Valley Oak Partners, LLC
734 The Alameda
San Jose, CA 95126
Tel: 408.282.9700
www.valleyoakpartners.com

RECEIVED
By Alameda County Environmental Health at 11:43 am, Jul 11, 2014

July 2, 2014

Mr. Mark Detterman, PG, CEG
Senior Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

Re: ***July 2, 2014 Supplemental Soil Sampling and Final Soil Excavation for Case Closure, and Response to ACEH Comments Report***
"Ventura Properties" RO2795
23830 & 23836 Saklan Road and 24137 Eden Avenue
Hayward, California

Dear Mr. Detterman:

I declare under penalty of perjury that to the best of my knowledge the information and recommendations contained in the attached report are true and correct.

If you have any questions or need additional information, please call me at (408) 282-0991.

Sincerely,

Steve Fisher
Partner, Valley Oak Partners, LLC

Attachment: July 2, 2014 Tetra Tech, Inc. Report *Supplemental Soil Sampling and Final Soil Excavation for Case Closure, and Response to ACEH Comments Submitted in March 10, 2014 Email, "Ventura Properties" RO2795, 23830 & 23836 Saklan Road and 24137 Eden Avenue, Hayward, California*

TETRA TECH

July 2, 2014
P:\PROJECTS\ValleyOakPartners\Hayward(7059010.01)\ClosureSoilSamplingMarch2014FINALREPORTING\ResponsetoComments;SupplementalSampling;FinalExcavation\ClosureRpt.doc

Mr. Mark Detterman, PG, CEG
Senior Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

Re: Supplemental Soil Sampling and Final Soil Excavation for Case Closure, and Response to ACEH Comments Submitted in March 10, 2014 Email
"Ventura Properties" RO2795
23830 & 23836 Saklan Road and 24137 Eden Avenue
Hayward, California

Dear Mr. Detterman:

This report is submitted is response to the March 10, 2014 email from the Alameda County Environmental Health (ACEH) staff that conveyed technical comments to the November 26, 2013 *Soil Cleanup Documentation Report* and December 6, 2013 *Status of Septic Systems and Wells* letter. The ACEH comments were discussed in a meeting attended by ACEH staff (you and Ms. Dilan Roe), Tim Costello from Tetra Tech, Inc., and Doug Rich from Valley Oak Partners, LLC (VOP) on March 17, 2014 at the ACEH offices in Alameda.

Responses to the comments are provided below, and follow the order of comments in your March 10, 2014 email. A copy of the ACEH March 10, 2014 email is included as Attachment 1.

RESPONSE TO COMMENTS

1. Public Notice of Excavation Document

A hard copy of the public notice was provided to you during our March 17, 2014 meeting.

2. Lateral Excavation Confirmation Sampling

A total of eight additional confirmation soil samples were collected in response to your March 10, 2014 email comments. The sampling approach was developed during our March 17, 2014 meeting, as follows:

- The confirmation soil samples were collected at 0.5 feet in depth following the same protocol as used during the prior sample events.
- Sample locations are shown in Figures 1 and 2, and are consistent with those discussed during the March 17, 2014 meeting.
- Sample results are summarized in Table 1.
- A copy of the laboratory analytical data sheets and chain of custody form are provided in Attachment 2.
- Sample results show that seven of the eight sample locations meet the residential land use cleanup criteria. The one sample that exceeded the residential land use criteria was sample

"Conf-3". That soil sample was collected just north of the "36-GS-13" soil excavation area, between the "36-GS-13" and "36-GS-14" soil excavation areas (Figure 1). Sample "Conf-3" was found to contain the pesticide Beta-BHC at 610 micrograms per kilogram (ug/kg), above the 270 ug/kg U.S. EPA Regional Screening Level (RSL) value for Beta-BHC. Beta-BHC was the primary compound of concern at the Property.

- Soil sample "Conf-3" also was found to contain the pesticide compounds DDT and DDE, at concentrations of 1,400 ug/kg and 790 ug/kg, respectively. These sample results are below corresponding residential land use screening levels, but added together exceed the California Title 22 value of 1 part per million (1,000 ug/kg) which triggers a requirement that if the soil is taken off-site for disposal, it must be managed and disposed as a hazardous waste (even though it is considered by the State of California to be safe for residential land use).
- As requested by the ACEH, three of the eight soil samples were also analyzed for PCBs. No PCBs were detected in those three samples (Table 1).
- The area of soil sample "Conf-3" was excavated to remove soil containing Beta-BHC concentrations above the RSL value (Figure 1), as described on Pages 3 and 4.

3. Detection Limit of Heptachlor Epoxide

The ACEH staff questioned the laboratory reporting limit provided for heptachlor epoxide, which varied from 17 ug/kg to 20 ug/kg. The ACEH staff noted that Regional Water Quality Control Board's (RWQCB) Environmental Screening Level (ESL) value is 14 ug/kg (December 2013 table), and the Federal EPA's Regional Screening Level (RSL) value is 54 ug/kg.

The RWQCB's human health-based ESL value for heptachlor epoxide (residential land use, shallow soil, Table A-1) is 61 ug/kg. The reporting limit of 17 to 20 ug/kg is less than the health-based 61 ug/kg ESL value. The 61 ug/kg health-based ESL value is consistent with the EPA's RSL value of 54 ug/kg. The 14 ug/kg ESL value referenced in the ACEH's email is the Groundwater Protection ESL value.

The 14 ug/kg Groundwater Protection ESL value is not applicable for the property for two main reasons:

1. In 40 years since application to the soil surface as over-spray, there is no evidence of vertical migration of heptachlor epoxide through the soil column toward groundwater. Soil sample results show a complete lack of soil impact below approximately 1-foot in depth. Pesticides including heptachlor epoxide are held tenaciously in soil due to sorption to clay particles and organic matter (high Cation Exchange Capacities). Soil at the property is high in clay and organic matter content (the soil is black in color), and as a result the lack of soil impact below approximately one foot in depth is not surprising.
2. The 14 ug/kg Groundwater Protection ESL value is inappropriate for the property because the default parameters used in calculating the value are not met for the property. The following default parameters (defined on Pages 5-11 and 5-12 of the RWQCB's document called *User's Guide: Derivation and Application of Environmental Screening Level, Interim Final 2013*) are not valid:
    - Mean Annual Precipitation of 43 inches (Hayward receives less than half of that amount, approximately 18 inches).
    - Soil texture of "very permeable sand" (the soil texture is silty clay).
    - Soil organic carbon content is assumed to be 0.1 percent (the actual OC content is expected to be at least 2 to 3 percent, more than one order of magnitude greater than that assumed).

- The impacted soil is assumed to be a 1-meter thickness of sand sandwiched between two 1-meter thicknesses of sand, directly overlying groundwater. The default proximity to groundwater is therefore 1 meter. Depth to groundwater at the property is expected to be 5 to 7 meters, and the soil texture is silty clay, not sand.

Additionally, heptachlor epoxide is not a chemical of concern at the property.

For these reasons, the 17 ug/kg to 20 ug/kg reporting limits for heptachlor epoxide are considered appropriate for the property.

4. Presence of Four Private Water Wells

The wells will be abandoned under permits to be obtained by VOP from the Alameda County Public Works Department prior to redevelopment of the property. The specific schedule for the well abandonments is not known at this time, and is dependent, in part, on City of Hayward Planning approvals.

5. Presence of Up to Three Septic Systems

Based on our discussion during the March 17, 2014 meeting, the septic systems will be managed independent of the environmental cleanup, following existing Land Use Department protocols, including permitting prior to closure of the septic systems.

6. List of Interested Parties for Notification of Potential Closure

Parties to be notified prior to Closure consist of the three existing property owners, and Valley Oak Partners, LLC (the purchaser):

- Ms. Sandra Gudiel
  23830 Saklan Road
  Hayward, CA 94545

- Mr. Fernando Ramirez
  23836 Saklan Road
  Hayward, CA 94545

- Mr. & Mrs. Tatsuai Hirikawa
  24137 Eden Avenue
  Hayward, CA 94545

- Valley Oak Partners, LLC
  Attn.: Steve Fisher
  734 The Alameda
  San Jose, CA 95126

7. Upload Technical Reports

This report will be uploaded to the ACEH website and to the RWQCB's GeoTracker website.

FINAL SOIL EXCAVATION AND DISPOSAL

On June 4, 2014, soil at and around the "Conf-3" soil sample location was excavated and disposed off-site to remove concentrations of Beta-BHC in surface soil above the residential land use screening level.

The strip of soil between the 2013 soil excavation areas "36-GS-13" and "36-GS-14" was excavated, which connected the two excavations, creating one large excavation entailing the "36-GS-13" and "36-GS-14" areas. A total of 28.56 tons of soil (an estimated 22 cubic yards) was excavated and hauled off-site to the Buttonwillow hazardous waste landfill for disposal (the soil required disposal as a hazardous waste due to the presence of total DDT and DDE concentrations above 1 part per million, per State of California Title 22 Regulations). Soil was excavated to depths ranging from 1-foot to 1.5-feet, consistent with the original soil excavations. Water spray was applied during the soil excavation and during the truck loading in the same manner in which it was applied during the original soil excavation to minimize the potential for airborne dust to be generated.

Copies of the signed manifest forms and landfill weight tags are provided in Attachment 3.

