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# APPENDIX G5: EBPSP PHASE II (2B)

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July 7, 2025

Peter Rooney  
Managing Director/Co-President  
Ontario Ranch Venture, LLC  
3501 Jamboree Road, Suite 3000  
Newport Beach, California 92660

Re: **Phase II Subsurface Investigation Letter Report**

Proposed Eucalyptus Business Park Specific Plan (EBPSP) Development of Ontario Ranch I,  
Northwest of the Intersection of Eucalyptus Avenue and Walker Avenue, Ontario California

Dear Mr. Rooney:

Roux Associates, Inc. (Roux) has prepared this Phase II Subsurface Investigation (Phase II) Letter Report (Report) for Ontario Ranch Venture, LLC (Client) to summarize the findings of the subsurface investigation conducted at the approximately 76-acre proposed Eucalyptus Business Park Specific Plan (EBPSP) development area of the Ontario Ranch I property located northwest of the intersection between Eucalyptus Avenue and Walker Avenue, Ontario, California (Site; Figures 1 and 2). The Client intends to redevelop the Site for commercial/industrial purposes with an open, recreational space located along the northern portion of the Site (Figure 2).

The Site consists of all or portions of four individual properties referred to herein as the Alewyn Property, Miersma Property, DeHoog II Property, and Swager Property. The scope of work, as detailed in Roux's proposal dated May 8, 2025, was developed to address a recognized environmental condition (REC), identified by Roux in a Phase I Environmental Site Assessment (Phase I ESA) for the proposed EBPSP development at the Site, dated March 24, 2025.

Specifically, the Phase I identified the following REC:

- Potential pesticide impacts to shallow soils from historical agricultural uses of the Site from at least the 1930s through 1950s.

The sections that follow provide details of the scope of work completed as part of the Phase II subsurface investigation to address the REC.

## **METHODS OF INVESTIGATION**

### ***Pre-Field Activities***

Prior to the start of field activities, Roux prepared a Site-specific Health and Safety Plan (HASP) to ensure worker safety. In addition to containing information regarding Roux's standard safety practices, the HASP contained information about potential hazards related to Site activities and provided the locations and contact information of nearby emergency services. Field workers acknowledged their familiarity with all safety procedures and indicated their intent to follow the HASP by signing the HASP after the tailgate safety meeting, which took place at the beginning of each field day.

Samples were collected using hand tools such as hand trowels and hand augers and sample collection depths did not extend below 0.5 feet below ground surface (bgs). Therefore, it was extremely unlikely that potential subsurface features such as buried electrical lines, water pipes, sewer pipes, etc. would be encountered and notification of Underground Service Alert (USA) of Southern California was not

considered necessary. In general, Roux visually assessed surface conditions and/or nearby surficial features (if any) at each sample location prior to sample collection.

### ***Agricultural Uses – Soil Sampling***

Prior to field activities, Roux subdivided the Site into approximately uniform grids (Figure 2) so the investigation could be conducted in a manner generally consistent with the California Department of Toxic Substances Control (DTSC) Interim Guidance for Sampling Agricultural Properties (Guidance), dated August 7, 2008 (Attachment 1).

On June 10 and June 11, 2025, a total of 85 individual soil samples (including discrete and duplicates) were collected at the nominal depth of 0.5 feet bgs, from 13 grids (ORBP-21 through ORBP-33) located across the Site (Figure 2). In general, soil samples were not collected from areas noted in historical aerial photographs and/or observed during the Phase I ESA to consist of wastewater ponds or developed with residential or dairy farm buildings (e.g., milk barns).

Four soil samples were collected with a clean trowel and/or a hand auger from each grid from randomly selected sampling locations that were intended to be evenly distributed across each grid. After collection, samples were composited in the field and placed into laboratory-provided glass jars. Between sampling locations, sampling equipment was decontaminated using an Alconox solution and double water rinse.

A total of 68 discreet soil samples were combined into 17 composite samples (ORBP-21 through ORBP-33), including 13 primary, and 4 duplicate composite samples (i.e., one duplicate composite sample randomly selected from a grid at each of the four individual Site properties). The 17 composited soil samples were analyzed for organochlorine pesticides (OCPs) using United States Environmental Protection Agency (USEPA) Method No 8081A.

In addition to the 17 composite samples, Roux also collected 17 discrete soil samples (ORBP-21A through ORBP-33A), including 13 primary and 4 duplicates (i.e., one duplicate discrete sample randomly selected from a grid at each of the four individual Site properties), from each grid for analysis of total lead and arsenic using USEPA Method 6010B, as per the DTSC Guidance. After sample collection, all soil samples were labeled, placed on ice, and transported under chain-of-custody to Enthalpy Analytical (Enthalpy) of Garden Grove, California, a California-certified laboratory. Soil samples were analyzed in accordance with the sampling and analysis plan as shown in Table 1.

## **RESULTS**

Laboratory analytical results for soil samples are summarized in Tables 2 and 3. The complete analytical laboratory reports are included in Attachment 2.

### ***Soil Results***

The following sections provide a summary of the soil analytical results. Soil sampling locations are shown in Figure 2.

#### OCPs

A summary of analytical results for OCPs in soil is presented in Table 2. In general, only three individual OCP constituents, including dieldrin, 4,4-dichlorodiphenyldichloroethylene (4,4'-DDE), and 4,4-dichlorodiphenyltrichloroethane (4,4'-DDT), were reported above laboratory method reporting limits (MRLs) in at least one of the soil samples analyzed.

Detected concentrations were compared to the applicable USEPA Regional Screening Levels (RSLs) for residential and commercial/industrial soil and the DTSC Human and Ecological Risk Office (HERO)

Human Health Risk Assessment (HHRA) Note 3 Screening Levels (SLs) for residential and commercial/industrial soil. Concentrations of detectable OCPs were below the residential and commercial/industrial screening levels established by USEPA RSLs or DTSC SLs.

### Metals

A summary of analytical results for metals in soil is presented in Table 3. Arsenic and lead were detected above laboratory MRLs in all soil samples analyzed, with the exception of one soil sample (ORBP-33A), where only lead above laboratory MRL was detected. The detected concentrations of arsenic and lead were compared to the applicable USEPA RSLs for residential and commercial/industrial soil and the DTSC SLs for residential and commercial/industrial soil.

Arsenic concentrations detected in the soil samples analyzed ranged from 1.2 to 11 milligrams per kilogram (mg/kg), all of which exceed the residential USEPA RSL and/or DTSC SL regulatory screening levels of 0.68 mg/kg or 0.032 mg/kg, respectively. However, due to the granitic nature of California geology, concentrations of arsenic typically exceed the applicable human health risk guideline as presented by the USEPA RSL or DTSC HERO HHRA Note 3 SL. In 2005, DTSC completed a study of naturally occurring concentrations of arsenic for school properties for the Los Angeles Unified School District (*Determination of a Southern California Regional Background Arsenic Concentration in Soil*, G., Bosan, W., and Outiz, D., DTSC). Based on this study, DTSC concluded that the Southern California regional background arsenic concentration in soil are typically less than 12 mg/kg. As such, all detected arsenic concentrations were below the upper range of the Southern California Regional Background Arsenic Concentration in Soil.

Arsenic and lead concentrations for all samples were below the applicable Southern California regional background concentrations or the residential and commercial/industrial screening levels established by USEPA RSLs or DTSC SLs.

### **RECOMMENDATIONS**

Based on the results of this Phase II investigation, Site soils are not impacted by OCPs or associated metals, arsenic and lead. Roux has successfully addressed the REC identified in the Phase I ESA and does not have any recommendations for additional investigations at this time.

Prior to redevelopment, a Soil Management Plan (SMP) should be prepared and implemented during earthmoving activities in the event that potentially unknown soil/soil vapor contamination or unknown subsurface structures (e.g., clarifiers, underground storage tanks [USTs], asbestos containing pipelines [ACPs], etc.) are encountered during redevelopment activities. The SMP will provide guidelines and necessary procedures to implement in order to appropriately handle and/or remedy unknown conditions that may be encountered. This will help reduce schedule impacts that may occur with the possible discovery of unknown conditions.

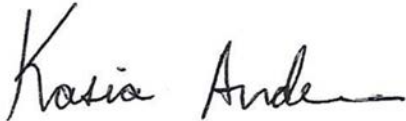
Mr. Peter Rooney  
July 7, 2025  
Page 4

## CLOSING

Should you have any questions or require any further information regarding the contents of this Report, please do not hesitate to contact Mauricio Escobar by telephone at 310-879-4920 or by email at [mescobar@rouxinc.com](mailto:mescobar@rouxinc.com) or Kasia Anderson by telephone at 805-849-9338 or by email at [kanderson@rouxinc.com](mailto:kanderson@rouxinc.com).

Sincerely,

**ROUX ASSOCIATES, INC.**



Kasia Anderson  
Project Geologist



Mauricio H. Escobar, P.G.  
Vice President / Principal Geologist

Enclosures:

Table 1	Sampling and Analysis Plan
Table 2	Organochlorine Pesticides in Soil
Table 3	Metals in Soil
Figure 1	Site Location Map
Figure 2	Site Plan
Attachment 1	DTSC Interim Guidance for Sampling Agricultural Properties
Attachment 2	Laboratory Analytical Reports

**Phase II Subsurface Investigation Letter Report**  
***Northwest Corner of Eucalyptus Avenue and Walker Avenue, Ontario, California***

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**TABLES**

1. Sampling and Analysis Plan
2. Organochlorine Pesticides in Soil
3. Metals in Soil

**Table 1 Sample and Analysis Plan**

Ontario Ranch  
Ontario, California

Sample ID	Naming Convention	Media	Depth (Feet bgs)	US EPA Soil Analysis Method		
				Lead and Arsenic by 6010B (Discrete)	Organochlorine Pesticides (Composite) 8081A	DUP Collected
<b>Former Agricultural Land/Shallow Soil Samples</b>						
ORBP-21	ORBP-21a	Soil	0.5	X	X	
	ORBP-21b	Soil	0.5			
	ORBP-21c	Soil	0.5			
	ORBP-21d	Soil	0.5			
ORBP-22	ORBP-22a	Soil	0.5	X	X	
	ORBP-22b	Soil	0.5			
	ORBP-22c	Soil	0.5			
	ORBP-22d	Soil	0.5			
ORBP-23	ORBP-23a	Soil	0.5	X	X	X
	ORBP-23b	Soil	0.5			
	ORBP-23c	Soil	0.5			
	ORBP-23d	Soil	0.5			
ORBP-24	ORBP-24a	Soil	0.5	X	X	X
	ORBP-24b	Soil	0.5			
	ORBP-24c	Soil	0.5			
	ORBP-24d	Soil	0.5			
ORBP-25	ORBP-25a	Soil	0.5	X	X	
	ORBP-25b	Soil	0.5			
	ORBP-25c	Soil	0.5			
	ORBP-25d	Soil	0.5			
ORBP-26	ORBP-26a	Soil	0.5	X	X	
	ORBP-26b	Soil	0.5			
	ORBP-26c	Soil	0.5			
	ORBP-26d	Soil	0.5			
ORBP-27	ORBP-27a	Soil	0.5	X	X	X
	ORBP-27b	Soil	0.5			
	ORBP-27c	Soil	0.5			
	ORBP-27d	Soil	0.5			
ORBP-28	ORBP-28a	Soil	0.5	X	X	
	ORBP-28b	Soil	0.5			
	ORBP-28c	Soil	0.5			
	ORBP-28d	Soil	0.5			

**Table 1 Sample and Analysis Plan**

Ontario Ranch  
Ontario, California

Sample ID	Naming Convention	Media	Depth (Feet bgs)	US EPA Soil Analysis Method		
				Lead and Arsenic by 6010B (Discrete)	Organochlorine Pesticides (Composite) 8081A	DUP Collected
ORBP-29	ORBP-29a	Soil	0.5	X	X	
	ORBP-29b	Soil	0.5			
	ORBP-29c	Soil	0.5			
	ORBP-29d	Soil	0.5			
ORBP-30	ORBP-30a	Soil	0.5	X	X	
	ORBP-30b	Soil	0.5			
	ORBP-30c	Soil	0.5			
	ORBP-30d	Soil	0.5			
ORBP-31	ORBP-31a	Soil	0.5	X	X	X
	ORBP-31b	Soil	0.5			
	ORBP-31c	Soil	0.5			
	ORBP-31d	Soil	0.5			
ORBP-32	ORBP-32a	Soil	0.5	X	X	
	ORBP-32b	Soil	0.5			
	ORBP-32c	Soil	0.5			
	ORBP-32d	Soil	0.5			
ORBP-33	ORBP-33a	Soil	0.5	X	X	
	ORBP-33b	Soil	0.5			
	ORBP-33c	Soil	0.5			
	ORBP-33d	Soil	0.5			

**Table 2 Organochlorine Pesticides in Soil**  
 Ontario Ranch Business Park  
 Ontario, California

Sample ID	Approximate Sample Depth (feet bgs)	Sample Date	Dieldrin	4,4'-DDE	4,4'-DDT	Other OCPs
<b>Analytical Method</b>			USEPA Method 8081A			
<b>Units</b>			µg/kg			
<b>USEPA Residential RSLs</b>			34	2,000	1,900	Various
<b>DTSC Residential Soil SL</b>			34	NS	NS	Various
<b>USEPA Industrial Soil RSLs</b>			140	9,300	8,500	Various
<b>DTSC Commercial/Industrial Soil SL</b>			120	NS	NS	Various
ORBP-21	0.5	6/11/2025	<10	<10	<10	ND
ORBP-22	0.5	6/11/2025	<10	<10	<10	ND
ORBP-23	0.5	6/11/2025	<10	<10	<10	ND
<i>ORBP-23 DUP</i>	<i>0.5</i>	<i>6/11/2025</i>	<9.9	<9.9	<9.9	ND
ORBP-24	0.5	6/11/2025	<9.9	<9.9	<9.9	ND
<i>ORBP-24 DUP</i>	<i>0.5</i>	<i>6/11/2025</i>	<10	<10	<10	ND
ORBP-25	0.5	6/11/2025	<5.0	<5.0	<b>9.4</b>	ND
ORBP-26	0.5	6/11/2025	<25	<b>31</b>	<25	ND
ORBP-27	0.5	6/10/2025	<5.1	<5.1	<5.1	ND
<i>ORBP-27 DUP</i>	<i>0.5</i>	<i>6/10/2025</i>	<5.1	<5.1	<5.1	ND
ORBP-28	0.5	6/10/2025	<5.1	<5.1	<5.1	ND
ORBP-29	0.5	6/10/2025	<4.9	<4.9	<4.9	ND
ORBP-30	0.5	6/10/2025	<5.1	<5.1	<5.1	ND
ORBP-31	0.5	6/11/2025	<10	<10	<10	ND
<i>ORBP-31 DUP</i>	<i>0.5</i>	<i>6/11/2025</i>	<9.9	<9.9	<9.9	ND
ORBP-32	0.5	6/11/2025	<5.0	<5.0	<5.0	ND
ORBP-33	0.5	6/11/2025	<b>26</b>	<b>5.6</b>	<5.0	ND

**Notes:**

OCPs = organochlorine pesticides

USEPA = United States Environmental Protection Agency

µg/kg = micrograms per kilogram

USEPA RSL = USEPA Regional Screening Level for industrial soil, dated November 2024

DTSC SL = Human Health Risk Assessment (HHRA) Note 3, Department of Toxic Substances

Control Screening Levels (DTSC-SLs) for Soil, April 2025.

bgs = below ground surface

Only compounds detected in soil above laboratory reporting limits in at least one sample are shown on this table

<X = not detected above laboratory reporting limits

**Bold** indicates value exceeds laboratory reporting limit

*Italics* indicates duplicate sample

NS = no screening criteria available

**Table 3 Metals in Soil**  
 Ontario Ranch Business Park  
 Ontario, California

Sample ID	Approximate Sample Depth (feet bgs)	Sample Date	Arsenic	Lead
<b>Analytical Method</b>			USEPA Method 6010B	
<b>Units</b>			mg/kg	
<b>USEPA Residential RSLs</b>			0.68	200
<b>DTSC Residential Soil SL</b>			0.032	80
<b>Typical range for California Soil<sup>1</sup></b>			12 <sup>a</sup>	14.3-107.9
<b>USEPA RSL - Industrial Soil</b>			3.0	800
<b>DTSC Commercial/Industrial Soil SL</b>			0.13	320*
ORBP-21A	0.5	6/11/2025	<b>1.3</b>	<b>15</b>
ORBP-22A	0.5	6/11/2025	<b>1.4</b>	<b>5.4</b>
ORBP-23A	0.5	6/11/2025	<b>3.7</b>	<b>11</b>
ORBP-23A DUP	0.5	6/11/2025	<b>1.7</b>	<b>6.3</b>
ORBP-24A	0.5	6/11/2025	<b>1.4</b>	<b>3.8</b>
ORBP-24A DUP	0.5	6/11/2025	<b>1.2</b>	<b>4.0</b>
ORBP-25A	0.5	6/11/2025	<b>2.3</b>	<b>4.4</b>
ORBP-26A	0.5	6/11/2025	<b>1.2</b>	<b>30</b>
ORBP-27A	0.5	6/10/2025	<b>1.9</b>	<b>3.1</b>
<i>ORBP-27A DUP</i>	<i>0.5</i>	<i>6/10/2025</i>	<b>2.2</b>	<b>3.1</b>
ORBP-28A	0.5	6/10/2025	<b>1.2</b>	<b>3.8</b>
ORBP-29A	0.5	6/10/2025	<b>11</b>	<b>7.2</b>
ORBP-30A	0.5	6/10/2025	<b>2.5</b>	<b>5.8</b>
ORBP-31A	0.5	6/11/2025	<b>3.1</b>	<b>5.9</b>
ORBP-31A DUP	0.5	6/11/2025	<b>2.5</b>	<b>6.5</b>
ORBP-32A	0.5	6/11/2025	<b>1.9</b>	<b>9.5</b>
ORBP-33A	0.5	6/11/2025	<1.0	<b>10</b>

**Notes:**

<sup>1</sup> Bradford, G.R., Chang, A.C., Page, A.L., Bakhtar, D., Frampton, J.A., and Wright, H., 1996, Background of Trace and Major Elements in California Soils, Kearney Foundation of Soil Sciences Special Report, Division of Agriculture and Natural Resources, University of California

<sup>a</sup>Upper-bound background concentrations from Chernoff, G., Bosan, W., and Outiz, D., DTSC. Determination of a Southern California Regional Background Arsenic Concentration in Soil.

