-Butanone	ND	6.9
cis-1,2-Dichloroethene	ND	3.4
2,2-Dichloropropane	ND	3.4
Chloroform	ND	3.4
Bromochloromethane	ND	3.4
1,1,1-Trichloroethane	ND	3.4
1,1-Dichloropropene	ND	3.4
Carbon Tetrachloride	ND	3.4
1,2-Dichloroethane	ND	3.4
Benzene	ND	3.4
Trichloroethene	ND	3.4
1,2-Dichloropropane	ND	3.4
Bromodichloromethane	ND	3.4
Dibromomethane	ND	3.4
4-Methyl-2-Pentanone	ND	6.9
cis-1,3-Dichloropropene	ND	3.4
Toluene	ND	3.4
trans-1,3-Dichloropropene	ND	3.4
1,1,2-Trichloroethane	ND	3.4
2-Hexanone	ND	6.9
1,3-Dichloropropane	ND	3.4
Tetrachloroethene	ND	3.4

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B12-1.0-2.0	Diln Fac:	0.6859
Lab ID:	262098-005	Batch#:	217040
Matrix:	Soil	Sampled:	10/29/14
Units:	ug/Kg	Received:	10/30/14
Basis:	as received	Analyzed:	11/03/14

Analyte	Result	RL
Dibromochloromethane	ND	3.4
1,2-Dibromoethane	ND	3.4
Chlorobenzene	ND	3.4
1,1,1,2-Tetrachloroethane	ND	3.4
Ethylbenzene	ND	3.4
m,p-Xylenes	ND	3.4
o-Xylene	ND	3.4
Styrene	ND	3.4
Bromoform	ND	3.4
Isopropylbenzene	ND	3.4
1,1,2,2-Tetrachloroethane	ND	3.4
1,2,3-Trichloropropane	ND	3.4
Propylbenzene	ND	3.4
Bromobenzene	ND	3.4
1,3,5-Trimethylbenzene	ND	3.4
2-Chlorotoluene	ND	3.4
4-Chlorotoluene	ND	3.4
tert-Butylbenzene	ND	3.4
1,2,4-Trimethylbenzene	ND	3.4
sec-Butylbenzene	ND	3.4
para-Isopropyl Toluene	ND	3.4
1,3-Dichlorobenzene	ND	3.4
1,4-Dichlorobenzene	ND	3.4
n-Butylbenzene	ND	3.4
1,2-Dichlorobenzene	ND	3.4
1,2-Dibromo-3-Chloropropane	ND	3.4
1,2,4-Trichlorobenzene	ND	3.4
Hexachlorobutadiene	ND	3.4
Naphthalene	ND	3.4
1,2,3-Trichlorobenzene	ND	3.4

Surrogate	%REC	Limits
Dibromofluoromethane	109	76-128
1,2-Dichloroethane-d4	101	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	89	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B13-1.0-2.0	Diln Fac:	0.8834
Lab ID:	262098-007	Batch#:	217040
Matrix:	Soil	Sampled:	10/29/14
Units:	ug/Kg	Received:	10/30/14
Basis:	as received	Analyzed:	11/03/14

Analyte	Result	RL
Freon 12	ND	8.8
Chloromethane	ND	8.8
Vinyl Chloride	ND	8.8
Bromomethane	ND	8.8
Chloroethane	ND	8.8
Trichlorofluoromethane	ND	4.4
Acetone	ND	18
Freon 113	ND	4.4
1,1-Dichloroethene	ND	4.4
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.4
MTBE	ND	4.4
trans-1,2-Dichloroethene	ND	4.4
Vinyl Acetate	ND	44
1,1-Dichloroethane	ND	4.4
2-Butanone	ND	8.8
cis-1,2-Dichloroethene	ND	4.4
2,2-Dichloropropane	ND	4.4
Chloroform	ND	4.4
Bromochloromethane	ND	4.4
1,1,1-Trichloroethane	ND	4.4
1,1-Dichloropropene	ND	4.4
Carbon Tetrachloride	ND	4.4
1,2-Dichloroethane	ND	4.4
Benzene	ND	4.4
Trichloroethene	ND	4.4
1,2-Dichloropropane	ND	4.4
Bromodichloromethane	ND	4.4
Dibromomethane	ND	4.4
4-Methyl-2-Pentanone	ND	8.8
cis-1,3-Dichloropropene	ND	4.4
Toluene	ND	4.4
trans-1,3-Dichloropropene	ND	4.4
1,1,2-Trichloroethane	ND	4.4
2-Hexanone	ND	8.8
1,3-Dichloropropane	ND	4.4
Tetrachloroethene	ND	4.4

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	B13-1.0-2.0	Diln Fac:	0.8834
Lab ID:	262098-007	Batch#:	217040
Matrix:	Soil	Sampled:	10/29/14
Units:	ug/Kg	Received:	10/30/14
Basis:	as received	Analyzed:	11/03/14

Analyte	Result	RL
Dibromochloromethane	ND	4.4
1,2-Dibromoethane	ND	4.4
Chlorobenzene	ND	4.4
1,1,1,2-Tetrachloroethane	ND	4.4
Ethylbenzene	ND	4.4
m,p-Xylenes	ND	4.4
o-Xylene	ND	4.4
Styrene	ND	4.4
Bromoform	ND	4.4
Isopropylbenzene	ND	4.4
1,1,2,2-Tetrachloroethane	ND	4.4
1,2,3-Trichloropropane	ND	4.4
Propylbenzene	ND	4.4
Bromobenzene	ND	4.4
1,3,5-Trimethylbenzene	ND	4.4
2-Chlorotoluene	ND	4.4
4-Chlorotoluene	ND	4.4
tert-Butylbenzene	ND	4.4
1,2,4-Trimethylbenzene	ND	4.4
sec-Butylbenzene	ND	4.4
para-Isopropyl Toluene	ND	4.4
1,3-Dichlorobenzene	ND	4.4
1,4-Dichlorobenzene	ND	4.4
n-Butylbenzene	ND	4.4
1,2-Dichlorobenzene	ND	4.4
1,2-Dibromo-3-Chloropropane	ND	4.4
1,2,4-Trichlorobenzene	ND	4.4
Hexachlorobutadiene	ND	4.4
Naphthalene	ND	4.4
1,2,3-Trichlorobenzene	ND	4.4

Surrogate	%REC	Limits
Dibromofluoromethane	111	76-128
1,2-Dichloroethane-d4	102	80-137
Toluene-d8	93	80-120
Bromofluorobenzene	88	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC764062	Batch#:	217040
Matrix:	Soil	Analyzed:	11/03/14
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	27.90	112	68-135
Benzene	25.00	26.36	105	80-127
Trichloroethene	25.00	26.46	106	77-129
Toluene	25.00	25.41	102	79-125
Chlorobenzene	25.00	27.21	109	78-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	76-128
1,2-Dichloroethane-d4	91	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	88	79-128

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC764063	Batch#:	217040
Matrix:	Soil	Analyzed:	11/03/14
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5035
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC764063	Batch#:	217040
Matrix:	Soil	Analyzed:	11/03/14
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	101	76-128
1,2-Dichloroethane-d4	88	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	90	79-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 5030B
Project#:	1098.007.01.001	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	217040
MSS Lab ID:	262105-002	Sampled:	10/30/14
Matrix:	Soil	Received:	10/30/14
Units:	ug/Kg	Analyzed:	11/03/14
Basis:	as received		

Type: MS Diln Fac: 0.9747
Lab ID: QC764080

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.5916	48.73	47.06	97	46-138
Benzene	<0.6892	48.73	43.08	88	51-125
Trichloroethene	<0.7179	48.73	42.99	88	41-146
Toluene	<0.7549	48.73	39.99	82	45-123
Chlorobenzene	<0.6189	48.73	41.25	85	39-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	76-128
1,2-Dichloroethane-d4	97	80-137
Toluene-d8	93	80-120
Bromofluorobenzene	88	79-128

Type: MSD Diln Fac: 0.9823
Lab ID: QC764081

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	49.12	48.47	99	46-138	2	51
Benzene	49.12	45.11	92	51-125	4	46
Trichloroethene	49.12	44.93	91	41-146	4	55
Toluene	49.12	41.78	85	45-123	4	59
Chlorobenzene	49.12	43.68	89	39-120	5	54

Surrogate	%REC	Limits
Dibromofluoromethane	103	76-128
1,2-Dichloroethane-d4	97	80-137
Toluene-d8	93	80-120
Bromofluorobenzene	90	79-128

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B16-1.0-2.0	Batch#:	216971
Lab ID:	262098-001	Sampled:	10/29/14
Matrix:	Soil	Received:	10/30/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received	Analyzed:	11/01/14
Diln Fac:	1.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	1.7
4,4'-DDE	21	3.3
Endrin	ND	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND	3.3
4,4'-DDT	7.7	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	61

Surrogate	%REC	Limits
TCMX	72	42-134
Decachlorobiphenyl	87	29-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B11-1.0-2.0	Batch#:	216971
Lab ID:	262098-003	Sampled:	10/29/14
Matrix:	Soil	Received:	10/30/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received		