Prior to performing the final soil excavation on June 4, 2014, confirmation soil samples were collected on the west and east sides of the planned excavation area on May 27, 2014, to define the lateral extent of excavation. Samples were not collected on the north and south ends of the planned soil excavation area because those areas has already been excavated – the planned excavation was to bridge the two previously excavated areas north and south of sample "Conf-3". Figure 1 shows the two conformation soil sample locations, "SO-Conf-3-1" and "SO-Conf-3-2". Each of the two soil samples were collected at 0.5 feet in depth, consistent with previous shallow confirmation soil samples. Beta-BHC was not detected in soil sample "SO-Conf-3-1", and was detected at a concentration of 180 ug/kg in sample "SO-Conf-3-2", below the 270 ug/kg RSL value. A copy of the laboratory analytical data sheets and chain of custody form is provided in Attachment 4.

CLOSURE

If there are any questions about the information provided above, please contact Tim Costello at (916) 853-4584 (direct) or by email at tim.costello@tetratech.com.

Sincerely,
Tetra Tech, Inc.

Tim Costello
Senior Scientist
Associate

Stephen M. Carlton, PG, CHG
Principal Hydrogeologist

PROFESSIONAL GEOLOGIST
STEPHEN M. CARLTON
No. 4730
STATE OF CALIFORNIA

Cc: Steve Fisher, Valley Oak Partners, LLC

Attachments:
Figure 1 Close-up of 23836 Saklan Road Soil Excavation Areas and Soil Sample Locations, Showing Selected Sample Results
Figure 2 Close-up of 24137 Eden Avenue Soil Excavation Areas and Soil Sample Locations, Showing Selected Sample Results

Table 1	Analytical Results Summary – Confirmation Soil Samples – March and May 2014
Attachment 1	ACEH Technical Comment Email 3-10-14
Attachment 2	Laboratory Analytical Data Sheets and COC Form 3-27-14
Attachment 3	Signed Manifest Forms and Landfill Weight Tags
Attachment 4	Laboratory Analytical Data Sheets and COC Form 5-27-14

Tables

TABLE 1
Analytical Results Summary - Confirmation Soil Samples - March and May 2014
23836 Saklan Road
Hayward, California

Confirmation Sample ID	Excavation Reference	Sample Area	Sample Date	O.C. Pesticides 8081A (µg/Kg)									PCBs by EPA Method 8082A (µg/Kg)
				alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	4,4´-DDD	4,4´-DDE	4,4´-DDT	Dieldrin	Aroclor 1260
23836 Saklan Road													
Conf-1	36-GS-8	East	3/27/2014	< 20	< 100	< 100	< 100	< 200	< 150	< 150	< 150	< 10	---
Conf-2	36-GS-9	East	3/27/2014	< 20	160	< 100	< 100	< 200	< 150	190	< 150	< 10	---
Conf-3	36-GS-13\36-GS-14	North	3/27/2014	45	**610**	< 100	< 100	< 200	< 150	790	1400	< 10	< 20
SO-Conf-3-1	36-GS-13\36-GS-14	West	5/27/2014	< 20	< 100	< 100	< 100	< 200	< 150	< 150	< 150	< 10	---
SO-Conf-3-2	36-GS-13\36-GS-14	East	5/27/2014	< 20	180	< 100	< 100	< 200	< 150	< 150	< 150	< 10	---
Conf-4	36-GS-14	East	3/27/2014	< 20	140	< 100	< 100	< 200	< 150	< 150	< 150	< 10	< 20
Conf-5	36-GS-16	East	3/27/2014	< 20	< 100	< 100	< 100	< 200	< 150	320	230	< 10	< 20
24137 Eden Avenue													
Conf-6	37-GS-15	North	3/27/2014	< 20	< 100	< 100	< 100	< 200	< 150	< 150	< 150	< 10	---
Conf-7	37-GS-15	West	3/27/2014	< 20	< 100	< 100	< 100	< 200	< 150	< 150	< 150	< 10	---
Conf-8	37-GS-15	West	3/27/2014	< 20	< 100	< 100	< 100	< 200	< 150	< 150	< 150	10	---
		RSL		77	270	nv	520	1,600	2,000	1,400	1,700	40	220
		TTLC		nv	nv	nv	4,000	2,500	1,000	1,000	1,000	8,000	50,000
		CHHSL		nv	nv	nv	500	430	2,300	1,600	1,600	35	89
		ESL		nv	nv	nv	21,000	440	2,400	1,700	1,700	34	220

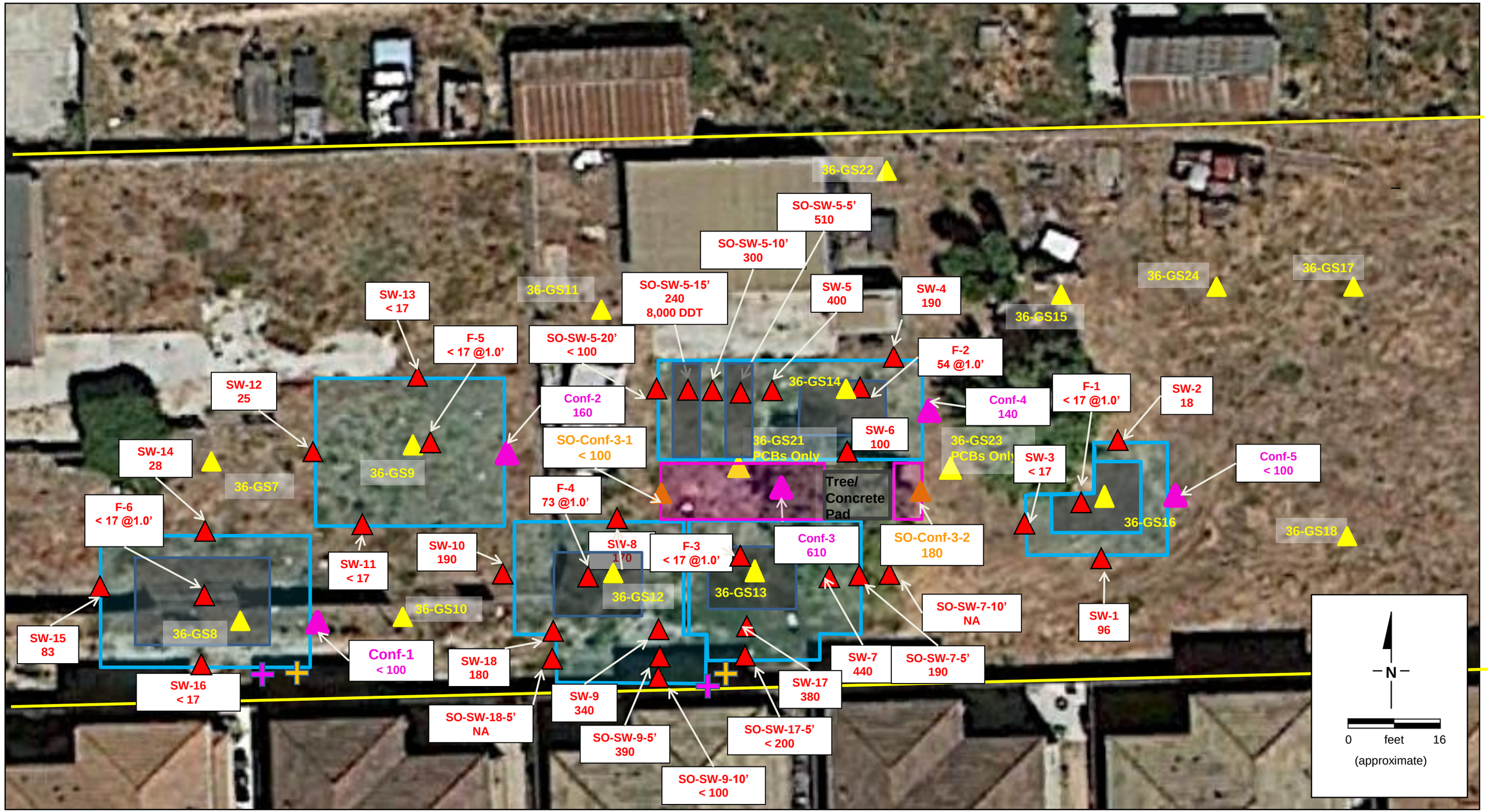
Notes:

See laboratory analytical data sheets for list of compounds and reporting limits; **Results in BOLD exceed agency screening criteria.**

mg/Kg	milligrams per kilograms or parts per million (ppm).
µg/Kg	kilograms or parts
---	Not analyzed.
CHHSL	California Human Health Screening Level, Office of Environmental Health Hazard Assessment, Table 1, Residential Soil, September 2010. Soil screening numbers based on total exposure to contaminated soil: inhalation, ingestion, dermal absorption.
ESL	Environmental Screening Level, RWQCB - San Francisco Region, Table A-1, Direct Exposure, Human Health, Shallow Soil Screening Levels, Residential Land Use, December 2013
nv	no value.
TTLC	Total Threshold Limit Concentrations, Title 22; limit for off-site disposal as a hazardous waste.
RSL	EPA Regional Screening Levels, Summary Table, Residential Soil, November 2013

Figures

P:\PROJECTS\Valley Oak Partners\Hayward (117-7059010.01)\Closure Soil Sampling March 2014 FINAL REPORTING\Case Closure Summary\Select Figures.pptx



Legend:

- 36-GS18 ▲ — Initial and follow-up surface soil sample location (February/March 2013)
- Soil Excavation Area - 2013
- Soil Excavation Area – Managed as Hazardous - 2013
- Confirmation Soil Sample Location - 2013
- Air Monitoring Station \ Dust Monitoring Station 2013
- Additional Shallow Soil Sample Location – March 27, 2014
- Excavation Confirmation Sample Location – May 2014
- SW-18 180 — Note: Values displayed for the pesticide Beta-BHC at 0.5' in depth, unless otherwise noted. Values in µg/Kg.
- Final Excavation Areas – June 2014

TITLE:	**Close-up of 23836 Saklan Road Soil Excavation Areas and Soil Sample Locations, Showing Selected Sample Results**
LOCATION:	**23830 & 23836 Saklan Road and 24137 Eden Avenue, Hayward, California**

TETRA TECH

CHECKED:	TC	FIGURE: 1
DRAFTED:	KEM	
FILE:	117-7059010	
DATE:	11/4/2013	

37-GS18 Initial surface soil sample location (February 2013)

37-GS22 Follow-up surface soil sample location (September – October 2013)

- Soil Excavation Area
- Air Monitoring Station
- Dust Monitoring Station

Additional Shallow Soil Sample Location – March 27, 2014

Conf-7
< 200

Note: Values displayed for the pesticide Chlordane at 0.5' in depth, unless otherwise noted. Values in µg/Kg.