USEPA = United States Environmental Protection Agency

USEPA RSL = USEPA Regional Screening Level for industrial soil, dated November 2024

DTSC SL = Department of Toxic Substances Control Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3 Screening Level for industrial/commercial soil, dated April 2025

\* SL is for "Lead and Compounds"

mg/kg = milligrams per kilogram

bgs = below ground surface

<X = not detected above laboratory reporting limits

-- = Not analyzed

**Bold** indicates value exceeds laboratory reporting limit

*Italics* indicates duplicate sample

Yellow = Concentration exceeds DTSC SL but does not exceed USEPA RSL

Orange = Concentration exceeds USEPA RSL

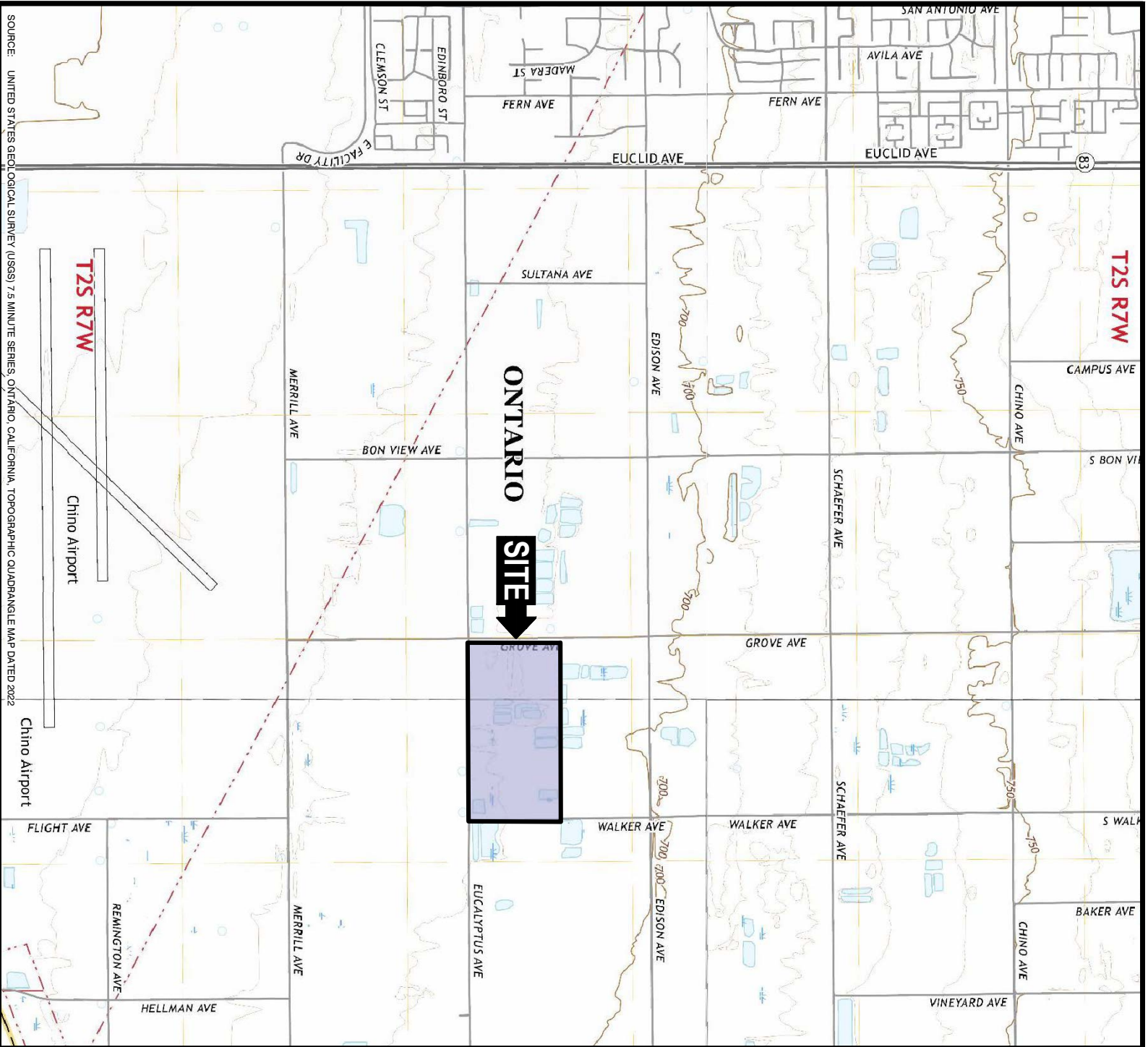
NS = no screening criteria available

**Phase II Subsurface Investigation Letter Report**  
***Northwest Corner of Eucalyptus Avenue and Walker Avenue, Ontario, California***

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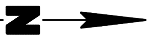
**FIGURES**

1. Site Location Map
2. Site Plan



SOURCE: UNITED STATES GEOLOGICAL SURVEY (USGS) 7.5 MINUTE SERIES, ONTARIO, CALIFORNIA, TOPOGRAPHIC QUADRANGLE MAP DATED 2022

QUADRANGLE LOCATION



Title:

### SITE LOCATION MAP

ONTARIO RANCH PROPOSED BUSINESS PARK DEVELOPMENT  
ONTARIO, CALIFORNIA

Prepared for:

ONTARIO RANCH VENTURE, LLC

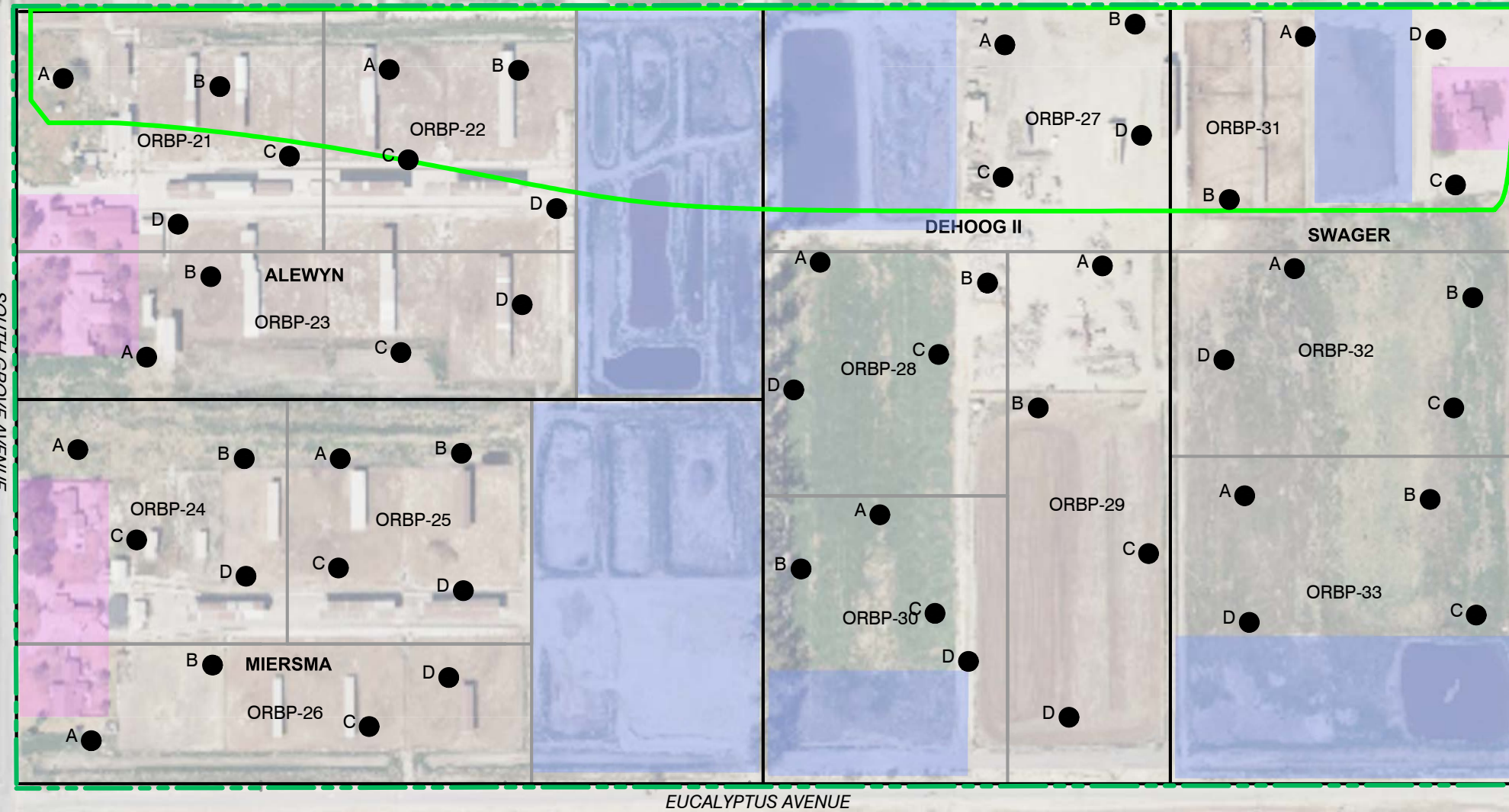


Compiled by: K.A.	Date: 2025-06-20
Prepared by: A.W.	Scale: AS SHOWN
Project Mgr.: K.A.	Project: 3669.0004L0003
File: 003_3669.0004L0003 - SITE LOCATION MAP (2B).DWG	

FIGURE

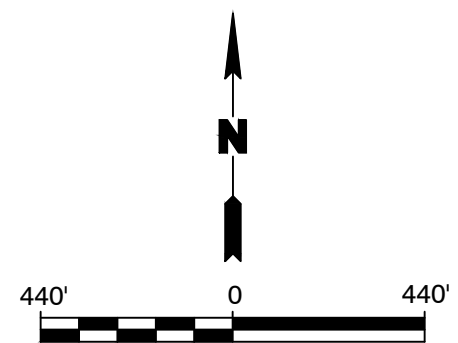
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S:\CLIENTS\3669.0004\003 SRG - ONTARIO RANCH BUSINESS PARK\10CAD\010\_3669.0004\0003 - SITE PLAN (2B).DWG



**LEGEND**

- APPROXIMATE SITE BOUNDARY
- PROPERTY BOUNDARY
- GRID LINE
- PONDS
- RESIDENTIAL/DEVELOPED
- AGRICULTURAL SOIL DISCREET SAMPLE
- ORBP-21 GRID DESIGNATION
- PROPOSED OPEN SPACE AREA



<b>SITE PLAN</b>		
ONTARIO RANCH PROPOSED BUSINESS PARK DEVELOPMENT ONTARIO, CALIFORNIA		
Prepared For: <b>ONTARIO RANCH VENTURE, LLC</b>		
<b>ROUX</b>	Compiled by: K.A.    Date: 2025-07-03 Prepared by: A.W.    Scale: AS SHOWN Project Mgr: K.A.    Project: 3669.0004L003	FIGURE <b>2</b>
File: 010_3669.0004L003 - SITE PLAN (2B).DWG		

**Phase II Subsurface Investigation Letter Report**  
***Northwest Corner of Eucalyptus Avenue and Walker Avenue, Ontario, California***

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**ATTACHMENTS**

1. DTSC Interim Guidance for Sampling Agricultural Properties
2. Laboratory Analytical Reports

**Phase II Subsurface Investigation Letter Report**  
***Northwest Corner of Eucalyptus Avenue and Walker Avenue, Ontario, California***

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**ATTACHMENT 1**

**DTSC Interim Guidance for Sampling Agricultural Properties**



Linda S. Adams  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

Maureen F. Gorsen, Director  
8800 Cal Center Drive  
Sacramento, California 95826-3200



Arnold Schwarzenegger  
Governor

# Interim Guidance for Sampling Agricultural Properties (Third Revision)

California Department of Toxic Substances Control  
California Environmental Protection Agency

August 7, 2008

### Preface

In June 2000, DTSC issued "Interim Guidance for Sampling Agricultural Soils" to provide a uniform approach for evaluating former agricultural properties where pesticides have been applied, and DTSC issued the revised Version 2 in August 2002. Over the last seven years, DTSC has reviewed several hundred former agricultural properties across California. DTSC has been committed to revising and updating the approach to these properties as new information and issues emerge. This revised guidance, Version 3, incorporates and refines the sampling and risk assessment approach to former agricultural properties.

**This guidance is intended to supplement the DTSC Preliminary Endangerment Assessment (PEA) Guidance Manual, CalEPA 1994 (Second Printing, June 1999). Data obtained from the investigations should be evaluated for potential health risks according to the PEA Manual. This guidance is not intended to diminish the need to take focused, authoritative samples at site locations commonly associated with hazardous substances releases nor replace guidance provided by the PEA Guidance Manual. This guidance is not applicable to areas where pesticides were mixed, stored, disposed, or areas where pesticides may have accumulated, such as ponds and drainage ditches.**

The scope of this document is limited to evaluating only agricultural properties during a PEA or other initial sampling investigation. This applies to proposed new and/or expanded school sites or other project where new land use could result in increased human exposure, especially residential use. Agricultural properties are lands where pesticides were uniformly applied for agricultural purposes consistent with normal application practices, and where other non-agriculturally related activities have been absent. Data obtained from the sampling analyses will be incorporated into the PEA Report, including performing a risk analysis in accordance with the guidance in the PEA Manual.

This guidance does not apply to disturbed land, such as, land that has been graded in preparation for construction, areas where imported soil has been brought in, or any other activity

that would redistribute or impact the soil, other than normal agricultural practices, such as disking and plowing.

This guidance is an on-going effort to streamline the characterization of agricultural properties. As additional knowledge and experience is obtained, DTSC may modify this guidance, as appropriate.

## **1.0 PURPOSE**

This guidance was initially prepared for use in evaluating soil at proposed new school sites and existing schools undergoing expansion projects where the property was currently or previously used for agricultural activities. This guidance is now expanded to include any project with DTSC oversight and is intended to supplement the DTSC PEA, and provide a uniform and streamlined approach for evaluating agricultural properties. This guidance can be used to assist environmental assessors in designing initial investigations or developing PEA Workplans for properties with agricultural uses. The analytical data obtained are to be incorporated into a risk analysis and PEA Report performed in accordance with the guidance in the PEA Manual.

## **2.0 AGRICULTURAL PROPERTIES**

### **2.1 Eligible Agricultural Properties**

**This guidance is specific to agricultural properties where pesticides and/or fertilizers were presumably applied uniformly, for agricultural purposes consistent with normal application practices.** It is applicable to agricultural properties that are currently under cultivation with row, fiber or food crops, orchards, or pasture. It is also applicable to fallow and former agricultural properties that are no longer in production and have not been disturbed beyond normal disking and plowing practices. Each field of the same crop is assumed to have been watered, fertilized and treated with agricultural chemicals to the same degree across the field. Because of this homogeneous application, contaminant levels are expected to be similar at any given location within the field. This is the underlying premise of the guidance, and one that must be verified at the scoping stage of the PEA process.

### **2.2 Properties not covered by this Guidance**

This guidance does not apply to former agricultural property that has been graded for construction or other purposes, that has received fill, or has had parking lots or structures placed on it following active use as an agricultural field. An urban residential area that was agricultural property in the past does not qualify for this guidance since the construction of the residences would have resulted in the disturbance and redistribution of potential agricultural contaminants in the soil. These areas may require biased, discrete sampling as opposed to the sampling for agricultural properties discussed in this document.

### **2.3 Grazing Land and Dry-Land Farmed Agricultural Properties**

#### **2.3.1 Grazing Land and Pasture**

Agricultural sampling is not required for property used exclusively as grazing lands or pasture, where the topography is not conducive to pesticide application, or the application of pesticides is not economically feasible. Aerial photographs, topographic maps, and a site visit should be used to evaluate the topography of the proposed school site and past land use. Sites that are suitable for animal grazing will often have irregular topography and often a cover of native trees,

brush and range grasses. In keeping with the definition of agricultural soils, the site must not have contained any structures, or been used for any commercial or manufacturing activities.

### **2.3.2 Dry-Land Farmed Agricultural Soils**

Dry-land farming is the practice of growing a crop without irrigation. Many dry-land farming fields are not treated with pesticides or infrequently treated, since the lack of water does not provide a desirable habitat for most agricultural pests. Properties that clearly qualify as dry-land farming do not need further investigation for pesticides or metals. For properties where there is uncertainty regarding dry-land farming, limited sampling may be conducted at a rate of four discrete samples per site, with one sample collected in each quadrant.

Some production crops such as winter wheat and barley can be grown under dry-land farming conditions. If the site has been planted in a dry-land farming production crop, every assurance should be made to determine that the crop was not irrigated and pesticides were not applied. This information may be obtained from interviews with farmers in the area, records that the County Agricultural Commissioner may have, and information the Commissioner may have about the irrigation practices for that crop in the specific county. If it cannot be clearly shown that irrigation did not take place and pesticides were not applied, limited sampling for organochlorine pesticides (OCPs) and arsenic may be necessary. At a minimum, this should include four samples per site, one sample per quadrant.