Cleanup Method: EPA 3620B

Analyte	Result	RL	Diln Fac	Analyzed
alpha-BHC	ND	1.7	1.000	11/01/14
beta-BHC	ND	1.7	1.000	11/01/14
gamma-BHC	ND	1.7	1.000	11/01/14
delta-BHC	ND	1.7	1.000	11/01/14
Heptachlor	ND	1.7	1.000	11/01/14
Aldrin	ND	1.7	1.000	11/01/14
Heptachlor epoxide	ND	1.7	1.000	11/01/14
Endosulfan I	ND	1.7	1.000	11/01/14
Dieldrin	ND	1.7	1.000	11/01/14
4,4'-DDE	670 C	33	10.00	11/03/14
Endrin	27 C	3.3	1.000	11/01/14
Endosulfan II	ND	3.3	1.000	11/01/14
Endosulfan sulfate	ND	3.3	1.000	11/01/14
4,4'-DDD	6.1 C #	3.3	1.000	11/01/14
Endrin aldehyde	ND	3.3	1.000	11/01/14
4,4'-DDT	130	3.3	1.000	11/01/14
alpha-Chlordane	5.4	1.7	1.000	11/01/14
gamma-Chlordane	ND	1.7	1.000	11/01/14
Methoxychlor	ND	17	1.000	11/01/14
Toxaphene	ND	60	1.000	11/01/14

Surrogate	%REC	Limits	Diln Fac	Analyzed
TCMX	93	42-134	1.000	11/01/14
Decachlorobiphenyl	91	29-122	1.000	11/01/14

#= CCV drift outside limits; average CCV drift within limits per method requirements
C= Presence confirmed, but RPD between columns exceeds 40%
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B12-1.0-2.0	Batch#:	216971
Lab ID:	262098-005	Sampled:	10/29/14
Matrix:	Soil	Received:	10/30/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received	Analyzed:	11/01/14
Diln Fac:	10.00		

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND	17
beta-BHC	ND	17
gamma-BHC	ND	17
delta-BHC	ND	17
Heptachlor	ND	17
Aldrin	ND	17
Heptachlor epoxide	ND	17
Endosulfan I	ND	17
Dieldrin	ND	17
4,4'-DDE	460	33
Endrin	ND	33
Endosulfan II	ND	33
Endosulfan sulfate	ND	33
4,4'-DDD	ND	33
Endrin aldehyde	ND	33
4,4'-DDT	100	33
alpha-Chlordane	ND	17
gamma-Chlordane	ND	17
Methoxychlor	ND	170
Toxaphene	ND	600

Surrogate	%REC	Limits
TCMX	DO	42-134
Decachlorobiphenyl	DO	29-122

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B13-1.0-2.0	Batch#:	217113
Lab ID:	262098-007	Sampled:	10/29/14
Matrix:	Soil	Received:	10/30/14
Units:	ug/Kg	Prepared:	11/04/14
Basis:	as received	Analyzed:	11/05/14
Diln Fac:	5.000		

Analyte	Result	RL
alpha-BHC	ND	8.5
beta-BHC	ND	8.5
gamma-BHC	ND	8.5
delta-BHC	ND	8.5
Heptachlor	ND	8.5
Aldrin	ND	8.5
Heptachlor epoxide	ND	8.5
Endosulfan I	ND	8.5
Dieldrin	ND	8.5
4,4'-DDE	54	17
Endrin	ND	17
Endosulfan II	ND	17
Endosulfan sulfate	ND	17
4,4'-DDD	ND	17
Endrin aldehyde	ND	17
4,4'-DDT	ND	17
alpha-Chlordane	ND	8.5
gamma-Chlordane	ND	8.5
Methoxychlor	ND	85
Toxaphene	ND	300

Surrogate	%REC	Limits
TCMX	93	42-134
Decachlorobiphenyl	86	29-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC763826	Batch#:	216971
Matrix:	Soil	Prepared:	10/30/14
Units:	ug/Kg	Analyzed:	10/31/14

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	1.7
4,4'-DDE	ND	3.3
Endrin	ND #	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND #	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	60

Surrogate	%REC	Limits
TCMX	79	42-134
Decachlorobiphenyl	76	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC763827	Batch#:	216971
Matrix:	Soil	Prepared:	10/30/14
Units:	ug/Kg	Analyzed:	10/31/14

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.16	8.724	66	46-120
Heptachlor	13.16	8.756	67	41-124
Aldrin	13.16	8.759	67	48-122
Dieldrin	13.16	9.881	75	39-142
Endrin	13.16	8.476 #	64	45-138
4,4'-DDT	13.16	12.14	92	32-145

Surrogate	%REC	Limits
TCMX	69	42-134
Decachlorobiphenyl	70	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	ZZZZZZZZZZ	Batch#:	216971
MSS Lab ID:	261950-005	Sampled:	10/22/14
Matrix:	Soil	Received:	10/22/14
Units:	ug/Kg	Prepared:	10/30/14
Basis:	as received	Analyzed:	10/31/14
Diln Fac:	1.000		

Type: MS Cleanup Method: EPA 3620B
Lab ID: QC763828

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	<0.2161	13.43	10.08	75	42-136
Heptachlor	0.4999	13.43	11.37	81	40-144
Aldrin	1.313	13.43	10.59	69	45-143
Dieldrin	0.3453	13.43	11.13	80	47-145
Endrin	0.8832	13.43	9.246 #	62	46-150
4,4'-DDT	7.043	13.43	23.14	120	30-157

Surrogate	%REC	Limits
TCMX	83	42-134
Decachlorobiphenyl	82	29-122

Type: MSD Cleanup Method: EPA 3620B
Lab ID: QC763829

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	13.28	8.591	65	42-136	15	40
Heptachlor	13.28	10.29	74	40-144	9	46
Aldrin	13.28	9.044	58	45-143	15	41
Dieldrin	13.28	9.432	68	47-145	15	36
Endrin	13.28	8.304 #	56	46-150	10	41
4,4'-DDT	13.28	16.32	70	30-157	34	52

Surrogate	%REC	Limits
TCMX	73	42-134
Decachlorobiphenyl	66	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC764363	Batch#:	217113
Matrix:	Soil	Prepared:	11/04/14
Units:	ug/Kg	Analyzed:	11/05/14

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	1.7
4,4'-DDE	ND	3.3
Endrin	ND	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	60

Surrogate	%REC	Limits
TCMX	83	42-134
Decachlorobiphenyl	68	29-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC764367	Batch#:	217113
Matrix:	Soil	Prepared:	11/04/14
Units:	ug/Kg	Analyzed:	11/05/14

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.20	10.68	81	46-120
Heptachlor	13.20	11.32	86	41-124
Aldrin	13.20	11.30	86	48-122
Dieldrin	13.20	11.83	90	39-142
Endrin	13.20	17.49	132	45-138
4,4'-DDT	13.20	12.64	96	32-145

Surrogate	%REC	Limits
TCMX	84	42-134
Decachlorobiphenyl	74	29-122

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	ZZZZZZZZZZ	Batch#:	217113
MSS Lab ID:	262184-033	Sampled:	10/29/14
Matrix:	Soil	Received:	10/30/14
Units:	ug/Kg	Prepared:	11/04/14
Basis:	as received	Analyzed:	11/05/14
Diln Fac:	1.000		

Type: MS Lab ID: QC764368

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	<0.2185	13.43	9.865	73	42-136
Heptachlor	<0.1937	13.43	10.33	77	40-144
Aldrin	<0.2071	13.43	9.734	72	45-143
Dieldrin	<0.4025	13.43	10.96	82	47-145
Endrin	<0.5667	13.43	11.79	88	46-150
4,4'-DDT	0.8424	13.43	11.69	81	30-157

Surrogate	%REC	Limits
TCMX	72	42-134
Decachlorobiphenyl	68	29-122

Type: MSD Lab ID: QC764369

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	13.48	9.083	67	42-136	9	40
Heptachlor	13.48	9.547	71	40-144	8	46
Aldrin	13.48	9.158	68	45-143	6	41
Dieldrin	13.48	9.578	71	47-145	14	36
Endrin	13.48	10.12	75	46-150	16	41
4,4'-DDT	13.48	10.88	75	30-157	7	52

Surrogate	%REC	Limits
TCMX	72	42-134
Decachlorobiphenyl	60	29-122

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Arsenic

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Arsenic	Batch#:	217013
Matrix:	Soil	Sampled:	10/29/14
Units:	mg/Kg	Received:	10/30/14
Basis:	as received	Prepared:	11/01/14
Diln Fac:	1.000	Analyzed:	11/02/14

Field ID	Type	Lab ID	Result	RL
B16-1.0-2.0	SAMPLE	262098-001	4.7	0.24
B11-1.0-2.0	SAMPLE	262098-003	4.3	0.25
B12-1.0-2.0	SAMPLE	262098-005	4.3	0.25
B13-1.0-2.0	SAMPLE	262098-007	5.6	0.23
	BLANK	QC763959	ND	0.25

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Lead

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	217013
Matrix:	Soil	Sampled:	10/29/14
Units:	mg/Kg	Received:	10/30/14
Basis:	as received	Prepared:	11/01/14
Diln Fac:	1.000	Analyzed:	11/02/14

Field ID	Type	Lab ID	Result	RL
B16-1.0-2.0	SAMPLE	262098-001	5.3	0.24
B11-1.0-2.0	SAMPLE	262098-003	5.3	0.25
B12-1.0-2.0	SAMPLE	262098-005	7.7	0.25
B13-1.0-2.0	SAMPLE	262098-007	11	0.23
	BLANK	QC763959	ND	0.25

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Arsenic

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Arsenic	Diln Fac:	5.000
Field ID:	ZZZZZZZZZZ	Batch#:	217013
MSS Lab ID:	262103-001	Sampled:	10/29/14
Matrix:	Soil	Received:	10/29/14
Units:	mg/Kg	Prepared:	11/01/14
Basis:	as received	Analyzed:	11/02/14

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC763960		50.00	52.69	105	80-120		
BSD	QC763961		50.00	50.22	100	80-120	5	20
MS	QC763962	3.633	48.54	58.58	113	72-120		
MSD	QC763963		45.87	52.43	106	72-120	6	30

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Lead

Lab #:	262098	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3050B
Project#:	1098.007.01.001	Analysis:	EPA 6010B
Analyte:	Lead	Diln Fac:	5.000
Field ID:	ZZZZZZZZZZ	Batch#:	217013
MSS Lab ID:	262103-001	Sampled:	10/29/14
Matrix:	Soil	Received:	10/29/14
Units:	mg/Kg	Prepared:	11/01/14
Basis:	as received	Analyzed:	11/02/14

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC763960		50.00	50.66	101	80-120		
BSD	QC763961		50.00	48.28	97	80-120	5	20
MS	QC763962	6.051	48.54	64.19	120	52-122		
MSD	QC763963		45.87	56.45	110	52-122	8	49

RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 262486
ANALYTICAL REPORT

PES Environmental, Inc.	Project : 1098.007.01.001
1682 Novato Boulevard	Location : 39155 & 39183 State St., Fremont
Novato, CA 94947	Level : II

Sample ID	Lab ID
B3-3.0-4.0	262486-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____ Date: 11/19/2014

Will S Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**262486**
Client:	**PES Environmental, Inc.**
Project:	**1098.007.01.001**
Location:	**39155 & 39183 State St., Fremont**
Request Date:	**11/13/14**
Samples Received:	**10/27/14**

This data package contains sample and QC results for one soil sample, requested for the above referenced project on 11/13/14. The sample was received cold and intact.