N

0 feet 16
(approximate)

TITLE: **Close-up of 24137 Eden Avenue Soil Excavation Areas and Soil Sample Locations, Showing Selected Sample Results**

LOCATION: **23830 & 23836 Saklan Road and 24137 Eden Avenue, Hayward, California**

TETRA TECH

CHECKED:	TC
DRAFTED:	KEM
FILE:	117-7059010
DATE:	11/4/2013

FIGURE: 2

Attachment 1

ACEH Technical Comment Email 3-10-14

Costello, Timothy

From: Detterman, Mark, Env. Health <Mark.Detterman@acgov.org>
Sent: Monday, March 10, 2014 10:06 AM
To: 'steve@valleyoakpartners.com'
Cc: Costello, Timothy; Roe, Dilan, Env. Health
Subject: Ventura Properties (RO2795; 23830 and 23836 Saklan Road, 24137 Eden Avenue); Request

Mr. Steve Fisher
Partner, Valley Oak Partners, LLC
734 The Alameda
San Jose, CA 95126

Dear Mr. Fisher,

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above referenced site including the *Soil Cleanup Documentation Report,* dated November 26, 2013, and the *Status of Septic Systems and Wells,* dated December 6, 2013. Both reports were prepared and submitted on your behalf by TetraTech, Inc. (TetraTech). Thank you for submitting them. Based on our review, ACEH has the following technical comments and would like to invite you to meeting in order to discuss the site and to resolve any questions that may arise. ACEH requests notification of suitable dates and times for the meeting by the date identified below.

TECHNICAL COMMENTS

In order to move the site towards case closure ACEH provides the following technical comments which can be discussed in greater detail in the meeting requested above.

1. **Public Notification of Excavation Document** – A public notification document is referenced to have been provided to vicinity residents prior to site excavations; however, a copy was not provided in the *Soil Cleanup Documentation Report* in order to document the action. ACEH requests that a copy of the document(s) be submitted in an addendum to the report by the date identified below.
2. **Lateral Excavation Confirmation Sampling** – ACEH observes that seven excavation areas (six at 23836 Saklan Road, and one at 24137 Eden Avenue) do not appear to be laterally constrained by confirmation samples. The following excavation areas appear to be unconstrained laterally. The data that constrain these excavation areas can be further discussed in the requested meeting.
    a. Eastern edge of 36-GS8 excavation
    b. Eastern edge of 36-GS9 excavation
    c. Northern edge of 36-GS13 excavation (inclusive of PCBs)
    d. Northern and eastern edges of 36-GS14 excavation (inclusive of PCBs)
    e. Eastern edge of 36-GS16 excavation (inclusive of PCBs)
    f. Northern edge of 37-GS15 excavation
3. **Detection Limit of Heptachlor Epoxide** – The detection limit for this contaminant is either <20 or <17micrograms per kilogram (ug/kg); however, the Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) is 14 ug/kg. Although the Federal EPA Risk Screening Level [RSL] for the contaminant is 54 ug/kg, ACEH uses SF RWQCB ESLs for cleanup goals. A resolution can be discussed further in the requested meeting.
4. **Presence of Four Private Water Wells** – Three residential, and one agricultural, water supply wells were located on the three subject parcels. It is understood these will be properly destroyed prior to site redevelopment;

however, to help clarify the case closure process, prior to closure, the wells must be destroyed under permitting by the Alameda County Public Works Agency and a report submitted to ACEH. A submittal date for the well abandonment report can be discussed in the requested meeting.

5. **Presence of Up to Three Septic Systems** – Two septic tanks have been identified at two of the three subject parcels. The *Status of Septic Systems and Wells* indicates that the septic tanks will removed and disposed offsite as general construction debris prior to redevelopment. Please be aware that Alameda County has septic closure permitting requirements. Please contact Russ Handzus at (510) 6887 to obtain a permit for tank abandonment, and thereafter please provide documentation to the ACEH Land use Department that the tanks have been closed under permit. A submittal date for the septic tank abandonment report(s) can be discussed in the requested meeting.

   Additionally ACEH requests that you work with the Land Use Department staff to identify the location of the leachfields. Once identified please submit a work plan to ACEH the leachfield locations and proposed sampling plan to confirm that no environmental degradation has occurred beneath the leachfield (TPH, VOCs, metals, etc.)

6. **List of Interested Parties for Notification of Potential Closure** – At the time the items listed above have been addressed to the satisfaction of ACEH, a 60 day notification of potential closure is required to be issued to vicinity property owners and tenants. ACEH requests that a list of all property owners of the subject parcels, and any future property owners prior to redevelopment, and any other interested party be disclosed, by the date identified below.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the specified file naming convention below, according to the following schedule:

- **March 28, 2014** – Notification of Available Meeting Dates and Times (email preferred), and disclosure of current and future (prior to redevelopment) property owners, and other interested parties.
  File to be named RO2795_CORRES_L_yyyy-mm-dd

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm.

Should you have questions, please let me know.

Mark Detterman
Senior Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
Direct: 510.567.6876
Fax: 510.337.9335
Email: mark.detterman@acgov.org

PDF copies of case files can be downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

Attachment 2

Laboratory Analytical Data Sheets and COC Form 3-27-14

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

April 03, 2014

CLS Work Order #: CXC1067
COC #:

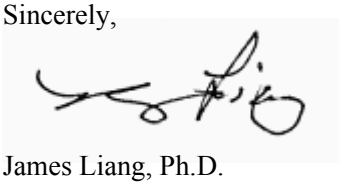
Tim Costello
Tetra Tech Geo
2969 Prospect Park Drive, Suite 100
Rancho Cordova, CA 95670

Project Name: VOP - Hayward

Enclosed are the results of analyses for samples received by the laboratory on 03/27/14 14:30. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,



James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

Tetra Tech Geo	Project: VOP - Hayward	
2969 Prospect Park Drive, Suite 100	Project Number: 117-7059010	**CLS Work Order #: CXC1067**
Rancho Cordova, CA 95670	Project Manager: Tim Costello	COC #:

1 of 2

CLS - Labs

CHAIN OF CUSTODY CLS ID No.: CXC1067 LOG NO. WEB FORM

REPORT TO:
Tetra Tech Inc.
2969 Prospect Park Drive
Rancho Cordova, CA
Tim Costello (916)853-1800
VOP - Hayward
Garrett Kuhl

CLIENT JOB NUMBER: 117-7059010

DESTINATION LABORATORY:
X CLS (916) 638-7301
3249 FITZGERALD RD
RANCHO CORDOVA, CA
95742
OTHER

ANALYSIS REQUESTED

GEOTRACKER:
EDF REPORT ☐ YES ☒ NO
GLOBAL ID:

COMPOSITE

FIELD CONDITIONS:

TURN AROUND TIME: 1 DAY 2 DAY 4 DAY 10 DAY

SPECIAL INSTRUCTIONS
OR
ALT. ID:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO	CONTAINER TYPE	PRESERVATIVES	OC Pesticides (EPA 8081A)	PCBs (EPA 8082)	4 DAY
3/27/14	0925	CONF-1	Soil	1	Glass Jar	3	X		X
3/27/14	0930	CONF-2	Soil	1	Glass Jar	3	X		X
3/27/14	0934	CONF-3	Soil	1	Glass Jar	3	X	X	X
3/27/14	0936	CONF-4	Soil	1	Glass Jar	3	X	X	X
3/27/14	0939	CONF-5	Soil	1	Glass Jar	3	X	X	X
3/27/14	0944	CONF-6	Soil	1	Glass Jar	3	X		X
3/27/14	0952	CONF-7	Soil	1	Glass Jar	3	X		X
3/27/14	0955	CONF-8	Soil	1	Glass Jar	3	X		X

INVOICE TO:

PO #:

QUOTE #:

SUSPECTED CONSTITUENTS

PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4) = NaOH (5) = H_2SO_4 (6) = $Na_2S_2O_3$ (7) =

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
	GARRETT KUHL / Tetra Tech	3/27/14 1430		

RECEIVED BY LAB: Devon M DATE / TIME: 3/27/14 1430 CONDITIONS / COMMENTS:

SHIPPED BY: ☐ FED X ☐ UPS ☒ OTHER Hand Delivered AIR BILL #

CALIFORNIA LABORATORY SERVICES

Tetra Tech Geo	Project: VOP - Hayward	
2969 Prospect Park Drive, Suite 100	Project Number: 117-7059010	**CLS Work Order #: CXC1067**
Rancho Cordova, CA 95670	Project Manager: Tim Costello	COC #:

2 OF 2

CLS - Labs CHAIN OF CUSTODY CLS ID No.: CXC1067 LOG NO. WEB FORM

REPORT TO:
Tetra Tech Inc.
2969 Prospect Park Drive
Rancho Cordova, CA
PROJECT MANAGER Tim Costello PHONE (916)853-1800
PROJECT NAME VOP - Hayward
SAMPLED BY Garrett Kuhl
JOB DESCRIPTION
SITE LOCATION

CLIENT JOB NUMBER 117-7059010
DESTINATION LABORATORY
X CLS (916) 638-7301 3249 FITZGERALD RD RANCHO CORDOVA, CA 95742
OTHER

ANALYSIS REQUESTED

GEOTRACKER:
EDF REPORT ☐ YES ☒ NO
GLOBAL ID:
COMPOSITE
FIELD CONDITIONS:
TURN AROUND TIME: 1 DAY 2 DAY 5 DAY 10 DAY
SPECIAL INSTRUCTIONS OR ALT. ID:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO	CONTAINER TYPE	PRESERVATIVES	Archive
3/27/14	1022	CONF-1-8'	Soil	1	Glass Jar	3	X
	1019	CONF-2-8'	Soil	1	Glass Jar	3	X
	1017	CONF-3-20'	Soil	1	Glass Jar	3	X
	1015	CONF-4-8'	Soil	1	Glass Jar	3	X
	1012	CONF-5-8'	Soil	1	Glass Jar	3	X
	1009	CONF-6-8'	Soil	1	Glass Jar	3	X
	1000	CONF-7-8'	Soil	1	Glass Jar	3	X
	0957	CONF-8-8'	Soil	1	Glass Jar	3	X

INVOICE TO
PO #
GLOBE #
SUSPECTED CONSTITUENTS
PRESERVATIVES (1) HCl (2) HNO_3 (3) COLD (4) NaOH (5) H_2SO_4 (6) $Na_2S_2O_3$ (7)

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
	GARRETT KUHL / TETRA TECH	3/27/14 1430		

RECEIVED AT LAB: Devon M. DATE / TIME: 3/27/14 1432
CONDITIONS / COMMENTS
SHIPPED BY: ☐ FED X ☐ UPS ☒ OTHER Hand Delivered AIR BILL #

Tetra Tech Geo
2969 Prospect Park Drive, Suite 100
Rancho Cordova, CA 95670

Project: VOP - Hayward
Project Number: 117-7059010
Project Manager: Tim Costello

CLS Work Order #: CXC1067
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CONF- 1 (CXC1067-01) Soil Sampled: 03/27/14 09:25 Received: 03/27/14 14:30									
Aldrin	ND	10	µg/kg	10	CX02197	03/30/14	04/03/14	EPA 8081A	
alpha-BHC	ND	20	"	"	"	"	"	"	
beta-BHC	ND	100	"	"	"	"	"	"	
delta-BHC	ND	100	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	100	"	"	"	"	"	"	
Chlordane-technical	ND	200	"	"	"	"	"	"	
4,4´-DDD	ND	150	"	"	"	"	"	"	
4,4´-DDE	ND	150	"	"	"	"	"	"	
4,4´-DDT	ND	150	"	"	"	"	"	"	
Dieldrin	ND	10	"	"	"	"	"	"	
Endosulfan I	ND	150	"	"	"	"	"	"	
Endosulfan II	ND	150	"	"	"	"	"	"	
Endosulfan sulfate	ND	150	"	"	"	"	"	"	
Endrin	ND	150	"	"	"	"	"	"	
Endrin aldehyde	ND	150	"	"	"	"	"	"	
Heptachlor	ND	50	"	"	"	"	"	"	
Heptachlor epoxide	ND	20	"	"	"	"	"	"	
Methoxychlor	ND	150	"	"	"	"	"	"	
Mirex	ND	100	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*56 %*	*46-139*		*"*	*"*	*"*	*"*	
Surrogate: Decachlorobiphenyl		*87 %*	*52-141*		*"*	*"*	*"*	*"*	
CONF- 2 (CXC1067-02) Soil Sampled: 03/27/14 09:30 Received: 03/27/14 14:30									
Aldrin	ND	10	µg/kg	10	CX02197	03/30/14	04/03/14	EPA 8081A	
alpha-BHC	ND	20	"	"	"	"	"	"	
beta-BHC	**160**	100	"	"	"	"	"	"	
delta-BHC	ND	100	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	100	"	"	"	"	"	"	
Chlordane-technical	ND	200	"	"	"	"	"	"	

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Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CONF- 2 (CXC1067-02) Soil Sampled: 03/27/14 09:30 Received: 03/27/14 14:30									
4,4´-DDD	ND	150	µg/kg	10	CX02197	"	04/03/14	EPA 8081A	
4,4´-DDE	**190**	150	"	"	"	"	"	"	
4,4´-DDT	ND	150	"	"	"	"	"	"	
Dieldrin	ND	10	"	"	"	"	"	"	
Endosulfan I	ND	150	"	"	"	"	"	"	
Endosulfan II	ND	150	"	"	"	"	"	"	
Endosulfan sulfate	ND	150	"	"	"	"	"	"	
Endrin	ND	150	"	"	"	"	"	"	
Endrin aldehyde	ND	150	"	"	"	"	"	"	
Heptachlor	ND	50	"	"	"	"	"	"	
Heptachlor epoxide	ND	20	"	"	"	"	"	"	
Methoxychlor	ND	150	"	"	"	"	"	"	
Mirex	ND	100	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*60 %*		*46-139*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*88 %*		*52-141*	"	"	"	"	
CONF- 3 (CXC1067-03) Soil Sampled: 03/27/14 09:34 Received: 03/27/14 14:30									
Aldrin	ND	10	µg/kg	10	CX02197	03/30/14	04/03/14	EPA 8081A	
alpha-BHC	**45**	20	"	"	"	"	"	"	
beta-BHC	**610**	100	"	"	"	"	"	"	
delta-BHC	ND	100	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	100	"	"	"	"	"	"	
Chlordane-technical	ND	200	"	"	"	"	"	"	
4,4´-DDD	ND	150	"	"	"	"	"	"	
4,4´-DDE	**790**	300	"	20	"	"	"	"	
4,4´-DDT	**1400**	750	"	50	"	"	"	"	
Dieldrin	ND	10	"	10	"	"	"	"	
Endosulfan I	ND	150	"	"	"	"	"	"	
Endosulfan II	ND	150	"	"	"	"	"	"	

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Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CONF- 3 (CXC1067-03) Soil Sampled: 03/27/14 09:34 Received: 03/27/14 14:30									
Endosulfan sulfate	ND	150	µg/kg	10	CX02197	"	04/03/14	EPA 8081A	
Endrin	ND	150	"	"	"	"	"	"	
Endrin aldehyde	ND	150	"	"	"	"	"	"	
Heptachlor	ND	50	"	"	"	"	"	"	
Heptachlor epoxide	ND	20	"	"	"	"	"	"	
Methoxychlor	ND	150	"	"	"	"	"	"	
Mirex	ND	100	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*87 %*		*46-139*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*96 %*		*52-141*	"	"	"	"	
CONF- 4 (CXC1067-04) Soil Sampled: 03/27/14 09:36 Received: 03/27/14 14:30									
Aldrin	ND	10	µg/kg	10	CX02197	03/30/14	04/03/14	EPA 8081A	
alpha-BHC	ND	20	"	"	"	"	"	"	
beta-BHC	**140**	100	"	"	"	"	"	"	
delta-BHC	ND	100	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	100	"	"	"	"	"	"	
Chlordane-technical	ND	200	"	"	"	"	"	"	
4,4´-DDD	ND	150	"	"	"	"	"	"	
4,4´-DDE	ND	150	"	"	"	"	"	"	
4,4´-DDT	ND	150	"	"	"	"	"	"	
Dieldrin	ND	10	"	"	"	"	"	"	
Endosulfan I	ND	150	"	"	"	"	"	"	
Endosulfan II	ND	150	"	"	"	"	"	"	
Endosulfan sulfate	ND	150	"	"	"	"	"	"	
Endrin	ND	150	"	"	"	"	"	"	
Endrin aldehyde	ND	150	"	"	"	"	"	"	
Heptachlor	ND	50	"	"	"	"	"	"	
Heptachlor epoxide	ND	20	"	"	"	"	"	"	
Methoxychlor	ND	150	"	"	"	"	"	"	

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Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CONF- 4 (CXC1067-04) Soil Sampled: 03/27/14 09:36 Received: 03/27/14 14:30									
Mirex	ND	100	µg/kg	10	CX02197	"	04/03/14	EPA 8081A	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*88 %*	*46-139*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*87 %*	*52-141*		"	"	"	"	
CONF- 5 (CXC1067-05) Soil Sampled: 03/27/14 09:39 Received: 03/27/14 14:30									
Aldrin	ND	10	µg/kg	10	CX02197	03/30/14	04/03/14	EPA 8081A	
alpha-BHC	ND	20	"	"	"	"	"	"	
beta-BHC	ND	100	"	"	"	"	"	"	
delta-BHC	ND	100	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	100	"	"	"	"	"	"	
Chlordane-technical	ND	200	"	"	"	"	"	"	
4,4´-DDD	ND	150	"	"	"	"	"	"	
4,4´-DDE	**320**	150	"	"	"	"	"	"	
4,4´-DDT	**230**	150	"	"	"	"	"	"	
Dieldrin	ND	10	"	"	"	"	"	"	
Endosulfan I	ND	150	"	"	"	"	"	"	
Endosulfan II	ND	150	"	"	"	"	"	"	
Endosulfan sulfate	ND	150	"	"	"	"	"	"	
Endrin	ND	150	"	"	"	"	"	"	
Endrin aldehyde	ND	150	"	"	"	"	"	"	
Heptachlor	ND	50	"	"	"	"	"	"	
Heptachlor epoxide	ND	20	"	"	"	"	"	"	
Methoxychlor	ND	150	"	"	"	"	"	"	
Mirex	ND	100	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*82 %*	*46-139*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*91 %*	*52-141*		"	"	"	"	