### **2.4 Agricultural Properties Prior to 1950**

A review of 35 proposed school sites along with the historical background of OCP use in California indicates that sites with agricultural usage ending prior to 1950 do not need to be evaluated for OCPs. Organochlorine pesticides were first introduced into California agriculture in 1944 and reached peak usage in the 1960's. In 1974 the use of the DDT was banned for agricultural purposes, and the elimination of remaining OCPs in California agriculture quickly followed. Data from 35 proposed school sites where agricultural use ended prior to 1950 indicates that OCPs were not identified as chemicals of potential concern. In those cases where OCPs were identified, the source appears to have been the application to structures on the property, and not the agricultural crops grown prior to 1950. It is recommended that former agricultural properties that terminated operation prior to 1950 not be evaluated for agriculturally related OCPs. Arsenic should still be evaluated as a chemical of potential concern (COPC) since its use as arsenical pesticides and herbicides predates 1950.

### **2.5 Continued Agricultural Use After PEA Sampling**

Chemicals associated with agricultural activities may result in potential risks to human health or the environment. If agricultural activities continue on the subject site after DTSC issues a no further action determination on the PEA, DTSC cannot ensure the no further action determination will remain in effect.

This may have impacts for school projects where the school districts elect to postpone school construction and allow continued agricultural use of the property. The most recent chemical use documentation (e.g., local Agricultural Commissioner Pesticide Application Permits) regarding the quantity and types of agricultural chemicals used on the property should be provided in the PEA report. If the type of agricultural chemicals applied to the site change after DTSC's no further action determination, DTSC recommends submittal of the chemical use documentation to DTSC at least three months prior to commencement of grading or other construction activities at the school site. DTSC will review the information, and if necessary, may recommend additional sample collection and analyses to assess potential impacts and ensure school site safety.

## 2.6 Other Areas of Concern on Agricultural Properties

In many cases, agricultural properties may include other areas of concern such as operations yards, storage areas, fuel tanks, residences, irrigation systems, and animal facilities. Examples of areas of concern may include:

- Structures such as homes, garages, equipment sheds, barns, and other out-buildings
- Pesticide storage, mixing/loading, and wash-down areas
- Ecological habitats, or rare, threatened, or endangered species
- Irrigation ditches/canals, containment berms, and low-lying swales or drainage areas
- Irrigation water containment ponds and collection/recirculation sumps
- Production wells and pumps
- Pole- or pad-mounted transformers
- Waste oil areas
- Animal pens, barns, and manure and disposal piles
- Burn piles
- Underground and above ground storage tanks
- Properties in dibromochloropropane (DBCP) study areas

Although agricultural-related, these targeted areas should be considered during the PEA scoping meeting and investigated using standard PEA protocols. The following DTSC guidance documents may be considered in these investigations:

- Interim Guidance: Evaluating Total Petroleum Hydrocarbons (TPH) (DTSC 2008) (The draft TPH guidance document is being revised at this time and will not be available to the public until DTSC finalizes the document.)
- Interim Guidance: Evaluation of School Sites with Potential Contamination from Lead Based Paint, Termiticides, and Electrical Transformers (DTSC, June 9, 2006)
- Arsenic Strategies for Determination of Arsenic Remediation: Development of Arsenic Cleanup Goals for Proposed and Existing School Sites (DTSC 2007)
- Advisory: Methane Assessment and Common Remedies at School Sites (DTSC, June 2005)
- Advisory: Active Soil Gas Investigations (DTSC, January 2003)
- Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion into Indoor Air (DTSC 2004)
- Fact Sheet: Information Advisory, Clean Imported Fill Material (DTSC, October 2001)
- Guidance Manual: Preliminary Endangerment Assessment (DTSC, January 1999)
- Data Validation Memorandum , Summary of Level II Data Validation (DTSC, May 2006)
- Guidance: Ecological Risk Assessment at Hazardous Waste Sites and Permitted Facilities (DTSC, July 4, 1996)

## **3.0 SAMPLING STRATEGIES**

### **3.1 Chemicals of Concern**

#### **3.1.1 Pesticides**

When the property is under active agricultural production, the operator should be interviewed to determine the types and amounts of pesticides historically used on the property. The County Agricultural Commissioner should also be consulted to verify pesticide usage on the property. The Agricultural Commissioner is required to maintain this information for three years, but often will have extensive knowledge of the farming practices over many years. A local or specialized farm advisor such as the University of California Cooperative Extension Agent is another source of information for farming practices in the area. These consultations should occur during the scoping phase of the investigation. For those properties that have not been actively farmed in the past three years, obtaining accurate information is more difficult. Information from surrounding or neighboring agricultural operations on the types of crops grown in the area during the time of active farming can provide clues on what chemicals may have been applied.

Based on data from former agricultural properties over the past seven years, the only pesticide class requiring analyses at agricultural properties are OCPs, such as DDT, toxaphene, dieldrin, etc. OCPs are biopersistent and bioaccumulate in the environment. Most other classes of pesticides have relatively short half-lives and have not been found in the agricultural fields. While paraquat does have a longer half-life in soil, it has either not been detected or detected rarely at trace levels at sites which DTSC has had oversight, therefore routine analyses for paraquat is not required for field areas. Analyses for paraquat may be required in storage and mixing/loading areas.

#### **3.1.2 Metals**

Based on data from former agricultural properties, the only heavy metal required for routine analyses for these properties is arsenic. Arsenic in the form of arsenical herbicides has been applied to many agricultural properties and elevated levels of arsenic have been reported in the evaluation of these properties.

Other heavy metals may be required on a case by case basis depending on history of the property and the surrounding environment. Certain counties, such as Kern and Merced in the Central Valley, allow the application of municipal sludge on agricultural properties with or without a permit. Municipal sludge has been often shown to have elevated levels of heavy metals. These metals concentrations can impact vadose soils and often may migrate to groundwater. If there is a history of sludge application, or if sludge application is suspected on an agricultural property, Title 22 metals (former CAM 17 metals) should be evaluated.

Copper compounds were generally applied directly to select crops (e.g. vineyards) to prevent or reduce mildew. Vineyards and grain storage areas may have elevated copper due to the use of copper compounds as fungicides. To date, DTSC has not found elevated copper in any agricultural property. However, analyzing soil or sediment samples for copper may be appropriate at agricultural properties with the potential to impact aquatic ecological habitats (e.g. a creek or stream which runs through site).

### **3.1.3 Additional Chemicals of Concern**

#### **3.1.3.1 Mixing/Loading/Storage Areas**

Focused sampling in mixing/loading/storage areas, drainage ditches, farm houses, or outbuilding areas may require analyses for a number of other constituents besides OCPs and arsenic, including other classes of pesticides/herbicides, paraquat, metals, and petroleum related compounds (see Section 2.6).

#### **3.1.3.2 Smudge Pots**

If smudge pots have been routinely used on agricultural properties, for example in citrus groves, additional sampling for PAHs and TPH may be required.

### **3.2 Sampling Frequency**

Sampling frequency may vary depending on the size of the site and conditions found. When the site has been used for agricultural crop, the presumption is that agricultural chemicals were applied uniformly across the site in any given year and that the variation across the site will be relatively small. An analysis of several hundred former agricultural properties by DTSC has supported the general use of the assumption of uniform application.

The assumption of uniform application may not apply to areas cultivated in different crops, adjoining or adjacent properties with different owners or operators. The uniform application assumption does not apply for non-cultivated areas (e.g. drainage ditches, farm houses and other structures, mixing/loading areas, storage sheds, etc.)

In general, the sampling pattern should be sufficient to characterize the site. Recommended numbers of borings or sampling locations and composite analyses are provided in Table 1 for both OCPs and arsenic analyses for sites up to 50 acres. DTSC should be consulted for sites greater than 50 acres. For these sites, the sampling frequency may be reduced based on documentation that verifies consistent owner, operator, and use. If different parcels of the property have different owners, operators or crops, the number of samples shown in Table 1 should be applied for each different parcel.

**Table 1: Recommended Number of Sampling Locations**

<b>Site Acres</b>	<b>Number of Borings</b>	<b>OCP Analyses (Composites)</b>	<b>Arsenic Analyses (Discrete only)</b>
1	4	4 (Discrete analyses)	4
2	4	4 (Discrete analyses)	4
3	4	4 (Discrete analyses)	4
4	8	4	4
5	10	4	4
6	12	4	4
7	14	4	4
8	16	4	4
9	18	5	5
10	20	5	5
11	21	6	6
12	22	6	6
13	23	6	6
14	24	6	6
15	25	7	7
16	26	7	7
17	27	7	7
18	28	7	7
19	29	8	8
20	30	8	8
21	31	8	8
22	32	8	8
23	33	9	9
24	34	9	9
25	35	9	9
26	36	9	9
27	37	10	10

<b>Site Acres</b>	<b>Number of Borings</b>	<b>OCP Analyses (Composites)</b>	<b>Arsenic Analyses (Discrete only)</b>
28	38	10	10
29	39	10	10
30	40	10	10
31	41	11	11
32	42	11	11
33	43	11	11
34	44	11	11
35	45	12	12
36	46	12	12
37	47	12	12
38	48	12	12
39	49	13	13
40	50	13	13
41	51	13	13
42	52	13	13
43	53	14	14
44	54	14	14
45	55	14	14
46	56	14	14
47	57	15	15
48	58	15	15
49	59	15	15
50	60	15	15
>50	Consult with DTSC		

### **3.3 Composite Samples**

Since this guidance assumes a relatively even distribution of chemicals across the agricultural field portion of a site, compositing of discrete samples allows for increased sampling coverage for a site, while not significantly increasing the number of analytical samples. Composite surface samples may be made up of a maximum of four discrete surface samples from adjacent sampling locations. Compositing may occur in the field or at the laboratory. In cases where two crops were grown on the site, only discrete samples from within the same crop area may be composited.

Specify the method of selecting the discrete samples to be composited and the compositing factor (e.g. 3 to 1: three discrete samples composited to one) in the workplan. Compositing requires that each discrete sample be the same in terms of volume or weight, and that the discrete sample be thoroughly homogenized prior to compositing. The detection level does not need to be reduced since the composite sampling area is assumed to be homogeneous in concentration.

If compositing is not chosen, analyses will be performed on all the discrete samples and the number of analyses will correspond to the number of borings.

For more information on composite samples, see the references provided in Section 6.0.

### **3.4 Discrete Sampling for Arsenic**

A minimum of four discrete on-site surface samples must be analyzed for arsenic. When samples are composited for OCP analysis, one discrete sample from each composite must be analyzed for arsenic. When more than four composite samples are analyzed for OCPs, the total number of discrete samples analyzed for arsenic does not need to be greater than the number of total composite samples used for OCP analysis (see Table 1).

### **3.5 Sampling Depth**

Based on the extensive data DTSC has reviewed for agricultural properties, only surface samples will be required for the screening assessment. Each location should be sampled to include one surface sample (0 to 6 inches). [Note: 0 inches means first encountered soil. Thick mats of vegetable material, roots, and other extraneous material should not be sampled. The locations can be staked and surveyed using a sub-meter global positioning system. This will facilitate collection of supplemental site investigation samples, such as subsurface or step out sampling, if necessary.

### **3.6 Sample Collection**

Sampling both the furrows and beds of existing rows will detect the greatest variability in the residuals. Some methods of pesticide application will favor residuals in the beds while others favor the furrows. In fields where rows remain, roughly half of the samples should be gathered from the furrows and half from the beds in an alternating pattern. Orchards should have the sampling locations placed at the current drip line for the trees, under the canopy, between the tree rows, and between the trees within a row. For sites with slopes, swales, or other uneven topography, sampling from centers should be modified to include samples from those areas where surface water would be expected to flow and accumulate.

### **3.7 Field Duplicates**

Field duplicates should be collected at a rate of 10 percent (or a minimum of one). For arsenic, a discrete co-located sample should be collected and analyzed for every 10 arsenic samples collected. For OCPs where composite samples will be prepared and analyzed, every 10<sup>th</sup>

composite sample should be prepared (independently) in duplicate and analyzed. See Section 4.1 for a description on preparation of composite samples.

### **3.8 Requirements for Collection of Background Metal Samples**

Consult with the DTSC project manager regarding the need for collecting background arsenic samples. In general, with the exception of arsenic, background samples for metals will not be necessary if all metals are below their respective California Human Health Screening Levels (CHHSLs). If all the arsenic results for the site are at or below 12 mg/kg, then collection of background samples will not be required. For sites where either arsenic or other metals are above their respective screening values, either collection of a background data set or use of an appropriate background data set may be required.

#### **3.8.1 Sampling for Background Metals**

If samples are needed to determine background levels of arsenic and/or other heavy metals (if additional metals are required for the PEA), a minimum of four onsite locations should be sampled at non-impacted areas, or samples may be collected at a depth of 5 to 5.5 feet bgs. In order to use background samples from 5 to 5.5 feet bgs, a licensed professional must make the determination that the background soils are similar enough geologically to the surface soils as to be representative.

Other background data sets may be substituted for on site sampling on a case by case basis in consultation with DTSC.

## **4.0 LABORATORY ANALYSES**

### **4.1 Preparation of Composite Samples**

Each discrete sample should be homogenized and uniformly split by trained field staff prior to compositing. A portion of each discrete sample should be frozen and archived in case additional analysis is warranted based on the composite results. Compositing requires that each discrete sample be the same in terms of volume or weight, and that the discrete sample be thoroughly homogenized prior to compositing. Excess sample from the homogenized composite sample shall be archived by the lab and/or used as a duplicate, as appropriate, for that composite set. The samples may be discarded when the PEA process has been completed and approved by the DTSC.

### **4.2 Methods**

The analytes of primary concern are OCPs, arsenic, and, in some cases, Title 22 metals. Depending on the site history, analysis of other types of pesticides may be required. OCPs should be analyzed using U.S. EPA 8081A or equivalent. Metals must be analyzed using the U.S. EPA 6000/7000 series. If the site history indicates other classes of persistent pesticides should be evaluated, DTSC should be consulted for the acceptable method of analysis and appropriate detection limits. Highly organic topsoil may interfere with proper extraction of pesticides.

Sample holding times should be consistent with U.S. EPA SW-846. Variances to holding times and affects on data results must be discussed in the data validation section of the report.

Please note, for comparison of chlordane concentrations against the CHHSL, chlordane must be quantified against a **technical chlordane** standard. For purposes of the PEA, DTSC will not

allow quantitation of the individual alpha and gamma isomers, with a total concentration determined by addition of those concentrations.

#### **4.3. Detection Limits**

The actual detection limits obtained will vary depending on the particular analyte. For OCPs, the analytes typically causing detection limit concerns in agricultural fields are aldrin, dieldrin, and toxaphene. The detection limits should be 0.005 mg/kg for aldrin, dieldrin, and 0.05 mg/kg for toxaphene. Table 2 lists the detection limits for several OCPs.

In samples with elevated DDT, the detected concentration may be above the range of calibration. This can result in the analytical laboratory diluting the sample for reanalysis, and then reporting only the final result. In these cases, the reported detection limits for aldrin, dieldrin, and toxaphene may exceed the detection limits needed for determining potential health effects. Ideally the laboratory should be asked to report if those three analytes were detected in the first analysis prior to dilution. Multiple analyses of the same samples may be required to obtain the data necessary for risk assessment purposes.

**Table 2. Analytical Methods and Detection Limits for Selected OCPs**

<b>Pesticide</b>	<b>Methods<sup>2</sup></b>	<b>CAS No.<sup>3</sup></b>	<b>DL<sup>4</sup> mg/kg</b>
Aldrin	8081A	309-00-2	0.005
a-BHC	8081A	319-84-6	0.005
b-BHC	8081A	319-85-7	0.005
g-BHC (Lindane)	8081A	58-89-9	0.005
d-BHC	8081A	319-86-8	0.005
Total Chlordane <sup>1</sup>	8081A	57-74-9	0.05
DBCP <sup>5</sup>	8081A	96-12-8	0.01
DDD	8081A	72-54-8	0.05
DDE	8081A	72-55-9	0.05
DDT	8081A	50-29-3	0.05
Dieldrin	8081A	60-57-1	0.005
Endosulfan I	8081A	959-98-8	0.005
Endosulfan II	8081A	33213-65-9	0.005
Endosulfan sulfate	8081A	1031-07-8	0.005
Endrin	8081A	72-20-8	0.05
Endrin aldehyde	8081A	7421-93-4	0.05
Endrin ketone	8081A	53494-70-5	0.05
Heptachlor	8081A	76-44-8	0.05
Heptachlor epoxide	8081A	1024-57-3	0.005
Hexachlorobenzene (HCB)	8081A	118-74-1	0.3
Hexachlorocyclopentadiene	8081A	77-47-4	0.5
Methoxychlor	8081A	72-43-5	0.005
Toxaphene	8081A	8001-35-2	0.05
<b>Notes:</b>			
1 = Report total Chlordane (based on a Technical Chlordane standard)			
2 = Although other methods may be used to quantify OPCs, DTSC recommends the use of 8081A as the primary method of quantitation			
3 = Chemical Abstract Service registry number			
4 = Detection Limit recommended for risk assessment purposes			
5 = If sampling for this compound is indicated, inclusion in the method must be requested in the workplan and/or QAPP			

#### **4.4 Pesticide Analyses**

Surface samples, discrete or composite, must be analyzed for OCPs. Analysis for other classes of persistent pesticides may be required as indicated by the agricultural history of the site. If the composite sample result exceeds the health risk screening criteria (see Section 5.3), analyze each discrete sample that made up the composite sample.

#### **4.5 Sub-surface sample analysis**

In consultation with DTSC, analyses of sub-surface samples may be required if surface samples results exceed specified screening levels. This sampling may be a part of the PEA or included in a Supplemental Site Investigation. If subsurface samples were collected during the PEA sampling event, those samples may be taken off “hold” and analyzed by the laboratory. If subsurface samples were not collected during the PEA, a Supplemental Site Investigation Workplan or Technical Memorandum should be prepared identifying appropriate step-out (vertical and horizontal) sampling locations.

#### **4.6 Quality Control**

Quality control (QC) procedures specified in SW-846 must be followed. A matrix spike/matrix spike duplicate on one soil sample per batch of 20 samples must be performed to demonstrate that the targeted pesticide(s) can be recovered from the soil investigated. The laboratory data package must include a summary of the quality control sample results: blanks, matrix spike/matrix spike duplicate, surrogate recoveries, laboratory control samples, etc., as specified by the method. The laboratory should provide a signed narrative stating whether the QC was met and listing any discrepancies. The consultant should perform a supplementary evaluation of the data, also referred to as data validation, and present the results of that evaluation in the PEA report. For an example of what to include in the data validation section, see the example data validation memorandum at the DTSC website:

[http://www.dtsc.ca.gov/Schools/upload/Data\\_Validation.pdf](http://www.dtsc.ca.gov/Schools/upload/Data_Validation.pdf)

### **5.0 REPORTING**

#### **5.1 Format**

The results of the sampling effort are to be reported in a PEA report as described in the DTSC PEA Guidance Manual.

##### **5.1.1 Summary Tables**

Include data tables in the PEA report to summarize the results of the investigation. Summary tables should include the analytes of interest, the reported concentrations or the reporting limit for non-detect results, and indicate whether a reported concentration exceeds its respective CHHSL screening level (if a CHHSL comparison is being conducted). In addition, for samples analyzed at multiple dilutions for purposes of reporting concentrations within calibration ranges (as described in Section 4.3), summary tables should either present the results for all of the dilution analyses indicating the appropriate result for each analyte, or a combined analysis indicating which results are being reported after a dilution. Sample results should also be flagged with appropriate qualifiers, where necessary, after data validation.

#### **5.2 Evaluating Metals (Inorganic Elements) Data**

Using a robust statistical procedure to determine if on-site metal concentrations are indicative of background conditions or the result of site-related activities can be problematic because of the limited number of background samples collected at any one site. Local site background may be used if the data is approved for use by the DTSC project manager and toxicologist. If DTSC

background levels are not available, then a defensible procedure for comparing on-site with background metals should be used. The DTSC project manager and DTSC toxicologist assigned to the project should be consulted on the most appropriate method of comparison.

### 5.2.1 Arsenic Evaluations

The DTSC Schools Program evaluated data from a large number of school sites across California. The data evaluation indicates that 12 mg/kg maybe a useful screening number for the Schools Program when evaluating arsenic as a COPC. If the proposed school property has been adequately characterized for arsenic and all the arsenic data are equal to or less than 12 mg/kg, then arsenic will be not be considered a COPC. This decision does not require collection and comparison to a background data set. If arsenic concentrations are greater than 12 mg/kg, then comparisons to background data will be required. In some cases additional sampling may also be required.

### 5.2.2 Strategy for Comparison of Background Metals

If background samples are necessary, follow the procedures provided in Section 3.8. The following strategy may be used for comparing site data to background data:

1. Compare the highest site concentration with the highest background concentration. If the site concentration is equal to or less than the background, the metal may be eliminated as a COPC. If the onsite maximum is greater than the background maximum, go to 2).
2. Compare the site and background arithmetic mean concentrations. If the means are comparable, and if the highest site concentration is below the concentration associated with unacceptable risk or hazard, the metal may be eliminated as a COPC. If the site mean is greater than the maximum background, go to 3).
3. Two approaches may be used, depending on the size of the background data set.
  - o If the background data set is of sufficient size, statistically evaluate the overlap of the background and onsite distributions to determine if they come from the same population. If they do, and if the highest site concentration is below the concentration associated with unacceptable risk or hazard, the metal may be eliminated as a COPC. If not, include the metal as a COPC in the risk evaluation.
  - o If the background data set is limited (n=4), the onsite data can be evaluated statistically using probability plots to determine if one or more populations are present. If only one population is present, and if the highest site concentration is below the concentration associated with unacceptable risk or hazard, the metal may be eliminated as a COPC. If there are two or more populations present, then include the metal as a COPC.
4. Additional information on eliminating metals as COPCs can be found in “*Selecting Inorganic Constituents as Chemicals of Potential Concern at Risk Assessments at Hazardous Waste Sites and Permitted Facilities – Final Policy* (DTSC/HERD 1997),

### 5.3 Human Health Risk Assessment

**All detected pesticides and any onsite metals above background should be evaluated as COPCs in a human health risk assessment as described in the DTSC PEA Guidance Manual or in comparison to CHHSLs.** In the initial screening analysis, the highest

concentration of each detected pesticide and metal above background must be used as the exposure point concentration in the risk assessment.

Since agricultural properties are assumed to have uniform application of pesticides, DTSC has allowed compositing of samples for OCP analyses (Sections 3.3 and 4.1). The concentration from the composited sample can be used directly in the risk assessment without adjusting the toxicity screening numbers, such as the CHHSLs. The review of the former agricultural properties over the past seven years has supported the assumption of uniform application. This is in contrast to other DTSC guidance, such as the *Lead-Based Paint, Termiticide and PCB Guidance*, (DTSC, June, 2006), where adjustments to the CHHSLs are required for composite samples because applications were not necessarily uniform.

### **5.3.1 Application of PEA Risk Assessment Equations and CHHSLs**

Chemicals of potential concern are evaluated either by comparison to the CHHSL, or by calculating the excess cancer risk and hazard index based on equations in the PEA Guidance.

**Note:** CHHSLs may not be used to “screen out” COPCs.

#### **5.3.1.1 CHHSLs**

CHHSLs are soil and/or soil gas concentrations for selected chemicals developed by Cal-EPA with a target threshold of a 1E-06 risk for carcinogens, and a hazard quotient of one for non-carcinogens. CHHSLs were developed using models and exposure assumptions similar to those used in the PEA Guidance Manual, with the exception of the concentrations for volatile organic compounds (VOCs), which were developed using the vapor intrusion model for addressing the inhalation of contaminated indoor air. CHHSLs may be used as a soil screening value at school sites if all of the chemicals detected at the site have a listed CHHSL, if it is agreed upon by all parties concerned, and if it is agreed that the screening document will be reviewed by a toxicologist from the Human and Ecological Risk Division. For school sites, only the residential-based CHHSLs may be used. The exposure pathways used in calculating the CHHSLs are incidental soil ingestion, dermal absorption, and inhalation of dusts in indoor air for non-volatile soil-bound chemicals, and the inhalation of indoor air pathway for VOCs. Direct exposures to VOCs are not included in the calculation of the CHHSLs and CHHSLs do not take into consideration the leaching of contaminants from soil to groundwater. CHHSLs are not appropriate if ecological receptors are the most sensitive species on the site. Lead should be evaluated using the most current DTSC LeadSpread Model or the school site lead screening level of 255 mg/kg.

#### **5.3.1.2 Human Health Risk Assessment with CHHSLs**

Independent of whether sites were analyzed with discrete samples or with composite samples, the evaluation is similar. Note that the CHHSL values are not adjusted for the number of discrete samples that comprise a composite. The rationale behind this comparison to unadjusted CHHSL is that application of pesticides is assumed to be uniform throughout the field, and large variations in the pesticide concentrations are not expected. This rationale applies only to the agricultural portion, not to mixing areas, storage sites, structures, etc.

### **5.3.2 Procedure for Human Health Risk Assessment with CHHSL or PEA Guidance**

- Determine that all of the chemicals detected at the site have the appropriate CHHSLs for soil and/or soil vapor. If they do not, then a PEA risk assessment must be conducted. A DTSC toxicologist will evaluate if the CHHSL screening is appropriate for the site

- The screening document, PEA or equivalent, will be reviewed by a toxicologist from the Human and Ecological Risk Division.
- The most recently published CHHSLs should be used. This may be found at: <http://www.calepa.ca.gov/Brownfields/documents/2005/CHHSLsGuide.pdf>.
- The exposure pathways at the site must match the exposure pathways used to develop the CHHSLs.  
Use the maximum concentration of each contaminant detected at the site and compare to unrestricted (residential) CHHSL or PEA risk calculations.
- Background metal concentrations can be used to screen metals as COPC. Construct a table listing the COPC (see Section 5.2.2 for discussion on background metals).
- The risk and hazard for each COPC should be calculated using the following equations:

$$\text{RISK} = \frac{[\text{maximum detected concentration}]}{\text{CHHSL}} \times 10^{-6}$$

$$\text{HQ} = \frac{[\text{maximum detected concentration}]}{\text{CHHSL}}$$

- If there are multiple COPCs, calculate the cumulative risk and/or hazard. An Excel calculator is provided on the Cal/EPA website for CHHSLs: (<http://www.calepa.ca.gov/Brownfields/documents/2005/Calculator.xls>).
- Complete a Risk Characterization Section where the total risk and hazard are presented and discussed along with the need for any further action.
- If the maximum concentrations detected on site pose an unacceptable risk or hazard, a spatial analysis should be conducted to determine if the elevated levels represent a “hot spot”, or are representative of concentrations across the site. In those cases where the elevated concentrations are determined to be one or more “hot spots”, risk or concentration isopleths should be constructed to differentiate between those areas of the site in need of further action, and those where no further action is required. Any deviations from these analyses must be approved by the DTSC toxicologist assigned to the project.

**Note:** For evaluation of composite samples, the CHHSL values are not adjusted for the number of discrete samples that comprise a composite. The rationale behind this comparison to un-adjusted CHHSL is that application of pesticides is assumed to be uniform throughout the field, and large variations in the pesticide concentrations are not expected. Note that this rationale applies only to the agricultural portion, not to mixing areas, storage sites, structures, etc.

## **6.0 ADDITIONAL SOURCES OF INFORMATION**

### **Pesticide Physical Properties and Half-Lives**

<http://ace.orst.edu/info/extoxnet/pips/ghindex.html>  
<http://www.arsusda.gov/rsml/ppdb1.html>

### **Active Pesticide Ingredient by Brand Name**

<http://www.cdpr.ca.gov/docs/label/prodnam.htm>  
<http://www.cdpr.ca.gov/> - see databases  
*Farm Chemicals Handbook*, current edition, Meister Publishing Company,

Willoughby, Ohio.

### **Maximum Application Rates**

<http://ace.orst.edu/info/extoxnet/>  
*Agricultural Chemicals* – Thomas Publications, Fresno, CA

### **Pesticide Usage by Year, County, and Crop**

<http://www.ipm.ucdavis.edu/PUSE/puse1.html>  
<http://www.cdpr.ca.gov/> - see databases

### **Composite Sampling**

[http://www.clu-in.org/download/char/SF\\_Rep\\_Samp\\_Guid\\_soil.pdf](http://www.clu-in.org/download/char/SF_Rep_Samp_Guid_soil.pdf)

U.S.EPA. 1995a. *Superfund Program Representative Sampling Guidance, Volume 1: Soil, Interim Final*, OSWER Directive 9360.4-10, EPA 540/R-95/141, PB96-963207. Environmental Response Team, Office of Emergency and Remedial Response, Office of Solid Waste and Emergency Response. December 1995, Page 28.

<http://clu-in.org/download/stats/composite.pdf>

U.S.EPA. 1995b. *EPA Observational Economy Series, Volume 1: Composite Sampling*, EPA-230-R-95-005. Policy, Planning, and Evaluation (2163). August 1995.

### **Test Methods**

<http://www.epa.gov/epaoswer/hazwaste/test/>  
SW-846: U.S. EPA, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, Current Revision*

### **Pesticide Toxicology Information**

<http://ace.orst.edu/info/extoxnet/ghindex.html>  
<http://www.state.nj.us/health/eoh/rtkweb/rtkhsfs.htm>

### **CHHSLs**

<http://www.calepa.ca.gov/Brownfields/documents/2005/CHHSLsGuide.pdf>  
<http://www.calepa.ca.gov/Brownfields/documents/2005/Calculator.xls>

## **Acronym List**

bgs	Below Ground Surface
CalEPA	California Environmental Protection Agency
CHHSL	California Human Health Screening Levels
COPC(s)	Chemicals of Potential Concern
DBCP	Dibromochloropropane
DTSC	Department of Toxic Substances Control
NFA	No Further Action
OCP(s)	Organochlorine Pesticides
PAH	Polyaromatic Hydrocarbon
PEA	Preliminary Endangerment Assessment
QC	Quality Control
TPH	Total Petroleum Hydrocarbon
U.S. EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

**Phase II Subsurface Investigation Letter Report**  
*Northwest Corner of Eucalyptus Avenue and Walker Avenue, Ontario, California*

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**ATTACHMENT 2**

Laboratory Analytical Reports



Enthalpy Analytical  
931 West Barkley Ave  
Orange, CA 92868  
(714) 771-6900

enthalpy.com

Lab Job Number : 535130  
Report Level : II  
Report Date : 06/17/2025

**Analytical Report** *prepared for:*

Kasia Anderson  
Roux Associates, Inc.  
5150 E. Pacific Coast Hwy.  
Suite 450  
Long Beach, CA 90804

Project: 3669.0004L003 - SRG Ontario Ranch, 3669.0004L003

*Authorized for release by:*

Diane Galvan, Project Manager  
714-771-9928  
[diane.galvan@enthalpy.com](mailto:diane.galvan@enthalpy.com)

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 above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105, ORELAP# 4197

## Sample Summary

Kasia Anderson Roux Associates, Inc. 5150 E. Pacific Coast Hwy. Suite 450 Long Beach, CA 90804	Lab Job #:	535130
	Project No:	3669.0004L003
	Location:	SRG Ontario Ranch, 3669.0004L003
	Date Received:	06/10/25

Sample ID	Lab ID	Collected	Matrix
ORBP-4A	535130-001	06/04/25 11:30	Soil
ORBP-4A DUP	535130-002	06/04/25 11:30	Soil
ORBP-4	535130-003	06/10/25 07:35	Soil
ORBP-4 DUP	535130-004	06/10/25 07:35	Soil
ORBP-30A	535130-005	06/10/25 12:10	Soil
ORBP-30	535130-006	06/10/25 12:25	Soil
ORBP-29A	535130-007	06/10/25 12:30	Soil
ORBP-29	535130-008	06/10/25 12:40	Soil
ORBP-28A	535130-009	06/10/25 12:45	Soil
ORBP-28	535130-010	06/10/25 12:55	Soil
ORBP-27A	535130-011	06/10/25 13:15	Soil
ORBP-27A DUP	535130-012	06/10/25 13:15	Soil
ORBP-27	535130-013	06/10/25 13:40	Soil
ORBP-27 DUP	535130-014	06/10/25 13:40	Soil

## Case Narrative

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Roux Associates, Inc.

5150 E. Pacific Coast Hwy.

Suite 450

Long Beach, CA 90804

Kasia Anderson

Lab Job Number: 535130

Project No: 3669.0004L003

Location: SRG Ontario Ranch,

3669.0004L003

Date Received: 06/10/25

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This data package contains sample and QC results for fourteen soil samples, requested for the above referenced project on 06/10/25. The samples were received cold and intact.





**SAMPLE RECEIPT CHECKLIST**



**Section 1: General Info**

Date Received: 6/10/25 WO# 535130 Client: Roux Associates

**Section 2: Shipping / Custody**

Are custody seals present?  Yes  No

Custody seals intact on arrival?  N/A  Yes  No  On cooler / box  On samples

Courier  Walk-In  Field Sampling  Shipping Info: \_\_\_\_\_

**Section 3a: Condition / Packaging**

Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)

Date Opened 6/10/25 By (initials) RRS Type of ice used:  Wet  Blue/Gel  None

Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

If no cooler: Observed/Adjusted Temp (°C): \_\_\_\_\_ / \_\_\_\_\_ Thermometer/IR Gun: IR 11 CF: +0.1

Cooler Temp (°C) #1: 0.4 / 0.5 #2: \_\_\_\_\_ / \_\_\_\_\_ #3: \_\_\_\_\_ / \_\_\_\_\_ #4: \_\_\_\_\_ / \_\_\_\_\_ #5: \_\_\_\_\_ / \_\_\_\_\_ #6: \_\_\_\_\_ / \_\_\_\_\_

**Section 3b: Microbiology Samples**

No microbiology samples submitted (skip 3b)

Within temp range 0.0 - 10.0°C or received on ice directly from field.

Adequate headspace for microbiology analysis.

**Section 3c: Air Samples**

No air samples submitted (skip 3c)

1.4L Canisters  6L Canisters  Tedlar Bags  MCE Cassettes  Sorbent Tubes  Other \_\_\_\_\_

**Section 4: Containers / Labels / Samples**

	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	✓		
2) Is the sampler's name present on the CoC?	✓		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	✓		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)	✓		
5) Were all of, and only, the correct samples received?	✓		
6) Are sample labels present, legible, and in agreement with the CoC?	✓		
7) Does the container count match the CoC?	✓		
8) Was sufficient sample volume / mass received for the analyses requested?	✓		
9) Were samples received in proper containers for the analyses requested?	✓		
10) Were samples received with > 1/2 holding time remaining?	✓		
11) Are samples properly preserved as indicated by CoC / labels?	✓		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			✓
13) Are VOA vials free from headspace/bubbles > 6mm?			✓

**Section 5: Explanations / Comments**

(If no comments are made, then no discrepancies noted.)