Pesticides (EPA 8081A):

All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. All samples underwent florisil cleanup using EPA Method 3620C. Low recovery was observed for 4,4'-DDT in the MSD of B8-3.0-4.0 (lab # 262487-003); the LCS was within limits. High recovery was also observed for 4,4'-DDT in the MS of B8-3.0-4.0 (lab # 262487-003); the LCS was within limits. High RPD was also observed for 4,4'-DDT in the MS/MSD of B8-3.0-4.0 (lab # 262487-003). 262486-001 was prepared outside of hold time; affected data was qualified with "b". No other analytical problems were encountered.

Subject: RE: 1098.007.01.001 - C&T Login Summary (262033)
From: "Justin J. Patterson" <jpatterson@pesenv.com>
Date: 11/13/2014 10:14 AM
To: Will S Rice <will.rice@ctberk.com>

262486

From: Will S Rice [mailto:will.rice@ctberk.com]
Sent: Wednesday, October 29, 2014 3:02 PM
To: Justin J. Patterson; Carl J. Michelsen; Gavin M. Creps
Subject: 1098.007.01.001 - C&T Login Summary (262033)

Will

Please run the following sample (on hold) for pesticides on a standard TAT:

- B3-3.0-4.0

C&T Login Summary for 262033

Project: 1098.007.01.001 **Site:** 39155 & 39183 State St., Fremont **Lab Login #:** 262033 **Report Level:** II **Report Due:** 11/03/14 **PO#:** **C&T Proj Mgr:** Will S Rice	**Report To:** PES Environmental, Inc. 1682 Novato Boulevard Suite 100 Novato, CA 94947 ATTN: Carl Michelsen (415) 899-1600	**Bill To:** PES Environmental 1682 Novato Boulevard Suite 100 Novato, CA 94947 ATTN: Accounts Payable (415) 899-1600

Client ID	Lab ID	Sampled	Received	Matrix	Analyses	COC #	Comments
B1-1.0-2.0	001	10/27	10/27				
				Soil	6010-AS		
				Soil	6010-PB		
				Soil	8081		
				Soil	E8260		
				Soil	ICP PREP		
B1-3.0-4.0	002	10/27	10/27				
				Soil	HOLD		
B3-1.0-2.0	003	10/27	10/27				
				Soil	6010-AS		
				Soil	6010-PB		
				Soil	8081		
				Soil	E8260		
				Soil	ICP PREP		
B3-3.0-4.0	004	10/27	10/27				
				Soil	HOLD		
B5-1.0-2.0	005	10/27	10/27				
				Soil	6010-AS		
				Soil	6010-PB		

				Soil	8081
				Soil	E8260
				Soil	ICP PREP
B5-3.0-4.0	006	10/27	10/27		
				Soil	E8260

Email compiled and sent 10/29/14 03:02 PM.

PES Environmental, Inc.
Engineering & Environmental Services

262033

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: Curtis & Tompkins
SAMPLERS: Gavin Creps / Matt Eddy
JOB NUMBER: 1098-007-01-001
NAME / LOCATION: 37155 & 37183 State St. Fremont
PROJECT MANAGER: Carl Michelson
RECORDER: Gavin Creps

DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX: Vapor	Water	Soil	Sediment	# of Containers & Preservatives: Unpres.	EnCore	H_2SO_4	HNO_3	HCl	Refrig.	Ice/Blue	DEPTH IN FEET	ANALYSIS REQUESTED: EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Pesticides	Total Lead	Arsenic
14	10	27	1125	B1-1.0-2.0			X		1					1	2										X	X	
14	10	27	1140	B1-3.0-4.0			X		1					1	2	HOLD											
14	10	27	1415	B3-1.0-2.0			X		1					1	2										X	X	
14	10	27	1420	B3-3.0-4.0			X		1					1	2	HOLD											
14	10	27	1435	B5-1.0-2.0			X		1					1	2										X	X	
14	10	27	1440	B5-3.0-4.0			X		1					1	2	HOLD											

wipe 10/27/14

NOTES

Turn Around Time: Standard
Terra core kit submitted for samples B1-1.0-2.0, B3-1.0-2.0 & B5-3.0-4.0 please hold for instruction.

Page 1 of 1

CHAIN OF CUSTODY RECORD

		DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	10/27/14	1515
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	10/27/14	1800
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)		
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)		

METHOD OF SHIPMENT:

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

attach on ice Coid RC

COOLER RECEIPT CHECKLIST Curtis & Tompkins, Ltd.

Login # 262033 Date Received 10/27/14 Number of coolers 1
Client DES Project 1098-007-01-001

Date Opened 10/27 By (print) FJ (sign)
Date Logged in " " By (print) " (sign) "

1. Did cooler come with a shipping slip (airbill, etc)_____ YES (NO)
Shipping info_____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name_____ Date_____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received?_____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form)__ (YES) NO
6. Indicate the packing in cooler: (if other, describe)_____

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C)_____

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present?_____ (YES) NO
If YES, what time were they transferred to freezer? 1950
9. Did all bottles arrive unbroken/unopened?_____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called?_____ By_____ Date:_____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 262486

Results for any subcontracted analyses are not included in this summary.

Client : PES Environmental, Inc.
Project : 1098.007.01.001
Location : 39155 & 39183 State St., Fremont

Client Sample ID : B3-3.0-4.0 Laboratory Sample ID : 262486-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Heptachlor epoxide	1.8	b	1.7	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDE	28	#,b	3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B
4,4'-DDT	18	#,b	3.3	ug/Kg	As Recd	1.000	EPA 8081A	EPA 3550B

# = CCV drift outside limits; average CCV drift within limits per method requirements
b = See narrative

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262486	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B3-3.0-4.0	Batch#:	217461
Lab ID:	262486-001	Sampled:	10/27/14
Matrix:	Soil	Received:	10/27/14
Units:	ug/Kg	Prepared:	11/13/14
Basis:	as received	Analyzed:	11/14/14
Diln Fac:	1.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND b	1.7
beta-BHC	ND b	1.7
gamma-BHC	ND b	1.7
delta-BHC	ND b	1.7
Heptachlor	ND b	1.7
Aldrin	ND b	1.7
Heptachlor epoxide	1.8 b	1.7
Endosulfan I	ND b	1.7
Dieldrin	ND b	1.7
4,4'-DDE	28 # b	3.3
Endrin	ND b	3.3
Endosulfan II	ND b	3.3
Endosulfan sulfate	ND b	3.3
4,4'-DDD	ND b	3.3
Endrin aldehyde	ND b	3.3
4,4'-DDT	18 # b	3.3
alpha-Chlordane	ND b	1.7
gamma-Chlordane	ND b	1.7
Methoxychlor	ND b	17
Toxaphene	ND b	60

Surrogate	%REC	Limits
TCMX	85 b	42-134
Decachlorobiphenyl	113 b	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements
b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262486	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC765760	Batch#:	217461
Matrix:	Soil	Prepared:	11/13/14
Units:	ug/Kg	Analyzed:	11/14/14

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	1.7
4,4'-DDE	ND	3.3
Endrin	ND	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	60

Surrogate	%REC	Limits
TCMX	98	42-134
Decachlorobiphenyl	77	29-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262486	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC765761	Batch#:	217461
Matrix:	Soil	Prepared:	11/13/14
Units:	ug/Kg	Analyzed:	11/14/14

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.14	10.56	80	46-120
Heptachlor	13.14	11.06	84	41-124
Aldrin	13.14	10.67	81	48-122
Dieldrin	13.14	12.50 #	95	39-142
Endrin	13.14	11.85 #	90	45-138
4,4'-DDT	13.14	11.65 #	89	32-145

Surrogate	%REC	Limits
TCMX	85	42-134
Decachlorobiphenyl	71	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262486	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B8-3.0-4.0	Batch#:	217461
MSS Lab ID:	262487-003	Sampled:	10/28/14
Matrix:	Soil	Received:	10/28/14
Units:	ug/Kg	Prepared:	11/13/14
Basis:	as received	Analyzed:	11/14/14
Diln Fac:	5.000		