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Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CONF- 6 (CXC1067-06) Soil Sampled: 03/27/14 09:44 Received: 03/27/14 14:30									
Aldrin	ND	10	µg/kg	10	CX02197	03/31/14	04/03/14	EPA 8081A	
alpha-BHC	ND	20	"	"	"	"	"	"	
beta-BHC	ND	100	"	"	"	"	"	"	
delta-BHC	ND	100	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	100	"	"	"	"	"	"	
Chlordane-technical	ND	200	"	"	"	"	"	"	
4,4´-DDD	ND	150	"	"	"	"	"	"	
4,4´-DDE	ND	150	"	"	"	"	"	"	
4,4´-DDT	ND	150	"	"	"	"	"	"	
Dieldrin	ND	10	"	"	"	"	"	"	
Endosulfan I	ND	150	"	"	"	"	"	"	
Endosulfan II	ND	150	"	"	"	"	"	"	
Endosulfan sulfate	ND	150	"	"	"	"	"	"	
Endrin	ND	150	"	"	"	"	"	"	
Endrin aldehyde	ND	150	"	"	"	"	"	"	
Heptachlor	ND	50	"	"	"	"	"	"	
Heptachlor epoxide	ND	20	"	"	"	"	"	"	
Methoxychlor	ND	150	"	"	"	"	"	"	
Mirex	ND	100	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*77 %*	*46-139*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*89 %*	*52-141*		"	"	"	"	
CONF- 7 (CXC1067-07) Soil Sampled: 03/27/14 09:52 Received: 03/27/14 14:30									
Aldrin	ND	10	µg/kg	10	CX02197	03/31/14	04/03/14	EPA 8081A	
alpha-BHC	ND	20	"	"	"	"	"	"	
beta-BHC	ND	100	"	"	"	"	"	"	
delta-BHC	ND	100	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	100	"	"	"	"	"	"	
Chlordane-technical	ND	200	"	"	"	"	"	"	

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Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CONF- 7 (CXC1067-07) Soil Sampled: 03/27/14 09:52 Received: 03/27/14 14:30									
4,4´-DDD	ND	150	µg/kg	10	CX02197	"	04/03/14	EPA 8081A	
4,4´-DDE	ND	150	"	"	"	"	"	"	
4,4´-DDT	ND	150	"	"	"	"	"	"	
Dieldrin	ND	10	"	"	"	"	"	"	
Endosulfan I	ND	150	"	"	"	"	"	"	
Endosulfan II	ND	150	"	"	"	"	"	"	
Endosulfan sulfate	ND	150	"	"	"	"	"	"	
Endrin	ND	150	"	"	"	"	"	"	
Endrin aldehyde	ND	150	"	"	"	"	"	"	
Heptachlor	ND	50	"	"	"	"	"	"	
Heptachlor epoxide	ND	20	"	"	"	"	"	"	
Methoxychlor	ND	150	"	"	"	"	"	"	
Mirex	ND	100	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*87 %*		*46-139*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*93 %*		*52-141*	"	"	"	"	
CONF- 8 (CXC1067-08) Soil Sampled: 03/27/14 09:55 Received: 03/27/14 14:30									
Aldrin	ND	10	µg/kg	10	CX02197	03/31/14	04/03/14	EPA 8081A	
alpha-BHC	ND	20	"	"	"	"	"	"	
beta-BHC	ND	100	"	"	"	"	"	"	
delta-BHC	ND	100	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	100	"	"	"	"	"	"	
Chlordane-technical	ND	200	"	"	"	"	"	"	
4,4´-DDD	ND	150	"	"	"	"	"	"	
4,4´-DDE	ND	150	"	"	"	"	"	"	
4,4´-DDT	ND	150	"	"	"	"	"	"	
Dieldrin	**10**	10	"	"	"	"	"	"	
Endosulfan I	ND	150	"	"	"	"	"	"	
Endosulfan II	ND	150	"	"	"	"	"	"	

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Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CONF- 8 (CXC1067-08) Soil Sampled: 03/27/14 09:55 Received: 03/27/14 14:30									
Endosulfan sulfate	ND	150	µg/kg	10	CX02197	"	04/03/14	EPA 8081A	
Endrin	ND	150	"	"	"	"	"	"	
Endrin aldehyde	ND	150	"	"	"	"	"	"	
Heptachlor	ND	50	"	"	"	"	"	"	
Heptachlor epoxide	ND	20	"	"	"	"	"	"	
Methoxychlor	ND	150	"	"	"	"	"	"	
Mirex	ND	100	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*83 %*		*46-139*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*132 %*		*52-141*	"	"	"	"	

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Polychlorinated Biphenyls by EPA Method 8082A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CONF- 3 (CXC1067-03) Soil Sampled: 03/27/14 09:34 Received: 03/27/14 14:30									
Aroclor 1016	ND	20	µg/kg	1	CX02136	03/28/14	03/31/14	EPA 8082A	
Aroclor 1221	ND	20	"	"	"	"	"	"	
Aroclor 1232	ND	20	"	"	"	"	"	"	
Aroclor 1242	ND	20	"	"	"	"	"	"	
Aroclor 1248	ND	20	"	"	"	"	"	"	
Aroclor 1254	ND	20	"	"	"	"	"	"	
Aroclor 1260	ND	20	"	"	"	"	"	"	
Aroclor 1268	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*60 %*		*50-150*	"	"	"	"	
CONF- 4 (CXC1067-04) Soil Sampled: 03/27/14 09:36 Received: 03/27/14 14:30									
Aroclor 1016	ND	20	µg/kg	1	CX02136	03/28/14	03/31/14	EPA 8082A	
Aroclor 1221	ND	20	"	"	"	"	"	"	
Aroclor 1232	ND	20	"	"	"	"	"	"	
Aroclor 1242	ND	20	"	"	"	"	"	"	
Aroclor 1248	ND	20	"	"	"	"	"	"	
Aroclor 1254	ND	20	"	"	"	"	"	"	
Aroclor 1260	ND	20	"	"	"	"	"	"	
Aroclor 1268	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*37 %*		*50-150*	"	"	"	"	*QS-4*
CONF- 5 (CXC1067-05) Soil Sampled: 03/27/14 09:39 Received: 03/27/14 14:30									
Aroclor 1016	ND	20	µg/kg	1	CX02136	03/28/14	03/31/14	EPA 8082A	
Aroclor 1221	ND	20	"	"	"	"	"	"	
Aroclor 1232	ND	20	"	"	"	"	"	"	
Aroclor 1242	ND	20	"	"	"	"	"	"	
Aroclor 1248	ND	20	"	"	"	"	"	"	
Aroclor 1254	ND	20	"	"	"	"	"	"	
Aroclor 1260	ND	20	"	"	"	"	"	"	

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Polychlorinated Biphenyls by EPA Method 8082A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CONF- 5 (CXC1067-05) Soil Sampled: 03/27/14 09:39 Received: 03/27/14 14:30									
Aroclor 1268	ND	20	µg/kg	1	CX02136	"	03/31/14	EPA 8082A	
Surrogate: Decachlorobiphenyl		*56 %*		*50-150*		*"*	*"*	*"*	*"*

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Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CX02197 - EPA method 3545										
Blank (CX02197-BLK1)				Prepared: 03/30/14 Analyzed: 04/03/14						
Aldrin	ND	1.0	µg/kg							
alpha-BHC	ND	2.0	"							
beta-BHC	ND	10	"							
delta-BHC	ND	10	"							
gamma-BHC (Lindane)	ND	10	"							
Chlordane-technical	ND	20	"							
4,4´-DDD	ND	15	"							
4,4´-DDE	ND	15	"							
4,4´-DDT	ND	15	"							
Dieldrin	ND	1.0	"							
Endosulfan I	ND	15	"							
Endosulfan II	ND	15	"							
Endosulfan sulfate	ND	15	"							
Endrin	ND	15	"							
Endrin aldehyde	ND	15	"							
Heptachlor	ND	5.0	"							
Heptachlor epoxide	ND	2.0	"							
Methoxychlor	ND	15	"							
Mirex	ND	10	"							
Toxaphene	ND	20	"							
Surrogate: Tetrachloro-meta-xylene	*16.6*		*"*	*16.7*		*100*	*46-139*			
Surrogate: Decachlorobiphenyl	*19.0*		*"*	*16.7*		*114*	*52-141*			
LCS (CX02197-BS1)				Prepared: 03/30/14 Analyzed: 04/03/14						
Aldrin	29.3	1.0	µg/kg	33.3		88	47-132			
gamma-BHC (Lindane)	30.0	10	"	33.3		90	56-133			
4,4´-DDT	41.3	15	"	33.3		124	46-137			
Dieldrin	33.8	1.0	"	33.3		101	44-143			
Endrin	34.6	15	"	33.3		104	30-147			
Heptachlor	30.6	5.0	"	33.3		92	33-148			
Surrogate: Tetrachloro-meta-xylene	*14.2*		*"*	*16.7*		*85*	*46-139*			