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

No additional discrepancies

Date Logged 6/10/25 By (print) ABD (sign) ABD  
 Date Labeled 6/10/25 By (print) RRS (sign) \_\_\_\_\_

## Analysis Results for 535130

Kasia Anderson  
 Roux Associates, Inc.  
 5150 E. Pacific Coast Hwy.  
 Suite 450  
 Long Beach, CA 90804

Lab Job #: 535130  
 Project No: 3669.0004L003  
 Location: SRG Ontario Ranch, 3669.0004L003  
 Date Received: 06/10/25

<b>Sample ID: ORBP-4A</b>	<b>Lab ID: 535130-001</b>	<b>Collected: 06/04/25 11:30</b>
	<b>Matrix: Soil</b>	

535130-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B Prep Method: EPA 3050B									
Arsenic	1.0		mg/Kg	0.99	0.99	373611	06/11/25	06/11/25	CAP
Lead	5.8		mg/Kg	0.99	0.99	373611	06/11/25	06/11/25	CAP

<b>Sample ID: ORBP-4A DUP</b>	<b>Lab ID: 535130-002</b>	<b>Collected: 06/04/25 11:30</b>
	<b>Matrix: Soil</b>	

535130-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B Prep Method: EPA 3050B									
Arsenic	1.1		mg/Kg	1.0	1	373611	06/11/25	06/11/25	CAP
Lead	5.9		mg/Kg	1.0	1	373611	06/11/25	06/11/25	CAP

## Analysis Results for 535130

<b>Sample ID:</b> ORBP-4	<b>Lab ID:</b> 535130-003	<b>Collected:</b> 06/10/25 07:35
<b>Matrix:</b> Soil		

535130-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
beta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
gamma-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
delta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Aldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor epoxide	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan I	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Dieldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDE	<b>13</b>		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan II	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan sulfate	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDD	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin aldehyde	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin ketone	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDT	<b>7.1</b>		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Methoxychlor	ND		ug/Kg	10	1	373684	06/11/25	06/12/25	KLR
Toxaphene	ND		ug/Kg	100	1	373684	06/11/25	06/12/25	KLR
Chlordane (Technical)	ND		ug/Kg	51	1	373684	06/11/25	06/12/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	88%		%REC	58-120	1	373684	06/11/25	06/12/25	KLR
Decachlorobiphenyl	79%		%REC	47-120	1	373684	06/11/25	06/12/25	KLR

## Analysis Results for 535130

<b>Sample ID: ORBP-4 DUP</b>	<b>Lab ID: 535130-004</b>	<b>Collected: 06/10/25 07:35</b>
<b>Matrix: Soil</b>		

535130-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
beta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
gamma-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
delta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Aldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor epoxide	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan I	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Dieldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDE	<b>10</b>		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan II	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan sulfate	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDD	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin aldehyde	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin ketone	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDT	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Methoxychlor	ND		ug/Kg	10	1	373684	06/11/25	06/12/25	KLR
Toxaphene	ND		ug/Kg	100	1	373684	06/11/25	06/12/25	KLR
Chlordane (Technical)	ND		ug/Kg	51	1	373684	06/11/25	06/12/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	90%		%REC	58-120	1	373684	06/11/25	06/12/25	KLR
Decachlorobiphenyl	54%		%REC	47-120	1	373684	06/11/25	06/12/25	KLR

<b>Sample ID: ORBP-30A</b>	<b>Lab ID: 535130-005</b>	<b>Collected: 06/10/25 12:10</b>
<b>Matrix: Soil</b>		

535130-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B									
Prep Method: EPA 3050B									
Arsenic	<b>2.5</b>		mg/Kg	0.96	0.96	373611	06/11/25	06/11/25	CAP
Lead	<b>5.8</b>		mg/Kg	0.96	0.96	373611	06/11/25	06/11/25	CAP

## Analysis Results for 535130

<b>Sample ID: ORBP-30</b>	<b>Lab ID: 535130-006</b>	<b>Collected: 06/10/25 12:25</b>
<b>Matrix: Soil</b>		

535130-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
beta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
gamma-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
delta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Aldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor epoxide	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan I	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Dieldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDE	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan II	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan sulfate	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDD	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin aldehyde	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin ketone	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDT	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Methoxychlor	ND		ug/Kg	10	1	373684	06/11/25	06/12/25	KLR
Toxaphene	ND		ug/Kg	100	1	373684	06/11/25	06/12/25	KLR
Chlordane (Technical)	ND		ug/Kg	51	1	373684	06/11/25	06/12/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	86%		%REC	58-120	1	373684	06/11/25	06/12/25	KLR
Decachlorobiphenyl	55%		%REC	47-120	1	373684	06/11/25	06/12/25	KLR

<b>Sample ID: ORBP-29A</b>	<b>Lab ID: 535130-007</b>	<b>Collected: 06/10/25 12:30</b>
<b>Matrix: Soil</b>		

535130-007 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B									
Prep Method: EPA 3050B									
Arsenic	<b>11</b>		mg/Kg	0.99	0.99	373611	06/11/25	06/11/25	CAP
Lead	<b>7.2</b>		mg/Kg	0.99	0.99	373611	06/11/25	06/11/25	CAP

## Analysis Results for 535130

<b>Sample ID: ORBP-29</b>	<b>Lab ID: 535130-008</b>	<b>Collected: 06/10/25 12:40</b>
<b>Matrix: Soil</b>		

535130-008 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
beta-BHC	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
gamma-BHC	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
delta-BHC	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
Heptachlor	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
Aldrin	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
Heptachlor epoxide	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
Endosulfan I	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
Dieldrin	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
4,4'-DDE	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
Endrin	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
Endosulfan II	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
Endosulfan sulfate	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
4,4'-DDD	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
Endrin aldehyde	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
Endrin ketone	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
4,4'-DDT	ND		ug/Kg	4.9	0.98	373684	06/11/25	06/12/25	KLR
Methoxychlor	ND		ug/Kg	9.8	0.98	373684	06/11/25	06/12/25	KLR
Toxaphene	ND		ug/Kg	98	0.98	373684	06/11/25	06/12/25	KLR
Chlordane (Technical)	ND		ug/Kg	49	0.98	373684	06/11/25	06/12/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	77%		%REC	58-120	0.98	373684	06/11/25	06/12/25	KLR
Decachlorobiphenyl	51%		%REC	47-120	0.98	373684	06/11/25	06/12/25	KLR

<b>Sample ID: ORBP-28A</b>	<b>Lab ID: 535130-009</b>	<b>Collected: 06/10/25 12:45</b>
<b>Matrix: Soil</b>		

535130-009 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B									
Prep Method: EPA 3050B									
Arsenic	<b>1.2</b>		mg/Kg	0.96	0.96	373611	06/11/25	06/11/25	CAP
Lead	<b>3.8</b>		mg/Kg	0.96	0.96	373611	06/11/25	06/11/25	CAP

## Analysis Results for 535130

<b>Sample ID: ORBP-28</b>	<b>Lab ID: 535130-010</b>	<b>Collected: 06/10/25 12:55</b>
<b>Matrix: Soil</b>		

535130-010 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
beta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
gamma-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
delta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Aldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor epoxide	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan I	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Dieldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDE	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan II	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan sulfate	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDD	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin aldehyde	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin ketone	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDT	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Methoxychlor	ND		ug/Kg	10	1	373684	06/11/25	06/12/25	KLR
Toxaphene	ND		ug/Kg	100	1	373684	06/11/25	06/12/25	KLR
Chlordane (Technical)	ND		ug/Kg	51	1	373684	06/11/25	06/12/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	78%		%REC	58-120	1	373684	06/11/25	06/12/25	KLR
Decachlorobiphenyl	48%		%REC	47-120	1	373684	06/11/25	06/12/25	KLR

<b>Sample ID: ORBP-27A</b>	<b>Lab ID: 535130-011</b>	<b>Collected: 06/10/25 13:15</b>
<b>Matrix: Soil</b>		

535130-011 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B Prep Method: EPA 3050B									
Arsenic	1.9		mg/Kg	0.97	0.97	373611	06/11/25	06/11/25	CAP
Lead	3.1		mg/Kg	0.97	0.97	373611	06/11/25	06/11/25	CAP

<b>Sample ID: ORBP-27A DUP</b>	<b>Lab ID: 535130-012</b>	<b>Collected: 06/10/25 13:15</b>
<b>Matrix: Soil</b>		

535130-012 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B Prep Method: EPA 3050B									
Arsenic	2.2		mg/Kg	0.96	0.96	373611	06/11/25	06/11/25	CAP
Lead	3.1		mg/Kg	0.96	0.96	373611	06/11/25	06/11/25	CAP

## Analysis Results for 535130

<b>Sample ID:</b> ORBP-27	<b>Lab ID:</b> 535130-013	<b>Collected:</b> 06/10/25 13:40
<b>Matrix:</b> Soil		

535130-013 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
beta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
gamma-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
delta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Aldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor epoxide	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan I	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Dieldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDE	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan II	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan sulfate	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDD	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin aldehyde	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin ketone	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDT	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Methoxychlor	ND		ug/Kg	10	1	373684	06/11/25	06/12/25	KLR
Toxaphene	ND		ug/Kg	100	1	373684	06/11/25	06/12/25	KLR
Chlordane (Technical)	ND		ug/Kg	51	1	373684	06/11/25	06/12/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	97%		%REC	58-120	1	373684	06/11/25	06/12/25	KLR
Decachlorobiphenyl	57%		%REC	47-120	1	373684	06/11/25	06/12/25	KLR

## Analysis Results for 535130

<b>Sample ID:</b> ORBP-27 DUP	<b>Lab ID:</b> 535130-014	<b>Collected:</b> 06/10/25 13:40
<b>Matrix:</b> Soil		

535130-014 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
beta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
gamma-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
delta-BHC	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Aldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Heptachlor epoxide	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan I	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Dieldrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDE	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan II	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endosulfan sulfate	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDD	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin aldehyde	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Endrin ketone	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
4,4'-DDT	ND		ug/Kg	5.1	1	373684	06/11/25	06/12/25	KLR
Methoxychlor	ND		ug/Kg	10	1	373684	06/11/25	06/12/25	KLR
Toxaphene	ND		ug/Kg	100	1	373684	06/11/25	06/12/25	KLR
Chlordane (Technical)	ND		ug/Kg	51	1	373684	06/11/25	06/12/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	69%		%REC	58-120	1	373684	06/11/25	06/12/25	KLR
Decachlorobiphenyl	54%		%REC	47-120	1	373684	06/11/25	06/12/25	KLR

ND Not Detected

## Batch QC

<b>Type: Blank</b>	<b>Lab ID: QC1264993</b>	<b>Batch: 373611</b>
<b>Matrix: Soil</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1264993 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Arsenic	ND		mg/Kg	1.0	06/11/25	06/11/25
Lead	ND		mg/Kg	1.0	06/11/25	06/11/25

<b>Type: Lab Control Sample</b>	<b>Lab ID: QC1264994</b>	<b>Batch: 373611</b>
<b>Matrix: Soil</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1264994 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	109.2	100.0	mg/Kg	109%		80-120
Lead	115.7	100.0	mg/Kg	116%		80-120

<b>Type: Matrix Spike</b>	<b>Lab ID: QC1264995</b>	<b>Batch: 373611</b>
<b>Matrix (Source ID): Soil (535130-001)</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1264995 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	107.5	1.039	100.0	mg/Kg	106%		75-125	1
Lead	113.3	5.813	100.0	mg/Kg	107%		75-125	1

<b>Type: Matrix Spike Duplicate</b>	<b>Lab ID: QC1264996</b>	<b>Batch: 373611</b>
<b>Matrix (Source ID): Soil (535130-001)</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1264996 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	104.5	1.039	99.01	mg/Kg	104%		75-125	2	20	0.99
Lead	111.0	5.813	99.01	mg/Kg	106%		75-125	1	28	0.99

<b>Type: Post Digest Spike</b>	<b>Lab ID: QC1264997</b>	<b>Batch: 373611</b>
<b>Matrix (Source ID): Soil (535130-001)</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1264997 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	101.4	1.039	99.01	mg/Kg	101%		75-125	0.99
Lead	106.5	5.813	99.01	mg/Kg	102%		75-125	0.99

<b>Type: Serial Dilution</b>	<b>Lab ID: QC1265052</b>	<b>Batch: 373611</b>
<b>Matrix (Source ID): Soil (535130-001)</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1265052 Analyte	Result	Source Sample Result	Units	Qual	RPD	RPD Lim	DF
Arsenic	ND	1.039	mg/Kg				5
Lead	3.863	5.813	mg/Kg	J			5

## Batch QC

<b>Type: Blank</b>	<b>Lab ID: QC1265171</b>	<b>Batch: 373684</b>
<b>Matrix: Soil</b>	<b>Method: EPA 8081A</b>	<b>Prep Method: EPA 3546</b>

QC1265171 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
alpha-BHC	ND		ug/Kg	5.1	06/11/25	06/12/25
beta-BHC	ND		ug/Kg	5.1	06/11/25	06/12/25
gamma-BHC	ND		ug/Kg	5.1	06/11/25	06/12/25
delta-BHC	ND		ug/Kg	5.1	06/11/25	06/12/25
Heptachlor	ND		ug/Kg	5.1	06/11/25	06/12/25
Aldrin	ND		ug/Kg	5.1	06/11/25	06/12/25
Heptachlor epoxide	ND		ug/Kg	5.1	06/11/25	06/12/25
Endosulfan I	ND		ug/Kg	5.1	06/11/25	06/12/25
Dieldrin	ND		ug/Kg	5.1	06/11/25	06/12/25
4,4'-DDE	ND		ug/Kg	5.1	06/11/25	06/12/25
Endrin	ND		ug/Kg	5.1	06/11/25	06/12/25
Endosulfan II	ND		ug/Kg	5.1	06/11/25	06/12/25
Endosulfan sulfate	ND		ug/Kg	5.1	06/11/25	06/12/25
4,4'-DDD	ND		ug/Kg	5.1	06/11/25	06/12/25
Endrin aldehyde	ND		ug/Kg	5.1	06/11/25	06/12/25
Endrin ketone	ND		ug/Kg	5.1	06/11/25	06/12/25
4,4'-DDT	ND		ug/Kg	5.1	06/11/25	06/12/25
Methoxychlor	ND		ug/Kg	10	06/11/25	06/12/25
Toxaphene	ND		ug/Kg	100	06/11/25	06/12/25
Chlordane (Technical)	ND		ug/Kg	51	06/11/25	06/12/25
<b>Surrogates</b>				<b>Limits</b>		
TCMX	74%		%REC	58-120	06/11/25	06/12/25
Decachlorobiphenyl	89%		%REC	47-120	06/11/25	06/12/25

## Batch QC

<b>Type:</b> Lab Control Sample	<b>Lab ID:</b> QC1265172	<b>Batch:</b> 373684
<b>Matrix:</b> Soil	<b>Method:</b> EPA 8081A	<b>Prep Method:</b> EPA 3546

QC1265172 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
alpha-BHC	36.31	50.51	ug/Kg	72%		53-132
beta-BHC	37.36	50.51	ug/Kg	74%		59-131
gamma-BHC	38.30	50.51	ug/Kg	76%		54-132
delta-BHC	36.84	50.51	ug/Kg	73%		54-134
Heptachlor	34.62	50.51	ug/Kg	69%		50-130
Aldrin	23.82	50.51	ug/Kg	47%		46-120
Heptachlor epoxide	33.87	50.51	ug/Kg	67%		52-127
Endosulfan I	34.82	50.51	ug/Kg	69%		53-132
Dieldrin	35.33	50.51	ug/Kg	70%		53-134
4,4'-DDE	35.17	50.51	ug/Kg	70%		53-140
Endrin	36.64	50.51	ug/Kg	73%		53-142
Endosulfan II	37.21	50.51	ug/Kg	74%	#	53-138
Endosulfan sulfate	34.21	50.51	ug/Kg	68%	#	50-134
4,4'-DDD	33.82	50.51	ug/Kg	67%		50-136
Endrin aldehyde	25.83	50.51	ug/Kg	51%	#	15-120
Endrin ketone	38.25	50.51	ug/Kg	76%		50-146
4,4'-DDT	36.89	50.51	ug/Kg	73%		46-142
Methoxychlor	40.07	50.51	ug/Kg	79%		48-156
<b>Surrogates</b>						
TCMX	35.80	50.51	ug/Kg	71%		58-120
Decachlorobiphenyl	38.60	50.51	ug/Kg	76%		47-120

## Batch QC

<b>Type: Matrix Spike</b>	<b>Lab ID: QC1265173</b>	<b>Batch: 373684</b>
<b>Matrix (Source ID): Soil (535132-003)</b>	<b>Method: EPA 8081A</b>	<b>Prep Method: EPA 3546</b>

QC1265173 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
alpha-BHC	45.82	ND	50.51	ug/Kg	91%		52-120	1
beta-BHC	40.18	ND	50.51	ug/Kg	80%		57-126	1
gamma-BHC	50.94	ND	50.51	ug/Kg	101%		54-122	1
delta-BHC	51.82	ND	50.51	ug/Kg	103%		44-127	1
Heptachlor	41.81	ND	50.51	ug/Kg	83%		51-122	1
Aldrin	37.37	ND	50.51	ug/Kg	74%		51-120	1
Heptachlor epoxide	38.87	ND	50.51	ug/Kg	77%		50-122	1
Endosulfan I	37.47	ND	50.51	ug/Kg	74%		48-123	1
Dieldrin	41.99	ND	50.51	ug/Kg	83%		48-128	1
4,4'-DDE	53.98	11.81	50.51	ug/Kg	83%		50-139	1
Endrin	44.66	ND	50.51	ug/Kg	88%		53-132	1
Endosulfan II	41.49	ND	50.51	ug/Kg	82%	#	47-131	1
Endosulfan sulfate	35.26	ND	50.51	ug/Kg	70%	#	40-126	1
4,4'-DDD	37.72	ND	50.51	ug/Kg	75%		48-130	1
Endrin aldehyde	30.05	ND	50.51	ug/Kg	60%	#	26-120	1
Endrin ketone	41.77	ND	50.51	ug/Kg	83%		51-133	1
4,4'-DDT	46.28	ND	50.51	ug/Kg	92%		40-144	1
Methoxychlor	37.04	ND	50.51	ug/Kg	73%		49-148	1
<b>Surrogates</b>								
TCMX	36.15		50.51	ug/Kg	72%		58-120	1
Decachlorobiphenyl	33.63		50.51	ug/Kg	67%		47-120	1

## Batch QC

<b>Type:</b> Matrix Spike Duplicate	<b>Lab ID:</b> QC1265174	<b>Batch:</b> 373684
<b>Matrix (Source ID):</b> Soil (535132-003)	<b>Method:</b> EPA 8081A	<b>Prep Method:</b> EPA 3546

QC1265174 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
alpha-BHC	44.44	ND	49.50	ug/Kg	90%		52-120	1	37	0.99
beta-BHC	38.06	ND	49.50	ug/Kg	77%		57-126	3	38	0.99
gamma-BHC	51.70	ND	49.50	ug/Kg	104%		54-122	3	39	0.99
delta-BHC	55.93	ND	49.50	ug/Kg	113%		44-127	10	54	0.99
Heptachlor	39.83	ND	49.50	ug/Kg	80%		51-122	3	44	0.99
Aldrin	37.40	ND	49.50	ug/Kg	76%		51-120	2	39	0.99
Heptachlor epoxide	36.40	ND	49.50	ug/Kg	74%		50-122	5	39	0.99
Endosulfan I	36.85	ND	49.50	ug/Kg	74%		48-123	0	47	0.99
Dieldrin	43.81	ND	49.50	ug/Kg	89%		48-128	6	43	0.99
4,4'-DDE	58.64	11.81	49.50	ug/Kg	95%		50-139	10	42	0.99
Endrin	44.69	ND	49.50	ug/Kg	90%		53-132	2	45	0.99
Endosulfan II	39.72	ND	49.50	ug/Kg	80%	#	47-131	2	46	0.99
Endosulfan sulfate	34.01	ND	49.50	ug/Kg	69%	#	40-126	2	52	0.99
4,4'-DDD	37.11	ND	49.50	ug/Kg	75%		48-130	0	46	0.99
Endrin aldehyde	26.86	ND	49.50	ug/Kg	54%	#	26-120	9	57	0.99
Endrin ketone	36.09	ND	49.50	ug/Kg	73%		51-133	13	43	0.99
4,4'-DDT	43.66	ND	49.50	ug/Kg	88%		40-144	4	56	0.99
Methoxychlor	37.09	ND	49.50	ug/Kg	75%		49-148	2	53	0.99
<b>Surrogates</b>										
TCMX	34.53		49.50	ug/Kg	70%		58-120			0.99
Decachlorobiphenyl	29.70		49.50	ug/Kg	60%		47-120			0.99

# CCV drift outside limits; average CCV drift within limits per method requirements  
 J Estimated value  
 ND Not Detected



**ENTHALPY**  
ANALYTICAL

Enthalpy Analytical  
931 West Barkley Ave  
Orange, CA 92868  
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enthalpy.com

Lab Job Number : 535247  
Report Level : II  
Report Date : 06/19/2025

**Analytical Report** *prepared for:*

Kasia Anderson  
Roux Associates, Inc.  
5150 E. Pacific Coast Hwy.  
Suite 450  
Long Beach, CA 90804

Project: 3669.0004L003 - SRG Ontario Ranch, 3669.0004L003

*Authorized for release by:*

Diane Galvan, Project Manager  
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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 above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105, ORELAP# 4197

### Sample Summary

Kasia Anderson Roux Associates, Inc. 5150 E. Pacific Coast Hwy. Suite 450 Long Beach, CA 90804	Lab Job #:	535247
	Project No:	3669.0004L003
	Location:	SRG Ontario Ranch, 3669.0004L003
	Date Received:	06/11/25

Sample ID	Lab ID	Collected	Matrix
ORBP-31A	535247-001	06/11/25 07:30	Soil
ORBP-31A DUP	535247-002	06/11/25 07:30	Soil
ORBP-31	535247-003	06/11/25 07:48	Soil
ORBP-31 DUP	535247-004	06/11/25 07:48	Soil
ORBP-32A	535247-005	06/11/25 08:00	Soil
ORBP-32	535247-006	06/11/25 08:15	Soil
ORBP-25A	535247-007	06/11/25 08:29	Soil
ORBP-25	535247-008	06/11/25 07:40	Soil
ORBP-26A	535247-009	06/11/25 09:20	Soil
ORBP-26	535247-010	06/11/25 09:45	Soil
ORBP-24A	535247-011	06/11/25 10:10	Soil
ORBP-24	535247-012	06/11/25 10:30	Soil
ORBP-33A	535247-013	06/11/25 10:40	Soil
ORBP-33	535247-014	06/11/25 10:55	Soil
ORBP-22A	535247-015	06/11/25 11:10	Soil
ORBP-22	535247-016	06/11/25 11:25	Soil
ORBP-23A	535247-017	06/11/25 11:40	Soil
ORBP-23A DUP	535247-018	06/11/25 11:40	Soil
ORBP-23	535247-019	06/11/25 11:55	Soil
ORBP-23 DUP	535247-020	06/11/25 11:55	Soil
ORBP-21A	535247-021	06/11/25 12:10	Soil
ORBP-21	535247-022	06/11/25 12:30	Soil
ORBP-24A-DUP	535247-023	06/11/25 10:10	Soil
ORBP-24-DUP	535247-024	06/11/25 10:30	Soil

## Case Narrative

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Roux Associates, Inc.  
5150 E. Pacific Coast Hwy.  
Suite 450  
Long Beach, CA 90804  
Kasia Anderson

Lab Job Number: 535247  
Project No: 3669.0004L003  
Location: SRG Ontario Ranch,  
3669.0004L003  
Date Received: 06/11/25

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This data package contains sample and QC results for twenty four soil samples, requested for the above referenced project on 06/11/25. The samples were received cold and intact.

### Pesticides (EPA 8081A):

- Low recovery was observed for 4,4'-DDD in the MSD for batch 374152; the parent sample was not a project sample, and the LCS was within limits. High recoveries were observed for 4,4'-DDD and 4,4'-DDT in the MS for batch 374152; the LCS was within limits, and these analytes were not detected at or above the RL in the associated samples. High RPD was observed for 4,4'-DDD in the MS/MSD for batch 374152; this analyte was not detected at or above the RL in the associated samples.
- Low surrogate recovery was observed for TCMX in ORBP-23 DUP (lab # 535247-020); the corresponding decachlorobiphenyl surrogate recovery was within limits.
- ORBP-22 [lab # 535247-016], ORBP-23 [lab # 535247-019], ORBP-23 DUP [lab # 535247-020], ORBP-21 [lab # 535247-022] and ORBP-24 DUP [lab # 535247-024] were diluted due to the color of the sample extracts.
- No other analytical problems were encountered.



**Chain of Custody Record**  
 Lab No: \_\_\_\_\_  
 Page: 1 of 3

**Turn Around Time (rush by advanced notice only)**

Standard:	X	5 Day:		3 Day:	
2 Day:		1 Day:		Custom TAT:	

**Enthalpy Analytical - Orange**  
 931 W. Barkley Avenue, Orange, CA 92868  
 Phone 714-771-6900

**Matrix:** A = Air S = Soil/Solid  
 W = Water DW = Drinking Water SD = Sediment  
 PP = Pure Product SEA = Sea Water  
 SW = Swab T = Tissue WP = Wipe O = Other

**Preservatives:**  
 1 = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 2 = HCl 3 = HNO<sub>3</sub>  
 4 = H<sub>2</sub>SO<sub>4</sub> 5 = NaOH 6 = Other

**Sample Receipt Temp:**  
 (lab use only)

CUSTOMER INFORMATION		PROJECT INFORMATION		Analysis Request						Test Instructions / Comments	
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Company:	Roux Associates Inc	Name:	SRG Ontario Ranch	Pesticides (OCs) Method 8081A Lead and Arsenic Method 6010B						1213 2.12.1	
Report To:	Kasia Anderson	Number:	3669.0004L003								
Email:	kanderon@rouxinc.com	P.O. #:									
Address:	5150 E Pacific Coast Highway Suite 450 Long Beach, CA 90804	Address:	Ontario Ranch Ontario, California								
Phone:	(805) 849-9338	Global ID:									
Fax:		Sampled By:	Anwi Anoor/Mariya Borovska/John Cameron								

Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.													
1 ORBP-31A	6/11/25	0730	S	140Z	N/A	X												
2 ORBP-31A Dup		0730	S	140Z	N/A	X												
3 ORBP-31		0748	S	140Z	N/A	X												
4 ORBP-31 Dup		0748	S	140Z	N/A	X												
5 ORBP-32A		0800	S	140Z	N/A	X												
6 ORBP-32		0815	S	140Z	N/A	X												
7 ORBP-25A		0829	S	140Z	N/A	X												
8 ORBP-25		0840	S	140Z	N/A	X												
9 ORBP-26A		0920	S	140Z	N/A	X												
10 ORBP-26		0945	S	140Z	N/A	X												



Login 535247



	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:	<i>Mariya Borovska</i>	MARIYA BOROVSKA	ROUX / STAFF ENG	6/11/2025 1330
1 Received By:	<i>Jelbert Quirigua</i>	Jelbert Quirigua	EA	6/11/25 1330
2 Relinquished By:	<i>Jelbert Quirigua</i>	Jelbert Quirigua	EA	6/11/25 1551
2 Received By:	<i>Mariya Borovska</i>	MARIYA BOROVSKA	EA-ORA	6/11/25 1551
3 Relinquished By:				
3 Received By:				



# ENTHALPY ANALYTICAL

## Chain of Custody Record

## Turn Around Time (rush by advanced notice only)

Lab No:

Page: 2 of 3

Standard: X

2 Day:

5 Day:

3 Day:

1 Day:

Custom TAT:

### Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air S = Soil/Solid

W = Water DW = Drinking Water SD = Sediment

PP = Pure Product SEA = Sea Water

SW = Swab T = Tissue WP = Wipe O = Other

Preservatives:

1 = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 2 = HCl 3 = HNO<sub>3</sub>

4 = H<sub>2</sub>SO<sub>4</sub> 5 = NaOH 6 = Other

Sample Receipt Temp:

(lab use only)

### CUSTOMER INFORMATION

### PROJECT INFORMATION

### Analysis Request

### Test Instructions / Comments

Company:	Roux Associates Inc	Name:	SRG Ontario Ranch
Report To:	Kasia Anderson	Number:	3669.0004L003
Email:	<a href="mailto:kanderon@rouxinc.com">kanderon@rouxinc.com</a>	P.O. #:	
Address:	5150 E Pacific Coast Highway Suite 450	Address:	Ontario Ranch
	Long Beach, CA 90804		Ontario, California
Phone:	(805) 849-9338	Global ID:	
Fax:		Sampled By:	Anwi Anoor/Mariya Borovska/John Cameron

Pesticides (OCPs) Method 8081A	Lead and Arsenic Method 6010B																			
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1/2/13 2.1/2.1
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Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.																
1 ORBP-24A	6/11/25	1010	S	1402	N/A	X															
2 ORBP-24		1030	S	1402	N/A	X															
3 ORBP-33A		1040	S	1402	N/A	X															
4 ORBP-33		1055	S	1402	N/A	X															
5 ORBP-22A		1110	S	1402	N/A	X															
6 ORBP-22		1125	S	1402	N/A	X															
7 <del>ORBP-23A</del> ORBP-23A		1140	S	1402	N/A	X															
8 ORBP-23A Dup		1140	S	1402	N/A	X															
9 ORBP-23		1155	S	1402	N/A	X															
10 ORBP-23 Dup		1155	S	1402	N/A	X															

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		MARIYA BOROVSKA	ROUX / STAFF ENG	6/11/2025 1330
1 Received By:		J. D. ...	EA	6/11/25 1330
2 Relinquished By:		J. D. ...	EA	6/11/25 1551
2 Received By:		JELBERT ANTONIA	EA-ORA	6/11/25 1551
3 Relinquished By:				
3 Received By:				

GSS-7

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## SAMPLE RECEIPT CHECKLIST


**Section 1: General Info**

 Date Received: 06/11/25 WO# 535247 Client: Roux Associates, Inc.
**Section 2: Shipping / Custody**

 Are custody seals present?  Yes  No

 Custody seals intact on arrival?  N/A  Yes  No  On cooler / box  On samples

 Courier  Walk-In  Field Sampling  Shipping Info: \_\_\_\_\_

**Section 3a: Condition / Packaging**
 Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)

 Date Opened 06/11/25 By (initials) RRS Type of ice used:  Wet  Blue/Gel  None

 Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

 Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

 If no cooler: Observed/Adjusted Temp (°C): \_\_\_\_\_ / \_\_\_\_\_ Thermometer/IR Gun: IR13 CF: 0.0

 Cooler Temp (°C) #1: 2.1 / 2.1 #2: \_\_\_\_\_ / \_\_\_\_\_ #3: \_\_\_\_\_ / \_\_\_\_\_ #4: \_\_\_\_\_ / \_\_\_\_\_ #5: \_\_\_\_\_ / \_\_\_\_\_ #6: \_\_\_\_\_ / \_\_\_\_\_

**Section 3b: Microbiology Samples**
 No microbiology samples submitted (skip 3b)

 Within temp range 0.0 - 10.0°C or received on ice directly from field.

 Adequate headspace for microbiology analysis.

**Section 3c: Air Samples**
 No air samples submitted (skip 3c)

 1.4L Canisters  6L Canisters  Tedlar Bags  MCE Cassettes  Sorbent Tubes  Other \_\_\_\_\_

**Section 4: Containers / Labels / Samples**

	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	x		
2) Is the sampler's name present on the CoC?	x		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	x		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)	x		
5) Were all of, and only, the correct samples received?	x		
6) Are sample labels present, legible, and in agreement with the CoC?	x		
7) Does the container count match the CoC?	x		
8) Was sufficient sample volume / mass received for the analyses requested?	x		
9) Were samples received in proper containers for the analyses requested?	x		
10) Were samples received with > 1/2 holding time remaining?	x		
11) Are samples properly preserved as indicated by CoC / labels?	x		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			x
13) Are VOA vials free from headspace/bubbles > 6mm?			x

**Section 5: Explanations / Comments**

(If no comments are made, then no discrepancies noted.)

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 No additional discrepancies

 Date Logged 06/11/25 By (print) FPD (sign) 

 Date Labeled 06/11/25 By (print) RRS (sign) \_\_\_\_\_

## Analysis Results for 535247

Kasia Anderson  
 Roux Associates, Inc.  
 5150 E. Pacific Coast Hwy.  
 Suite 450  
 Long Beach, CA 90804

Lab Job #: 535247  
 Project No: 3669.0004L003  
 Location: SRG Ontario Ranch, 3669.0004L003  
 Date Received: 06/11/25

**Sample ID: ORBP-31A                      Lab ID: 535247-001                      Collected: 06/11/25 07:30**  
**Matrix: Soil**

535247-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B Prep Method: EPA 3050B									
Arsenic	3.1		mg/Kg	1.0	1	373722	06/11/25	06/12/25	SBW
Lead	5.9		mg/Kg	1.0	1	373722	06/11/25	06/12/25	SBW

**Sample ID: ORBP-31A DUP                      Lab ID: 535247-002                      Collected: 06/11/25 07:30**  
**Matrix: Soil**

535247-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B Prep Method: EPA 3050B									
Arsenic	2.5		mg/Kg	0.97	0.97	373722	06/11/25	06/12/25	SBW
Lead	6.5		mg/Kg	0.97	0.97	373722	06/11/25	06/12/25	SBW

## Analysis Results for 535247

<b>Sample ID:</b> ORBP-31	<b>Lab ID:</b> 535247-003	<b>Collected:</b> 06/11/25 07:48
<b>Matrix:</b> Soil		

535247-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
beta-BHC	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
gamma-BHC	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
delta-BHC	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
Heptachlor	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
Aldrin	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
Heptachlor epoxide	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
Endosulfan I	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
Dieldrin	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
4,4'-DDE	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
Endrin	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
Endosulfan II	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
Endosulfan sulfate	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
4,4'-DDD	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
Endrin aldehyde	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
Endrin ketone	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
4,4'-DDT	ND		ug/Kg	10	2	373819	06/13/25	06/16/25	KLR
Methoxychlor	ND		ug/Kg	20	2	373819	06/13/25	06/16/25	KLR
Toxaphene	ND		ug/Kg	200	2	373819	06/13/25	06/16/25	KLR
Chlordane (Technical)	ND		ug/Kg	100	2	373819	06/13/25	06/16/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	88%		%REC	58-120	2	373819	06/13/25	06/16/25	KLR
Decachlorobiphenyl	98%		%REC	47-120	2	373819	06/13/25	06/16/25	KLR

## Analysis Results for 535247

<b>Sample ID: ORBP-31 DUP</b>	<b>Lab ID: 535247-004</b>	<b>Collected: 06/11/25 07:48</b>
<b>Matrix: Soil</b>		

535247-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
beta-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
gamma-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
delta-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Heptachlor	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Aldrin	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Heptachlor epoxide	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endosulfan I	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Dieldrin	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
4,4'-DDE	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endrin	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endosulfan II	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endosulfan sulfate	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
4,4'-DDD	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endrin aldehyde	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endrin ketone	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
4,4'-DDT	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Methoxychlor	ND		ug/Kg	20	2	373819	06/13/25	06/16/25	KLR
Toxaphene	ND		ug/Kg	200	2	373819	06/13/25	06/16/25	KLR
Chlordane (Technical)	ND		ug/Kg	99	2	373819	06/13/25	06/16/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	74%		%REC	58-120	2	373819	06/13/25	06/16/25	KLR
Decachlorobiphenyl	85%		%REC	47-120	2	373819	06/13/25	06/16/25	KLR

<b>Sample ID: ORBP-32A</b>	<b>Lab ID: 535247-005</b>	<b>Collected: 06/11/25 08:00</b>
<b>Matrix: Soil</b>		

535247-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B									
Prep Method: EPA 3050B									
Arsenic	<b>1.9</b>		mg/Kg	0.99	0.99	373722	06/11/25	06/12/25	SBW
Lead	<b>9.5</b>		mg/Kg	0.99	0.99	373722	06/11/25	06/12/25	SBW

## Analysis Results for 535247

<b>Sample ID: ORBP-32</b>	<b>Lab ID: 535247-006</b>	<b>Collected: 06/11/25 08:15</b>
<b>Matrix: Soil</b>		

535247-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
beta-BHC	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
gamma-BHC	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
delta-BHC	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
Heptachlor	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
Aldrin	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
Heptachlor epoxide	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
Endosulfan I	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
Dieldrin	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
4,4'-DDE	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
Endrin	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
Endosulfan II	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
Endosulfan sulfate	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
4,4'-DDD	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
Endrin aldehyde	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
Endrin ketone	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
4,4'-DDT	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	KLR
Methoxychlor	ND		ug/Kg	10	1	373819	06/13/25	06/16/25	KLR
Toxaphene	ND		ug/Kg	100	1	373819	06/13/25	06/16/25	KLR
Chlordane (Technical)	ND		ug/Kg	50	1	373819	06/13/25	06/16/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	73%		%REC	58-120	1	373819	06/13/25	06/16/25	KLR
Decachlorobiphenyl	82%		%REC	47-120	1	373819	06/13/25	06/16/25	KLR

<b>Sample ID: ORBP-25A</b>	<b>Lab ID: 535247-007</b>	<b>Collected: 06/11/25 08:29</b>
<b>Matrix: Soil</b>		

535247-007 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B Prep Method: EPA 3050B									
Arsenic	<b>2.3</b>		mg/Kg	0.96	0.96	373722	06/11/25	06/12/25	SBW
Lead	<b>4.4</b>		mg/Kg	0.96	0.96	373722	06/11/25	06/12/25	SBW

## Analysis Results for 535247

<b>Sample ID: ORBP-25</b>	<b>Lab ID: 535247-008</b>	<b>Collected: 06/11/25 07:40</b>
<b>Matrix: Soil</b>		

535247-008 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
beta-BHC	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
gamma-BHC	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
delta-BHC	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
Heptachlor	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
Aldrin	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
Heptachlor epoxide	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
Endosulfan I	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
Dieldrin	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
4,4'-DDE	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
Endrin	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
Endosulfan II	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
Endosulfan sulfate	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
4,4'-DDD	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
Endrin aldehyde	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
Endrin ketone	ND		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
4,4'-DDT	<b>9.4</b>		ug/Kg	5.0	0.99	373819	06/13/25	06/16/25	KLR
Methoxychlor	ND		ug/Kg	9.9	0.99	373819	06/13/25	06/16/25	KLR
Toxaphene	ND		ug/Kg	99	0.99	373819	06/13/25	06/16/25	KLR
Chlordane (Technical)	ND		ug/Kg	50	0.99	373819	06/13/25	06/16/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	86%		%REC	58-120	0.99	373819	06/13/25	06/16/25	KLR
Decachlorobiphenyl	94%		%REC	47-120	0.99	373819	06/13/25	06/16/25	KLR

<b>Sample ID: ORBP-26A</b>	<b>Lab ID: 535247-009</b>	<b>Collected: 06/11/25 09:20</b>
<b>Matrix: Soil</b>		

535247-009 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B									
Prep Method: EPA 3050B									
Arsenic	<b>1.2</b>		mg/Kg	0.96	0.96	373722	06/11/25	06/12/25	SBW
Lead	<b>30</b>		mg/Kg	0.96	0.96	373722	06/11/25	06/12/25	SBW

## Analysis Results for 535247

<b>Sample ID: ORBP-26</b>	<b>Lab ID: 535247-010</b>	<b>Collected: 06/11/25 09:45</b>
<b>Matrix: Soil</b>		

535247-010 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
beta-BHC	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
gamma-BHC	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
delta-BHC	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
Heptachlor	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
Aldrin	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
Heptachlor epoxide	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
Endosulfan I	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
Dieldrin	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
4,4'-DDE	<b>31</b>		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
Endrin	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
Endosulfan II	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
Endosulfan sulfate	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
4,4'-DDD	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
Endrin aldehyde	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
Endrin ketone	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
4,4'-DDT	ND		ug/Kg	25	5	373819	06/13/25	06/16/25	KLR
Methoxychlor	ND		ug/Kg	50	5	373819	06/13/25	06/16/25	KLR
Toxaphene	ND		ug/Kg	500	5	373819	06/13/25	06/16/25	KLR
Chlordane (Technical)	ND		ug/Kg	250	5	373819	06/13/25	06/16/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	94%		%REC	58-120	5	373819	06/13/25	06/16/25	KLR
Decachlorobiphenyl	103%		%REC	47-120	5	373819	06/13/25	06/16/25	KLR

<b>Sample ID: ORBP-24A</b>	<b>Lab ID: 535247-011</b>	<b>Collected: 06/11/25 10:10</b>
<b>Matrix: Soil</b>		

535247-011 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B									
Prep Method: EPA 3050B									
Arsenic	<b>1.4</b>		mg/Kg	0.95	0.95	373722	06/11/25	06/12/25	SBW
Lead	<b>3.8</b>		mg/Kg	0.95	0.95	373722	06/11/25	06/12/25	SBW

## Analysis Results for 535247

<b>Sample ID: ORBP-24</b>	<b>Lab ID: 535247-012</b>	<b>Collected: 06/11/25 10:30</b>
<b>Matrix: Soil</b>		

535247-012 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
beta-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
gamma-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
delta-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Heptachlor	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Aldrin	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Heptachlor epoxide	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endosulfan I	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Dieldrin	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
4,4'-DDE	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endrin	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endosulfan II	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endosulfan sulfate	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
4,4'-DDD	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endrin aldehyde	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Endrin ketone	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
4,4'-DDT	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	KLR
Methoxychlor	ND		ug/Kg	20	2	373819	06/13/25	06/16/25	KLR
Toxaphene	ND		ug/Kg	200	2	373819	06/13/25	06/16/25	KLR
Chlordane (Technical)	ND		ug/Kg	99	2	373819	06/13/25	06/16/25	KLR
<b>Surrogates</b>				<b>Limits</b>					
TCMX	90%		%REC	58-120	2	373819	06/13/25	06/16/25	KLR
Decachlorobiphenyl	103%		%REC	47-120	2	373819	06/13/25	06/16/25	KLR

<b>Sample ID: ORBP-33A</b>	<b>Lab ID: 535247-013</b>	<b>Collected: 06/11/25 10:40</b>
<b>Matrix: Soil</b>		

535247-013 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B									
Prep Method: EPA 3050B									
Arsenic	ND		mg/Kg	0.95	0.95	373722	06/11/25	06/12/25	SBW
Lead	<b>10</b>		mg/Kg	0.95	0.95	373722	06/11/25	06/12/25	SBW

## Analysis Results for 535247

<b>Sample ID: ORBP-33</b>	<b>Lab ID: 535247-014</b>	<b>Collected: 06/11/25 10:55</b>
<b>Matrix: Soil</b>		

535247-014 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
beta-BHC	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
gamma-BHC	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
delta-BHC	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
Heptachlor	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
Aldrin	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
Heptachlor epoxide	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
Endosulfan I	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
Dieldrin	<b>26</b>		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
4,4'-DDE	<b>5.6</b>		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
Endrin	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
Endosulfan II	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
Endosulfan sulfate	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
4,4'-DDD	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
Endrin aldehyde	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
Endrin ketone	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
4,4'-DDT	ND		ug/Kg	5.0	1	373819	06/13/25	06/16/25	XLY
Methoxychlor	ND		ug/Kg	10	1	373819	06/13/25	06/16/25	XLY
Toxaphene	ND		ug/Kg	100	1	373819	06/13/25	06/16/25	XLY
Chlordane (Technical)	ND		ug/Kg	50	1	373819	06/13/25	06/16/25	XLY
<b>Surrogates</b>				<b>Limits</b>					
TCMX	89%		%REC	58-120	1	373819	06/13/25	06/16/25	XLY
Decachlorobiphenyl	78%		%REC	47-120	1	373819	06/13/25	06/16/25	XLY

<b>Sample ID: ORBP-22A</b>	<b>Lab ID: 535247-015</b>	<b>Collected: 06/11/25 11:10</b>
<b>Matrix: Soil</b>		

535247-015 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B									
Prep Method: EPA 3050B									
Arsenic	<b>1.4</b>		mg/Kg	0.95	0.95	373722	06/11/25	06/12/25	SBW
Lead	<b>5.4</b>		mg/Kg	0.95	0.95	373722	06/11/25	06/12/25	SBW

## Analysis Results for 535247

<b>Sample ID: ORBP-22</b>	<b>Lab ID: 535247-016</b>	<b>Collected: 06/11/25 11:25</b>
<b>Matrix: Soil</b>		

535247-016 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
beta-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
gamma-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
delta-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Heptachlor	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Aldrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Heptachlor epoxide	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan I	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Dieldrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDE	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan II	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan sulfate	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDD	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin aldehyde	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin ketone	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDT	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Methoxychlor	ND		ug/Kg	20	2	374152	06/18/25	06/18/25	MES
Toxaphene	ND		ug/Kg	200	2	374152	06/18/25	06/18/25	MES
Chlordane (Technical)	ND		ug/Kg	100	2	374152	06/18/25	06/18/25	MES
<b>Surrogates</b>				<b>Limits</b>					
TCMX	77%		%REC	58-120	2	374152	06/18/25	06/18/25	MES
Decachlorobiphenyl	59%		%REC	47-120	2	374152	06/18/25	06/18/25	MES

<b>Sample ID: ORBP-23A</b>	<b>Lab ID: 535247-017</b>	<b>Collected: 06/11/25 11:40</b>
<b>Matrix: Soil</b>		

535247-017 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B Prep Method: EPA 3050B									
Arsenic	<b>3.7</b>		mg/Kg	1.0	1	373722	06/11/25	06/12/25	SBW
Lead	<b>11</b>		mg/Kg	1.0	1	373722	06/11/25	06/12/25	SBW

<b>Sample ID: ORBP-23A DUP</b>	<b>Lab ID: 535247-018</b>	<b>Collected: 06/11/25 11:40</b>
<b>Matrix: Soil</b>		

535247-018 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B Prep Method: EPA 3050B									
Arsenic	<b>1.7</b>		mg/Kg	0.99	0.99	373722	06/11/25	06/12/25	SBW
Lead	<b>6.3</b>		mg/Kg	0.99	0.99	373722	06/11/25	06/12/25	SBW

## Analysis Results for 535247

<b>Sample ID:</b> ORBP-23	<b>Lab ID:</b> 535247-019	<b>Collected:</b> 06/11/25 11:55
<b>Matrix:</b> Soil		

535247-019 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
beta-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
gamma-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
delta-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Heptachlor	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Aldrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Heptachlor epoxide	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan I	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Dieldrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDE	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan II	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan sulfate	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDD	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin aldehyde	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin ketone	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDT	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Methoxychlor	ND		ug/Kg	20	2	374152	06/18/25	06/18/25	MES
Toxaphene	ND		ug/Kg	200	2	374152	06/18/25	06/18/25	MES
Chlordane (Technical)	ND		ug/Kg	100	2	374152	06/18/25	06/18/25	MES
<b>Surrogates</b>				<b>Limits</b>					
TCMX	84%		%REC	58-120	2	374152	06/18/25	06/18/25	MES
Decachlorobiphenyl	71%		%REC	47-120	2	374152	06/18/25	06/18/25	MES

## Analysis Results for 535247

<b>Sample ID: ORBP-23 DUP</b>	<b>Lab ID: 535247-020</b>	<b>Collected: 06/11/25 11:55</b>
<b>Matrix: Soil</b>		

535247-020 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
beta-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
gamma-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
delta-BHC	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
Heptachlor	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
Aldrin	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
Heptachlor epoxide	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
Endosulfan I	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
Dieldrin	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
4,4'-DDE	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
Endrin	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
Endosulfan II	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
Endosulfan sulfate	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
4,4'-DDD	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
Endrin aldehyde	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
Endrin ketone	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
4,4'-DDT	ND		ug/Kg	9.9	2	373819	06/13/25	06/16/25	XLY
Methoxychlor	ND		ug/Kg	20	2	373819	06/13/25	06/16/25	XLY
Toxaphene	ND		ug/Kg	200	2	373819	06/13/25	06/16/25	XLY
Chlordane (Technical)	ND		ug/Kg	99	2	373819	06/13/25	06/16/25	XLY
<b>Surrogates</b>				<b>Limits</b>					
TCMX	53%	*	%REC	58-120	2	373819	06/13/25	06/16/25	XLY
Decachlorobiphenyl	56%		%REC	47-120	2	373819	06/13/25	06/16/25	XLY

<b>Sample ID: ORBP-21A</b>	<b>Lab ID: 535247-021</b>	<b>Collected: 06/11/25 12:10</b>
<b>Matrix: Soil</b>		

535247-021 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B									
Prep Method: EPA 3050B									
Arsenic	<b>1.3</b>		mg/Kg	0.95	0.95	373722	06/11/25	06/12/25	SBW
Lead	<b>15</b>		mg/Kg	0.95	0.95	373722	06/11/25	06/12/25	SBW

## Analysis Results for 535247

<b>Sample ID: ORBP-21</b>	<b>Lab ID: 535247-022</b>	<b>Collected: 06/11/25 12:30</b>
<b>Matrix: Soil</b>		

535247-022 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
beta-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
gamma-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
delta-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Heptachlor	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Aldrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Heptachlor epoxide	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan I	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Dieldrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDE	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan II	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan sulfate	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDD	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin aldehyde	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin ketone	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDT	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Methoxychlor	ND		ug/Kg	20	2	374152	06/18/25	06/18/25	MES
Toxaphene	ND		ug/Kg	200	2	374152	06/18/25	06/18/25	MES
Chlordane (Technical)	ND		ug/Kg	100	2	374152	06/18/25	06/18/25	MES
<b>Surrogates</b>				<b>Limits</b>					
TCMX	86%		%REC	58-120	2	374152	06/18/25	06/18/25	MES
Decachlorobiphenyl	68%		%REC	47-120	2	374152	06/18/25	06/18/25	MES

<b>Sample ID: ORBP-24A-DUP</b>	<b>Lab ID: 535247-023</b>	<b>Collected: 06/11/25 10:10</b>
<b>Matrix: Soil</b>		

535247-023 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6010B									
Prep Method: EPA 3050B									
Arsenic	<b>1.2</b>		mg/Kg	0.99	0.99	373722	06/11/25	06/12/25	SBW
Lead	<b>4.0</b>		mg/Kg	0.99	0.99	373722	06/11/25	06/12/25	SBW

## Analysis Results for 535247

<b>Sample ID:</b> ORBP-24-DUP	<b>Lab ID:</b> 535247-024	<b>Collected:</b> 06/11/25 10:30
<b>Matrix:</b> Soil		

535247-024 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 8081A									
Prep Method: EPA 3546									
alpha-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
beta-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
gamma-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
delta-BHC	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Heptachlor	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Aldrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Heptachlor epoxide	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan I	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Dieldrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDE	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan II	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endosulfan sulfate	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDD	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin aldehyde	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Endrin ketone	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
4,4'-DDT	ND		ug/Kg	10	2	374152	06/18/25	06/18/25	MES
Methoxychlor	ND		ug/Kg	20	2	374152	06/18/25	06/18/25	MES
Toxaphene	ND		ug/Kg	200	2	374152	06/18/25	06/18/25	MES
Chlordane (Technical)	ND		ug/Kg	100	2	374152	06/18/25	06/18/25	MES
<b>Surrogates</b>				<b>Limits</b>					
TCMX	76%		%REC	58-120	2	374152	06/18/25	06/18/25	MES
Decachlorobiphenyl	59%		%REC	47-120	2	374152	06/18/25	06/18/25	MES

\* Value is outside QC limits  
 ND Not Detected

## Batch QC

<b>Type: Blank</b>	<b>Lab ID: QC1265310</b>	<b>Batch: 373722</b>
<b>Matrix: Soil</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1265310 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Arsenic	ND		mg/Kg	1.0	06/11/25	06/12/25
Lead	ND		mg/Kg	1.0	06/11/25	06/12/25

<b>Type: Lab Control Sample</b>	<b>Lab ID: QC1265311</b>	<b>Batch: 373722</b>
<b>Matrix: Soil</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1265311 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	101.6	100.0	mg/Kg	102%		80-120
Lead	107.2	100.0	mg/Kg	107%		80-120

<b>Type: Matrix Spike</b>	<b>Lab ID: QC1265312</b>	<b>Batch: 373722</b>
<b>Matrix (Source ID): Soil (535224-001)</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1265312 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	103.2	6.088	98.04	mg/Kg	99%		75-125	0.98
Lead	114.6	20.16	98.04	mg/Kg	96%		75-125	0.98