Type: MS Cleanup Method: EPA 3620B
Lab ID: QC765762

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	1.278	13.27	14.96	103	42-136
Heptachlor	3.041	13.27	14.75	88	40-144
Aldrin	<1.129	13.27	12.93	97	45-143
Dieldrin	9.290	13.27	21.60 #	93	47-145
Endrin	14.15	13.27	25.16 #	83	46-150
4,4'-DDT	19.13	13.27	47.33 #	212 *	30-157

Surrogate	%REC	Limits
TCMX	97	42-134
Decachlorobiphenyl	96	29-122

Type: MSD Cleanup Method: EPA 3620B
Lab ID: QC765763

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	13.29	14.68	101	42-136	2	40
Heptachlor	13.29	19.32	122	40-144	27	46
Aldrin	13.29	13.82	104	45-143	7	41
Dieldrin	13.29	23.25 #	105	47-145	7	36
Endrin	13.29	29.89 #	118	46-150	17	41
4,4'-DDT	13.29	16.34 #	-21 *	30-157	97 *	52

Surrogate	%REC	Limits
TCMX	105	42-134
Decachlorobiphenyl	106	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements
*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 262487
ANALYTICAL REPORT

PES Environmental, Inc.	Project : 1098.007.01.001
1682 Novato Boulevard	Location : State Street, Fremont
Novato, CA 94947	Level : II

Sample ID	Lab ID
B6-3.0-4.0	262487-001
B7-3.0-4.0	262487-002
B8-3.0-4.0	262487-003

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Will Rice Date: 11/19/2014

Will S Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**262487**
Client:	**PES Environmental, Inc.**
Project:	**1098.007.01.001**
Location:	**State Street, Fremont**
Request Date:	**11/13/14**
Samples Received:	**10/28/14**

This data package contains sample and QC results for three soil samples, requested for the above referenced project on 11/13/14. The samples were received cold and intact.

Pesticides (EPA 8081A):

All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. All samples underwent florisil cleanup using EPA Method 3620C. Low recovery was observed for 4,4'-DDT in the MSD of B8-3.0-4.0 (lab # 262487-003); the LCS was within limits. High recovery was also observed for 4,4'-DDT in the MS of B8-3.0-4.0 (lab # 262487-003); the LCS was within limits. High RPD was also observed for 4,4'-DDT in the MS/MSD of B8-3.0-4.0 (lab # 262487-003). 262487-001, 262487-002, and 262487-003 were prepared outside of hold time; affected data was qualified with "b". B8-3.0-4.0 (lab # 262487-003) was diluted due to the color of the sample extract. No other analytical problems were encountered.

262487

Subject: RE: 1098.007.01.001 - C&T Login Summary (262069)
From: "Justin J. Patterson" <jpatterson@pesenv.com>
Date: 11/13/2014 10:15 AM
To: Will S Rice <will.rice@ctberk.com>

Will

Please run the following sample (on hold) for pesticides on a standard TAT:

- B6-3.0-4.0
- B7-3.0-4.0
- B8-3.0-4.0

From: Will S Rice [mailto:will.rice@ctberk.com]
Sent: Wednesday, October 29, 2014 3:03 PM
To: Justin J. Patterson; Carl J. Michelsen; Gavin M. Creps
Subject: 1098.007.01.001 - C&T Login Summary (262069)

8260 analysis added

C&T Login Summary for 262069

Project: 1098.007.01.001 **Site:** State Street, Fremont **Lab Login #:** 262069 **Report Level:** II **Report Due:** 11/04/14 **PO#:** **C&T Proj Mgr:** Will S Rice	**Report To:** PES Environmental, Inc. 1682 Novato Boulevard Suite 100 Novato, CA 94947 ATTN: Carl Michelsen (415) 899-1600	**Bill To:** PES Environmental 1682 Novato Boulevard Suite 100 Novato, CA 94947 ATTN: Accounts Payable (415) 899-1600

Client ID	Lab ID	Sampled	Received	Matrix	Analyses	COC #	Comments
B6-1.0-2.0	001	10/28	10/28				
				Soil	6010-AS		
				Soil	6010-PB		
				Soil	8081		
				Soil	E8260		
				Soil	ICP PREP		
B6-3.0-4.0	002	10/28	10/28				
				Soil	E8260		
B7-1.0-2.0	003	10/28	10/28				
				Soil	6010-AS		
				Soil	6010-PB		

				Soil	8081
				Soil	E8260
				Soil	ICP PREP
B7-3.0-4.0	004	10/28	10/28		
				Soil	HOLD
B8-1.0-2.0	005	10/28	10/28		
				Soil	6010-AS
				Soil	6010-PB
				Soil	8081
				Soil	E8260
				Soil	ICP PREP
B8-3.0-4.0	006	10/28	10/28		
				Soil	HOLD

Email compiled and sent 10/29/14 03:02 PM.

262069

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: Curtis & Tompkins
JOB NUMBER: 1098-007-01-001
NAME / LOCATION: State Street, Fremont
PROJECT MANAGER: Carl Michelson
SAMPLERS: Gavin Creps
RECORDER: Gavin Creps

YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	Vapor	Water	Soil	Sedim't	Unpres.	EnCore	H_2SO_4	HNO_3	HCl	[illegible]	[illegible]	DEPTH IN FEET	EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Organochlorine Pesticides	Total Lead	Arsenic
14	10	28	1255	B6-1.0-2.0			X		1					1	2										X	X	X
↓	↓	↓	1300	B6-3.0-4.0			X		1					1	2	HOLD											
			1340	B7-1.0-2.0			X		1					1	2										X	X	X
			1350	B7-3.0-4.0			X		1					1	2	HOLD											
			1435	B8-1.0-2.0			X		1					1	2										X	X	X
			1440	B8-3.0-4.0			X		1					1	2	HOLD											

NOTES

Turn Around Time: Standard

Terra core set submitted for samples 1.0-2.0 please hold for instruction

Page 1 of 1

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
[signature]	[signature]	10/28/14	1450
[signature]	[signature]	10/28/14	1800

DISPATCHED BY: (Signature) DATE TIME RECEIVED FOR LAB BY: (Signature) DATE TIME

METHOD OF SHIPMENT:

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

intact on ice cold [illegible]

COOLER RECEIPT CHECKLIST Curtis & Tompkins, Ltd.

Login # 262069 Date Received 10/28/14 Number of coolers 1
Client PES Project 1098.007-01-001

Date Opened 10/28 By (print) " FJ " (sign) " "
Date Logged in " " By (print) " " (sign) " "

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
Shipping info

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many Name Date
2B. Were custody seals intact upon arrival? YES NO (N/A)
3. Were custody papers dry and intact when received? (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe)

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C
Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 2-8°
☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun
☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? (YES) NO
If YES, what time were they transferred to freezer? 10/28/14 @ 21:21
9. Did all bottles arrive unbroken/unopened? (YES) NO
10. Are there any missing / extra samples? YES (NO)
11. Are samples in the appropriate containers for indicated tests? (YES) NO
12. Are sample labels present, in good condition and complete? (YES) NO
13. Do the sample labels agree with custody papers? (YES) NO
14. Was sufficient amount of sample sent for tests requested? (YES) NO
15. Are the samples appropriately preserved? (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? YES NO (N/A)
17. Did you document your preservative check? YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? YES NO (N/A)
21. Was the client contacted concerning this sample delivery? YES (NO)
If YES, Who was called? By Date:

COMMENTS

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 262487

Results for any subcontracted analyses are not included in this summary.

Client : PES Environmental, Inc.
Project : 1098.007.01.001
Location : State Street, Fremont

Client Sample ID : B6-3.0-4.0 Laboratory Sample ID : 262487-001

No Detections

Client Sample ID : B7-3.0-4.0 Laboratory Sample ID : 262487-002

No Detections

Client Sample ID : B8-3.0-4.0 Laboratory Sample ID : 262487-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Dieldrin	9.3	#,b	8.5	ug/Kg	As Recd	5.000	EPA 8081A	EPA 3550B
4,4'-DDE	260	#,b	17	ug/Kg	As Recd	5.000	EPA 8081A	EPA 3550B
4,4'-DDT	19	C,b	17	ug/Kg	As Recd	5.000	EPA 8081A	EPA 3550B

# = CCV drift outside limits; average CCV drift within limits per method requiremer
C = Presence confirmed, but RPD between columns exceeds 40%
b = See narrative

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262487	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B6-3.0-4.0	Batch#:	217461
Lab ID:	262487-001	Sampled:	10/28/14
Matrix:	Soil	Received:	10/28/14
Units:	ug/Kg	Prepared:	11/13/14
Basis:	as received	Analyzed:	11/14/14
Diln Fac:	1.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND b	1.7
beta-BHC	ND b	1.7
gamma-BHC	ND b	1.7
delta-BHC	ND b	1.7
Heptachlor	ND b	1.7
Aldrin	ND b	1.7
Heptachlor epoxide	ND b	1.7
Endosulfan I	ND b	1.7
Dieldrin	ND b	1.7
4,4'-DDE	ND b	3.3
Endrin	ND b	3.3
Endosulfan II	ND b	3.3
Endosulfan sulfate	ND b	3.3
4,4'-DDD	ND b	3.3
Endrin aldehyde	ND b	3.3
4,4'-DDT	ND b	3.3
alpha-Chlordane	ND b	1.7
gamma-Chlordane	ND b	1.7
Methoxychlor	ND b	17
Toxaphene	ND b	60