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Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CX02197 - EPA method 3545										
LCS (CX02197-BS1)				Prepared: 03/30/14 Analyzed: 04/03/14						
Surrogate: Decachlorobiphenyl	*18.9*		*µg/kg*	*16.7*		*113*	*52-141*			
LCS Dup (CX02197-BSD1)				Prepared: 03/30/14 Analyzed: 04/03/14						
Aldrin	32.3	1.0	µg/kg	33.3		97	47-132	10	30	
gamma-BHC (Lindane)	33.4	10	"	33.3		100	56-133	11	30	
4,4´-DDT	44.2	15	"	33.3		133	46-137	7	30	
Dieldrin	36.1	1.0	"	33.3		108	44-143	7	30	
Endrin	37.0	15	"	33.3		111	30-147	7	30	
Heptachlor	33.7	5.0	"	33.3		101	33-148	10	30	
Surrogate: Tetrachloro-meta-xylene	*15.3*		*"*	*16.7*		*92*	*46-139*			
Surrogate: Decachlorobiphenyl	*18.5*		*"*	*16.7*		*111*	*52-141*			
Matrix Spike (CX02197-MS1)		**Source: CXC1036-42**		Prepared: 03/30/14 Analyzed: 04/03/14						
Aldrin	30.4	10	µg/kg	33.3	ND	91	47-138			
gamma-BHC (Lindane)	31.6	100	"	33.3	ND	95	38-144			
4,4´-DDT	28.6	150	"	33.3	376	NR	41-157			QM-7T
Dieldrin	72.5	10	"	33.3	54.9	53	46-155			
Endrin	64.8	150	"	33.3	ND	194	34-149			QM-7T
Heptachlor	33.1	50	"	33.3	ND	99	36-155			
Surrogate: Tetrachloro-meta-xylene	*16.2*		*"*	*16.7*		*97*	*46-139*			
Surrogate: Decachlorobiphenyl	*19.4*		*"*	*16.7*		*117*	*52-141*			
Matrix Spike Dup (CX02197-MSD1)		**Source: CXC1036-42**		Prepared: 03/30/14 Analyzed: 04/03/14						
Aldrin	29.9	10	µg/kg	33.3	ND	90	47-138	2	35	
gamma-BHC (Lindane)	32.5	100	"	33.3	ND	98	38-144	3	35	
4,4´-DDT	31.5	150	"	33.3	376	NR	41-157	10	35	QM-7T
Dieldrin	80.5	10	"	33.3	54.9	77	46-155	11	35	
Endrin	60.9	150	"	33.3	ND	183	34-149	6	35	QM-7T
Heptachlor	33.1	50	"	33.3	ND	99	36-155	0.1	35	
Surrogate: Tetrachloro-meta-xylene	*15.9*		*"*	*16.7*		*96*	*46-139*			
Surrogate: Decachlorobiphenyl	*17.5*		*"*	*16.7*		*105*	*52-141*			

Tetra Tech Geo
2969 Prospect Park Drive, Suite 100
Rancho Cordova, CA 95670

Project: VOP - Hayward
Project Number: 117-7059010
Project Manager: Tim Costello

CLS Work Order #: CXC1067
COC #:

Polychlorinated Biphenyls by EPA Method 8082A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CX02136 - LUFT-DHS GCNV										
Blank (CX02136-BLK1)				Prepared: 03/28/14 Analyzed: 03/31/14						
Aroclor 1016	ND	20	µg/kg							
Aroclor 1221	ND	20	"							
Aroclor 1232	ND	20	"							
Aroclor 1242	ND	20	"							
Aroclor 1248	ND	20	"							
Aroclor 1254	ND	20	"							
Aroclor 1260	ND	20	"							
Aroclor 1268	ND	20	"							
Surrogate: Decachlorobiphenyl	*9.60*		*"*	*8.33*		*115*	*50-150*			
LCS (CX02136-BS1)				Prepared: 03/28/14 Analyzed: 03/31/14						
Aroclor 1260	86.7	20	µg/kg	83.3		104	29-131			
Surrogate: Decachlorobiphenyl	*9.35*		*"*	*8.33*		*112*	*50-150*			
LCS Dup (CX02136-BSD1)				Prepared: 03/28/14 Analyzed: 03/31/14						
Aroclor 1260	90.4	20	µg/kg	83.3		108	29-131	4	30	
Surrogate: Decachlorobiphenyl	*9.55*		*"*	*8.33*		*115*	*50-150*			
Matrix Spike (CX02136-MS1)	**Source: CXC1063-06**			Prepared: 03/28/14 Analyzed: 03/31/14						
Aroclor 1260	50.5	20	µg/kg	83.3	8.57	50	29-131			
Surrogate: Decachlorobiphenyl	*5.72*		*"*	*8.33*		*69*	*50-150*			
Matrix Spike Dup (CX02136-MSD1)	**Source: CXC1063-06**			Prepared: 03/28/14 Analyzed: 03/31/14						
Aroclor 1260	54.8	20	µg/kg	83.3	8.57	55	29-131	8	30	
Surrogate: Decachlorobiphenyl	*6.02*		*"*	*8.33*		*72*	*50-150*			

Tetra Tech Geo	Project: VOP - Hayward	
2969 Prospect Park Drive, Suite 100	Project Number: 117-7059010	**CLS Work Order #: CXC1067**
Rancho Cordova, CA 95670	Project Manager: Tim Costello	COC #:

Notes and Definitions

QS-4	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-7T	The spike recovery was outside acceptance limits for these analytes in both the MS and MSD due to toxaphene/chlordane interference from the source. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Attachment 3

Signed Manifest Forms and Landfill Weight Tags

THKH J13. LICH VPS82--

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC002768703
2. Page 1 of: 1
3. Emergency Response Phone: 800-858-1477
4. Manifest Tracking Number: 003294090 JJK

GENERATOR

5. Generator's Name and Mailing Address: Fernando Ramirez, 1210 Clinton Street, San Francisco, CA 94124 USA
Generator's Phone: 415-297-0724
Generator's Site Address (if different than mailing address): 23536 Soto Rd, Hayward, CA 94545 USA

6. Transporter 1 Company Name: Denbeste Transportation, Inc
U.S. EPA ID Number: CAD982513632

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: Clean Harbors Environmental, 2500 West Lokern Rd, Buttonwillow, CA 93206 USA
U.S. EPA ID Number: CAD980675276
Facility's Phone: 661-762-6200

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. Non, Non RCRA Hazardous Waste, Solids, (DOT, IATA, DOT), NA	1	DT	18	Y	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
Waste Profile Number CHA891208
Wear all appropriate PPE when Handling Material
Sales Order Number: 1400693819
Denbeste Job Number: DB13472

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Fernando Ramirez
Signature
Month 10 Day 29 Year 14

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: George Lima
Signature
Month 10 Day 04 Year 14

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month 11 Day 04 Year 14

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

NO. 283628

CLEANHARBORS BUTTONWILLOW, LLC
WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed in Chapter 7 (commencing with Section12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agiculture.

WEIGHMASTER CLEANHARBORS BUTTONWILLOW, LLC

3:45 PM 06/04/14
REG. (80)
INBOUND 77780 lb

4:02 PM 06/04/14

REG. (80)
77780 lb GROSS
32980 lb TARE
44800 lb NET

PROFILE NO. CH6391208		GROSS WT. BY: DEPUTY	DATE 6/4/14
DISPOSAL LOCATION 35-11 25-11-15		TARE WT. BY: DEPUTY	DATE 6/4/14
DRIVER'S NAME PRINTED George Lima		WEIGHING LOCATION:	2500 W. LOKERN ROAD BUTTONWILLOW, CA 93206
DRIVER'S NAME SIGNATURE		GENERATOR	Fernando Ramirez
TRACTOR NO. 273		TRANSPORTER	Denbesc
TRACTOR LIC. NO. VP58255		MANIFEST NO.	003294090 JJK
TRAILER LIC. NO. 439HRW		SERVICE ORDER NO.	1100603519
BIN NUMBERS:		BIN TRACKING	

☒ END DUMP ☐ TRANSFER ☐ VACUUM ☐ VAN
☐ ROLL OFF - _____ ☐ FLAT BED ☐ _____

VIS	pH	SUL	CYA	OX	FL	FLASH	20%	
+	7.35	-	-	-	+			
OTHER:								

IC	CR	PR	B.W. W.B.	LAB	SOLID BULK	WORK SHEET	LAND TRACK	W.T. SCAN	MAN-SCAN	RE-SCAN

DRUM NUMBER:

COMMENTS:

BIN DROP FULL:

MOVE BIN TO: DATE: BY:

REVISED (3/10)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) ILL7340 A 9

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC002768903
2. Page 1 of: 1
3. Emergency Response Phone: 800-338-1477
4. Manifest Tracking Number: 003294088 JJK

5. Generator's Name and Mailing Address: Fernando Ramirez, 1210 Gilman Street, San Francisco, CA 94124 USA
Generator's Site Address (if different than mailing address): 23836 Sotion Road, Hayward, CA 94545 USA
Generator's Phone: 415-293-0724

6. Transporter 1 Company Name: Denbeste Transportation, Inc. c/o JJ Perez Trucking
U.S. EPA ID Number: CA[illegible] / CAD982513652

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Clean Harbors Environmental, 2500 West Lokern Rd, Buttonwillow, CA 93206 USA
U.S. EPA ID Number: CAD980675276
Facility's Phone: 661-762-6200

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes			
	1. None, non RCRA Hazardous Waste, Solids, (DDD, DDE, DDT), N/A	1	DT	18	Y	611			
	2.								
	3.								
	4.								