<b>Type: Matrix Spike Duplicate</b>	<b>Lab ID: QC1265313</b>	<b>Batch: 373722</b>
<b>Matrix (Source ID): Soil (535224-001)</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1265313 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	107.2	6.088	100.0	mg/Kg	101%		75-125	2	20	1
Lead	116.0	20.16	100.0	mg/Kg	96%		75-125	0	28	1

<b>Type: Post Digest Spike</b>	<b>Lab ID: QC1265314</b>	<b>Batch: 373722</b>
<b>Matrix (Source ID): Soil (535224-001)</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1265314 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	99.50	6.088	96.15	mg/Kg	97%		75-125	0.96
Lead	113.6	20.16	96.15	mg/Kg	97%		75-125	0.96

<b>Type: Serial Dilution</b>	<b>Lab ID: QC1265322</b>	<b>Batch: 373722</b>
<b>Matrix (Source ID): Soil (535224-001)</b>	<b>Method: EPA 6010B</b>	<b>Prep Method: EPA 3050B</b>

QC1265322 Analyte	Result	Source Sample Result	Units	Qual	RPD	RPD Lim	DF
Arsenic	5.676	6.088	mg/Kg				4.8
Lead	19.34	20.16	mg/Kg				4.8

## Batch QC

<b>Type: Blank</b>	<b>Lab ID: QC1265633</b>	<b>Batch: 373819</b>
<b>Matrix: Miscell.</b>	<b>Method: EPA 8081A</b>	<b>Prep Method: EPA 3546</b>

QC1265633 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
alpha-BHC	ND		ug/Kg	4.9	06/13/25	06/16/25
beta-BHC	ND		ug/Kg	4.9	06/13/25	06/16/25
gamma-BHC	ND		ug/Kg	4.9	06/13/25	06/16/25
delta-BHC	ND		ug/Kg	4.9	06/13/25	06/16/25
Heptachlor	ND		ug/Kg	4.9	06/13/25	06/16/25
Aldrin	ND		ug/Kg	4.9	06/13/25	06/16/25
Heptachlor epoxide	ND		ug/Kg	4.9	06/13/25	06/16/25
Endosulfan I	ND		ug/Kg	4.9	06/13/25	06/16/25
Dieldrin	ND		ug/Kg	4.9	06/13/25	06/16/25
4,4'-DDE	ND		ug/Kg	4.9	06/13/25	06/16/25
Endrin	ND		ug/Kg	4.9	06/13/25	06/16/25
Endosulfan II	ND		ug/Kg	4.9	06/13/25	06/16/25
Endosulfan sulfate	ND		ug/Kg	4.9	06/13/25	06/16/25
4,4'-DDD	ND		ug/Kg	4.9	06/13/25	06/16/25
Endrin aldehyde	ND		ug/Kg	4.9	06/13/25	06/16/25
Endrin ketone	ND		ug/Kg	4.9	06/13/25	06/16/25
4,4'-DDT	ND		ug/Kg	4.9	06/13/25	06/16/25
Methoxychlor	ND		ug/Kg	9.8	06/13/25	06/16/25
Toxaphene	ND		ug/Kg	98	06/13/25	06/16/25
Chlordane (Technical)	ND		ug/Kg	49	06/13/25	06/16/25
<b>Surrogates</b>				<b>Limits</b>		
TCMX	93%		%REC	58-120	06/13/25	06/16/25
Decachlorobiphenyl	109%		%REC	47-120	06/13/25	06/16/25

## Batch QC

<b>Type:</b> Lab Control Sample	<b>Lab ID:</b> QC1265634	<b>Batch:</b> 373819
<b>Matrix:</b> Miscell.	<b>Method:</b> EPA 8081A	<b>Prep Method:</b> EPA 3546

QC1265634 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
alpha-BHC	41.85	49.02	ug/Kg	85%		53-132
beta-BHC	43.02	49.02	ug/Kg	88%		59-131
gamma-BHC	44.20	49.02	ug/Kg	90%		54-132
delta-BHC	43.44	49.02	ug/Kg	89%		54-134
Heptachlor	44.11	49.02	ug/Kg	90%		50-130
Aldrin	40.40	49.02	ug/Kg	82%		46-120
Heptachlor epoxide	42.56	49.02	ug/Kg	87%		52-127
Endosulfan I	43.67	49.02	ug/Kg	89%		53-132
Dieldrin	44.06	49.02	ug/Kg	90%		53-134
4,4'-DDE	46.05	49.02	ug/Kg	94%		53-140
Endrin	47.90	49.02	ug/Kg	98%		53-142
Endosulfan II	46.51	49.02	ug/Kg	95%		53-138
Endosulfan sulfate	46.21	49.02	ug/Kg	94%		50-134
4,4'-DDD	42.69	49.02	ug/Kg	87%		50-136
Endrin aldehyde	39.00	49.02	ug/Kg	80%		15-120
Endrin ketone	45.63	49.02	ug/Kg	93%		50-146
4,4'-DDT	46.76	49.02	ug/Kg	95%		46-142
Methoxychlor	51.83	49.02	ug/Kg	106%		48-156
<b>Surrogates</b>						
TCMX	42.80	49.02	ug/Kg	87%		58-120
Decachlorobiphenyl	49.53	49.02	ug/Kg	101%		47-120

## Batch QC

<b>Type: Matrix Spike</b>	<b>Lab ID: QC1265637</b>	<b>Batch: 373819</b>
<b>Matrix (Source ID): Soil (535247-008)</b>	<b>Method: EPA 8081A</b>	<b>Prep Method: EPA 3546</b>

QC1265637 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
alpha-BHC	42.23	ND	50.00	ug/Kg	84%		52-120	1
beta-BHC	42.24	ND	50.00	ug/Kg	84%		57-126	1
gamma-BHC	45.30	ND	50.00	ug/Kg	91%		54-122	1
delta-BHC	41.23	ND	50.00	ug/Kg	82%		44-127	1
Heptachlor	44.33	ND	50.00	ug/Kg	89%		51-122	1
Aldrin	41.68	ND	50.00	ug/Kg	83%		51-120	1
Heptachlor epoxide	41.48	ND	50.00	ug/Kg	83%		50-122	1
Endosulfan I	36.63	3.433	50.00	ug/Kg	66%		48-123	1
Dieldrin	46.20	ND	50.00	ug/Kg	92%		48-128	1
4,4'-DDE	48.81	ND	50.00	ug/Kg	98%		50-139	1
Endrin	48.06	ND	50.00	ug/Kg	96%		53-132	1
Endosulfan II	46.33	ND	50.00	ug/Kg	93%		47-131	1
Endosulfan sulfate	45.54	ND	50.00	ug/Kg	91%		40-126	1
4,4'-DDD	42.75	ND	50.00	ug/Kg	86%		48-130	1
Endrin aldehyde	35.87	ND	50.00	ug/Kg	72%		26-120	1
Endrin ketone	45.21	ND	50.00	ug/Kg	90%		51-133	1
4,4'-DDT	58.86	9.373	50.00	ug/Kg	99%		40-144	1
Methoxychlor	49.46	ND	50.00	ug/Kg	99%		49-148	1
<b>Surrogates</b>								
TCMX	42.01		50.00	ug/Kg	84%		58-120	1
Decachlorobiphenyl	51.19		50.00	ug/Kg	102%		47-120	1

## Batch QC

<b>Type:</b> Matrix Spike Duplicate	<b>Lab ID:</b> QC1265638	<b>Batch:</b> 373819
<b>Matrix (Source ID):</b> Soil (535247-008)	<b>Method:</b> EPA 8081A	<b>Prep Method:</b> EPA 3546

QC1265638 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
alpha-BHC	41.23	ND	50.00	ug/Kg	82%		52-120	2	37	1
beta-BHC	42.23	ND	50.00	ug/Kg	84%		57-126	0	38	1
gamma-BHC	44.38	ND	50.00	ug/Kg	89%		54-122	2	39	1
delta-BHC	41.07	ND	50.00	ug/Kg	82%		44-127	0	54	1
Heptachlor	43.38	ND	50.00	ug/Kg	87%		51-122	2	44	1
Aldrin	42.37	ND	50.00	ug/Kg	85%		51-120	2	39	1
Heptachlor epoxide	41.81	ND	50.00	ug/Kg	84%		50-122	1	39	1
Endosulfan I	35.31	3.433	50.00	ug/Kg	64%		48-123	4	47	1
Dieldrin	45.36	ND	50.00	ug/Kg	91%		48-128	2	43	1
4,4'-DDE	49.21	ND	50.00	ug/Kg	98%		50-139	1	42	1
Endrin	47.48	ND	50.00	ug/Kg	95%		53-132	1	45	1
Endosulfan II	45.84	ND	50.00	ug/Kg	92%		47-131	1	46	1
Endosulfan sulfate	44.81	ND	50.00	ug/Kg	90%		40-126	2	52	1
4,4'-DDD	42.13	ND	50.00	ug/Kg	84%		48-130	1	46	1
Endrin aldehyde	33.02	ND	50.00	ug/Kg	66%		26-120	8	57	1
Endrin ketone	44.16	ND	50.00	ug/Kg	88%		51-133	2	43	1
4,4'-DDT	51.93	9.373	50.00	ug/Kg	85%		40-144	13	56	1
Methoxychlor	46.34	ND	50.00	ug/Kg	93%		49-148	7	53	1
<b>Surrogates</b>										
TCMX	41.94		50.00	ug/Kg	84%		58-120			1
Decachlorobiphenyl	47.62		50.00	ug/Kg	95%		47-120			1

## Batch QC

<b>Type: Blank</b>	<b>Lab ID: QC1266841</b>	<b>Batch: 374152</b>
<b>Matrix: Soil</b>	<b>Method: EPA 8081A</b>	<b>Prep Method: EPA 3546</b>

QC1266841 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
alpha-BHC	ND		ug/Kg	5.1	06/17/25	06/18/25
beta-BHC	ND		ug/Kg	5.1	06/17/25	06/18/25
gamma-BHC	ND		ug/Kg	5.1	06/17/25	06/18/25
delta-BHC	ND		ug/Kg	5.1	06/17/25	06/18/25
Heptachlor	ND		ug/Kg	5.1	06/17/25	06/18/25
Aldrin	ND		ug/Kg	5.1	06/17/25	06/18/25
Heptachlor epoxide	ND		ug/Kg	5.1	06/17/25	06/18/25
Endosulfan I	ND		ug/Kg	5.1	06/17/25	06/18/25
Dieldrin	ND		ug/Kg	5.1	06/17/25	06/18/25
4,4'-DDE	ND		ug/Kg	5.1	06/17/25	06/18/25
Endrin	ND		ug/Kg	5.1	06/17/25	06/18/25
Endosulfan II	ND		ug/Kg	5.1	06/17/25	06/18/25
Endosulfan sulfate	ND		ug/Kg	5.1	06/17/25	06/18/25
4,4'-DDD	ND		ug/Kg	5.1	06/17/25	06/18/25
Endrin aldehyde	ND		ug/Kg	5.1	06/17/25	06/18/25
Endrin ketone	ND		ug/Kg	5.1	06/17/25	06/18/25
4,4'-DDT	ND		ug/Kg	5.1	06/17/25	06/18/25
Methoxychlor	ND		ug/Kg	10	06/17/25	06/18/25
Toxaphene	ND		ug/Kg	100	06/17/25	06/18/25
Chlordane (Technical)	ND		ug/Kg	51	06/17/25	06/18/25
<b>Surrogates</b>				<b>Limits</b>		
TCMX	81%		%REC	58-120	06/17/25	06/18/25
Decachlorobiphenyl	87%		%REC	47-120	06/17/25	06/18/25

## Batch QC

<b>Type:</b> Lab Control Sample	<b>Lab ID:</b> QC1266842	<b>Batch:</b> 374152
<b>Matrix:</b> Soil	<b>Method:</b> EPA 8081A	<b>Prep Method:</b> EPA 3546

QC1266842 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
alpha-BHC	45.49	50.00	ug/Kg	91%		53-132
beta-BHC	46.54	50.00	ug/Kg	93%		59-131
gamma-BHC	48.11	50.00	ug/Kg	96%		54-132
delta-BHC	47.23	50.00	ug/Kg	94%		54-134
Heptachlor	47.37	50.00	ug/Kg	95%		50-130
Aldrin	42.35	50.00	ug/Kg	85%		46-120
Heptachlor epoxide	45.82	50.00	ug/Kg	92%		52-127
Endosulfan I	46.50	50.00	ug/Kg	93%		53-132
Dieldrin	47.27	50.00	ug/Kg	95%		53-134
4,4'-DDE	48.59	50.00	ug/Kg	97%		53-140
Endrin	51.49	50.00	ug/Kg	103%		53-142
Endosulfan II	49.52	50.00	ug/Kg	99%		53-138
Endosulfan sulfate	49.97	50.00	ug/Kg	100%		50-134
4,4'-DDD	44.87	50.00	ug/Kg	90%		50-136
Endrin aldehyde	39.35	50.00	ug/Kg	79%		15-120
Endrin ketone	49.87	50.00	ug/Kg	100%		50-146
4,4'-DDT	50.15	50.00	ug/Kg	100%		46-142
Methoxychlor	56.43	50.00	ug/Kg	113%		48-156
<b>Surrogates</b>						
TCMX	44.78	50.00	ug/Kg	90%		58-120
Decachlorobiphenyl	49.30	50.00	ug/Kg	99%		47-120

## Batch QC

<b>Type: Matrix Spike</b>	<b>Lab ID: QC1266843</b>	<b>Batch: 374152</b>
<b>Matrix (Source ID): Soil (535107-009)</b>	<b>Method: EPA 8081A</b>	<b>Prep Method: EPA 3546</b>

QC1266843 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
alpha-BHC	41.73	ND	49.50	ug/Kg	84%		52-120	0.99
beta-BHC	45.49	ND	49.50	ug/Kg	92%		57-126	0.99
gamma-BHC	44.53	ND	49.50	ug/Kg	90%		54-122	0.99
delta-BHC	41.66	ND	49.50	ug/Kg	84%		44-127	0.99
Heptachlor	43.17	ND	49.50	ug/Kg	87%		51-122	0.99
Aldrin	41.27	ND	49.50	ug/Kg	83%		51-120	0.99
Heptachlor epoxide	41.64	ND	49.50	ug/Kg	84%		50-122	0.99
Endosulfan I	43.09	ND	49.50	ug/Kg	87%		48-123	0.99
Dieldrin	43.55	ND	49.50	ug/Kg	88%		48-128	0.99
4,4'-DDE	559.5	417.3	49.50	ug/Kg	287%	E,NM	50-139	0.99
Endrin	44.17	ND	49.50	ug/Kg	89%		53-132	0.99
Endosulfan II	44.43	ND	49.50	ug/Kg	90%		47-131	0.99
Endosulfan sulfate	44.85	ND	49.50	ug/Kg	91%		40-126	0.99
4,4'-DDD	197.1	97.89	49.50	ug/Kg	200%	*	48-130	0.99
Endrin aldehyde	37.53	ND	49.50	ug/Kg	76%		26-120	0.99
Endrin ketone	44.60	ND	49.50	ug/Kg	90%		51-133	0.99
4,4'-DDT	145.0	61.22	49.50	ug/Kg	169%	*	40-144	0.99
Methoxychlor	52.88	ND	49.50	ug/Kg	107%		49-148	0.99
<b>Surrogates</b>								
TCMX	41.98		49.50	ug/Kg	85%		58-120	0.99
Decachlorobiphenyl	45.11		49.50	ug/Kg	91%		47-120	0.99

## Batch QC

<b>Type:</b> Matrix Spike Duplicate	<b>Lab ID:</b> QC1266844	<b>Batch:</b> 374152
<b>Matrix (Source ID):</b> Soil (535107-009)	<b>Method:</b> EPA 8081A	<b>Prep Method:</b> EPA 3546

QC1266844 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
alpha-BHC	42.32	ND	50.51	ug/Kg	84%		52-120	1	37	1
beta-BHC	46.51	ND	50.51	ug/Kg	92%		57-126	0	38	1
gamma-BHC	45.04	ND	50.51	ug/Kg	89%		54-122	1	39	1
delta-BHC	43.57	ND	50.51	ug/Kg	86%		44-127	2	54	1
Heptachlor	43.44	ND	50.51	ug/Kg	86%		51-122	1	44	1
Aldrin	39.56	ND	50.51	ug/Kg	78%		51-120	6	39	1
Heptachlor epoxide	40.72	ND	50.51	ug/Kg	81%		50-122	4	39	1
Endosulfan I	44.02	ND	50.51	ug/Kg	87%		48-123	0	47	1
Dieldrin	43.83	ND	50.51	ug/Kg	87%		48-128	1	43	1
4,4'-DDE	450.6	417.3	50.51	ug/Kg	66%	E,NM	50-139		42	1
Endrin	46.44	ND	50.51	ug/Kg	92%		53-132	3	45	1
Endosulfan II	45.64	ND	50.51	ug/Kg	90%		47-131	1	46	1
Endosulfan sulfate	45.80	ND	50.51	ug/Kg	91%		40-126	0	52	1
4,4'-DDD	121.5	97.89	50.51	ug/Kg	47%	*	48-130	48*	46	1
Endrin aldehyde	37.12	ND	50.51	ug/Kg	74%		26-120	3	57	1
Endrin ketone	44.38	ND	50.51	ug/Kg	88%		51-133	2	43	1
4,4'-DDT	102.3	61.22	50.51	ug/Kg	81%		40-144	35	56	1
Methoxychlor	53.55	ND	50.51	ug/Kg	106%		49-148	1	53	1
<b>Surrogates</b>										
TCMX	41.92		50.51	ug/Kg	83%		58-120			1
Decachlorobiphenyl	40.90		50.51	ug/Kg	81%		47-120			1

\* Value is outside QC limits  
 E Response exceeds instrument's linear range  
 ND Not Detected  
 NM Not Meaningful