Surrogate	%REC	Limits
TCMX	82 b	42-134
Decachlorobiphenyl	95 b	29-122

b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262487	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B7-3.0-4.0	Batch#:	217461
Lab ID:	262487-002	Sampled:	10/28/14
Matrix:	Soil	Received:	10/28/14
Units:	ug/Kg	Prepared:	11/13/14
Basis:	as received	Analyzed:	11/14/14
Diln Fac:	1.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND b	1.7
beta-BHC	ND b	1.7
gamma-BHC	ND b	1.7
delta-BHC	ND b	1.7
Heptachlor	ND b	1.7
Aldrin	ND b	1.7
Heptachlor epoxide	ND b	1.7
Endosulfan I	ND b	1.7
Dieldrin	ND b	1.7
4,4'-DDE	ND b	3.3
Endrin	ND b	3.3
Endosulfan II	ND b	3.3
Endosulfan sulfate	ND b	3.3
4,4'-DDD	ND b	3.3
Endrin aldehyde	ND b	3.3
4,4'-DDT	ND b	3.3
alpha-Chlordane	ND b	1.7
gamma-Chlordane	ND b	1.7
Methoxychlor	ND b	17
Toxaphene	ND b	60

Surrogate	%REC	Limits
TCMX	97 b	42-134
Decachlorobiphenyl	93 b	29-122

b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262487	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B8-3.0-4.0	Batch#:	217461
Lab ID:	262487-003	Sampled:	10/28/14
Matrix:	Soil	Received:	10/28/14
Units:	ug/Kg	Prepared:	11/13/14
Basis:	as received	Analyzed:	11/14/14
Diln Fac:	5.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND b	8.5
beta-BHC	ND b	8.5
gamma-BHC	ND b	8.5
delta-BHC	ND b	8.5
Heptachlor	ND b	8.5
Aldrin	ND b	8.5
Heptachlor epoxide	ND b	8.5
Endosulfan I	ND b	8.5
Dieldrin	9.3 # b	8.5
4,4'-DDE	260 # b	17
Endrin	ND b	17
Endosulfan II	ND b	17
Endosulfan sulfate	ND b	17
4,4'-DDD	ND b	17
Endrin aldehyde	ND b	17
4,4'-DDT	19 C b	17
alpha-Chlordane	ND b	8.5
gamma-Chlordane	ND b	8.5
Methoxychlor	ND b	85
Toxaphene	ND b	300

Surrogate	%REC	Limits
TCMX	102 b	42-134
Decachlorobiphenyl	87 b	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements
C= Presence confirmed, but RPD between columns exceeds 40%
b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262487	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC765760	Batch#:	217461
Matrix:	Soil	Prepared:	11/13/14
Units:	ug/Kg	Analyzed:	11/14/14

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	1.7
4,4'-DDE	ND	3.3
Endrin	ND	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	60

Surrogate	%REC	Limits
TCMX	98	42-134
Decachlorobiphenyl	77	29-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262487	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC765761	Batch#:	217461
Matrix:	Soil	Prepared:	11/13/14
Units:	ug/Kg	Analyzed:	11/14/14

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.14	10.56	80	46-120
Heptachlor	13.14	11.06	84	41-124
Aldrin	13.14	10.67	81	48-122
Dieldrin	13.14	12.50 #	95	39-142
Endrin	13.14	11.85 #	90	45-138
4,4'-DDT	13.14	11.65 #	89	32-145

Surrogate	%REC	Limits
TCMX	85	42-134
Decachlorobiphenyl	71	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262487	Location:	State Street, Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B8-3.0-4.0	Batch#:	217461
MSS Lab ID:	262487-003	Sampled:	10/28/14
Matrix:	Soil	Received:	10/28/14
Units:	ug/Kg	Prepared:	11/13/14
Basis:	as received	Analyzed:	11/14/14
Diln Fac:	5.000		

Type: MS Cleanup Method: EPA 3620B
Lab ID: QC765762

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	1.278	13.27	14.96	103	42-136
Heptachlor	3.041	13.27	14.75	88	40-144
Aldrin	<1.129	13.27	12.93	97	45-143
Dieldrin	9.290	13.27	21.60 #	93	47-145
Endrin	14.15	13.27	25.16 #	83	46-150
4,4'-DDT	19.13	13.27	47.33 #	212 *	30-157

Surrogate	%REC	Limits
TCMX	97	42-134
Decachlorobiphenyl	96	29-122

Type: MSD Cleanup Method: EPA 3620B
Lab ID: QC765763

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	13.29	14.68	101	42-136	2	40
Heptachlor	13.29	19.32	122	40-144	27	46
Aldrin	13.29	13.82	104	45-143	7	41
Dieldrin	13.29	23.25 #	105	47-145	7	36
Endrin	13.29	29.89 #	118	46-150	17	41
4,4'-DDT	13.29	16.34 #	-21 *	30-157	97 *	52

Surrogate	%REC	Limits
TCMX	105	42-134
Decachlorobiphenyl	106	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements
*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 262490
ANALYTICAL REPORT

PES Environmental, Inc.	Project	: 1098.007.01.001
1682 Novato Boulevard	Location	: 39155 & 39183 State St., Fremont
Novato, CA 94947	Level	: II

Sample ID	Lab ID
B11-3.0-4.0	262490-001
B12-3.0-4.0	262490-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Will Rice Date: 11/19/2014

Will S Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**262490**
Client:	**PES Environmental, Inc.**
Project:	**1098.007.01.001**
Location:	**39155 & 39183 State St., Fremont**
Request Date:	**11/13/14**
Samples Received:	**10/30/14**

This data package contains sample and QC results for two soil samples, requested for the above referenced project on 11/13/14. The samples were received cold and intact.

Pesticides (EPA 8081A):

All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. All samples underwent florisil cleanup using EPA Method 3620C. Low recovery was observed for 4,4'-DDT in the MSD of B8-3.0-4.0 (lab # 262487-003); the LCS was within limits. High recovery was also observed for 4,4'-DDT in the MS of B8-3.0-4.0 (lab # 262487-003); the LCS was within limits, and this analyte was not detected at or above the RL in the associated samples. High RPD was also observed for 4,4'-DDT in the MS/MSD of B8-3.0-4.0 (lab # 262487-003); this analyte was not detected at or above the RL in the associated samples. 262490-001 and 262490-002 were prepared outside of hold time; affected data was qualified with "b". No other analytical problems were encountered.

262490

Subject: RE: 1098.007.01.001 - C&T Login Summary (262098)
From: "Justin J. Patterson" <jpatterson@pesenv.com>
Date: 11/13/2014 10:16 AM
To: Will S Rice <will.rice@ctberk.com>

Will

Please run the following sample (on hold) for pesticides on a standard TAT:

- B11-3.0-4.0

From: Will S Rice [mailto:will.rice@ctberk.com]
Sent: Thursday, October 30, 2014 2:19 PM
To: Justin J. Patterson; Carl J. Michelsen; Gavin M. Creps
Subject: 1098.007.01.001 - C&T Login Summary (262098)

C&T Login Summary for 262098

Project: 1098.007.01.001 **Site:** 39155 & 39183 State St., Fremont **Lab Login #:** 262098 **Report Level:** II **Report Due:** 11/06/14 **PO#:** **C&T Proj Mgr:** Will S Rice	**Report To:** PES Environmental, Inc. 1682 Novato Boulevard Suite 100 Novato, CA 94947 ATTN: Carl Michelsen (415) 899-1600	**Bill To:** PES Environmental 1682 Novato Boulevard Suite 100 Novato, CA 94947 ATTN: Accounts Payable (415) 899-1600

Client ID	Lab ID	Sampled	Received	Matrix	Analyses	COC #	Comments
B16-1.0-2.0	001	10/29	10/30				
				Soil	6010-AS		
				Soil	6010-PB		
				Soil	8081		
				Soil	E8260		
				Soil	ICP PREP		
B16-3.0-4.0	002	10/29	10/30				
				Soil	E8260		
B11-1.0-2.0	003	10/29	10/30				
				Soil	6010-AS		
				Soil	6010-PB		
				Soil	8081		
				Soil	E8260		
				Soil	ICP PREP		
B11-3.0-4..0	004	10/29	10/30				
				Soil	HOLD		
B12-1.0-2.0	005	10/29	10/30				
				Soil	6010-AS		
				Soil	6010-PB		
				Soil	8081		
				Soil	E8260		

				Soil	ICP PREP
B12-3.0-4.0	006	10/29	10/30		
				Soil	HOLD
B13-1.0-2.0	007	10/29	10/30		
				Soil	6010-AS
				Soil	6010-PB
				Soil	8081
				Soil	E8260
				Soil	ICP PREP
B13-3.0-4..0	008	10/29	10/30		
				Soil	HOLD

Email compiled and sent 10/30/14 02:19 PM.

PES Environmental, Inc.
Engineering & Environmental Services

CHAIN OF CUSTODY RECORD

262098

1682 NOVATO BOULEVARD, SUITE 100
NOVATO, CALIFORNIA 94947
(415) 899-1600 FAX (415) 899-1601

LABORATORY: Curtis & Tompkins
SAMPLERS: Gavin Creps
JOB NUMBER: 1098-007-01-001
NAME / LOCATION: 39155 & 39183 State St. Freemont
PROJECT MANAGER: Carl Michelson
RECORDER: Gavin Creps

DATE YR	MO	DY	TIME	SAMPLE NUMBER / DESIGNATION	MATRIX Vapor	Water	Soil	Sedim't	# of Containers & Preservatives Unpres.	EnCore	H_2SO_4	HNO_3	HCl	Actual	UPBW	DEPTH IN FEET	ANALYSIS REQUESTED EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	Organochlorine Pesticides	Total Lead	Arsenic
14	10	29	1200	B16-1.0-2.0			X		1					1	2				X						X	X	X
			1205	B16-3.0-4.0			X		1					1	2				X								
			1225	B11-1.0-2.0			X		1					1	2				X						X	X	X
			1230	B11-3.0-4.0			X		1					1	2				X								
			1245	B12-1.0-2.0			X		1					1	2				X						X	X	X
			1250	B12-3.0-4.0			X		1					1	2				X								
			1310	B13-1.0-2.0			X		1					1	2				X						X	X	X
			1315	B13-3.0-4.0			X		1					1	2				X								

NOTES

Turn Around Time: Standard

Page 1 of 1

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE 10/29/14	TIME 1345
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE 10/29/14	TIME 1640
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature) DATE TIME	RECEIVED FOR LAB BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:			

WHITE-Laboratory COPY YELLOW-Project Office Copy PINK-Field or Office Copy

Intact on ice cold RL

COOLER RECEIPT CHECKLIST Curtis & Tompkins, Ltd.

Login # 262098 Date Received 10/29 Number of coolers 1
Client PES Project 1098.007.01.001

Date Opened 10/29 By (print) EJ (sign)
Date Logged in 10/30 By (print) EJ (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
Shipping info

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many Name Date
2B. Were custody seals intact upon arrival? YES NO (N/A)
3. Were custody papers dry and intact when received? (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe)

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C)

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? (YES) NO
If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? (YES) NO
10. Are there any missing / extra samples? YES (NO)
11. Are samples in the appropriate containers for indicated tests? (YES) NO
12. Are sample labels present, in good condition and complete? (YES) NO
13. Do the sample labels agree with custody papers? (YES) NO
14. Was sufficient amount of sample sent for tests requested? (YES) NO
15. Are the samples appropriately preserved? (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? YES NO (N/A)
17. Did you document your preservative check? YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? (YES) NO N/A
20. Are bubbles > 6mm absent in VOA samples? YES NO (N/A)
21. Was the client contacted concerning this sample delivery? YES (NO)
If YES, Who was called? By Date:

COMMENTS

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 262490

Results for any subcontracted analyses are not included in this summary.

Client : PES Environmental, Inc.
Project : 1098.007.01.001
Location : 39155 & 39183 State St., Fremont

Client Sample ID : B11-3.0-4.0 Laboratory Sample ID : 262490-001

No Detections

Client Sample ID : B12-3.0-4.0 Laboratory Sample ID : 262490-002

No Detections

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262490	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B11-3.0-4.0	Batch#:	217461
Lab ID:	262490-001	Sampled:	10/29/14
Matrix:	Soil	Received:	10/30/14
Units:	ug/Kg	Prepared:	11/13/14
Basis:	as received	Analyzed:	11/14/14
Diln Fac:	1.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND b	1.7
beta-BHC	ND b	1.7
gamma-BHC	ND b	1.7
delta-BHC	ND b	1.7
Heptachlor	ND b	1.7
Aldrin	ND b	1.7
Heptachlor epoxide	ND b	1.7
Endosulfan I	ND b	1.7
Dieldrin	ND b	1.7
4,4'-DDE	ND b	3.3
Endrin	ND b	3.3
Endosulfan II	ND b	3.3
Endosulfan sulfate	ND b	3.3
4,4'-DDD	ND b	3.3
Endrin aldehyde	ND b	3.3
4,4'-DDT	ND b	3.3
alpha-Chlordane	ND b	1.7
gamma-Chlordane	ND b	1.7
Methoxychlor	ND b	17
Toxaphene	ND b	60

Surrogate	%REC	Limits
TCMX	108 b	42-134
Decachlorobiphenyl	115 b	29-122

b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Organochlorine Pesticides

Lab #:	262490	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B12-3.0-4.0	Batch#:	217461
Lab ID:	262490-002	Sampled:	10/29/14
Matrix:	Soil	Received:	10/30/14
Units:	ug/Kg	Prepared:	11/13/14
Basis:	as received	Analyzed:	11/14/14
Diln Fac:	1.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND b	1.7
beta-BHC	ND b	1.7
gamma-BHC	ND b	1.7
delta-BHC	ND b	1.7
Heptachlor	ND b	1.7
Aldrin	ND b	1.7
Heptachlor epoxide	ND b	1.7
Endosulfan I	ND b	1.7
Dieldrin	ND b	1.7
4,4'-DDE	ND b	3.3
Endrin	ND b	3.3
Endosulfan II	ND b	3.3
Endosulfan sulfate	ND b	3.3
4,4'-DDD	ND b	3.3
Endrin aldehyde	ND b	3.3
4,4'-DDT	ND b	3.3
alpha-Chlordane	ND b	1.7
gamma-Chlordane	ND b	1.7
Methoxychlor	ND b	17
Toxaphene	ND b	60

Surrogate	%REC	Limits
TCMX	92 b	42-134
Decachlorobiphenyl	89 b	29-122

b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262490	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC765760	Batch#:	217461
Matrix:	Soil	Prepared:	11/13/14
Units:	ug/Kg	Analyzed:	11/14/14

Cleanup Method: EPA 3620B

Analyte	Result	RL
alpha-BHC	ND	1.7
beta-BHC	ND	1.7
gamma-BHC	ND	1.7
delta-BHC	ND	1.7
Heptachlor	ND	1.7
Aldrin	ND	1.7
Heptachlor epoxide	ND	1.7
Endosulfan I	ND	1.7
Dieldrin	ND	1.7
4,4'-DDE	ND	3.3
Endrin	ND	3.3
Endosulfan II	ND	3.3
Endosulfan sulfate	ND	3.3
4,4'-DDD	ND	3.3
Endrin aldehyde	ND	3.3
4,4'-DDT	ND	3.3
alpha-Chlordane	ND	1.7
gamma-Chlordane	ND	1.7
Methoxychlor	ND	17
Toxaphene	ND	60

Surrogate	%REC	Limits
TCMX	98	42-134
Decachlorobiphenyl	77	29-122

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262490	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC765761	Batch#:	217461
Matrix:	Soil	Prepared:	11/13/14
Units:	ug/Kg	Analyzed:	11/14/14

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.14	10.56	80	46-120
Heptachlor	13.14	11.06	84	41-124
Aldrin	13.14	10.67	81	48-122
Dieldrin	13.14	12.50 #	95	39-142
Endrin	13.14	11.85 #	90	45-138
4,4'-DDT	13.14	11.65 #	89	32-145

Surrogate	%REC	Limits
TCMX	85	42-134
Decachlorobiphenyl	71	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements

Curtis & Tompkins, Ltd.

Batch QC Report

Organochlorine Pesticides

Lab #:	262490	Location:	39155 & 39183 State St., Fremont
Client:	PES Environmental, Inc.	Prep:	EPA 3550B
Project#:	1098.007.01.001	Analysis:	EPA 8081A
Field ID:	B8-3.0-4.0	Batch#:	217461
MSS Lab ID:	262487-003	Sampled:	10/28/14
Matrix:	Soil	Received:	10/28/14
Units:	ug/Kg	Prepared:	11/13/14
Basis:	as received	Analyzed:	11/14/14
Diln Fac:	5.000		

Type: MS Cleanup Method: EPA 3620B
Lab ID: QC765762

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	1.278	13.27	14.96	103	42-136
Heptachlor	3.041	13.27	14.75	88	40-144
Aldrin	<1.129	13.27	12.93	97	45-143
Dieldrin	9.290	13.27	21.60 #	93	47-145
Endrin	14.15	13.27	25.16 #	83	46-150
4,4'-DDT	19.13	13.27	47.33 #	212 *	30-157

Surrogate	%REC	Limits
TCMX	97	42-134
Decachlorobiphenyl	96	29-122

Type: MSD Cleanup Method: EPA 3620B
Lab ID: QC765763

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	13.29	14.68	101	42-136	2	40
Heptachlor	13.29	19.32	122	40-144	27	46
Aldrin	13.29	13.82	104	45-143	7	41
Dieldrin	13.29	23.25 #	105	47-145	7	36
Endrin	13.29	29.89 #	118	46-150	17	41
4,4'-DDT	13.29	16.34 #	-21 *	30-157	97 *	52

Surrogate	%REC	Limits
TCMX	105	42-134
Decachlorobiphenyl	106	29-122

#= CCV drift outside limits; average CCV drift within limits per method requirements
*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

TEG

TEG Northern California Inc.

10 November 2014

Mr. Carl Michelsen
PES Environmental, Inc.
1682 Novato Blvd., Suite 100
Novato, CA 94947

SUBJECT: DATA REPORT - PES Environmental, Inc. Project # 109800701001
39155 State Street, Fremont, California

TEG Project # 41027F

Mr. Michelsen:

Please find enclosed a data report for the samples analyzed from the above referenced project for PES Environmental. The samples were analyzed on site in TEG's mobile laboratory. TEG conducted a total of 19 analyses on 19 soil vapor samples.

-- 19 analyses on soil vapors for selected volatile organic hydrocarbons by EPA method 8260B.

The results of the analyses are summarized in the enclosed tables. Applicable detection limits and calibration data are included in the tables.

TEG appreciates the opportunity to have provided analytical services to PES Environmental on this project. If you have any further questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Mark Jerpbak
Director, TEG-Northern California

11350 Monier Park Place, Rancho Cordova, CA 95742 • Phone (916) 853-8010 • Fax (916) 853-8020

PES Envronmental, Inc.
Project # 109800701001
39155 State Street
Fremont, California

TEG Project #41027F

EPA Method 8260B VOC Analyses of SOIL VAPOR in micrograms per cubic meter of Vapor

SAMPLE NUMBER:		Probe Blank	Probe Blank	B1-SV	B2-SV	B4-SV	B4-SV	B4-SV
SAMPLE DEPTH (feet):				3.5	4.0	5.0	5.0	5.0
PURGE VOLUME:				3	3	1	3	10
COLLECTION DATE:		10/27/14	10/28/14	10/28/14	10/28/14	10/27/14	10/27/14	10/27/14
COLLECTION TIME:		11:09	09:29	14:17	13:51	12:35	12:52	13:06
DILUTION FACTOR:		1	1	1	1	1	1	1
	RL							
Dichlorodifluoromethane	100	nd	nd	nd	1900	1700	2300	2100
Vinyl Chloride	100	nd	nd	nd	nd	nd	nd	nd
Chloroethane	100	nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	100	nd	nd	nd	120	nd	nd	nd
1,1-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloro-trifluoroethane	100	nd	nd	nd	nd	nd	nd	nd
Methylene Chloride	100	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	100	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
Chloroform	100	nd	nd	nd	nd	160	160	nd
1,1,1-Trichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	100	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Benzene	80	nd	nd	nd	nd	320	480	510
Trichloroethene	100	nd	nd	nd	nd	nd	nd	nd
Toluene	200	nd	nd	nd	nd	1800	1500	780
1,1,2-Trichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene	100	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene	100	nd	nd	nd	nd	nd	160	230
1,1,1,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd	nd
m,p-Xylene	200	nd	nd	nd	nd	360	520	690
o-Xylene	100	nd	nd	nd	nd	140	190	260
1,1,2,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10000	nd	nd	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		102%	100%	104%	101%	103%	100%	99%
Surrogate Recovery (1,2-DCA-d4)		96%	85%	105%	98%	100%	95%	87%
Surrogate Recovery (Toluene-d8)		96%	93%	95%	96%	95%	92%	98%

'RL' Indicates reporting limit at a dilution factor of 1
'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
Analyses performed by: Mr. Leif Jonsson

11350 Monier Park Place, Rancho Cordova, CA 95742 • Phone (916) 853-8010 • Fax (916) 853-8020

PES Envronmental, Inc.
Project # 109800701001
39155 State Street
Fremont, California

TEG Project #41027F

EPA Method 8260B VOC Analyses of SOIL VAPOR in micrograms per cubic meter of Vapor

SAMPLE NUMBER:	RL	B5-SV	B6-SV	B6-SV dup	B8-SV	B9-SV	B10-SV	B11-SV
SAMPLE DEPTH (feet):		5.0	4.0	4.0	5.0	5.0	5.0	5.0
PURGE VOLUME:		3	3	3	3	3	3	3
COLLECTION DATE:		10/27/14	10/28/14	10/28/14	10/27/14	10/28/14	10/28/14	10/28/14
COLLECTION TIME:		14:07	14:43	14:43	14:38	09:53	10:17	10:55
DILUTION FACTOR:		1	1	1	1	1	1	1
Dichlorodifluoromethane	100	1000	240	170	6400	nd	1400	410
Vinyl Chloride	100	nd	nd	nd	nd	nd	nd	nd
Chloroethane	100	nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	100	nd	nd	nd	1600	110	370	nd
1,1-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloro-trifluoroethane	100	nd	nd	nd	nd	nd	nd	nd
Methylene Chloride	100	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	100	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
Chloroform	100	nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	100	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Benzene	80	nd	97	98	nd	nd	nd	nd
Trichloroethene	100	nd	nd	nd	nd	nd	nd	nd
Toluene	200	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene	100	300	nd	nd	nd	nd	nd	nd
Ethylbenzene	100	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd	nd
m,p-Xylene	200	nd	nd	nd	nd	nd	nd	nd
o-Xylene	100	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10000	nd	nd	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		100%	100%	96%	105%	90%	103%	95%
Surrogate Recovery (1,2-DCA-d4)		97%	103%	101%	98%	81%	92%	86%
Surrogate Recovery (Toluene-d8)		95%	94%	94%	97%	88%	95%	88%

'RL' Indicates reporting limit at a dilution factor of 1
'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
Analyses performed by: Mr. Leif Jonsson

11350 Monier Park Place, Rancho Cordova, CA 95742 • Phone (916) 853-8010 • Fax (916) 853-8020

PES Envronmental, Inc.
Project # 109800701001
39155 State Street
Fremont, California

TEG Project #41027F

EPA Method 8260B VOC Analyses of SOIL VAPOR in micrograms per cubic meter of Vapor

SAMPLE NUMBER:		B11-SV dup	B12-SV	B14-SV	B15-SV	B16-SV	B17-SV	B18-SV
SAMPLE DEPTH (feet):		5.0	5.0	5.0	5.0	5.0	5.0	5.0
PURGE VOLUME:		3	3	3	3	3	3	3
COLLECTION DATE:		10/28/14	10/28/14	10/28/14	10/28/14	10/28/14	10/28/14	10/28/14
COLLECTION TIME:		10:55	11:36	11:59	12:13	12:41	12:57	13:30
DILUTION FACTOR:		1	1	1	1	1	1	1
	RL							
Dichlorodifluoromethane	100	400	4100	390	1800	2300	1900	210
Vinyl Chloride	100	nd	nd	nd	nd	nd	nd	nd
Chloroethane	100	nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	100	nd	1100	nd	nd	160	460	nd
1,1-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloro-trifluoroethane	100	nd	nd	nd	nd	nd	nd	nd
Methylene Chloride	100	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	100	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
Chloroform	100	nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	100	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Benzene	80	nd	nd	nd	nd	nd	nd	nd
Trichloroethene	100	nd	nd	nd	nd	nd	nd	nd
Toluene	200	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene	100	nd	nd	nd	nd	550	nd	nd
Ethylbenzene	100	nd	nd	nd	nd	nd	220	nd
1,1,1,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd	nd
m,p-Xylene	200	nd	nd	nd	420	nd	1100	nd
o-Xylene	100	nd	nd	nd	150	nd	350	nd
1,1,2,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10000	nd	nd	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		97%	99%	98%	98%	99%	99%	103%
Surrogate Recovery (1,2-DCA-d4)		94%	96%	94%	96%	99%	99%	102%
Surrogate Recovery (Toluene-d8)		94%	95%	95%	94%	96%	94%	88%

'RL' Indicates reporting limit at a dilution factor of 1
'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
Analyses performed by: Mr. Leif Jonsson

11350 Monier Park Place, Rancho Cordova, CA 95742 • Phone (916) 853-8010 • Fax (916) 853-8020

PES Envronmental, Inc.
Project # 109800701001
39155 State Street
Fremont, California

TEG Project #41027F

CALIBRATION DATA - Calibration Check Compounds

	Vinyl Chloride	1,1 DCE	Chloroform	1,2 DCP	Toluene	Ethylbenzene
Midpoint	10.0	10.0	10.0	10.0	10.0	10.0
Continuing Calibration - Midpoint						
10/27/14	10.5	10.2	10.8	10.4	10.1	10.4
	105%	102%	108%	104%	101%	104%
10/28/14	10.2	9.5	9.9	9.7	9.4	9.4
	102%	95%	99%	97%	94%	94%

TEG Northern California Inc.

22 December 2014

Mr. Carl Michelsen
PES Environmental, Inc.
1682 Novato Blvd., Suite 100
Novato, CA 94947

SUBJECT: DATA REPORT - PES Environmental, Inc. Project # 109800701001
39155 State Street, Fremont, California

TEG Project # 41210F

Mr. Michelsen:

Please find enclosed a data report for the samples analyzed from the above referenced project for PES Environmental. The samples were analyzed on site in TEG's mobile laboratory. TEG conducted a total of 12 analyses on 12 soil vapor samples.

-- 12 analyses on soil vapors for selected volatile organic hydrocarbons by EPA method 8260B.

The results of the analyses are summarized in the enclosed tables. Applicable detection limits and calibration data are included in the tables.

TEG appreciates the opportunity to have provided analytical services to PES Environmental on this project. If you have any further questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Mark Jerpbak
Director, TEG-Northern California

11350 Monier Park Place, Rancho Cordova, CA 95742 • Phone (916) 853-8010 • Fax (916) 853-8020

PES Envronmental, Inc.
Project # 109800701001
39155 State Street
Fremont, California

TEG Project #41210F

EPA Method 8260B VOC Analyses of SOIL VAPOR in micrograms per cubic meter of Vapor

SAMPLE NUMBER:	RL	Probe Blank	B19-SV	B20-SV	B21-SV	B22-SV	B23-SV	B24-SV
SAMPLE DEPTH (feet):			10.0	5.0	5.0	6.0	10.0	5.0
PURGE VOLUME:			3	3	3	3	3	3
COLLECTION DATE:		12/10/14	12/10/14	12/10/14	12/10/14	12/10/14	12/10/14	12/10/14
COLLECTION TIME:		10:02	10:46	11:08	11:28	11:50	14:12	12:14
DILUTION FACTOR:		1	1	1	1	1	1	1
Dichlorodifluoromethane	100	nd	1500	3200	2000	400	2400	1600
Vinyl Chloride	100	nd	nd	nd	nd	nd	nd	nd
Chloroethane	100	nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	100	nd	nd	320	150	nd	590	730
1,1-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloro-trifluoroethane	100	nd	nd	nd	nd	nd	nd	nd
Methylene Chloride	100	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	100	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
Chloroform	100	nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	100	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Benzene	80	nd	nd	nd	nd	nd	nd	nd
Trichloroethene	100	nd	nd	nd	nd	nd	nd	nd
Toluene	200	nd	nd	nd	nd	210	nd	nd
1,1,2-Trichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene	100	nd	330	nd	8500	110	nd	nd
Ethylbenzene	100	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd	nd
m,p-Xylene	200	nd	nd	nd	nd	nd	nd	nd
o-Xylene	100	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10000	nd	nd	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		92%	94%	93%	95%	94%	93%	94%
Surrogate Recovery (1,2-DCA-d4)		82%	90%	81%	89%	84%	87%	83%
Surrogate Recovery (Toluene-d8)		90%	91%	88%	90%	92%	89%	91%

'RL' Indicates reporting limit at a dilution factor of 1
'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
Analyses performed by: Mr. Leif Jonsson

11350 Monier Park Place, Rancho Cordova, CA 95742 • Phone (916) 853-8010 • Fax (916) 853-8020

PES Envronmental, Inc.
Project # 109800701001
39155 State Street
Fremont, California

TEG Project #41210F

EPA Method 8260B VOC Analyses of SOIL VAPOR in micrograms per cubic meter of Vapor

SAMPLE NUMBER:		B24-SV dup	B25-SV	B26-SV	B27-SV	B28-SV	B29-SV
SAMPLE DEPTH (feet):		5.0	5.0	5.0	10.0	5.0	5.0
PURGE VOLUME:		3	3	3	3	3	3
COLLECTION DATE:		12/10/14	12/10/14	12/10/14	12/10/14	12/10/14	12/10/14
COLLECTION TIME:		12:14	13:06	13:26	16:01	16:28	16:42
DILUTION FACTOR:		1	1	1	1	1	1
	RL						
Dichlorodifluoromethane	100	1800	2900	4800	3900	4800	2300
Vinyl Chloride	100	nd	nd	nd	nd	nd	nd
Chloroethane	100	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	100	780	480	2300	230	220	290
1,1-Dichloroethene	100	nd	nd	nd	nd	nd	nd
1,1,2-Trichloro-trifluoroethane	100	nd	nd	nd	nd	nd	nd
Methylene Chloride	100	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	100	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd
Chloroform	100	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	100	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	100	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	100	nd	nd	nd	nd	nd	nd
Benzene	80	nd	nd	nd	nd	nd	nd
Trichloroethene	100	nd	nd	nd	nd	nd	nd
Toluene	200	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	100	nd	nd	nd	nd	nd	nd
Tetrachloroethene	100	nd	nd	nd	430	nd	nd
Ethylbenzene	100	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd
m,p-Xylene	200	nd	nd	nd	nd	nd	nd
o-Xylene	100	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10000	nd	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		90%	93%	101%	97%	92%	99%
Surrogate Recovery (1,2-DCA-d4)		87%	86%	88%	90%	86%	91%
Surrogate Recovery (Toluene-d8)		93%	91%	90%	92%	90%	90%

'RL' Indicates reporting limit at a dilution factor of 1
'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
Analyses performed by: Mr. Leif Jonsson

11350 Monier Park Place, Rancho Cordova, CA 95742 • Phone (916) 853-8010 • Fax (916) 853-8020

PES Envronmental, Inc.
Project # 109800701001
39155 State Street
Fremont, California

TEG Project #41210F

CALIBRATION DATA - Calibration Check Compounds

	Vinyl Chloride	1,1 DCE	Chloroform	1,2 DCP	Toluene	Ethylbenzene
Midpoint	10.0	10.0	10.0	10.0	10.0	10.0
Continuing Calibration - Midpoint						
12/10/14	10.3	11.3	11.4	10.8	10.4	9.3
	103%	113%	114%	108%	104%	93%

5 February 2015

Mr. Carl Michelsen
PES Environmental, Inc.
1682 Novato Blvd., Suite 100
Novato, CA 94947

SUBJECT: DATA REPORT - PES Environmental, Inc. Project # 109800701
39155 State Street, Fremont, California

TEG Project # 50130F

Mr. Michelsen:

Please find enclosed a data report for the samples analyzed from the above referenced project for PES Environmental. The samples were analyzed on site in TEG's mobile laboratory. TEG conducted a total of 12 analyses on 12 soil vapor samples.

-- 12 analyses on soil vapors for selected volatile organic hydrocarbons by EPA method 8260B.

The results of the analyses are summarized in the enclosed tables. Applicable detection limits and calibration data are included in the tables.

TEG appreciates the opportunity to have provided analytical services to PES Environmental on this project. If you have any further questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Mark Jerpbak
Director, TEG-Northern California

teg

PES Envronmental, Inc.
Project # 109800701
39155 State Street
Fremont, California

TEG Project #50130F

EPA Method 8260B VOC Analyses of SOIL VAPOR in micrograms per cubic meter of Vapor

SAMPLE NUMBER:		Probe Blank	B30-SV	B31-SV	B32-SV	B32-SV dup	B33-SV	B34-SV
SAMPLE DEPTH (feet):			5.0	5.0	5.0	5.0	5.0	9.0
PURGE VOLUME:			3	3	3	3	3	3
COLLECTION DATE:		1/30/15	1/30/15	1/30/15	1/30/15	1/30/15	1/30/15	1/30/15
COLLECTION TIME:		08:40	09:26	09:49	10:12	10:12	10:57	11:29
DILUTION FACTOR:		1	1	1	1	1	1	1
	RL							
Dichlorodifluoromethane	100	nd	1400	1200	410	450	nd	nd
Vinyl Chloride	100	nd	nd	nd	nd	nd	nd	nd
Chloroethane	100	nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	100	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloro-trifluoroethane	100	nd	nd	nd	nd	nd	nd	nd
Methylene Chloride	100	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	100	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd	nd
Chloroform	100	nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	100	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Benzene	80	nd	nd	nd	nd	nd	nd	nd
Trichloroethene	100	nd	nd	nd	nd	nd	nd	nd
Toluene	200	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	100	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene	100	nd	1700	640	nd	nd	nd	680
Ethylbenzene	100	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd	nd
m,p-Xylene	200	nd	nd	nd	nd	nd	nd	nd
o-Xylene	100	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10000	nd	nd	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		83%	92%	83%	80%	86%	93%	90%
Surrogate Recovery (1,2-DCA-d4)		86%	93%	79%	80%	89%	90%	93%
Surrogate Recovery (Toluene-d8)		88%	95%	86%	86%	92%	94%	96%

'RL' Indicates reporting limit at a dilution factor of 1
'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
Analyses performed by: Mr. Leif Jonsson

11350 Monier Park Place, Rancho Cordova, CA 95742 • Phone (916) 853-8010 • Fax (916) 853-8020

PES Envronmental, Inc.
Project # 109800701
39155 State Street
Fremont, California

TEG Project #50130F

EPA Method 8260B VOC Analyses of SOIL VAPOR in micrograms per cubic meter of Vapor

SAMPLE NUMBER:		B35-SV	B36-SV	B37-SV	B38-SV	B39-SV	B40-SV
SAMPLE DEPTH (feet):		9.0	9.0	9.0	9.0	6.0	8.75
PURGE VOLUME:		3	3	3	3	3	3
COLLECTION DATE:		1/30/15	1/30/15	1/30/15	1/30/15	1/30/15	1/30/15
COLLECTION TIME:		11:50	12:10	12:35	12:56	13:17	13:37
DILUTION FACTOR:		1	1	1	1	1	1
	RL						
Dichlorodifluoromethane	100	nd	130	470	170	100	230
Vinyl Chloride	100	nd	nd	nd	nd	nd	nd
Chloroethane	100	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	100	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	100	nd	nd	nd	nd	nd	nd
1,1,2-Trichloro-trifluoroethane	100	nd	nd	nd	nd	nd	nd
Methylene Chloride	100	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	100	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	100	nd	nd	nd	nd	nd	nd
Chloroform	100	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	100	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	100	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	100	nd	nd	nd	nd	nd	nd
Benzene	80	nd	nd	nd	nd	nd	nd
Trichloroethene	100	nd	nd	nd	nd	nd	nd
Toluene	200	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	100	nd	nd	nd	nd	nd	nd
Tetrachloroethene	100	350	700	5000	23000	2900	220
Ethylbenzene	100	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd
m,p-Xylene	200	nd	nd	nd	nd	nd	nd
o-Xylene	100	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	100	nd	nd	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10000	nd	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		82%	88%	88%	90%	89%	92%
Surrogate Recovery (1,2-DCA-d4)		88%	95%	99%	102%	104%	103%
Surrogate Recovery (Toluene-d8)		87%	94%	97%	93%	93%	96%

'RL' Indicates reporting limit at a dilution factor of 1
'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
Analyses performed by: Mr. Leif Jonsson

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TEG Project #50130F

CALIBRATION DATA - Calibration Check Compounds

	Vinyl Chloride	1,1 DCE	Chloroform	1,2 DCP	Toluene	Ethylbenzene
Midpoint	10.0	10.0	10.0	10.0	10.0	10.0
Continuing Calibration - Midpoint						
1/30/15	9.1	9.8	10.3	10.7	9.6	11.9
	91%	98%	103%	107%	96%	119%

ATTACHMENT C

DEPARTMANT OF TOXIC SUBSTANCE CONTROL, VAPOR INTRUSTION SCREENING MODEL – SOIL GAS, RESIDENTIAL SCENARIO; TETRACHOLOETHYLENE AND BENZENE

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
1.26E+03	4.0E-04	5.0E-01	1.0E-06	1.4E-02

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_a ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_a (ppmv)	Chemical
127184	1.26E+03			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	C		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
C	1.43	0.459	0.215	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH ($hour^{-1}$)
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Benzene

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_a ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_a (ppmv)	Chemical
71432	1.60E+02			Benzene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
1.60E+02	6.2E-04	1.0E-01	1.0E-06	3.2E-02

MORE

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	24	C		

MORE

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
C	1.43	0.459	0.215	5

MORE

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24 (NEW)	0.5 (NEW)

END