14. Special Handling Instructions and Additional Information
Waste Profile Number CH6891208 Sales Order Number:
Wear all appropriate PPE when handling material Denbeste Job Number: DC13477

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Fernando Ramirez — Signature: [signature] — Month Day Year: 03 27 14

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Daniel Gomez — Signature: [signature] — Month Day Year: 08 04 14
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: [illegible] — Signature: [signature] — Month Day Year: [illegible]

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

NO. 283630

CLEANHARBORS BUTTONWILLOW, LLC
WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed in Chapter 7 (commencing with Section12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agiculture.

WEIGHMASTER CLEANHARBORS BUTTONWILLOW, LLC

4:14 pm 06/04/14
REG. (82)
INBOUND 42640 lb

4:28 pm 06/04/14

REG. (82)
42640 lb GROSS
30320 lb TARE
12320 lb NET

PROFILE NO. CH689122B	GROSS WT. BY:	DEPUTY	DATE 06/04/14
DISPOSAL LOCATION 25-4 Z8-11-10	TARE WT. BY:	DEPUTY	DATE 06/04/14
DRIVER'S NAME PRINTED Daniel Gomez	WEIGHING LOCATION: 2500 W. LOKERN ROAD BUTTONWILLOW, CA 93206		
DRIVER'S NAME SIGNATURE (signature)	GENERATOR Fernando		
TRACTOR NO. 69	TRANSPORTER JJ Perez Trucking		
TRACTOR LIC. NO. 9D07540	MANIFEST NO. 003294088 JJK		
TRAILER LIC. NO. 803 SFJ	SERVICE ORDER NO. 1402063819		
BIN NUMBERS: E/D 386	BIN TRACKING		

☒ END DUMP ☐ TRANSFER ☐ VACUUM ☐ VAN

☐ ROLL OFF - ______ ☐ FLAT BED ☐ ______

VIS	pH	SUL	CYA	OX	FL	FLASH	20%	
st	8.91	–	–	–	N			
OTHER:								

IC	CR	PR	B.W. W.B.	LAB	SOLID BULK	WORK SHEET	LAND TRACK	W.T. SCAN	MAN-SCAN	RE-SCAN

DRUM NUMBER:

COMMENTS:

BIN DROP FULL:

MOVE BIN TO: DATE: BY:

REVISED (3/10)

Attachment 4

Laboratory Analytical Data Sheets and COC Form 5-27-14

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

May 29, 2014

CLS Work Order #: CXE1048
COC #:

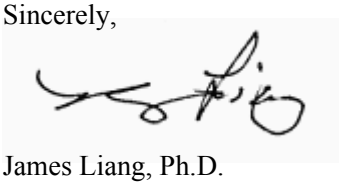
Tim Costello
Tetra Tech Geo
2969 Prospect Park Drive, Suite 100
Rancho Cordova, CA 95670

Project Name: VOP - Hayward

Enclosed are the results of analyses for samples received by the laboratory on 05/27/14 14:10. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,



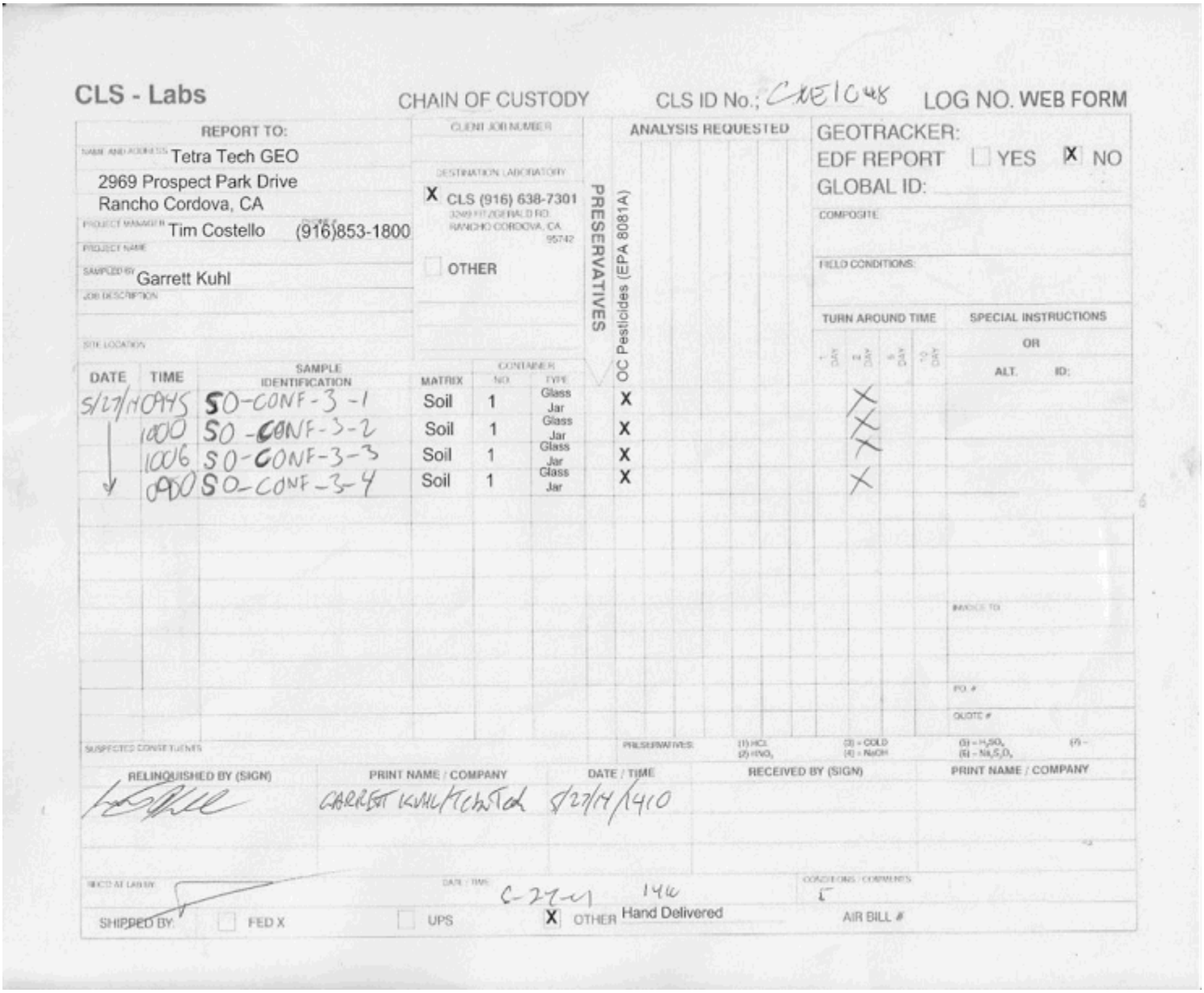
James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

05/29/14 13:37

Tetra Tech Geo	Project: VOP - Hayward	
2969 Prospect Park Drive, Suite 100	Project Number: 117-7059010	**CLS Work Order #: CXE1048**
Rancho Cordova, CA 95670	Project Manager: Tim Costello	COC #:



CLS - Labs

CHAIN OF CUSTODY

CLS ID No.: CXE1048

LOG NO. WEB FORM

REPORT TO:

Tetra Tech GEO
2969 Prospect Park Drive
Rancho Cordova, CA
Tim Costello (916)853-1800

Garrett Kuhl

CLIENT JOB NUMBER

DESTINATION LABORATORY

X CLS (916) 638-7301
3249 FITZGERALD RD.
RANCHO CORDOVA, CA
95742

OTHER

ANALYSIS REQUESTED

PRESERVATIVES

OC Pesticides (EPA 8081A)

GEOTRACKER:
EDF REPORT ☐ YES X NO
GLOBAL ID:

COMPOSITE

FIELD CONDITIONS:

TURN AROUND TIME

SPECIAL INSTRUCTIONS

OR

ALT. ID:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	CONTAINER TYPE	OC Pesticides (EPA 8081A)	TURN AROUND TIME
5/27/14	0945	SO-CONF-3-1	Soil	1	Glass Jar	X	X
	1000	SO-CONF-3-2	Soil	1	Glass Jar	X	X
	1006	SO-CONF-3-3	Soil	1	Glass Jar	X	X
	0950	SO-CONF-3-4	Soil	1	Glass Jar	X	X

SUSPECTED CONSTITUENTS

PRESERVATIVES: (1) HCL (2) HNO3 (3) = COLD (4) = NaOH (5) = H2SO4 (6) = Na2S2O3 (7) =

INVOICE TO:

PO #:

QUOTE #:

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
	GARRETT KUHL/TETRA TECH	5/27/14 1410		

RECD AT LAB BY: DATE / TIME: 5-27-14 1410 CONDITIONS / COMMENTS: 5

SHIPPED BY: ☐ FED X ☐ UPS X OTHER Hand Delivered AIR BILL #

CALIFORNIA LABORATORY SERVICES

Tetra Tech Geo	Project: VOP - Hayward	
2969 Prospect Park Drive, Suite 100	Project Number: 117-7059010	**CLS Work Order #: CXE1048**
Rancho Cordova, CA 95670	Project Manager: Tim Costello	COC #:

CHANGE OF STATUS

CLS Labs Job # CXE1048

Project Name: VOP HAYWARD

Date Sample(s) Were Received: 5/27/14 **Original Date** 5/28/14

Tim Costello (Client Contacted) of KTMA Tech (Company) called

on 5/28/14 (Date) at 0828 hrs (Time).
(EMAIL ATTACHED)

... and requested the following:

ADD Project NAME: VOP HAYWARD
& Project NUMBER: 117-7059010
TO WORK ORDER.

ARCHIVE SAMPLES:

-03 (SO-CONF-S-3)
-04 (SO-CONF-S-4)

Turnaround time requested for additional work: 2 DAYS

(Signature) 5/28/14 (Date)

Updated lab job database and file folder by: 5/28/14

Cc:

H:\WillOrellana\ChangeOfStatus.Doc

Tetra Tech Geo
2969 Prospect Park Drive, Suite 100
Rancho Cordova, CA 95670

Project: VOP - Hayward
Project Number: 117-7059010
Project Manager: Tim Costello

CLS Work Order #: CXE1048
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SO - CONF - 3 - 1 (CXE1048-01) Soil Sampled: 05/27/14 09:45 Received: 05/27/14 14:10									
Aldrin	ND	10	µg/kg	10	CX03609	05/28/14	05/29/14	EPA 8081A	
alpha-BHC	ND	20	"	"	"	"	"	"	
beta-BHC	ND	100	"	"	"	"	"	"	
delta-BHC	ND	100	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	100	"	"	"	"	"	"	
Chlordane-technical	ND	200	"	"	"	"	"	"	
4,4´-DDD	ND	150	"	"	"	"	"	"	
4,4´-DDE	ND	150	"	"	"	"	"	"	
4,4´-DDT	ND	150	"	"	"	"	"	"	
Dieldrin	ND	10	"	"	"	"	"	"	
Endosulfan I	ND	150	"	"	"	"	"	"	
Endosulfan II	ND	150	"	"	"	"	"	"	
Endosulfan sulfate	ND	150	"	"	"	"	"	"	
Endrin	ND	150	"	"	"	"	"	"	
Endrin aldehyde	ND	150	"	"	"	"	"	"	
Heptachlor	ND	50	"	"	"	"	"	"	
Heptachlor epoxide	ND	20	"	"	"	"	"	"	
Methoxychlor	ND	150	"	"	"	"	"	"	
Mirex	ND	100	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*65 %*	*46-139*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*48 %*	*52-141*		"	"	"	"	*QS-4*
SO - CONF - 3 - 2 (CXE1048-02) Soil Sampled: 05/27/14 10:00 Received: 05/27/14 14:10									
Aldrin	ND	10	µg/kg	10	CX03609	05/28/14	05/29/14	EPA 8081A	
alpha-BHC	ND	20	"	"	"	"	"	"	
beta-BHC	**180**	100	"	"	"	"	"	"	
delta-BHC	ND	100	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	100	"	"	"	"	"	"	
Chlordane-technical	ND	200	"	"	"	"	"	"	

Tetra Tech Geo
2969 Prospect Park Drive, Suite 100
Rancho Cordova, CA 95670

Project: VOP - Hayward
Project Number: 117-7059010
Project Manager: Tim Costello

CLS Work Order #: CXE1048
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SO - CONF - 3 - 2 (CXE1048-02) Soil Sampled: 05/27/14 10:00 Received: 05/27/14 14:10									
4,4´-DDD	ND	150	µg/kg	10	CX03609	"	05/29/14	EPA 8081A	
4,4´-DDE	ND	150	"	"	"	"	"	"	
4,4´-DDT	ND	150	"	"	"	"	"	"	
Dieldrin	ND	10	"	"	"	"	"	"	
Endosulfan I	ND	150	"	"	"	"	"	"	
Endosulfan II	ND	150	"	"	"	"	"	"	
Endosulfan sulfate	ND	150	"	"	"	"	"	"	
Endrin	ND	150	"	"	"	"	"	"	
Endrin aldehyde	ND	150	"	"	"	"	"	"	
Heptachlor	ND	50	"	"	"	"	"	"	
Heptachlor epoxide	ND	20	"	"	"	"	"	"	
Methoxychlor	ND	150	"	"	"	"	"	"	
Mirex	ND	100	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*74 %*		*46-139*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*63 %*		*52-141*	"	"	"	"	

Tetra Tech Geo
2969 Prospect Park Drive, Suite 100
Rancho Cordova, CA 95670

Project: VOP - Hayward
Project Number: 117-7059010
Project Manager: Tim Costello

CLS Work Order #: CXE1048
COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CX03609 - LUFT-DHS GCNV										
Blank (CX03609-BLK1)				Prepared: 05/27/14 Analyzed: 05/29/14						
Aldrin	ND	1.0	µg/kg							
alpha-BHC	ND	2.0	"							
beta-BHC	ND	10	"							
delta-BHC	ND	10	"							
gamma-BHC (Lindane)	ND	10	"							
Chlordane-technical	ND	20	"							
4,4´-DDD	ND	15	"							
4,4´-DDE	ND	15	"							
4,4´-DDT	ND	15	"							
Dieldrin	ND	1.0	"							
Endosulfan I	ND	15	"							
Endosulfan II	ND	15	"							
Endosulfan sulfate	ND	15	"							
Endrin	ND	15	"							
Endrin aldehyde	ND	15	"							
Heptachlor	ND	5.0	"							
Heptachlor epoxide	ND	2.0	"							
Methoxychlor	ND	15	"							
Mirex	ND	10	"							
Toxaphene	ND	20	"							
Surrogate: Tetrachloro-meta-xylene	*6.78*		*"*	*8.33*		*81*	*46-139*			
Surrogate: Decachlorobiphenyl	*8.33*		*"*	*8.33*		*100*	*52-141*			
LCS (CX03609-BS1)				Prepared: 05/27/14 Analyzed: 05/29/14						
Aldrin	14.8	1.0	µg/kg	16.7		89	47-132			
gamma-BHC (Lindane)	14.5	10	"	16.7		87	56-133			
4,4´-DDT	18.4	15	"	16.7		110	46-137			
Dieldrin	17.3	1.0	"	16.7		104	44-143			
Endrin	12.7	15	"	16.7		76	30-147			
Heptachlor	14.2	5.0	"	16.7		85	33-148			
Surrogate: Tetrachloro-meta-xylene	*6.72*		*"*	*8.33*		*81*	*46-139*			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CX03609 - LUFT-DHS GCNV										
LCS (CX03609-BS1)				Prepared: 05/27/14 Analyzed: 05/29/14						
Surrogate: Decachlorobiphenyl	*8.39*		*µg/kg*	*8.33*		*101*	*52-141*			
LCS Dup (CX03609-BSD1)				Prepared: 05/27/14 Analyzed: 05/29/14						
Aldrin	14.9	1.0	µg/kg	16.7		90	47-132	0.7	30	
gamma-BHC (Lindane)	14.6	10	"	16.7		88	56-133	0.5	30	
4,4´-DDT	16.2	15	"	16.7		97	46-137	12	30	
Dieldrin	17.2	1.0	"	16.7		103	44-143	0.4	30	
Endrin	11.6	15	"	16.7		70	30-147	9	30	
Heptachlor	13.7	5.0	"	16.7		82	33-148	3	30	
Surrogate: Tetrachloro-meta-xylene	*4.98*		*"*	*8.33*		*60*	*46-139*			
Surrogate: Decachlorobiphenyl	*8.16*		*"*	*8.33*		*98*	*52-141*			
Matrix Spike (CX03609-MS1)	**Source: CXE0998-05**			Prepared: 05/27/14 Analyzed: 05/29/14						
Aldrin	15.1	10	µg/kg	16.7	ND	90	47-138			
gamma-BHC (Lindane)	15.5	100	"	16.7	ND	93	38-144			
4,4´-DDT	22.7	150	"	16.7	ND	136	41-157			
Dieldrin	19.9	10	"	16.7	ND	120	46-155			
Endrin	14.7	150	"	16.7	ND	88	34-149			
Heptachlor	11.9	50	"	16.7	ND	71	36-155			
Surrogate: Tetrachloro-meta-xylene	*15.7*		*"*	*20.8*		*75*	*46-139*			
Surrogate: Decachlorobiphenyl	*16.5*		*"*	*20.8*		*79*	*52-141*			
Matrix Spike Dup (CX03609-MSD1)	**Source: CXE0998-05**			Prepared: 05/27/14 Analyzed: 05/29/14						
Aldrin	14.4	10	µg/kg	16.7	ND	86	47-138	5	35	
gamma-BHC (Lindane)	14.6	100	"	16.7	ND	88	38-144	6	35	
4,4´-DDT	21.7	150	"	16.7	ND	130	41-157	4	35	
Dieldrin	19.0	10	"	16.7	ND	114	46-155	5	35	
Endrin	14.2	150	"	16.7	ND	85	34-149	4	35	
Heptachlor	11.4	50	"	16.7	ND	69	36-155	4	35	
Surrogate: Tetrachloro-meta-xylene	*14.8*		*"*	*20.8*		*71*	*46-139*			
Surrogate: Decachlorobiphenyl	*15.2*		*"*	*20.8*		*73*	*52-141*			

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Notes and Definitions

QS-4	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference