

Supplemental Investigation Report

Hillcrest Development Site

3283 Hillcrest Road, Medford, Oregon 97504

2-Acre Portion of Map 371W21D and TL 300

ECSI Site ID # 6554

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EXECUTIVE SUMMARY

Alpine Environmental Consultants, LLC (AEC) conducted a Supplemental Investigation on an approximately 2-acre portion of the property addressed as 3283 Hillcrest Road, Medford, Oregon and identified as Map 371W21D and tax lot (TL) 300 (the 2-Acre Parcel). This Supplemental Investigation work involved site-specific soil testing and was conducted in January 2024. The Supplemental Investigation was conducted for Hillcrest Corp as Managing Partner for Cogswell Limited Partnership (Cogswell LP) and for the Oregon Department of Environmental Quality (DEQ).

In April 2022, AEC initiated a Phase I Environmental Site Assessment (ESA) investigation at an approximately 269-acre property identified as the Hillcrest Development Site. The Hillcrest Development Site includes five Tls identified as Map 371W21D and Tls 101 and 300, Map 371W22 and Tls 500 and 501, and Map 371W21A and TL 1400. The 2-Acre Parcel occupies approximately 2 acres and is located in the northwest corner of TL 300, along the western boundary of the Hillcrest Development Site. The 2-Acre Parcel is also identified as Lot 1 and Lot 2 of a pending partition plan for TL 300. Based on a review of the available historical aerial photographs, a potential recognized environmental condition (REC) was initially identified associated with the Hillcrest Development Site. Specifically, the historical use of the Hillcrest Development Site (and of the western and southwestern adjacent properties) for agricultural purposes, specifically as orchards and vineyards, constituted a potential REC. Therefore, AEC recommended a Phase II ESA be conducted to determine if the soil was adversely impacted by pesticide use and constituted a REC or if this issue could be eliminated from further consideration. The Phase II ESA was conducted in July 2022 and included the excavation of 12 test pits (TP1 through TP12) and the investigation of subsurface soil throughout the Hillcrest Development Site. Composite soil samples were collected and analyzed for relevant laboratory analyses to determine if historical agricultural operations had adversely impacted soil at the Hillcrest Development Site at constituent concentrations exceeding potentially applicable generic cleanup levels developed and established by DEQ (risk-based concentrations [RBCs], Clean Fill Values, and naturally occurring background concentrations).

The results of the 2022 Phase II ESA reported the presence of residual pesticides in shallow soil at concentrations exceeding generic RBCs for residential and occupational receptors and construction workers, and at concentrations exceeding Clean Fill Values. The Phase II ESA concluded that additional characterization and potentially remediation of shallow soil at the Hillcrest Development Site might be necessary to ensure future occupational receptors, occupational receptors, and construction workers would not be exposed to unacceptable levels of site-related residual pesticides.

The 2-Acre Parcel is planned to be developed for commercial use. Prior to its development, AEC recommended supplemental subsurface work be conducted at the 2-Acre Parcel in order to identify the lateral and vertical extent of residual orchard-related pesticides contamination in



shallow soil and to develop a cost-effective soil removal action plan, if warranted. The Supplemental Investigation field work was conducted in January 2024 and included the excavation of eight test pits (TP13 through TP20). The 2-Acre Parcel was divided into two sections, identified in this report as Decision Units (DUs), specifically DU4 and DU5. DU4 covered the northern portion of the 2-Acre Parcel and included test pits TP13 through TP16. DU5 covered the southern portion of the 2-Acre Parcel and included test pits TP17 through TP20. Five composite soil samples were prepared by the analytical laboratory using Incremental Sampling Methodology (ISM) for each DU area using soil from the four test pits. The composite soil samples were developed from depths of 0.0 to 0.5 feet below ground surface (bgs), 0.5 to 1.0 feet bgs, 1.0 to 1.5 feet bgs, 1.5 to 2.0 feet bgs, and 2.0 to 3.0 feet bgs. These composite samples were labeled as DU4-0-6 and DU5-0-6, DU4-6-12 and DU5-6-12, DU4-12-18 and DU5-12-18, DU4-18-24 and DU5-18-24, and DU4-24-36 and DU5-24-36.

The 10 composite soil samples were submitted for relevant laboratory analyses to determine if historical orchard operations at the 2-Acre Parcel had adversely impacted soil at the 2-Acre Parcel with constituent concentrations exceeding potentially applicable screening levels developed and established by DEQ (RBCs, Clean Fill Values, and naturally occurring background concentrations) and by the United States Environmental Protection Agency (USEPA) (relevant Regional Screening Levels [RSLs]).

The generic RBCs applicable to the 2-Acre Parcel are consistent with the planned commercial land use and assume occupational receptors, and construction and excavation workers, will be present at the 2-Acre Parcel. The laboratory analyses of the composite soil samples included 17 metals, organochlorine pesticides, organophosphorus pesticides, and chlorinated herbicides. This analytical suite was based on the review of the detailed historical spray records for the Hillcrest Development Site, which includes the 2-Acre Parcel, and the analytes described in DEQ's *Guidance for Evaluating Residual Pesticides on Lands Used for Agricultural Production* developed in 2006 and updated in 2019.

The Supplemental Investigation analytical data reported several constituents at concentrations above the laboratory reporting limits (MRLs). Overall, the analytical results reported in general a higher concentration of metals and pesticides constituents in the upper 1 foot of soil than in the underlying layer from 1.0 to 3.0 feet bgs. These data demonstrate concentrations of pesticides constituents attenuate fairly rapidly with depth.

Based on an evaluation of the analytical results for the 10 composite soil samples collected at the 2-Acre Parcel, several exceedances were reported. These include the following:

- Arsenic and dieldrin were reported at concentrations above their respective generic RBCs for the *ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors. Arsenic was reported in all composite samples collected from the upper 3.0 feet of soil and dieldrin was reported in composite soil sample collected from the DU4 area from the upper 0.5 feet of soil;
- One constituent, specifically arsenic, was reported at concentrations above its respective generic RBC for the *ingestion, dermal contact, and inhalation exposure pathway* for construction workers. Arsenic was reported in the composite soil samples



collected from the DU4 area from the upper 1.5 feet of soil and from the DU5 area from the upper 2.0 feet of soil.

- Lead and dieldrin were reported at concentrations above the generic RBC for the *leaching to groundwater exposure pathway* for occupational receptors. Lead was reported in the composite soil samples collected from the DU4 area from the upper 1.5 feet of soil and from the DU5 area from the upper 2.0 feet of soil. Dieldrin was reported in composite soil samples collected from the DU4 area and the DU5 area from the upper 1.0 feet of soil.
- Several constituents were reported at concentrations above Clean Fill Values throughout the 2-Acre Parcel. These included arsenic, lead, 4,4'-dichlorodiphenyldichloroethane (4,4'-DDD), 4,4'-dichlorodiphenyldichloroethene (4,4'-DDE), 4,4'-dichlorodiphenyltrichloroethane (4,4'-DDT), and dieldrin at depths ranging from 0.0 to 3.0 feet bgs.
- Several constituents were reported at concentrations above the USEPA's RSLs, specifically above the RSLs for industrial and worker receptors for ingestion exposure pathway (arsenic), for dermal exposure pathway (arsenic), and for carcinogenic exposure pathway (arsenic and dieldrin).

While generic RBCs for occupational receptors and construction workers were exceeded for the aforementioned constituents and exposure pathways, potential risks to human health associated with these constituents and exposure pathways can be managed, mitigated, and/or eliminated from further concern, as follows:

- The generic residential RBC under the *soil ingestion, dermal contact, and inhalation exposure pathway* assumes occupational receptors are likely to come into contact with contaminated soils found in the upper 3 feet of soil. The concentrations of arsenic in the upper 3 feet of soil in the DU4 and DU5 areas and dieldrin in the upper 0.5 feet of soil in the DU4 area exceeded this RBC. The reported concentrations of arsenic in soil collected from the upper 1.5 feet and 0.5 feet, respectively, also exceeded the naturally occurring background concentrations. AEC recommends institutional and/or engineering controls be implemented to address this impacted soil. Institutional and/or engineering control options to protect occupational receptors include but are not limited to the following: paving; removal of shallow soil and/or covering the property with a 3-foot layer of clean compacted fill material; developing an asphalt cap maintenance plan; developing a Contaminated Media Management Plan (CMMP) approved by DEQ; and/or applying a deed notice (e.g. to ensure the asphalt cap is maintained).
- The generic construction workers RBC for total arsenic under the *soil ingestion, dermal contact, and inhalation exposure pathway* assumes construction workers could be exposed over 1 year to arsenic during construction activities involving the disturbance of impacted-soils. However, it is unlikely construction workers would be working at the 2-Acre Parcel continuously for 1 year. Furthermore, this risk could be easily mitigated with proper communication to future construction workers requiring dust suppression and/or that they wear appropriate personal protective equipment (PPE) and follow proper decontamination procedures subsequent to working in order to avoid exposure



and health risks. The procedures documenting proper communication, appropriate PPE, and proper decontamination could be documented in a CMMP approved by DEQ.

- The generic residential RBC for total lead and dieldrin under the *leaching to groundwater exposure pathway* conservatively assumes that a water supply well is being used at the 2-Acre Parcel or proximal to it, and that these constituents could be leached from the shallow soil, impact groundwater, and that occupational receptors could subsequently be exposed to these constituents in drinking water. According to the Hillcrest Development Site's owner, the Hillcrest Development Site is planned to be serviced with municipal water by the Medford Water Commission. The neighboring properties utilize private well water and/or municipal water and will likely continue to utilize private well water and/or municipal water in the future. A review of the WRD well records indicates the 2-Acre Parcel has no water supply wells. Based on professional judgment, groundwater flow direction at the 2-Acre Parcel is assumed to be to the north-northwest towards Lone Pine Creek. Therefore, given the municipal water use, the absence of wells at the 2-Acre Parcel for domestic uses, and the assumed groundwater flow direction, it is highly unlikely potentially leached lead and dieldrin from the shallow soil into groundwater at the 2-Acre Parcel will pose an unacceptable risk to occupational receptors at the 2-Acre Parcel. Furthermore, lead and dieldrin concentrations attenuate to below their respective generic RBCs for the *leaching to ground water exposure pathway* within the upper 2 feet of soil, indicating limited leaching is occurring. To completely eliminate the potential risk that leaching of these constituents to groundwater might pose to occupational receptors at the 2-Acre Parcel, a deed notice could be developed and applied that prohibits the installation of wells to supply water to occupational receptors at the 2-Acre Parcel.
- The Clean Fill Values were exceeded by several constituents (arsenic, lead, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and dieldrin) in the investigated upper 3 feet of soil throughout the 2-Acre Parcel. If soil at this depth throughout the 2-Acre Parcel is excavated, it can be reused at the Hillcrest Development Site. For example, it could be placed in the Buffer Garden area as part of a Soil Removal Action Plan. However, if this soil is exported off of the Hillcrest Development Site, it should be managed appropriately to ensure it does not adversely impact ecological receptors. For example, this soil could be properly disposed of at a quarry under a DEQ-approved Solid Waste Letter of Authorization (SWLA).

The available data indicate historical orchard practices at the 2-Acre Parcel involving pesticides have adversely impacted soil. The available data reflect the adverse impacts are in the soil within the investigated interval of 0.0 to 3.0 feet bgs. Based on these findings and accounting for the inherent uncertainties associated with any subsurface investigation, AEC recommends the following:

- Consider developing and applying a deed notice that prohibits the installation of wells to supply water to occupational receptors at the 2-Acre Parcel unless groundwater investigations are conducted prior to well installation.
- Consider developing a Health and Safety Plan (HASP). The HASP should inform the future construction workers of the contaminants present in shallow soil at the 2-Acre Parcel, and should require the construction workers to wear appropriate PPE and to



follow proper decontamination procedures subsequent to working in order to avoid exposure and health risks. The procedures documenting proper communication, appropriate PPE, and proper decontamination could be also documented in a CMMP approved by DEQ.

- During development activities, appropriately manage potential risks associated with residual pesticides concentrations in shallow soil that are above generic RBCs (e.g. arsenic and dieldrin) and/or Clean Fill values (e.g. arsenic, lead, 4,4'-DDE, 4,4'-DDD, 4,4'-DDT, and dieldrin) in the upper 3.0 feet throughout the 2-Acre Parcel. If the upper 3 feet of soil at the 2-Acre Parcel is to be excavated during development and moved off of the Hillcrest Development Site, the soil should be disposed of consistent with DEQ regulations, examples being disposal under a DEQ-approved SWLA or disposal at an approved landfill (e.g. Dry Creek Landfill). If soil below 3 feet bgs is planned to be excavated, it should be assumed Clean Fill Values have been exceeded for organochlorine pesticides have been exceeded unless additional organochlorine pesticides characterization has been completed.
- It should be noted that per the *Clean Fill Determinations* Internal Management Directive (DEQ, 2019), any soil with petroleum-like staining or a petroleum-like odor does not qualify as Clean Fill and should not be exported from the Hillcrest Development Site unless it is properly managed.
- The most cost-effective solution for addressing impacted soils at the 2-Acre Parcel will likely involve soil removal and placement on the Buffer Garden area south of the 2-Acre Parcel on the Hillcrest Development Site. This work could be completed under a Soil Removal Action Plan and a Soil Repository Management Plan approved by DEQ, which would also be supportive of obtaining a No Further Action (NFA) Letter from DEQ.



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LIST OF ACRONYMS AND ABBREVIATIONS

AEC	Alpine Environmental Consultants, LLC
ALS	ALS Group USA, Corp. dba ALS Environmental
bgs	below ground surface
CMMP	Contaminated Media Management Plan
4,4'-DDD	4,4'-Dichlorodiphenyldichloroethane
4,4'-DDE	4,4'-Dichlorodiphenyldichloroethene
4,4'-DDT	4,4'-Dichlorodiphenyltrichloroethane
DEQ	Department of Environmental Quality
DU	Decision Unit
ECSI	Environmental Cleanup Site Information
EFU	Exclusive Farm Use
ESA	Environmental Site Assessment
HASP	Health and Safety Plan
ICPMS	Inductively Coupled Plasma Mass Spectrometry
ISM	Incremental Sampling Methodology
ITRC	Interstate Technology and Regulatory Council
MCPA	2-methyl-4-chlorophenoxyacetic acid
NFA	No Further Action
PPE	personal protective equipment
mg/kg	milligrams per kilogram
MRL	method reporting limit
PPE	personal protective equipment
RBCs	risk-based concentrations
RBDM	Risk-Based Decision Making
REC	recognized environmental condition
RSLs	regional screening levels
SWLA	Solid Waste Letter of Authorization
TL	tax lot
VCP	Voluntary Cleanup Pathway
USEPA	United States Environmental Protection Agency
WRD	Water Resources Department



1 INTRODUCTION

Alpine Environmental Consultants, LLC (AEC) has prepared this report to present the findings of the Supplemental Investigation conducted at the property identified as the 2-acre portion of the Map 371W21D and Taxlot (TL) 300, addressed as 3285 Hillcrest Road in Medford, Oregon (hereinafter referred to as the 2-Acre Parcel). The Supplemental Investigation was conducted for Hillcrest Corp as Managing Partner for Cogswell Limited Partnership (Cogswell LP), the current owner of the 2-Acre Parcel, and the Oregon Department of Environmental Quality (DEQ).

1.1 2-Acre Parcel Description

The 2-Acre Parcel occupies approximately 2 acres of undeveloped land and is located in the northwest corner of TL 300 of Map 371W21D. The 2-Acre Parcel is also identified as Lot 1 and Lot 2 of TL 300. The Hillcrest Development Site includes five TLs identified as Map 371W21D and TLs 101 and 300, Map 371W22 and TLs 500 and 501, and Map 371W21A and TL 1400. The 2-Acre Parcel occupies approximately 2 acres and is located in the northwest corner of TL 300, along the western boundary of the Hillcrest Development Site. The 2-Acre Parcel is also identified as Lot 1 and Lot 2 of a pending partition plan for TL 300. The location of the Hillcrest Development Site is shown on **Figure 1** and **Figure 2**. The location of the 2-Acre Parcel is shown on **Figure 2**, **Figure 3**, and **Figure 4**. The entire Hillcrest Development Site, including the 2-Acre Parcel, is currently owned by Cogswell LP.

The topography at the 2-Acre Parcel slopes to the north-northwest. The headwaters of Lone Pine Creek are located approximately 0.3 miles to the northwest of the 2-Acre Parcel and Lone Pine Creek flows to the northwest towards Bear Creek. The groundwater flow direction at the 2-Acre Parcel is assumed to be to the north-northwest towards Lone Pine Creek and ultimately Bear Creek.

According to the City of Medford Zoning Map and Jackson County Zoning Map, the 2-Acre Parcel is located within the City of Medford's Urban Growth Boundary (UGB) and has been rezoned from Exclusive Farm Use to a Neighborhood and Community Commercial Use.

1.2 Hillcrest Development Site Background

The approximately 269-acre Hillcrest Development Site, which includes the 2-Acre Parcel, has been used for agricultural purposes since approximately 1900. Reportedly, tree fruit production started in 1897. Limited vineyard and other crops have also been cultivated. A major shift occurred in the early 2000s, from orchard cultivation to viticulture. Hillcrest Orchards operated on the approximately 269-acre Hillcrest Development Site from approximately 1908 through today.



Prior to redevelopment, Cogswell LP retained AEC to investigate the potential for environmental impacts at this property. AEC prepared a Phase I Environmental Site Assessment (ESA) report in June 2023 and a Phase II ESA report in July 2023. Both of these reports have been shared with DEQ. The Phase II ESA investigation was completed to characterize potential impacts to shallow soil associated with the historical use of the Hillcrest Development Site as an orchard. The results of the Phase II ESA reported residual pesticides are present in shallow soil at concentrations exceeding generic risk-based concentrations (RBCs) for residential, occupational, and construction worker receptors and at concentrations exceeding DEQ's Clean Fill Values described in DEQ's *Clean Fill Determinations* Internal Management Directive (DEQ, February 2019).

Recognizing additional characterization and potentially remediation of shallow soil at the Hillcrest Development Site will be necessary, Cogswell LP personnel applied to DEQ's Voluntary Cleanup Pathway (VCP). The approximately 269-acre Hillcrest Development Site was entered into the VCP program and Environmental Cleanup Site Information (ECSI) database as File #6554.

Prior to future commercial construction at the 2-Acre Parcel, AEC anticipated remedial action through the removal of shallow soil with concentrations of pesticides concentrations exceeding generic RBCs for *the ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors, and/or construction workers would be required. As described in an email from Mr. Jonathan Williams of AEC to DEQ dated November 16, 2023, Cogswell LP has been in negotiations to sell the 2-Acre Parcel to a company that plans to construct a hardware store, parking areas, and landscaping. The Conceptual Hillcrest District Plan is illustrated on **Figure 3** and shows the 2-Acre Parcel which is now zoned Community Commercial.

In order to identify the lateral and vertical extent of residual orchard-related pesticides contamination in shallow soil and to develop a cost-effective soil removal action plan, if warranted, AEC recommended a Supplemental Investigation be conducted at the 2-Acre Parcel prior to its development. AEC and Cogswell LP submitted a Supplemental Investigation Work Plan for the 2-Acre Parcel on December 7, 2023. In an email from Ms. Sarah Eagle of DEQ to Mr. Jonathan Williams of AEC dated January 12, 2024, DEQ approved the Supplemental Investigation Work Plan.

1.3 Supplemental Investigation Objectives

The objectives of this Supplemental Investigation were the following:

- Collect site-specific soil quality data to identify the lateral and vertical extent of residual pesticides contamination associated with historical orchard use that is present in shallow soil at concentrations exceeding generic RBCs for *the ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors and construction workers on the 2-Acre Parcel.
- Collect a technically defensible dataset needed to develop a cost-effective soil Removal Action Plan, if warranted, such that post-excavation soil concentrations will not pose unacceptable risks to future occupational receptors and construction workers.



The Supplemental Investigation process is presented in **Section 2**, data evaluation is presented in **Section 3**, and conclusions and recommendations are presented in **Section 4**.



2 SUPPLEMENTAL INVESTIGATION

The Supplemental Investigation included soil sampling. The Supplemental Investigation field work was conducted on January 22, 2024, and a summary of the field methods and observations is presented in **Section 2.1**. The analytical results of the soil samples and their interpretation are included in **Section 3**. Conclusions and recommendations are presented in **Section 4**. The photographic documentation is included in **Appendix 1**. The complete laboratory results are included in **Appendix 2**. The location of the Hillcrest Development Site is shown on **Figure 1** and **Figure 2**. The location of the 2-Acre Parcel is shown on **Figure 2**, **Figure 3**, and **Figure 4** and test pit sampling locations from January 2024 are shown on **Figure 4**. The analytical results of the discrete and composite soil samples are summarized in **Table 1** through **Table 4**.

2.1 Pre-Excavation

Prior to any subsurface disturbances, the underground infrastructure of pipes, mains, and utility lines were located at the 2-Acre Parcel. AEC contacted the Utility Notification Center in order to locate and trace any potential public underground utilities. Test pit locations were also cleared by Mr. Terry Light of Cogswell LP to ensure no private underground utilities would be impacted.

2.2 Test Pit Soil Sampling

On January 22, 2024 AEC supervised the excavation of 8 test pits on the 2-Acre Parcel Property identified as TP13 through TP20. The test pits were excavated using a small excavator by personnel from Applegate Excavation of Jacksonville, Oregon. Soil samples, lithologic characterization, and field screening were logged by Mr. Toby Shallcross (Project Geologist) and checked by Mr. Jonathan Williams (Oregon Registered Geologist) of AEC.

Based on the 2-Acre Parcel's layout, AEC divided the 2-Acre Parcel into two investigation areas, referred to in this report as decision units (DUs). The northern portion of the 2-Acre Parcel was identified as DU4 and included test pits TP13 through TP16. The southern portion of the 2-Acre Parcel was identified as DU5 and included test pits TP17 through TP20. The 2-Acre Parcel's DUs are shown on **Figure 4**.

The sampling objective at each test pit was to collect five soil subsamples representing the uppermost 0.0 to 3.0 feet of native soil. No non-native fill was observed in any of the test pits. Therefore, the eight test pits were excavated to a depth of approximately 3.0 feet below ground surface (bgs) and AEC personnel collected five depth discrete soil subsamples over this depth interval from each test pit. Soil subsamples representative of the native soil from five depth intervals were collected at each test pit by scraping an equal and representative volume of soil off of the test pit walls over the desired depth intervals using gloved hands and/or a decontaminated stainless-steel trowel and placed in ziploc bags. The soil in the ziploc bags was then thoroughly homogenized using gloved hands. Larger sized material (i.e., gravel greater than approximately ¼ to ½ inch in diameter) was removed by hand.



The five soil subsamples collected from each of the eight test pits were collected from the following depths: 0.0 to 0.5 feet bgs, 0.5 to 1.0 feet bgs, 1.0 to 1.5 feet bgs, 1.5 to 2.0 feet bgs, and 2.0 to 3.0 feet bgs. Accordingly, a total of 40 subsamples were collected. Before and between the excavation of each test pit, the small excavator bucket was swept clean with a broom. The stainless-steel trowels were cleansed prior to each use by scrubbing with a brush and an Alconox solution and rinsed with de-ionized water.

The rationale for collecting five soil subsamples at each test pit location was that depth discrete analytical results should help characterize the vertical extent and attenuation with depth of potential impacts by pesticide constituents. The concept of depth discrete subsamples is also documented in the DEQ's *Evaluating Residual Pesticides on Lands Formerly Used for Agricultural Production* Guidance of 2006 that was updated in June 2019 (DEQ, June 2019). The sample depth density under the Supplemental Investigation is more rigorous than DEQ's guidance.

Once all the depth discrete soil subsamples were collected, 10 composite soil samples were created by the Apex Laboratories, LLC (Apex) of Tigard, Oregon. The 10 composite soil samples were homogenized by Apex using equal volumes of soil using the Incremental Sampling Methodology (ISM) developed by the Interstate Technology and Regulatory Council (ITRC). Apex created the following 10 composite soil samples:

- Depth discrete soil subsamples collected from the 0.0 to 0.5 feet bgs interval: composite soil sample DU4-0-6 (soil subsamples from test pits TP13 through TP16) and DU5-0-6 (TP17 through TP20);
- Depth discrete soil subsamples collected from the 0.5 to 1.0 feet bgs interval: composite soil sample DU4-6-12 (soil subsamples from test pits TP1 through TP4) and DU5-6-12 (TP17 through TP20);
- Depth discrete soil subsamples collected from the 1.0 to 1.5 feet bgs interval: composite soil sample DU4-12-18 (soil subsamples from test pits TP13 through TP16) and DU5-12-18 (TP17 through TP20);
- Depth discrete soil subsamples collected from the 1.5 to 2.0 feet bgs interval: composite soil sample DU4-18-24 (soil subsamples from test pits TP13 through TP16) and DU5-18-24 (TP17 through TP20); and
- Depth discrete soil subsamples collected from the 2.0 to 3.0 feet bgs interval: composite soil sample DU4-24-36 (soil subsamples from test pits TP13 through TP16) and DU5-24-36 (TP17 through TP20).

After soil sample collection was completed, the test pits were backfilled and compacted using the small excavator as described above.



2.3 Soil Laboratory Analyses

All soil samples were placed in iced coolers and submitted to Apex under standard chain-of-custody protocol. The 10 composite soil samples developed by Apex were submitted for the following analyses:

- 17 metals (i.e. antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, mercury, molybdenum, selenium, silver, thallium, vanadium, and zinc) by USEPA Methods 6020B by inductively coupled plasma and a mass spectrometer (ICPMS);
- Organochlorine pesticides by USEPA Method 8081B;
- Organophosphorus pesticides by USEPA Method 8270E; and
- Chlorinated herbicides by USEPA Method 8151A (note that APEX subcontracted the chlorinated herbicides analysis to Eurofins Environmental Testing of Tustin, California).

Copies of the final analytical laboratory reports for the 2-Acre Parcel analytical soil results are included in **Appendix 2**. The analytical results for soil samples are summarized in **Table 1** through **Table 4**. The metals results are presented in **Table 1**, the organochlorine pesticides in **Table 2**, the organophosphorus pesticides in **Table 3**, and the chlorinated herbicides in **Table 4**. In addition to presenting the analytical results, **Table 1** through **Table 4** also identify relevant DEQ generic RBCs and Clean Fill Values for soil. The generic RBCs identified in these tables are consistent with the anticipated future land use and zoning and assume occupational receptors and construction and excavation workers will be present on the 2-Acre Parcel.



3 DATA EVALUATION

The soil samples analytical results are included in **Appendix 2** and summarized in **Table 1** through **Table 4**. The analytical results reported several constituents at concentrations that exceed the laboratory method reporting limits (MRLs) in several soil samples. These constituents were further compared to the following screening levels:

- DEQ's relevant generic RBCs, including the following receptors and exposure pathways: the occupational receptors, construction workers, and excavation workers *ingestion, dermal contact, and inhalation exposure pathway*; the occupational receptors *volatilization to outdoor air exposure pathway*; and the occupational receptors *leaching to groundwater exposure pathway*. Risk-based concentrations are referenced from the June 2023 updated generic tables of the DEQ's *Risk-Based Decision Making (RBDM) for the Remediation of Contaminated Sites* guidance document (DEQ, 2017).
- USEPA's regional screening levels (RSLs) for industrial and worker receptors presented with target cancer risk of 1E-6 and non-cancer hazard index of 1. The RSLs are referenced from the May 2022 update to the USEPA Generic Tables.
- Clean Fill Values listed in the DEQ's *Clean Fill Determinations* Internal Management Directive dated February 21, 2019 (DEQ, February 2019). Note that the Clean Fill Values for metals equal the naturally occurring background concentrations.
- The naturally occurring background concentrations of metals in soil developed for the Cascade Range region, which includes the Medford area and the 2-Acre Parcel. The background concentrations are derived from DEQ's Technical Report entitled *Development of Oregon Background Metals Concentrations in Soil* (DEQ, 2013). The background concentrations are a type of average defined as the 95 percent upper predictive limits.

The reported data are summarized in the following paragraphs.

3.1 Total Metals

Based on AEC's experience working on properties in the Rogue Valley used as orchards, arsenic and lead associated with the historical application of pesticide formulations containing lead arsenate is prevalent in shallow soils. The composite soil samples were analyzed for 17 metals, including arsenic and lead. Arsenic, barium, beryllium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc were reported at concentrations that exceeded the laboratory MRLs in all composite soil samples. Arsenic and lead were the only metals reported at concentrations above the generic applicable RBCs.



Arsenic

Arsenic was reported in all composite soil samples at concentrations ranging from 9.59 to 88.3 milligrams per kilogram (mg/kg). The reported concentration of arsenic exceeded several cleanup levels, as follows:

- All reported concentrations exceeded the generic RBC for the *ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors of 1.9 mg/kg.
- The reported concentrations of arsenic in the composite soil samples collected from the DU4 area (from a depth interval of 0.0 to 1.5 feet bgs) and from the DU5 area (from a depth interval of 0.0 to 2.0 feet bgs) exceeded the generic RBCs for the *ingestion, dermal contact, and inhalation exposure pathway* for construction workers of 15 mg/kg.
- Most of the reported concentrations of arsenic were below the naturally occurring background concentration and Clean Fill Value of 19 mg/kg. Nevertheless, several reported concentrations of arsenic exceeded the naturally occurring background concentration and Clean Fill Value. These included the concentrations reported in the composite soil samples collected from the DU4 and DU5 areas from a depth interval of 0.0 to 1.5 feet bgs.
- The reported concentrations of arsenic also exceeded the USEPA's RSLs for industrial and worker receptors for ingestion exposure pathway (3.60 mg/kg) (in all eight composite samples), dermal exposure pathway (17 mg/kg) (in the composite samples from the DU4 and DU5 areas from a depth interval of 0.0 to 1.5 feet bgs), and carcinogenic exposure pathway (3.0 mg/kg) (in all eight composite samples).

While arsenic concentrations exceed the abovementioned RBCs and RSLs, potential risks to human health associated with this constituent and exposure pathways can be managed, mitigated, and/or eliminated from further concern, as follows:

- The generic residential RBC for total arsenic under the *soil ingestion, dermal contact, and inhalation exposure pathway* assumes occupational receptors are likely to come into contact with contaminated soils found in the upper 3 feet of soil. The reported concentrations of arsenic exceeded the generic RBC for this exposure pathway in several analyzed composite soil samples, though it exceeded the naturally occurring background concentration in the upper 1.5 feet of soil. AEC recommends institutional and/or engineering controls be implemented to address the impacted area. Institutional and/or engineering control options to protect occupational receptors include but are not limited to the following: paving; removal of shallow soil and/or covering the property with a 3-foot layer of clean compacted fill material; developing an asphalt cap maintenance plan; developing a Contaminated Media Management Plan (CMMP) approved by DEQ; and/or applying a deed notice (e.g. to ensure the asphalt cap is maintained).
- The generic construction workers RBC for total arsenic under the *soil ingestion, dermal contact, and inhalation exposure pathway* assumes construction workers could be exposed over 1 year to arsenic during construction activities involving the disturbance of impacted-soils. However, it is unlikely construction workers would be working at the 2-Acre Parcel continuously for 1 year. Furthermore, this risk could be easily mitigated



with proper communication to future construction workers requiring dust suppression and/or that they wear appropriate personal protective equipment (PPE) and follow proper decontamination procedures subsequent to working in order to avoid exposure and health risks. The procedures documenting proper communication, appropriate PPE, and proper decontamination could be documented in a CMMP approved by DEQ.

- The arsenic in the upper 1.5 feet of soil exceeded the Clean Fill Values throughout the 2-Acre Parcel. See Section 3.3 for Clean Fill data evaluation.

Lead

Lead was reported in all discrete and composite soil samples at concentrations above the laboratory MRL, specifically ranging from 15.9 to 307 mg/kg. The reported concentrations of lead in the composite soil samples collected from the DU4 area from a depth interval of 0.0 to 1.5 feet bgs and from the DU5 area from a depth interval of 0.0 to 2.0 feet bgs exceeded the generic RBC for the *leaching to groundwater exposure pathway* for occupational receptors of 30 mg/kg. These concentrations in these composite soil samples also exceeded the naturally occurring background concentration and Clean Fill Value of 34 mg/kg (see Section 3.3 for Clean Fill data evaluation).

While the concentrations of lead exceeded the generic RBCs for occupational receptors, potential risks to human health can be managed, mitigated, and/or eliminated from further concern. The generic occupational RBC for total lead under the *leaching to groundwater exposure pathway* conservatively assumes that a water supply well is being used at the 2-Acre Parcel or proximal to the 2-Acre Parcel, and that lead could be leached from the shallow soil, impact groundwater, and that occupational receptors could subsequently be exposed to lead in drinking water. According to the Hillcrest Development Site's owner, the 2-Acre Parcel will be serviced with municipal water by the Medford Water Commission. The neighboring properties utilize private well water and/or municipal water and will likely continue to utilize private well water and/or municipal water in the future. A review of the WRD well records indicates the 2-Acre Parcel has no water supply wells. Based on professional judgment, groundwater flow direction at the 2-Acre Parcel is assumed to be to the north-northwest towards Lone Pine Creek and ultimately Bear Creek. Therefore, given the municipal water use, the absence of wells at 2-Acre Parcel for domestic uses, and the assumed groundwater flow direction, it is highly unlikely potentially leached lead from the shallow soil into groundwater at the 2-Acre Parcel will pose an unacceptable risk to occupational receptors at the 2-Acre Parcel. Furthermore, lead concentrations attenuate to below their respective generic RBCs for the *leaching to groundwater exposure pathway* within the upper 2 feet of soil, indicating limited leaching is occurring. To completely eliminate the potential risk that leaching lead to groundwater might pose to occupational receptors at the 2-Acre Parcel, a deed notice could be developed and applied that prohibits the installation of wells to supply water to occupational receptors at the 2-Acre Parcel.

Total metals results are summarized in **Table 1**.



3.2 Organochlorine Pesticides

Several organochlorine pesticides were reported at concentrations above the laboratory MRLs in the analyzed composite soil samples. The organochlorine pesticides MRLs were below the generic applicable RBCs. The organochlorine pesticides results are summarized in **Table 2**.

One of the organochlorine pesticides reported at concentrations above the laboratory MRLs was dieldrin. Dieldrin was reported at concentrations ranging from 0.00189 mg/kg to 0.159 mg/kg, and some of these concentrations exceeded several screening levels, as follows:

- The concentration of dieldrin reported in the composite sample collected from the DU4 area from a depth of 0.0 to 0.5 feet bgs exceeded the generic RBC for occupational receptors for the *ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors of 0.14 mg/kg.
- The concentrations of dieldrin reported in the composite samples collected from the DU4 and DU5 areas from a depth of 0.0 to 1.0 feet bgs exceeded the generic RBC for occupational receptors for the *leaching to groundwater exposure pathway* for occupational receptors of 0.030 mg/kg.
- The concentration of dieldrin reported in the composite sample collected from the DU4 area from a depth of 0.0 to 0.5 feet bgs also exceeded the USEPA's RSLs for industrial and worker receptors for carcinogenic exposure pathway (0.14 mg/kg).
- The concentrations of dieldrin reported in the composite samples collected from the DU4 area from a depth of 0.0 to 1.5 feet bgs and from DU5 from a depth of 0.0 to 2.0 feet bgs exceeded the Clean Fill Value of 0.0045 mg/kg (see Section 3.3 for Clean Fill data evaluation).

In addition, 4,4'-dichlorodiphenyldichloroethane (4,4'-DDD), 4,4'-dichlorodiphenyldichloroethene (4,4'-DDE), and 4,4'-dichlorodiphenyltrichloroethane (4,4'-DDT) were also reported in the composite samples at concentrations that exceeded their respective Clean Fill Values (see **Section 3.3** for Clean Fill data evaluation).

While dieldrin concentrations exceed the abovementioned RBCs and RSLs, potential risks to human health associated with this constituent and exposure pathways can be managed, mitigated, and/or eliminated from further concern, as follows:

- The generic residential RBC for dieldrin under the *soil ingestion, dermal contact, and inhalation exposure pathway* assumes occupational receptors are likely to come into contact with contaminated soils found in the upper 3 feet of soil. The reported concentrations of dieldrin exceeded the RBC for this exposure pathway in the composite soil sample collected from the DU4 area from a depth of 0.0 to 0.5 feet bgs. AEC recommends institutional and/or engineering controls be implemented to address the impacted area. Institutional and/or engineering control options to protect occupational receptors include but are not limited to the following: paving; removal of shallow soil and/or covering the property with a 3-foot layer of clean compacted fill material; developing an asphalt cap maintenance plan; developing a CMMP approved by DEQ; and/or applying a deed notice (e.g. to ensure the asphalt cap is maintained).



The generic occupational RBC for dieldrin under the *leaching to groundwater exposure pathway* conservatively assumes that a water supply well is being used at the 2-Acre Parcel or proximal to the 2-Acre Parcel, and that dieldrin could be leached from the shallow soil, impact groundwater, and that occupational receptors could subsequently be exposed to dieldrin in drinking water. According to the Hillcrest Development Site's owner, the 2-Acre Parcel will be serviced with municipal water by the Medford Water Commission. The neighboring properties utilize private well water and/or municipal water and will likely continue to utilize private well water and/or municipal water in the future. A review of the WRD well records indicates the 2-Acre Parcel has no water supply wells. Based on professional judgment, groundwater flow direction at the 2-Acre Parcel is assumed to be to the north-northwest towards Lone Pine Creek and ultimately Bear Creek. Therefore, given the municipal water use, the absence of wells at 2-Acre Parcel for domestic uses, and the assumed groundwater flow direction, it is highly unlikely potentially leached dieldrin from the shallow soil into groundwater at the 2-Acre Parcel will pose an unacceptable risk to occupational receptors at the 2-Acre Parcel. Furthermore, dieldrin concentrations attenuate to below their respective generic RBCs for the *leaching to ground water exposure pathway* below the upper 1 foot of soil, indicating limited leaching is occurring. To completely eliminate the potential risk that leaching dieldrin to groundwater might pose to occupational receptors at the 2-Acre Parcel, a deed notice could be developed and applied that prohibits the installation of wells to supply water to occupational receptors at the 2-Acre Parcel.

3.3 Organophosphorus Pesticides

The analytical results reported no organophosphorus pesticides at concentrations above the laboratory MRLs in the analyzed composite soil samples. There are no established RBCs for organophosphorus pesticides. The organophosphorus pesticides MRLs were below their respective Clean Fill Values with the exception of the MRLs for dichlorvos. The organophosphorus pesticides results are summarized in **Table 3**.

3.4 Chlorinated Herbicides

The analytical results reported no chlorinated herbicides at concentrations above the laboratory MRLs in the analyzed composite soil samples. The chlorinated herbicides MRLs were below the generic applicable RBCs with the exception of the MRLs for 2-Methyl-4-chlorophenoxyacetic (MCPA), which exceeded the RBC for the *leaching to groundwater exposure pathway* for occupational receptors. The chlorinated herbicides results are summarized in **Table 4**.

3.5 Clean Fill Determination

Based on the analytical results of the composite soil samples collected throughout the 2-Acre Parcel, which are presented in **Table 1** through **Table 4**, the soil at the 2-Acre Parcel within at least the upper 3 feet does not qualify as Clean Fill. The constituents reported at concentrations above the Clean Fill Values (which for metals are equivalent with the naturally occurring background concentrations of metals) within the 0.0 to 3.0 feet bgs depth interval include the following: arsenic (in the upper 1.5 feet bgs), lead (in the upper 2.0 feet), 4,4'-DDD (in the upper



1.0 feet), 4,4'-DDE (in the upper 3.0 feet), 4,4'-DDT (in the upper 3.0 feet), and dieldrin (in the upper 2.0 feet).

It is concluded that soil within at least the upper 3 feet at the 2-Acre Parcel should not be exported off of the Hillcrest Development Site unless it is managed appropriately to ensure it does not adversely impact ecological receptors. For example, this soil could be properly disposed of at a quarry under a DEQ-approved Solid Waste Letter of Authorization (SWLA).

Nevertheless, the soil can be reused at the 2-Acre Parcel or elsewhere on the Hillcrest Development Site. For example, this soil could be reused in the Buffer Garden Area (see **Figure 3**) under a DEQ-approved Soil Removal Action and Soil Repository Management Plan. It should be noted that per the *Clean Fill Determinations* Internal Management Directive (DEQ, 2019), any soil with petroleum-like staining or a petroleum-like odor does not qualify as Clean Fill and should not be exported from the Hillcrest Development Site unless it is properly managed. If soil at depths below 3 feet bgs is disturbed, it should be assessed for organochlorine pesticides prior to being moved off of the Hillcrest Development Site.



4 CONCLUSIONS AND RECOMMENDATIONS

The Supplemental Investigation conducted at the 2-Acre Parcel included the following:

- The partition of the 2-Acre Parcel into two sampling areas identified as DU4 (the northern half of the 2-Acre Parcel) and DU5 (the southern half of the 2-Acre Parcel);
- The excavation of eight test pits, identified as TP13 through TP16 (located on DU4) and TP17 through TP20 (located on DU5);
- The collection of five subsamples from each test pit from depths of 0.0 to 0.5 feet bgs, 0.5 to 1.0 feet bgs, 1.0 to 1.5 feet bgs, 1.5 to 2.0 feet bgs, and 2.0 to 3.0 feet bgs.
- The preparation of five composite soil samples using ISM from the DU4 area identified as DU4-0-6 (from a depth of 0.0 to 0.5 feet bgs), DU4-6-12 (0.5 to 1.0 feet bgs), DU4-12-18 (1.0 to 1.5 feet bgs), DU4-18-24 (1.5 to 2.0 feet bgs), and DU4-24-36 (2.0 to 3.0 feet bgs);
- The preparation of five composite soil samples using ISM from the DU5 area identified as DU5-0-6 (from a depth of 0.0 to 0.5 feet bgs), DU5-6-12 (0.5 to 1.0 feet bgs), DU5-12-18 (1.0 to 1.5 feet bgs), DU5-18-24 (1.5 to 2.0 feet bgs), and DU5-24-36 (2.0 to 3.0 feet bgs); and
- The laboratory analyses of all 10 composite soil samples for 17 metals by USEPA Method 6020B, organochlorine pesticides by USEPA Method 8081B, organophosphorus pesticides by USEPA Method 8270E, and chlorinated herbicides by USEPA Method 8151A.

The analytical results reported in general a higher concentration of metals and pesticides constituents in the upper 1 foot of soil than in the underlying layer from 1.0 to 3.0 feet bgs. These data demonstrate concentrations of pesticides constituents attenuate fairly rapidly with depth.

Based on an evaluation of the analytical results for the discrete and composite soil samples collected at the 2-Acre Parcel, several exceedances were reported. These include the following:

- Two constituents were reported at concentrations above their respective generic RBCs for the *ingestion, dermal contact, and inhalation exposure pathway* for occupational receptors. These included the following:
 - Arsenic - in all composite samples collected from 0.0 to 3.0 feet bgs;
 - Dieldrin - in composite soil sample collected from the DU4 area from 0.0 to 0.5 feet bgs;
- One constituent, arsenic, was reported at a concentration above its respective generic RBC for the *ingestion, dermal contact, and inhalation exposure pathway* for construction workers. This included in the composite soil samples collected from the DU4 area from a depth of 0.0 to 1.5 feet bgs and from the DU5 area from a depth of 0.0 to 2.0 feet bgs.



- Two constituents were reported at concentrations above the generic RBC for the *leaching to groundwater exposure pathway* for occupational receptors. These included the following:
 - Lead - in the composite soil samples collected from the DU4 area from a depth of 0.0 to 1.5 feet bgs and from the DU5 area from a depth of 0.0 to 2.0 feet bgs;
 - Dieldrin - in composite soil samples from the DU4 area and the DU5 area from 0.0 to 1.0 feet bgs.
- Several constituents were reported at concentrations above the Clean Fill Values throughout the 2-Acre Parcel. These included arsenic, lead, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and dieldrin at depths ranging from 0.0 to 3.0 feet bgs.

While generic RBCs for occupational receptors and construction workers were exceeded for the aforementioned constituents and exposure pathways, potential risks to human health associated with these constituents and exposure pathways can be managed, mitigated, and/or eliminated from further concern, as follows:

- The generic residential RBC under the *soil ingestion, dermal contact, and inhalation exposure pathway* assumes occupational receptors are likely to come into contact with contaminated soils found in the upper 3 feet of soil. The concentrations of arsenic in the upper 3 feet of soil in the DU4 and DU5 areas and dieldrin in the upper 0.5 feet of soil in the DU4 area exceeded this RBC. The reported concentrations of arsenic in soil collected from the upper 1.5 feet also exceeded the naturally occurring background concentration. AEC recommends institutional and/or engineering controls be implemented to address this impacted area. Institutional and/or engineering control options to protect occupational receptors include but are not limited to the following: paving; removal of shallow soil and/or covering the property with a 3-foot layer of clean compacted fill material; developing an asphalt cap maintenance plan; developing a CMMP approved by DEQ; and/or applying a deed notice (e.g. to ensure the asphalt cap is maintained).
- The generic construction workers RBC for total arsenic under the *soil ingestion, dermal contact, and inhalation exposure pathway* assumes construction workers could be exposed over 1 year to arsenic during construction activities involving the disturbance of impacted-soils. However, it is unlikely construction workers would be working on the 2-Acre Parcel continuously for 1 year. Furthermore, this risk could be easily mitigated with proper communication to future construction workers requiring dust suppression and/or that they wear appropriate PPE and follow proper decontamination procedures subsequent to working in order to avoid exposure and health risks. The procedures documenting proper communication, appropriate PPE, and proper decontamination could be documented in a CMMP approved by DEQ.
- The generic residential RBC for total lead and dieldrin under the *leaching to groundwater exposure pathway* conservatively assumes that a water supply well is being used on the 2-Acre Parcel and that these constituents could be leached from the shallow soil, impact groundwater, and that occupational receptors could subsequently be exposed to these constituents in drinking water. According to the Hillcrest



Development Site's owner, the 2-Acre Parcel will be serviced with municipal water by the Medford Water Commission. The neighboring properties utilize private well water and/or municipal water and will likely continue to utilize private well water and/or municipal water in the future. A review of the WRD well records indicates the 2-Acre Parcel has no water supply wells. Based on professional judgment, groundwater flow direction at the 2-Acre Parcel is assumed to be to the north-northwest towards Lone Pine Creek and ultimately Bear Creek. Therefore, given the municipal water use, the absence of wells at 2-Acre Parcel for domestic uses, and the assumed groundwater flow direction, it is highly unlikely potentially leached lead and dieldrin from the shallow soil into groundwater at the 2-Acre Parcel will pose an unacceptable risk to occupational receptors at the 2-Acre Parcel. Furthermore, lead and dieldrin concentrations attenuate to below their respective generic RBCs for the *leaching to ground water exposure pathway* below the upper 2 feet of soil, indicating limited leaching is occurring. To completely eliminate the potential risk that leaching lead and dieldrin to groundwater might pose to occupational receptors at the 2-Acre Parcel, a deed notice could be developed and applied that prohibits the installation of wells to supply water to occupational receptors at the 2-Acre Parcel.

- The Clean Fill Values were exceeded by several constituents (arsenic, lead, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and dieldrin) in the investigated upper 3 feet of soil throughout the 2-Acre Parcel. If soil at this depth throughout the 2-Acre Parcel is excavated, it can be reused at the 2-Acre Parcel or elsewhere on the Hillcrest Development Site. However, if this soil is exported off of the Hillcrest Development Site, it should be managed appropriately to ensure it does not adversely impact ecological receptors. For example, this soil could be properly disposed of at a quarry under a DEQ-approved SWLA.

The available data indicate historical orchard practices at the 2-Acre Parcel involving pesticides have adversely impacted soil. The available data reflect the adverse impacts are in the soil within the investigated interval of 0.0 to 3.0 feet bgs. Based on these findings and accounting for the inherent uncertainties associated with any subsurface investigation, AEC recommends the following:

- Consider developing and applying a deed notice that prohibits the installation of wells to supply water to occupational receptors at the 2-Acre Parcel unless groundwater investigations are conducted prior to well installation.
- Consider developing a Health and Safety Plan (HASP). The HASP should inform the future construction workers of the contaminants present in shallow soil at the 2-Acre Parcel, and should require the construction workers to wear appropriate PPE and to follow proper decontamination procedures subsequent to working in order to avoid exposure and health risks. The procedures documenting proper communication, appropriate PPE, and proper decontamination could be also documented in a CMMP approved by DEQ.
- During development activities, appropriately manage potential risks associated with residual pesticides concentrations in shallow soil that are above generic RBCs (e.g. arsenic and dieldrin) and/or Clean Fill values (e.g. arsenic, lead, 4,4'-DDE, 4,4'-DDD, 4,4'-



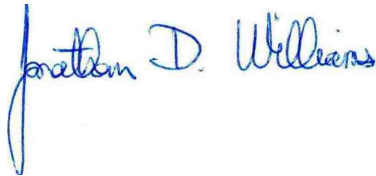
DDT, and dieldrin) in the upper 3.0 feet throughout the 2-Acre Parcel. If the upper 3 feet of soil at the 2-Acre Parcel is to be excavated during development and moved off of the Hillcrest Development Site, the soil should be disposed of consistent with DEQ regulations, examples being disposal under a DEQ-approved SWLA or disposal at an approved landfill (e.g. Dry Creek Landfill). If soil below 3 feet bgs is planned to be excavated, it should be assumed Clean Fill Values have been exceeded for organochlorine pesticides have been exceeded unless additional organochlorine pesticides characterization has been completed.

- It should be noted that per the *Clean Fill Determinations* Internal Management Directive (DEQ, 2019), any soil with petroleum-like staining or a petroleum-like odor does not qualify as Clean Fill and should not be exported from the Hillcrest Development Site unless it is properly managed.
- The most cost-effective solution for addressing impacted soils at the 2-Acre Parcel will likely involve soil removal and placement on the Buffer Garden area south of the 2-Acre Parcel on the Hillcrest Development Site. This work could be completed under a Soil Removal Action Plan and a Soil Repository Management Plan approved by DEQ, which would also be supportive of obtaining a No Further Action (NFA) Letter from DEQ.

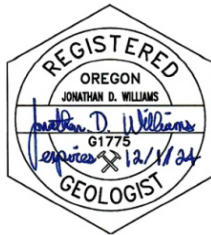
Please feel free to contact Jonathan Williams at 541-944-4685 or jwilliams@alpine-env-llc.com if you have any questions about this Supplemental Investigation report.

Sincerely,

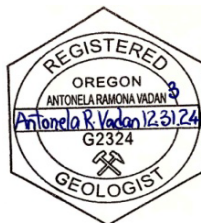
Alpine Environmental Consultants, LLC



Jonathan D. Williams, R.G.
Senior Hydrogeologist



Antonela Vadan, R.G.
Project Geologist



5 REFERENCES

Oregon Department of Environmental Quality (DEQ). March 2013. *Development of Oregon Background Metals Concentrations in Soil*, Technical report. Land Quality Division, Cleanup Program. (DEQ, 2013).

Oregon DEQ. October 2017. *Risk-Based Decision Making for the Remediation of Contaminated Sites*. Updated on October 2, 2017 (DEQ, 2017).

Oregon DEQ. February 21, 2019. *Clean Fill Determinations*. Internal Management Directive, Materials Management Division. (DEQ, February 2019).

Oregon DEQ. June 2019. *Guidance for Evaluating Residual Pesticides on Lands Formerly Used for Agricultural Production*. Land Quality Division, Cleanup Program. Developed in January 2006 and Updated in June 2019 (DEQ, June 2019).



6 LIMITATIONS

The purpose of an environmental assessment is to reasonably evaluate the potential for or actual impact of past practices on a given Subject Property area. In performing an environmental assessment, it is understood that a balance must be struck between a reasonable inquiry into the environmental issues and an exhaustive analysis of each conceivable issue of potential concern. This environmental assessment contains professional opinions as to the environmental issues of concern and/or additional actions, which may be addressed to the property. In rendering its professional opinion, we warrant that services provided hereunder were performed, within the limits described, consistent with current generally accepted environmental consulting principles and practices. No other warranty, express or implied, is made. The following paragraphs discuss the assumptions and parameters under which such an opinion is rendered.

No investigation is thorough enough to exclude the presence of hazardous materials at a given Subject Property. If hazardous conditions have not been identified during the assessment, such a finding should not therefore be construed as a guarantee of the absence of such materials on the Subject Property, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

Any opinions or recommendations presented apply to Subject Property conditions existing when services were performed. We are unable to report on or accurately predict events that may change the Subject Property conditions after the described services are performed, whether occurring naturally or caused by external forces. We assume no responsibility for conditions we were not authorized to investigate, or conditions not generally recognized as environmentally unacceptable when services were performed.

Environmental conditions may exist at the Subject Property that cannot be identified by visual observation. Where the scope of services was limited to observations made during Subject Property reconnaissance, interviews, review of readily available reports and literature or any combination, any conclusions or recommendations or both are necessarily based in part on information supplied by others, the accuracy or sufficiency of which we may not have independently reviewed.

Where subsurface work was performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions at unsampled locations.

Except where there is express concern of our client, or where specific environmental contaminants have been previously reported by others, naturally occurring toxic substances, potential environmental contaminants inside buildings, or contaminant concentrations that are not of current environmental concern may not be reflected in this document.

We are not responsible for any potential impact of changes in applicable environmental standards, practices, or regulations following performance of services, on the conclusions or recommendations, or both, of the study.



Services hereunder were performed consistent with our agreement and understanding with, and solely for the use of, our client. Opinions and recommendations are intended for the client, purpose, Subject Property, location, time frame, and project parameters indicated. We are not responsible for subsequent separation, detachment, or partial use of this document. Any reliance on this report by a third party shall be at such party's sole risk.



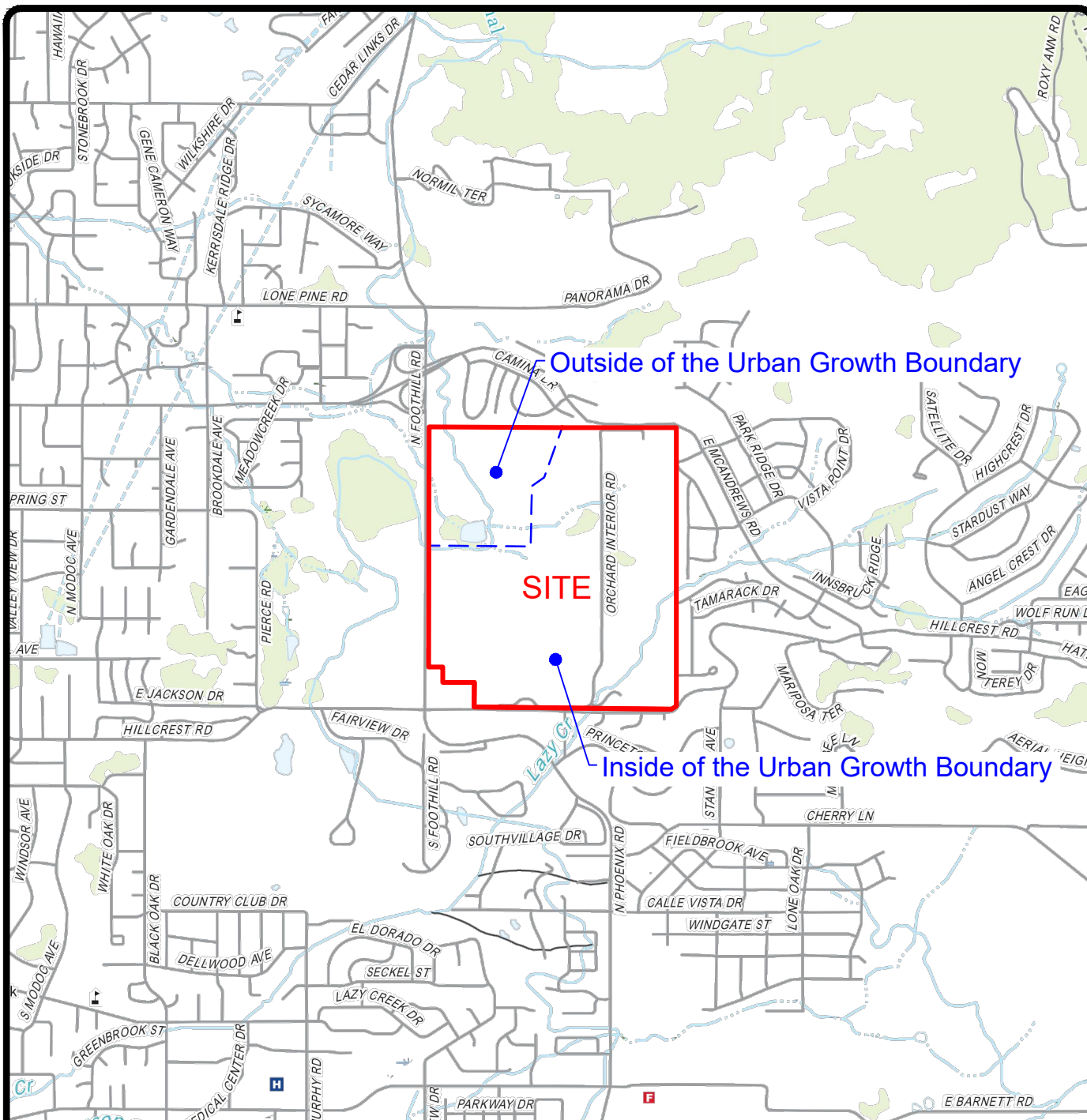
7 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

Mr. Jonathan Williams received a Bachelor of Science degree in Geology, with honors, from Duke University in 1987. He has over 30 years experience working with geologic and environmental reports, including Phase I ESAs. Mr. Williams has been a Registered Geologist in the State of Oregon since 1996, and has 40-hour HAZWOPER training.

Ms. Antonela Vadan holds a Bachelor of Arts and Science in Earth and Environmental Sciences from the University of Illinois at Chicago. She has over 21 years of experience in both the private and public sector. Ms. Vadan has conducted multiple Phase I ESAs. Additional project activities have included risk assessments, remedial investigations/feasibility studies, soil and groundwater investigations, and indoor air quality investigations. Ms. Vadan is a Registered Geologist in the States of Oregon and Washington and has 40-hour HAZWOPER training.



FIGURES



SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE
MEDFORD EAST, OR (2020)

LEGEND

- Approximate Site Boundary
- Approximate Urban Growth Boundary at the Site



SCALE
0 2,000 4,000 FEET



ALPINE ENVIRONMENTAL CONSULTANTS, LLC

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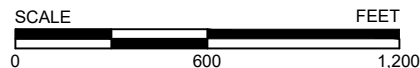
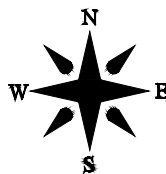
Figure 1
General Location Map
Supplemental Investigation Report for 2-Acres
3285 Hillcrest Road
Medford, Oregon



SOURCE: Google Earth (2022)

LEGEND

- Approximate Site Boundary
- - - Urban Growth Boundary at the Site
- TP1 2022 Test Pit Location
- DU1 Approximate Decision Unit Area
- Approximate 2-Acre Parcel Boundary
- AST Above Ground Storage Tank
- UST Underground Storage Tank



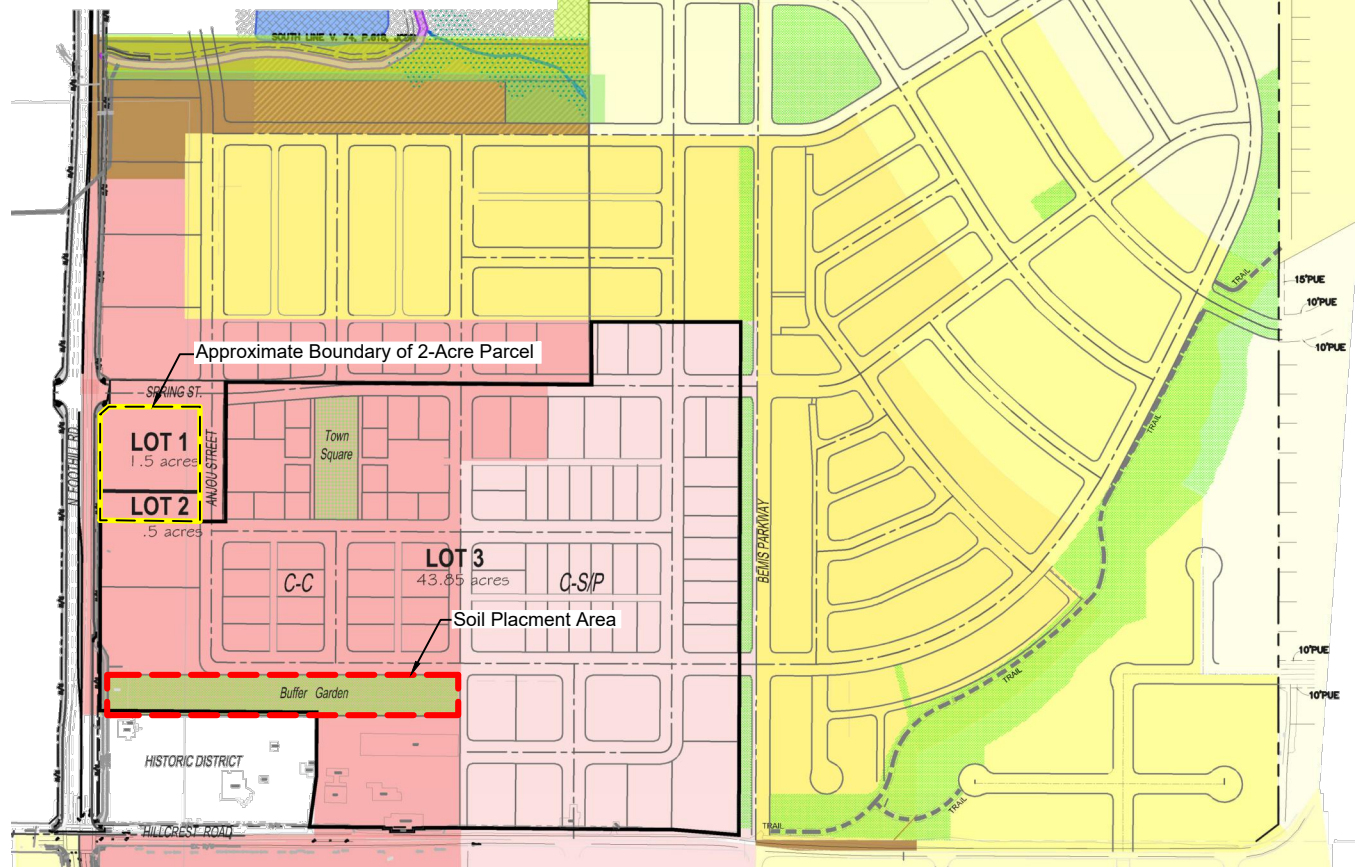
ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 4/4/24

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Figure 2
Phase II ESA 2022 Test Pit Location Map
Supplemental Investigation Report for 2-Acres
3285 Hillcrest Road
Medford, Oregon

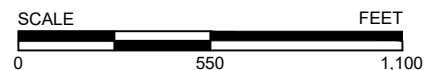
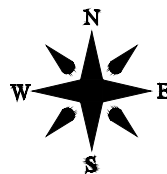
	SFR-2	.8 - 2.0 UNITS/GROSS ACRE 14,000 TO 55,000 SF LOTS
	SFR-4	2.5 TO 4.0 UNITS/ GROSS ACRE 6,500 TO 18,750 SF LOTS
	SFR-6	4.0 TO 6.0 UNITS/ GROSS ACRE 4,500 TO 12,500 SF LOTS
	SFR-10	6.0 TO 10.0 UNITS/ GROSS ACRE 1,500 SF TO 4,500 SF TOWNHOUSE LOTS
	MFR-15	10.0 TO 15.0 UNITS/ GROSS ACRE 7,000 SF MIN. MULTI-FAMILY LOTS
	MFR-20	15.0 TO 20.0 UNITS/ GROSS ACRE
	MFR-30	20.0 TO 30.0 UNITS/ GROSS ACRE 7,000 SF MIN. MULTI-FAMILY LOTS
	C-S/P	SERVICE COMMERCIAL
	C-N	NEIGHBORHOOD COMMERCIAL
	C-C	COMMUNITY COMMERCIAL



SOURCE: CSA Planning, Ltd., Conceptual District Plan, August 8, 2023

LEGEND

-  Approximate 2-Acre Parcel Boundary
-  Soil Placement Area



ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 4/4/24

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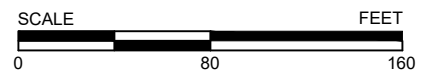
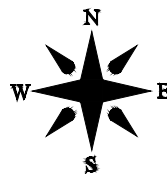
Figure 3
Conceptual Hillcrest District Plan
Supplemental Investigation Report for 2-Acres
3285 Hillcrest Road
Medford, Oregon



SOURCE: Google Earth (2022)

LEGEND

- TP13 ■ Test Pit Location
- Approximate 2-Acre Parcel Boundary
- Approximate Site Boundary
- DU5 — Approximate Decision Unit (DU) Boundary



DATE: 4/4/24

DRAWN BY: SM

Figure 4
Test Pit Location Map
Supplemental Investigation Report for 2-Acres
3285 Hillcrest Road
Medford, Oregon

TABLES

Table 1. Soil Samples Analytical Results - Total Metals
Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

SAMPLING DATA					PARAMETERS: Total Metals (mg/kg) USEPA 6020B (ICPMS)									
Sample Type	Sample ID	Sampling Location	Depth (ft bgs)	Date	Antimony (h)	Arsenic	Barium	Beryllium	Cadmium	Chromium (III)	Cobalt	Copper	Lead	Mercury
Composite TP	DU4-0-6	DU4	0.0-0.5	01/22/24	1.08U, PRO	73.2 PRO	189 PRO	0.714 PRO	0.216U, PRO	28.5 PRO	17.8 PRO	67.5 PRO	241 PRO	0.0866U, PRO
	DU4-6-12		0.5-1.0	01/22/24	1.09U, PRO	88.3 PRO	203 PRO	0.752 PRO	0.219U, PRO	26.6 PRO	17.9 PRO	53.9 PRO	289 PRO	0.0875U, PRO
	DU4-12-18		1.0-1.5	01/22/24	1.06U, PRO	37.2 PRO	214 PRO	0.801 PRO	0.212U, PRO	29.1 PRO	17.7 PRO	44.0 PRO	93.3 PRO	0.0848U, PRO
	DU4-18-24		1.5-2.0	01/22/24	1.02U, PRO	12.2 PRO	205 PRO	0.759 PRO	0.204U, PRO	26.8 PRO	18.0 PRO	40.0 PRO	27.3 PRO	0.0816U, PRO
	DU4-24-36		2.0-3.0	01/22/24	1.03U, PRO	9.59 PRO	212 PRO	0.857 PRO	0.207U, PRO	31.6 PRO	18.1 PRO	42.7 PRO	15.9 PRO	0.0828U, PRO
Composite TP	DU5-0-6	DU5	0.0-0.5	01/22/24	1.03U, PRO	77.4 PRO	220 PRO	0.897 PRO	0.206U, PRO	24.9 PRO	17.4 PRO	46.7 PRO	307 PRO	0.0824U, PRO
	DU5-6-12		0.5-1.0	01/22/24	1.07U, PRO	49.7 PRO	234 PRO	0.827 PRO	0.213U, PRO	27.9 PRO	19.3 PRO	44.3 PRO	171 PRO	0.0854U, PRO
	DU5-12-18		1.0-1.5	01/22/24	1.08U, PRO	36.7 PRO	248 PRO	0.802 PRO	0.216U, PRO	29.0 PRO	19.7 PRO	42.6 PRO	102 PRO	0.0864U, PRO
	DU5-18-24		1.5-2.0	01/22/24	1.07U, PRO	15.1 PRO	235 PRO	0.792 PRO	0.213U, PRO	30.9 PRO	19.7 PRO	40.5 PRO	40.7 PRO	0.0853U, PRO
	DU5-24-36		2.0-3.0	01/22/24	1.03U, PRO	9.86 PRO	236 PRO	0.774 PRO	0.206U, PRO	35.2 PRO	19.9 PRO	43.6 PRO	22.1 PRO	0.0825U, PRO
DEQ RBCs (a)	Ingestion, Dermal Contact and Inhalation (b)			OCC.	NE	1.9	220,000	2,300	1,100	>Max	NE	47,000	800	350
				C. W.	NE	15	69,000	700	350	530,000	NE	14,000	800	110
				E. W.	NE	420	>Max	19,000	9,700	>Max	NE	390,000	800	2,900
	Volatilization to Outdoor Air (c)			OCC.	NE	NV	NV	NV	NV	NE	NV	NV	NV	
	Leaching to Groundwater (d)			OCC.	NE	*	*	*	*	NE	*	30	*	
DEQ's clean fill values and background metals in Soil for Cascade Range province (e), (f)					0.67	19	630	2.1	0.54	200	NE	73	34	0.24
USEPA RSLs (g)	Carcinogenic TR = 1E-06	Ingestion	I. & W.	NE	3.60	NE	NE	NE	NE	NE	NE	NE	NE	NE
		Dermal	I. & W.	NE	17	NE	NE	NE	NE	NE	NE	NE	NE	NE
		Inhalation	I. & W.	NE	3,900	NE	6,900	9,300	NE	1,900	NE	NE	NE	NE
	Noncancer HI = 1	Carcinogenic	I. & W.	NE	3.0	NE	6,900	9,300	NE	1,900	NE	NE	NE	NE
		Ingestion	I. & W.	470	580	230,000	2,300	120	1,800,000	350	47,000	NE	NE	NE
		Dermal	I. & W.	NE	2,800	NE	NE	690	NE	NE	NE	NE	NE	NE
		Inhalation	I. & W.	1,200,000	89,000	3,000,000	120,000	60,000	NE	36,000	NE	NE	NE	46
		Carcinogenic	I. & W.	470	480	220,000	2,300	100	1,800,000	350	47,000	800	46	46

Table 1. Soil Samples Analytical Results - Total Metals
Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

SAMPLING DATA					PARAMETERS: Total Metals (mg/kg) USEPA 6020B (ICPMS)						
Sample Type	Sample ID	Sampling Location	Depth (ft bgs)	Date	Molybdenum	Nickel (i)	Selenium	Silver	Thallium(i)	Vanadium	Zinc
Composite TP	DU4-0-6	DU4	0.0-0.5	01/22/24	1.08U, PRO	31.7 PRO	1.08U, PRO	0.216U, PRO	0.216U, PRO	78.3 PRO	87.2 PRO
	DU4-6-12		0.5-1.0	01/22/24	1.09U, PRO	32.6 PRO	1.09U, PRO	0.219U, PRO	0.219U, PRO	71.3 PRO	80.4 PRO
	DU4-12-18		1.0-1.5	01/22/24	1.06U, PRO	37.3 PRO	1.06U, PRO	0.212U, PRO	0.213, PRO	74.3 PRO	71.8 PRO
	DU4-18-24		1.5-2.0	01/22/24	1.02U, PRO	36.6 PRO	1.02U, PRO	0.204U, PRO	0.220, PRO	73.9 PRO	68.8 PRO
	DU4-24-36		2.0-3.0	01/22/24	1.03U, PRO	38.9 PRO	1.03U, PRO	0.207U, PRO	0.220, PRO	79.1 PRO	77.0 PRO
Composite TP	DU5-0-6	DU5	0.0-0.5	01/22/24	1.03U, PRO	32.5 PRO	1.03U, PRO	0.206U, PRO	0.206U, PRO	69.7 PRO	70.4 PRO
	DU5-6-12		0.5-1.0	01/22/24	1.07U, PRO	34.9 PRO	1.07U, PRO	0.213U, PRO	0.213U, PRO	81.6 PRO	66.9 PRO
	DU5-12-18		1.0-1.5	01/22/24	1.08U, PRO	38.8 PRO	1.08U, PRO	0.216U, PRO	0.216U, PRO	81.0 PRO	66.5 PRO
	DU5-18-24		1.5-2.0	01/22/24	1.07U, PRO	37.5 PRO	1.07U, PRO	0.213U, PRO	0.213U, PRO	84.0 PRO	66.3 PRO
	DU5-24-36		2.0-3.0	01/22/24	1.03U, PRO	40.0 PRO	1.03U, PRO	0.206U, PRO	0.206U, PRO	88.5 PRO	71.9 PRO
DEQ RBCs (a)	Ingestion, Dermal Contact and Inhalation (b)			OCC.	NE	22,000	NE	5,800	NE	NE	NE
				C. W.	NE	7,000	NE	1,800	NE	NE	NE
				E. W.	NE	190,000	NE	49,000	NE	NE	NE
	Volatilization to Outdoor Air (c)			OCC.	NE	NV	NE	NV	NE	NE	NE
	Leaching to Groundwater (d)			OCC.	NE	*	NE	*	NE	NE	NE
DEQ's clean fill values and background metals in Soil for Cascade Range province (e), (f)					NE	110	0.52	0.17	2.8	280	170
USEPA RSLs (g)	Carcinogenic TR = 1E-06	Ingestion	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE
		Dermal	I. & W.	NE	NE	NE	NE	NE	NE	NE	
		Inhalation	I. & W.	NE	64,000	NE	NE	NE	NE	NE	
	Noncancer HI = 1	Carcinogenic	I. & W.	NE	64,000	NE	NE	NE	NE	NE	NE
		Ingestion	I. & W.	5,800	13,000	5,800	5,800.00	12.00	5,900	350,000	
		Dermal	I. & W.	NE	30,000	NE	NE	55.00	NE	NE	
		Inhalation	I. & W.	12,000,000	83,000	120,000,000	NE	NE	600,000	NE	
Carcinogenic	I. & W.	5,800	8,100	5,800	5,800.00	12.00	5,800	350,000			

Table 1. Soil Samples Analytical Results - Total Metals **Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300**

Notes:

Analytical data in bold font indicates that the value exceeds the laboratory MRL.

Analytical data highlighted in yellow indicates the value exceeded one or more generic RBCs.

Analytical data highlighted in orange indicates the value exceeded one or more generic RBCs and RSLs.

Analytical data highlighted in both yellow and blue indicates the value exceeded one or more generic RBCs and the clean fill screening level.

Analytical data highlighted in both orange and blue indicates the value exceeded one or more generic RBCs and RSLs and the clean fill screening level.

* - Leaching to groundwater RBCs are not provided for inorganic chemicals. If this pathway is of concern, then site-specific leaching tests must be performed.

Data Qualifiers:

PRO - Sample has undergone sample processing prior to extraction and analysis.

U - The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.

Footnotes:

(a) Risk-Based Concentrations are referenced from the June 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime someone is likely to come into contact with contaminated soil. For the occupational scenario, exposure to contaminated soils should be considered for all contaminants found in the top three feet of soil.

(c) This pathway is applicable whenever vadose zone soils are contaminated with volatile compounds.

(d) This pathway is applicable whenever vadose zone contamination is found overlying an aquifer that is currently used or is reasonably likely to be used in the future for drinking water.

(e) DEQ's Background Concentrations in Soil are referenced from the DEQ's Development of Oregon Background Metals Concentrations in Soil technical report dated March 2013. The background concentrations included in this table are 95% Upper Prediction Limit (UPL) for the Cascade Range region, which includes the East Medford 2-Acre Parcel.

(f) Clean Fill Values are referenced from the DEQ's Clean Fill Determinations guidance document dated February 2019.

(g) The RSLs are referenced from the May 2022 update to the USEPA Generic Tables.

(h) The RSLs for antimony are the lowest RSLs listed in the USEPA Generic Tables for the following compounds: metallic antimony, antimony pentoxide, antimony tetroxide, and antimony trioxide.

(i) The RSLs for nickel are the lowest RSLs listed in the USEPA Generic Tables for the following compounds: nickel acetate, nickel carbonate, nickel carbonyl, nickel hydroxide, nickel oxide, nickel refinery dust, nickel soluble salts, and nickel subsulfide.

(j) The RSLs for thallium are the lowest RSLs listed in the USEPA Generic Tables for the following compounds: thallium nitrate, thallium soluble salts, thallium acetate, thallium carbonate, thallium chloride, thallium selenite, and thallium sulfate.

Symbols/Acronyms:

bgs - below ground surface

C. W. - construction worker receptors

DEQ - Department of Environmental Quality

DU - decision unit

E. W. - excavation worker receptors

ft - feet

HI - Hazard Index

ICPMS - inductively coupled plasma mass spectrometry

I & W. - industrial and worker receptors

MDL - Method Detection Limit

mg/kg - milligrams per kilogram

MRL - Method Reporting Limit

NE - No RBCs or RSLs are established for this constituent.

NV - The chemical is considered "nonvolatile" for the purposes of the exposure calculations.

OCC. - occupational receptors

RBC - risk-based concentration

RSLs - Regional Screening Levels

TP - test pit

TR - Target Risk

USEPA - United States Environmental Protection Agency

Table 2. Soil Samples Analytical Results - Organochlorine Pesticides
Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

SAMPLING DATA					PARAMETERS: Organochlorine Pesticides (mg/kg) USEPA 8081B						
Sample Type	Sample ID	Sampling Location	Depth (ft bgs)	Date	Aldrin	alpha-Hexachlorocyclohexane (alpha-BHC)	beta-BHC	delta-BHC	gamma-BHC (Lindane)	cis-Chlordane (Chlordane RBCs)	trans-Chlordane (Chlordane RBCs)
Discrete TP	DU4-0-6	DU4	0.0-0.5	01/22/24	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO
	DU4-6-12		0.5-1.0	01/22/24	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO
	DU4-12-18		1.0-1.5	01/22/24	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO
	DU4-18-24		1.5-2.0	01/22/24	0.00169U, C-05, PRO	0.00169U, C-05, PRO	0.00169U, C-05, PRO	0.00169U, C-05, PRO	0.00169U, C-05, PRO	0.00169U, C-05, PRO	0.00169U, C-05, PRO
Discrete TP	DU4-24-36	DU5	2.0-3.0	01/22/24	0.00180U, C-05, PRO	0.00180U, C-05, PRO	0.00180U, C-05, PRO	0.00180U, C-05, PRO	0.00180U, C-05, PRO	0.00180U, C-05, PRO	0.00180U, C-05, PRO
	DU5-0-6		0.0-0.5	01/22/24	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO
	DU5-6-12		0.5-1.0	01/22/24	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO
	DU5-12-18		1.0-1.5	01/22/24	0.00183U, C-05, PRO	0.00183U, C-05, PRO	0.00183U, C-05, PRO	0.00183U, C-05, PRO	0.00183U, C-05, PRO	0.00183U, C-05, PRO	0.00183U, C-05, PRO
	DU5-18-24		1.5-2.0	01/22/24	0.00173U, C-05, PRO	0.00173U, C-05, PRO	0.00173U, C-05, PRO	0.00173U, C-05, PRO	0.00173U, C-05, PRO	0.00173U, C-05, PRO	0.00173U, C-05, PRO
DU5-24-36	2.0-3.0	01/22/24	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO	
DEQ RBCs (a)	Ingestion, Dermal Contact and Inhalation (b)			OCC.	0.13	0.36	NE	NE	2.1	7.4	7.4
				C. W.	1.1	3	NE	NE	17	61	61
				E. W.	30	83	NE	NE	470	1700	1700
	Volatilization to Outdoor Air (c)			OCC.	>Csat	NV	NE	NE	NV	>Csat	>Csat
Leaching to Groundwater (d)			OCC.	0.1	0.023	NE	NE	0.13	2.1	2.1	
DEQ's clean fill values (e)					0.023	0.0063	0.009	NE	0.0095	0.91	0.91
USEPA RSLs (f)	Carcinogenic TR = 1E-06	Ingestion	I. & W.	0.19	8.1	0.52	1.8	3.0	NE	NE	NE
		Dermal	I. & W.	NE	19	1.2	4.3	18	NE	NE	NE
		Inhalation	I. & W.	4.3	NE	9,300	31,000	54,000	NE	NE	NE
		Carcinogenic	I. & W.	0.18	5.7	0.36	1.3	2.5	NE	NE	NE
	Noncancer HI = 1	Ingestion	I. & W.	35	NE	9,300	NE	12	580	580	580
		Dermal	I. & W.	NE	NE	22,000	NE	69	3,400	3,400	3,400
		Inhalation	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE
	Carcinogenic	I. & W.	35	NE	6,600	NE	10	500	500	500	

Table 2. Soil Samples Analytical Results - Organochlorine Pesticides
Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

SAMPLING DATA					PARAMETERS: Organochlorine Pesticides (mg/kg) USEPA 8081B						
Sample Type	Sample ID	Sampling Location	Depth (ft bgs)	Date	4,4'-Dichlorodiphenyl dichloroethane (4,4'-DDD)	4,4'-Dichlorodiphenyl dichloroethene (4,4'-DDE)	4,4'-Dichlorodiphenyl trichloroethane (4,4'-DDT)	Dieldrin	Endosulfan I (Endosulfan alpha-beta RBC)	Endosulfan II (Endosulfan alpha-beta RBC)	Endosulfan Sulfate (Endosulfan alpha-beta RBC)
Discrete TP	DU4-0-6	DU4	0.0-0.5	01/22/24	0.0696 C-05, PRO	1.36 C-05, PRO	0.728 C-05, PRO	0.159 C-05, PRO	0.00184U, C-05, PRO	0.00525U, C-05, PRO, R-02	0.00184U, C-05, PRO
	DU4-6-12		0.5-1.0	01/22/24	0.0520 C-05, PRO	1.09 C-05, PRO	0.484 C-05, PRO	0.118 C-05, PRO	0.00179U, C-05, PRO	0.0013U, C-05, PRO, R-02	0.00179U, C-05, PRO
	DU4-12-18		1.0-1.5	01/22/24	0.00179U, C-05, PRO	0.0950 C-05, PRO	0.0260 C-05, PRO	0.00459 C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO
	DU4-18-24		1.5-2.0	01/22/24	0.00169U, C-05, PRO	0.00948 C-05, PRO	0.00209 C-05, PRO	0.00169U, C-05, PRO	0.00169U, C-05, PRO	0.00169U, C-05, PRO	0.00169U, C-05, PRO
	DU4-24-36		2.0-3.0	01/22/24	0.00180U, C-05, PRO	0.00568 C-05, PRO	0.00305 C-05, PRO	0.00180U, C-05, PRO	0.00180U, C-05, PRO	0.00180U, C-05, PRO	0.00180U, C-05, PRO
Discrete TP	DU5-0-6	DU5	0.0-0.5	01/22/24	0.0160 C-05, PRO	1.10 C-05, PRO	0.335 C-05, PRO	0.0768 C-05, PRO	0.00179U, C-05, PRO	0.00242U, C-05, PRO, R-02	0.00358U, C-05, PRO, R-02
	DU5-6-12		0.5-1.0	01/22/24	0.00626 C-05, PRO	0.644 C-05, PRO	0.193 C-05, PRO	0.0431 C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO
	DU5-12-18		1.0-1.5	01/22/24	0.00183U, C-05, PRO	0.207 C-05, PRO	0.0522 C-05, PRO	0.0114 C-05, PRO	0.00183U, C-05, PRO	0.00183U, C-05, PRO	0.00183U, C-05, PRO
	DU5-18-24		1.5-2.0	01/22/24	0.00173U, C-05, PRO	0.0682 C-05, PRO	0.0195 C-05, PRO	0.00189 C-05, PRO	0.00173U, C-05, PRO	0.00173U, C-05, PRO	0.00173U, C-05, PRO
	DU5-24-36		2.0-3.0	01/22/24	0.00175U, C-05, PRO	0.0267 C-05, PRO	0.00661 C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO
DEQ RBCs (a)	Ingestion, Dermal Contact and Inhalation (b)			OCC.	12	8.2	8.5	0.14	4900	4900	4900
				C. W.	94	66	66	1.2	1600	1600	1600
				E. W.	2,600	1,800	1,800	33	45,000	45,000	45,000
	Volatilization to Outdoor Air (c)			OCC.	NV	>Csat	NV	NV	>Max	>Max	>Max
Leaching to Groundwater (d)			OCC.	2.6	7.5	70	0.030	>Csat	>Csat	>Csat	
DEQ's clean fill values (e)					0.0063	0.01	0.01	0.0045	0.64	0.64	0.64
USEPA RSLs (f)	Carcinogenic TR = 1E-06	Ingestion	I. & W.	14	9.6	9.6	0.2	NE	NE	NE	NE
		Dermal	I. & W.	32	NE	76	0.48	NE	NE	NE	NE
		Inhalation	I. & W.	240,000	270	170,000	3,600	NE	NE	NE	NE
		Carcinogenic	I. & W.	9.6	9.3	8.5	0.14	NE	NE	NE	NE
	Noncancer HI = 1	Ingestion	I. & W.	580	580	580	58	7,000	NE	NE	7,000
		Dermal	I. & W.	1,400	NE	4,600	140	NE	NE	NE	17,000
		Inhalation	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE
		Carcinogenic	I. & W.	410	580	520	41	7,000	NE	NE	4,900

Table 2. Soil Samples Analytical Results - Organochlorine Pesticides
Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

SAMPLING DATA					PARAMETERS: Organochlorine Pesticides (mg/kg) USEPA 8081B							
Sample Type												
	Sample ID	Sampling Location	Depth (ft bgs)	Date	Endrin	Endrin Aldehyde (Endrin RBC)	Endrin Ketone (Endrin RBC)	Heptachlor	Heptachlor epoxide	Methoxychlor	Chlordane (Technical)	Toxaphene (Total)
Discrete TP	DU4-0-6	DU4	0.0-0.5	01/22/24	0.00184U, C-05, PRO	0.00258U, C-05, PRO, R-02	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.0167U, C-05, PRO, R-02	0.0553U, C-05, PRO	0.0553U, C-05, PRO
	DU4-6-12		0.5-1.0	01/22/24	0.00179U, C-05, PRO	0.00188U, C-05, PRO, R-02	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.0119U, C-05, PRO, R-02	0.0536U, C-05, PRO	0.0536U, C-05, PRO
	DU4-12-18		1.0-1.5	01/22/24	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00536U, C-05, PRO	0.0536U, C-05, PRO	0.0536U, C-05, PRO
	DU4-18-24		1.5-2.0	01/22/24	0.00169U, C-05, PRO	0.00169U, C-05, PRO	0.00169U, C-05, PRO	0.00169U, C-05, PRO	0.00169U, C-05, PRO	0.00506U, C-05, PRO	0.0506U, C-05, PRO	0.0506U, C-05, PRO
	DU4-24-36		2.0-3.0	01/22/24	0.00180U, C-05, PRO	0.00180U, C-05, PRO	0.00180U, C-05, PRO	0.00180U, C-05, PRO	0.00180U, C-05, PRO	0.00541U C-05, PRO	0.0541U C-05, PRO	0.0541U C-05, PRO
Discrete TP	DU5-0-6	DU5	0.0-0.5	01/22/24	0.00179U, C-05, PRO	0.00233U, C-05, PRO, R-02	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.00179U, C-05, PRO	0.0139U, C-05, PRO, R-02	0.0537U, C-05, PRO	0.0537U, C-05, PRO
	DU5-6-12		0.5-1.0	01/22/24	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00184U, C-05, PRO	0.00552U, C-05, PRO	0.0552U, C-05, PRO	0.0552U, C-05, PRO
	DU5-12-18		1.0-1.5	01/22/24	0.00183U, C-05, PRO	0.00183U, C-05, PRO	0.00183U, C-05, PRO	0.00183U, C-05, PRO	0.00183U, C-05, PRO	0.00549U, C-05, PRO	0.0549U, C-05, PRO	0.0549U, C-05, PRO
	DU5-18-24		1.5-2.0	01/22/24	0.00173U, C-05, PRO	0.00173U, C-05, PRO	0.00173U, C-05, PRO	0.00173U, C-05, PRO	0.00173U, C-05, PRO	0.00518U, C-05, PRO	0.0518U, C-05, PRO	0.00173U, C-05, PRO
	DU5-24-36		2.0-3.0	01/22/24	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00175U, C-05, PRO	0.00524U, C-05, PRO	0.0524U, C-05, PRO	0.00175U, C-05, PRO
DEQ RBCs (a)	Ingestion, Dermal Contact and Inhalation (b)			OCC.	250	250	250	0.45	0.24	NE	7.4	2.1
				C. W.	80	80	80	4	2	NE	61	17
				E. W.	2200	2200	2200	110	56	NE	1700	470
	Volatilization to Outdoor Air (c)			OCC.	NV	NV	NV	230	>Csat	NE	>Csat	NV
Leaching to Groundwater (d)			OCC.	>Csat	>Csat	>Csat	0.048	0.016	NE	2.1	0.093	
DEQ's clean fill values (e)					0.0014	0.0014	0.0014	0.017	0.0042	5.1	0.91	0.36
USEPA RSLs (f)	Carcinogenic TR = 1E-06	Ingestion	I. & W.	NE	NE	NE	NE	0.73	0.36	NE	9.3	3.0
		Dermal	I. & W.	NE	NE	NE	NE	NE	NE	NE	55	7.0
		Inhalation	I. & W.	NE	NE	NE	NE	4.5	4.0	NE	190	52,000
		Carcinogenic	I. & W.	NE	NE	NE	NE	0.63	0.33	NE	7.7	2.1
	Noncancer HI = 1	Ingestion	I. & W.	350	NE	NE	NE	120	15	5,800	580	110
		Dermal	I. & W.	830	NE	NE	NE	NE	NE	14,000	3,400	250
		Inhalation	I. & W.	NE	NE	NE	NE	NE	NE	NE	4,700	
		Carcinogenic	I. & W.	250	NE	NE	NE	120	15	4,100	450	74

Table 2. Soil Samples Analytical Results - Organochlorine Pesticides

Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

Notes:

Analytical data in bold font indicates that the value exceeds the laboratory MRL.

Analytical data highlighted in blue indicates the value exceeded the clean fill screening level.

Analytical data highlighted in both yellow and blue indicates the value exceeded one or more generic RBCs and the clean fill screening level.

Data Qualifiers:

C-05 - Extract has undergone a GPC (Gel-Permeation Chromatography) cleanup per EPA 3640A. Reporting levels may be raised due to dilution necessary for cleanup. Sample Final Volume includes the GPC dilution factor, see the Prep page for details.

PRO - Sample has undergone sample processing prior to extraction and analysis.

R-02 - The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

U - The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.

Footnotes:

(a) Risk-Based Concentrations are referenced from the June 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime someone is likely to come into contact with contaminated soil. For the occupational scenario, exposure to contaminated soils should be considered for all contaminants found in the top three feet of soil.

(c) This pathway is applicable whenever vadose zone soils are contaminated with volatile compounds.

(d) This pathway is applicable whenever vadose zone contamination is found overlying an aquifer that is currently used or is reasonably likely to be used in the future for drinking water.

(d) Clean Fill Values are referenced from the DEQ's Clean Fill Determinations guidance document dated February 2019.

(f) Regional Screening Levels (RSLs) are referenced from the May 2022 update to the USEPA Generic Tables.

Symbols/Acronyms:

bgs - below ground surface

C. W. - construction worker receptors

>Csat - The soil RBC exceeds the limit of three-phase equilibrium partitioning.

Soil concentrations in excess of this value indicate free product might be present.

DEQ - Department of Environmental Quality

DU - decision unit

E. W. - excavation worker receptors

ft - feet

HI - Hazard Index

I & W. - industrial and worker receptors

>Max - The constituent RBC for this pathway is greater than 1,000,000 mg/Kg or 1,000,000 mg/L.

Therefore, these substances are not expected to pose risks in the scenario shown.

MDL - Method Detection Limit

mg/kg - milligrams per kilogram

MRL - Method Reporting Limit

NE - No RBCs or RSLs are established for this constituent.

NV - The chemical is considered "nonvolatile" for the purposes of the exposure calculations.

RBC - risk-based concentration

RSLs - Regional Screening Levels

TP - test pit

TR - Target Risk

USEPA - United States Environmental Protection Agency

Table 3. Soil Samples Analytical Results - Organophosphorus Herbicides
Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

SAMPLING DATA					PARAMETERS: Organophosphorus Pesticides (mg/kg) USEPA 8270E (GC/MS)									
Sample Type	Sample ID	Sampling Location	Depth (ft bgs)	Date	Azinphos methyl (Guthion)	Chlorpyrifos	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethyl-p-nitrophenyl Phosphonate (EPN)
Discrete TP	DU4-0-6	DU4	0.0-0.5	01/22/24	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO
	DU4-6-12		0.5-1.0	01/22/24	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO
	DU4-12-18		1.0-1.5	01/22/24	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO
	DU4-18-24		1.5-2.0	01/22/24	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO
	DU4-24-36		2.0-3.0	01/22/24	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO
Discrete TP	DU5-0-6	DU5	0.0-0.5	01/22/24	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO
	DU5-6-12		0.5-1.0	01/22/24	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	
	DU5-12-18		1.0-1.5	01/22/24	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	
	DU5-18-24		1.5-2.0	01/22/24	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	
	DU5-24-36		2.0-3.0	01/22/24	0.0448U, PRO	0.0448U, PRO, Q-42	0.0448U, PRO	0.0448U, PRO, Q-42	0.0448U, PRO, Q-42	0.0448U, PRO, Q-42	0.0448U, PRO, Q-42	0.0448U, PRO, Q-42	0.0448U, PRO	0.0448U, PRO
DEQ RBCs (a)	Ingestion, Dermal Contact and Inhalation (b)			OCC.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
				C. W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
				E. W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Volatilization to Outdoor Air (c)			OCC.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Leaching to Groundwater (d)			OCC.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
DEQ's clean fill values (e)					1.0	7.2	NE	2.5	2.5	3.9	0.0049	0.59	0.056	0.17
USEPA RSLs (f)	Carcinogenic TR = 1E-06	Ingestion	I. & W.	NE	NE	NE	NE	NE	NE	NE	11	NE	NE	NE
		Dermal	I. & W.	NE	NE	NE	NE	NE	NE	NE	27	NE	NE	NE
		Inhalation	I. & W.	NE	NE	NE	NE	NE	NE	NE	200,000	NE	NE	NE
		Carcinogenic	I. & W.	NE	NE	NE	NE	NE	NE	NE	7.9	NE	NE	NE
	Noncancer HI = 1	Ingestion	I. & W.	3,500	1,200	NE	47	47	820	580	2,600	47	12	
		Dermal	I. & W.	8,300	2,800	NE	110	110	1,900	1,400	6,100	110	28	
		Inhalation	I. & W.	60,000,000	NE	NE	NE	NE	NE	3,000,000	NE	NE	NE	
		Carcinogenic	I. & W.	2,500	820	NE	33	33	570	410	1,800	33	8.2	

Table 3. Soil Samples Analytical Results - Organophosphorus Herbicides
Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

SAMPLING DATA					PARAMETERS: Organophosphorus Pesticides (mg/kg) USEPA 8270E (GC/MS)								
Sample Type	Sample ID	Sampling Location	Depth (ft bgs)	Date	Ethoprop	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)
Discrete TP	DU4-0-6	DU4	0.0-0.5	01/22/24	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.107U, PRO, R-02	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO
	DU4-6-12		0.5-1.0	01/22/24	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.345U, PRO, R-02	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO
	DU4-12-18		1.0-1.5	01/22/24	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.133U, PRO, R-02	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO
	DU4-18-24		1.5-2.0	01/22/24	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0704U, PRO, R-02	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO
	DU4-24-36		2.0-3.0	01/22/24	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0542U, PRO, R-02	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO
Discrete TP	DU5-0-6	DU5	0.0-0.5	01/22/24	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.161U, PRO, R-02	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO
	DU5-6-12		0.5-1.0	01/22/24	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.165U, PRO, R-02	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO
	DU5-12-18		1.0-1.5	01/22/24	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.143U, PRO, R-02	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO
	DU5-18-24		1.5-2.0	01/22/24	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.0933U, PRO, R-02	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO
	DU5-24-36		2.0-3.0	01/22/24	0.0488U, PRO, Q-42	0.0488U, PRO, Q-42	0.0488U, PRO, Q-42	0.0488U, PRO, Q-42	0.0510U, PRO, R-02	0.0448U, PRO	0.0488U, PRO, Q-42	0.0488U, PRO, Q-42	0.0488U, PRO, Q-42
DEQ RBCs (a)	Ingestion, Dermal Contact and Inhalation (b)			OCC.	NE	NE	NE	NE	NE	NE	NE	NE	NE
				C. W.	NE	NE	NE	NE	NE	NE	NE	NE	NE
				E. W.	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Volatilization to Outdoor Air (c)			OCC.	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Leaching to Groundwater (d)			OCC.	NE	NE	NE	NE	NE	NE	NE	NE	NE
DEQ's clean fill values (e)					NE	NE	NE	6	2.3	0.44	NE	NE	1.1
USEPA RSLs (f)	Carcinogenic TR = 1E-06	Ingestion	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
		Dermal	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
		Inhalation	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
		Carcinogenic	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Noncancer HI = 1	Ingestion	I. & W.	NE	NE	NE	23,000	35	290	NE	NE	NE	2,300
		Dermal	I. & W.	NE	NE	NE	55,000	NE	690	NE	NE	NE	NE
		Inhalation	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
		Carcinogenic	I. & W.	NE	NE	NE	16,000	35	210	NE	NE	NE	2,300

Table 3. Soil Samples Analytical Results - Organophosphorus Herbicides
Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

SAMPLING DATA					PARAMETERS: Organophosphorus Pesticides (mg/kg) USEPA 8270E (GC/MS)									
Sample Type	Sample ID	Sampling Location	Depth (ft bgs)	Date	Parathion, ethyl	Phorate	Ronnel (Fenchlorphos)	Sulfotep	Sulprofos (Bolstar)	Tetraethyl pyrophosphate (TEPP)	Tetrachlorvinphos (Rabon) (Stirofos)	Tokution (Prothiotos)	Trichloronate	
Discrete TP	DU4-0-6	DU4	0.0-0.5	01/22/24	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	0.177U, PRO	0.0433U, PRO	0.0433U, PRO	0.0433U, PRO	
	DU4-6-12		0.5-1.0	01/22/24	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	0.173U, PRO	0.0434U, PRO	0.0434U, PRO	0.0434U, PRO	
	DU4-12-18		1.0-1.5	01/22/24	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.180U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	
	DU4-18-24		1.5-2.0	01/22/24	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.178U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	
	DU4-24-36		2.0-3.0	01/22/24	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	0.175U, PRO	0.0437U, PRO	0.0437U, PRO	0.0437U, PRO	
Discrete TP	DU5-0-6	DU5	0.0-0.5	01/22/24	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	0.180U, PRO	0.0451U, PRO	0.0451U, PRO	0.0451U, PRO	
	DU5-6-12		0.5-1.0	01/22/24	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	0.172U, PRO	0.0431U, PRO	0.0431U, PRO	0.0431U, PRO	
	DU5-12-18		1.0-1.5	01/22/24	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	0.178U, PRO	0.0446U, PRO	0.0446U, PRO	0.0446U, PRO	
	DU5-18-24		1.5-2.0	01/22/24	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	0.181U, PRO	0.0453U, PRO	0.0453U, PRO	0.0453U, PRO	
	DU5-24-36		2.0-3.0	01/22/24	0.0448U, PRO	0.0448U, PRO	0.0448U, PRO	0.0488U, PRO, Q-42	0.0448U, PRO	0.179U, PRO, Q-42	0.0488U, PRO, Q-42	0.0448U, PRO	0.0448U, PRO	
DEQ RBCs (a)	Ingestion, Dermal Contact and Inhalation (b)			OCC.	NE	NE	NE	NE	NE	NE	NE	NE	NE	
				C. W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	
				E. W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	
	Volatilization to Outdoor Air (c)			OCC.	NE	NE	NE	NE	NE	NE	NE	NE	NE	
	Leaching to Groundwater (d)			OCC.	NE	NE	NE	NE	NE	NE	NE	NE	NE	
DEQ's clean fill values (e)					26	0.2	220	NE	NE	NE	0.49	NE	NE	
USEPA RSLs (f)	Carcinogenic TR = 1E-06	Ingestion	I. & W.	NE	NE	NE	NE	NE	NE	NE	140	NE	NE	
		Dermal	I. & W.	NE	NE	NE	NE	NE	NE	NE	320	NE	NE	
		Inhalation	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
		Carcinogenic	I. & W.	NE	NE	NE	NE	NE	NE	NE	96	NE	NE	
	Noncancer HI = 1	Ingestion	I. & W.	7,000	230	58,000	NE	NE	NE	NE	35,000	NE	NE	
		Dermal	I. & W.	17,000	550	NE	NE	NE	NE	NE	83,000	NE	NE	
		Inhalation	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
		Carcinogenic	I. & W.	4,900	160	58,000	NE	NE	NE	NE	25,000	NE	NE	

Table 3. Soil Samples Analytical Results - Organophosphorus Herbicides

Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

Notes:

The laboratory MRLs that exceeds the Clean Fill Values are indicated with bold blue font.

Data Qualifiers:

Q-42 - Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)

PRO - Sample has undergone sample processing prior to extraction and analysis.

R-02 - The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

U - The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.

Footnotes:

(a) Risk-Based Concentrations are referenced from the June 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime someone is likely to come into contact with contaminated soil. For the occupational scenario, exposure to contaminated soils should be considered for all contaminants found in the top three feet of soil.

(c) This pathway is applicable whenever vadose zone soils are contaminated with volatile compounds.

(d) This pathway is applicable whenever vadose zone contamination is found overlying an aquifer that is currently used or is reasonably likely to be used in the future for drinking water.

(e) Clean Fill Values are referenced from the DEQ's Clean Fill Determinations guidance document dated February 2019.

(f) Regional Screening Levels (RSLs) are referenced from the May 2022 update to the USEPA Generic Tables.

Symbols/Acronyms:

bgs - below ground surface

C. W. - construction worker receptors

>Csat - The soil RBC exceeds the limit of three-phase equilibrium partitioning.

Soil concentrations in excess of this value indicate free product might be present.

DEQ - Department of Environmental Quality

DU - decision unit

E. W. - excavation worker receptors

ft - feet

GC/MS - gas chromatography/mass spectrometry

HI - Hazard Index

I & W. - industrial and worker receptors

>Max - The constituent RBC for this pathway is greater than 1,000,000 mg/Kg or 1,000,000 mg/L.

Therefore, these substances are not expected to pose risks in the scenario shown.

MDL - Method Detection Limit

mg/kg - milligrams per kilogram

MRL - Method Reporting Limit

NE - No RBCs or RSLs are established for this constituent.

NV - The chemical is considered "nonvolatile" for the purposes of the exposure calculations.

OCC. - occupational receptors

RBC - risk-based concentration

RSLs - Regional Screening Levels

TP - test pit

TR - Target Risk

USEPA - United States Environmental Protection Agency

Table 4. Soil Samples Analytical Results - Chlorinated Herbicides
Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

SAMPLING DATA					PARAMETERS: Chlorinated Herbicides (mg/kg) USEPA 8151A									
Sample Type	Sample ID	Sampling Location	Depth (ft bgs)	Date	2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)	2,4,5-Trichlorophenoxypropionic acid (2,4,5-TP) (Silvex)	2,4-Dichlorophenoxyacetic acid (2,4-D)	4-(2,4-dichlorophenoxy)butyric acid (2,4-DB)	Dalapon	Dicamba	Dichloroprop	Dinoseb	2-Methyl-4-chlorophenoxyacetic acid (MCPA)	Methylchlorophenoxy propionic acid (MCPP)
Discrete TP	DU4-0-6	DU4	0.0-0.5	01/22/24	0.011U,*1	0.011U	0.110U,*+	0.110U,*1	0.270U	0.011U	0.110U	0.110U	11.0U	11.0U
	DU4-6-12		0.5-1.0	01/22/24	0.011U,*1	0.011U	0.110U,*+	0.110U,*1	0.270U	0.011U	0.110U	0.110U	11.0U	11.0U
	DU4-12-18		1.0-1.5	01/22/24	0.0099U,*1	0.0099U	0.099U,*+	0.099U,*1	0.250U	0.0099U	0.099U	0.099U	9.9U	9.9U
	DU4-18-24		1.5-2.0	01/22/24	0.010U,*1	0.010U	0.100U,*+	0.100U,*1	0.250U	0.010U	0.100U	0.100U	10.0U	10.0U
Discrete TP	DU4-24-36	DU5	2.0-3.0	01/22/24	0.010U,*1	0.010U	0.100U,*+	0.100U,*1	0.250U	0.010U	0.100U	0.100U	10.0U	10.0U
	DU5-0-6		0.0-0.5	01/22/24	0.011U,*1	0.011U	0.110U,*+	0.110U,*1	0.260U	0.011U	0.110U	0.110U	11.0U	11.0U
	DU5-6-12		0.5-1.0	01/22/24	0.011U,*1	0.011U	0.110U,*+	0.110U,*1	0.270U	0.011U	0.110U	0.110U	11.0U	11.0U
	DU5-12-18		1.0-1.5	01/22/24	0.010U,*1	0.010U	0.100U,*+	0.100U,*1	0.260U	0.010U	0.100U	0.100U	10.0U	10.0U
	DU5-18-24		1.5-2.0	01/22/24	0.011U,*1	0.011U	0.110U,*+	0.110U,*1	0.260U	0.011U	0.110U	0.110U	11.0U	11.0U
DU5-24-36	2.0-3.0	01/22/24	0.010U,*1	0.010U	0.100U,*+	0.100U,*1	0.260U	0.010U	0.100U	0.100U	10.0U	10.0U		
DEQ RBCs (a)	Ingestion, Dermal Contact and Inhalation (b)			OCC.	NE	NE	8,200	NE	NE	NE	NE	NE	410	NE
				C. W.	NE	NE	2,700	NE	NE	NE	NE	NE	130	NE
				E. W.	NE	NE	74,000	NE	NE	NE	NE	NE	3,700	NE
	Volatilization to Outdoor Air (c)			OCC.	NE	NE	NV	NE	NE	NE	NE	NE	NV	NE
	Leaching to Groundwater (d)			OCC.	NE	NE	16	NE	NE	NE	NE	NE	0.61	NE
DEQ's clean fill values (e)					4.1	3.7	16	25	7.2	9	NE	7.8	0.61	NE
USEPA RSLs (f)	Carcinogenic TR = 1E-06	Ingestion	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
		Dermal	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
		Inhalation	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
		Carcinogenic	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Noncancer HI = 1	Ingestion	I. & W.	12,000	9,300	12,000	NE	35,000	35,000	NE	1,200	580	1,200	
		Dermal	I. & W.	28,000	22,000	55,000	NE	83,000	83,000	NE	2,800	1,400	2,800	
		Inhalation	I. & W.	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
		Carcinogenic	I. & W.	8,200	6,600	9,600	NE	25,000	25,000	NE	820	410	820	

Table 4. Soil Samples Analytical Results - Chlorinated Herbicides
Supplemental Investigation: Hillcrest Development Site - 3283 Hillcrest Road, Medford, Oregon; Lot 1 and Lot 2 of Map 371W21D and Taxlot 300

Notes:

The laboratory MRL that exceeds one or more RBCs are indicated with bold blue font.

Data Qualifiers:

*+ - LCS and/or LCSD is outside acceptance limits, high biased.

*1 - LCS / LCSD RPD exceeds control limits.

U - The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.

Footnotes:

(a) Risk-Based Concentrations are referenced from the June 2023 update to the DEQ's Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites guidance document dated September 2003.

(b) This pathway is applicable anytime someone is likely to come into contact with contaminated soil. For the occupational scenario, exposure to contaminated soils should be considered for all contaminants found in the top three feet of soil.

(c) This pathway is applicable whenever vadose zone soils are contaminated with volatile compounds.

(d) This pathway is applicable whenever vadose zone contamination is found overlying an aquifer that is currently used or is reasonably likely to be used in the future for drinking water.

(e) Clean Fill Values are referenced from the DEQ's Clean Fill Determinations guidance document dated February 2019.

(f) Regional Screening Levels (RSLs) are referenced from the May 2022 update to the USEPA Generic Tables.

Symbols/Acronyms:

bgs - below ground surface

C. W. - construction worker receptors

>Csat - The soil RBC exceeds the limit of three-phase equilibrium partitioning.

Soil concentrations in excess of this value indicate free product might be present.

DEQ - Department of Environmental Quality

DU - decision unit

E. W. - excavation worker receptors

ft - feet

HI - Hazard Index

I & W. - industrial and worker receptors

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

>Max - The constituent RBC for this pathway is greater than 1,000,000 mg/Kg or 1,000,000 mg/L.

Therefore, these substances are not expected to pose risks in the scenario shown.

MDL - Method Detection Limit

mg/kg - milligrams per kilogram

MRL - Method Reporting Limit

MS - Matrix Spike

MSD - Matrix Spike Duplicate

NE - No RBCs or RSLs are established for this constituent.

NV - The chemical is considered "nonvolatile" for the purposes of the exposure calculations.

OCC. - occupational receptors

RPD - Relative Percent Difference,

RBC - risk-based concentration

RSLs - Regional Screening Levels

TP - test pit

TR - Target Risk

USEPA - United States Environmental Protection Agency

APPENDIX 1

Photographic Documentation



1. Test Pit TP13.



4. Test Pit TP14.



2. Test Pit TP13.



5. Test Pit TP14.



3. Test Pit TP14.



6. Test Pit TP15.



7. Test Pit TP15.



10. Test Pit TP17.



8. Test Pit TP16.



11. Test Pit TP17.



9. Test Pit TP16.



12. Test Pit TP18.



13. Test Pit TP18.



16. Test Pit TP20.



14. Test Pit TP19.



17. Test Pit TP20.



15. Test Pit TP19.

APPENDIX 2

Complete Laboratory Results



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Wednesday, March 6, 2024

Jonathan Williams

Alpine Environmental Consultants

12210 Antioch Road

White City, OR 97503

RE: A4A1444 - Hillcrest Orchards - [none]

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A4A1444, which was received by the laboratory on 1/25/2024 at 11:19:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: dthomas@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information			
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>			
(See Cooler Receipt Form for details)			
Cooler #1	3.2	degC	Cooler #2 4.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Darwin Thomas, Business Development Director

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Alpine Environmental Consultants**12210 Antioch Road
White City, OR 97503Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:****A4A1444 - 03 06 24 0800****ANALYTICAL REPORT FOR SAMPLES****SAMPLE INFORMATION**

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DU4-0-6	A4A1444-41	Soil	01/22/24 12:04	01/25/24 11:19
DU4-0-6	A4A1444-42	Soil	01/22/24 12:04	01/25/24 11:19
DU4-6-12	A4A1444-43	Soil	01/22/24 12:03	01/25/24 11:19
DU4-6-12	A4A1444-44	Soil	01/22/24 12:03	01/25/24 11:19
DU4-12-18	A4A1444-45	Soil	01/22/24 12:02	01/25/24 11:19
DU4-12-18	A4A1444-46	Soil	01/22/24 12:02	01/25/24 11:19
DU4-18-24	A4A1444-47	Soil	01/22/24 12:01	01/25/24 11:19
DU4-18-24	A4A1444-48	Soil	01/22/24 12:01	01/25/24 11:19
DU4-24-36	A4A1444-49	Soil	01/22/24 12:00	01/25/24 11:19
DU4-24-36	A4A1444-50	Soil	01/22/24 12:00	01/25/24 11:19
DU5-0-6	A4A1444-51	Soil	01/22/24 12:41	01/25/24 11:19
DU5-0-6	A4A1444-52	Soil	01/22/24 12:41	01/25/24 11:19
DU5-6-12	A4A1444-53	Soil	01/22/24 12:42	01/25/24 11:19
DU5-6-12	A4A1444-54	Soil	01/22/24 12:42	01/25/24 11:19
DU5-12-18	A4A1444-55	Soil	01/22/24 12:43	01/25/24 11:19
DU5-12-18	A4A1444-56	Soil	01/22/24 12:43	01/25/24 11:19
DU5-18-24	A4A1444-57	Soil	01/22/24 12:44	01/25/24 11:19
DU5-18-24	A4A1444-58	Soil	01/22/24 12:44	01/25/24 11:19
DU5-24-36	A4A1444-59	Soil	01/22/24 12:45	01/25/24 11:19
DU5-24-36	A4A1444-60	Soil	01/22/24 12:45	01/25/24 11:19

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-0-6 (A4A1444-42RE1)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
Aldrin [2C]	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
alpha-BHC [2C]	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
beta-BHC [2C]	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
delta-BHC [2C]	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
gamma-BHC (Lindane) [2C]	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
cis-Chlordane	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
trans-Chlordane	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
4,4'-DDD [2C]	0.0696	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
Dieldrin [2C]	0.159	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
Endosulfan I [2C]	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
Endosulfan II [2C]	ND	---	0.00525	mg/kg dry	1	02/06/24 19:32	EPA 8081B	R-02
Endosulfan sulfate [2C]	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
Endrin	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
Endrin aldehyde	ND	---	0.00258	mg/kg dry	1	02/06/24 19:32	EPA 8081B	R-02
Endrin ketone [2C]	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
Heptachlor [2C]	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
Heptachlor epoxide [2C]	ND	---	0.00184	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
Methoxychlor	ND	---	0.0167	mg/kg dry	1	02/06/24 19:32	EPA 8081B	R-02
Chlordane (Technical) [2C]	ND	---	0.0553	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
Toxaphene (Total) [2C]	ND	---	0.0553	mg/kg dry	1	02/06/24 19:32	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Recovery: 60 %		Limits: 42-129 %	1	02/06/24 19:32	EPA 8081B	
Decachlorobiphenyl (Surr)		84 %		55-130 %	1	02/06/24 19:32	EPA 8081B	
DU4-0-6 (A4A1444-42RE2)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
4,4'-DDE [2C]	1.36	---	0.0369	mg/kg dry	20	02/07/24 12:53	EPA 8081B	
4,4'-DDT [2C]	0.728	---	0.0369	mg/kg dry	20	02/07/24 12:53	EPA 8081B	
DU4-6-12 (A4A1444-44RE1)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
Aldrin [2C]	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
alpha-BHC [2C]	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
beta-BHC [2C]	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
delta-BHC [2C]	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
gamma-BHC (Lindane) [2C]	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
cis-Chlordane	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-6-12 (A4A1444-44RE1)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
trans-Chlordane	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
4,4'-DDD [2C]	0.0520	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
Dieldrin [2C]	0.118	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
Endosulfan I [2C]	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
Endosulfan II	ND	---	0.00313	mg/kg dry	1	02/06/24 20:05	EPA 8081B	R-02
Endosulfan sulfate [2C]	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
Endrin	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
Endrin aldehyde	ND	---	0.00188	mg/kg dry	1	02/06/24 20:05	EPA 8081B	R-02
Endrin ketone [2C]	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
Heptachlor [2C]	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
Heptachlor epoxide [2C]	ND	---	0.00179	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
Methoxychlor	ND	---	0.0119	mg/kg dry	1	02/06/24 20:05	EPA 8081B	R-02
Chlordane (Technical) [2C]	ND	---	0.0536	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
Toxaphene (Total) [2C]	ND	---	0.0536	mg/kg dry	1	02/06/24 20:05	EPA 8081B	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>		<i>Recovery: 64 %</i>		<i>Limits: 42-129 %</i>	<i>1</i>	<i>02/06/24 20:05</i>	<i>EPA 8081B</i>	
<i>Decachlorobiphenyl (Surr)</i>		<i>91 %</i>		<i>55-130 %</i>	<i>1</i>	<i>02/06/24 20:05</i>	<i>EPA 8081B</i>	
DU4-6-12 (A4A1444-44RE2)		Matrix: Soil		Batch: 24B0119		PRO, C-05		
4,4'-DDE [2C]	1.09	---	0.0358	mg/kg dry	20	02/07/24 13:26	EPA 8081B	
4,4'-DDT [2C]	0.484	---	0.0358	mg/kg dry	20	02/07/24 13:26	EPA 8081B	
DU4-12-18 (A4A1444-46RE1)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
Aldrin [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
alpha-BHC [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
beta-BHC [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
delta-BHC [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
gamma-BHC (Lindane) [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
cis-Chlordane [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
trans-Chlordane [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
4,4'-DDD [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
4,4'-DDE [2C]	0.0950	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
4,4'-DDT [2C]	0.0260	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
Dieldrin [2C]	0.00459	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-12-18 (A4A1444-46RE1)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
Endosulfan I [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
Endosulfan II [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
Endosulfan sulfate [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
Endrin	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
Endrin aldehyde	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
Endrin ketone [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
Heptachlor [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
Heptachlor epoxide [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
Methoxychlor [2C]	ND	---	0.00536	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
Chlordane (Technical) [2C]	ND	---	0.0536	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
Toxaphene (Total) [2C]	ND	---	0.0536	mg/kg dry	1	02/07/24 10:59	EPA 8081B	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>		<i>Recovery: 51 %</i>		<i>Limits: 42-129 %</i>	<i>1</i>	<i>02/07/24 10:59</i>	<i>EPA 8081B</i>	
<i>Decachlorobiphenyl (Surr)</i>		<i>83 %</i>		<i>55-130 %</i>	<i>1</i>	<i>02/07/24 10:59</i>	<i>EPA 8081B</i>	
DU4-18-24 (A4A1444-48RE1)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
Aldrin [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
alpha-BHC [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
beta-BHC [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
delta-BHC [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
gamma-BHC (Lindane) [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
cis-Chlordane [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
trans-Chlordane [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
4,4'-DDD [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
4,4'-DDE [2C]	0.00948	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
4,4'-DDT [2C]	0.00209	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
Dieldrin [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
Endosulfan I [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
Endosulfan II [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
Endosulfan sulfate [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
Endrin [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
Endrin aldehyde [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
Endrin ketone [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
Heptachlor [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:**

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-18-24 (A4A1444-48RE1)				Matrix: Soil		Batch: 24B0119		C-05, PRO
Heptachlor epoxide [2C]	ND	---	0.00169	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
Methoxychlor [2C]	ND	---	0.00506	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
Chlordane (Technical) [2C]	ND	---	0.0506	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
Toxaphene (Total) [2C]	ND	---	0.0506	mg/kg dry	1	02/07/24 11:16	EPA 8081B	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>			<i>Recovery: 57 %</i>	<i>Limits: 42-129 %</i>	<i>1</i>	<i>02/07/24 11:16</i>	<i>EPA 8081B</i>	
<i>Decachlorobiphenyl (Surr)</i>			<i>85 %</i>	<i>55-130 %</i>	<i>1</i>	<i>02/07/24 11:16</i>	<i>EPA 8081B</i>	
DU4-24-36 (A4A1444-50RE1)				Matrix: Soil		Batch: 24B0119		C-05, PRO
Aldrin [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
alpha-BHC [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
beta-BHC [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
delta-BHC [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
gamma-BHC (Lindane) [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
cis-Chlordane [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
trans-Chlordane [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
4,4'-DDD [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
4,4'-DDE [2C]	0.00568	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
4,4'-DDT [2C]	0.00305	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Dieldrin [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Endosulfan I [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Endosulfan II [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Endosulfan sulfate [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Endrin [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Endrin aldehyde [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Endrin ketone [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Heptachlor [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Heptachlor epoxide [2C]	ND	---	0.00180	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Methoxychlor [2C]	ND	---	0.00541	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Chlordane (Technical) [2C]	ND	---	0.0541	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
Toxaphene (Total) [2C]	ND	---	0.0541	mg/kg dry	1	02/07/24 11:32	EPA 8081B	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>			<i>Recovery: 57 %</i>	<i>Limits: 42-129 %</i>	<i>1</i>	<i>02/07/24 11:32</i>	<i>EPA 8081B</i>	
<i>Decachlorobiphenyl (Surr)</i>			<i>90 %</i>	<i>55-130 %</i>	<i>1</i>	<i>02/07/24 11:32</i>	<i>EPA 8081B</i>	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-0-6 (A4A1444-52RE1)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
Aldrin [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
alpha-BHC [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
beta-BHC [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
delta-BHC [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
gamma-BHC (Lindane) [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
cis-Chlordane	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
trans-Chlordane	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
4,4'-DDD [2C]	0.0160	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
Dieldrin	0.0768	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
Endosulfan I [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
Endosulfan II [2C]	ND	---	0.00242	mg/kg dry	1	02/07/24 11:48	EPA 8081B	R-02
Endosulfan sulfate	ND	---	0.00358	mg/kg dry	1	02/07/24 11:48	EPA 8081B	R-02
Endrin	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
Endrin aldehyde	ND	---	0.00233	mg/kg dry	1	02/07/24 11:48	EPA 8081B	R-02
Endrin ketone [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
Heptachlor [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
Heptachlor epoxide [2C]	ND	---	0.00179	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
Methoxychlor	ND	---	0.0139	mg/kg dry	1	02/07/24 11:48	EPA 8081B	R-02
Chlordane (Technical) [2C]	ND	---	0.0537	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
Toxaphene (Total) [2C]	ND	---	0.0537	mg/kg dry	1	02/07/24 11:48	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Recovery: 64 %		Limits: 42-129 %	1	02/07/24 11:48	EPA 8081B	
Decachlorobiphenyl (Surr)		91 %		55-130 %	1	02/07/24 11:48	EPA 8081B	
DU5-0-6 (A4A1444-52RE2)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
4,4'-DDE [2C]	1.10	---	0.0358	mg/kg dry	20	02/07/24 14:47	EPA 8081B	
4,4'-DDT [2C]	0.335	---	0.0358	mg/kg dry	20	02/07/24 14:47	EPA 8081B	
DU5-6-12 (A4A1444-54RE1)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
Aldrin [2C]	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
alpha-BHC [2C]	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
beta-BHC [2C]	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
delta-BHC [2C]	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
gamma-BHC (Lindane) [2C]	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
cis-Chlordane	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-6-12 (A4A1444-54RE1)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
trans-Chlordane	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
4,4'-DDD [2C]	0.00626	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Dieldrin	0.0431	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Endosulfan I [2C]	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Endosulfan II	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Endosulfan sulfate [2C]	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Endrin	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Endrin aldehyde	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Endrin ketone [2C]	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Heptachlor [2C]	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Heptachlor epoxide [2C]	ND	---	0.00184	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Methoxychlor	ND	---	0.00552	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Chlordane (Technical) [2C]	ND	---	0.0552	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
Toxaphene (Total) [2C]	ND	---	0.0552	mg/kg dry	1	02/07/24 12:04	EPA 8081B	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>		<i>Recovery: 56 %</i>		<i>Limits: 42-129 %</i>	<i>1</i>	<i>02/07/24 12:04</i>	<i>EPA 8081B</i>	
<i>Decachlorobiphenyl (Surr)</i>		<i>86 %</i>		<i>55-130 %</i>	<i>1</i>	<i>02/07/24 12:04</i>	<i>EPA 8081B</i>	
DU5-6-12 (A4A1444-54RE2)		Matrix: Soil		Batch: 24B0119		PRO, C-05		
4,4'-DDE [2C]	0.644	---	0.0184	mg/kg dry	10	02/07/24 15:03	EPA 8081B	
4,4'-DDT [2C]	0.193	---	0.0184	mg/kg dry	10	02/07/24 15:03	EPA 8081B	
DU5-12-18 (A4A1444-56RE1)		Matrix: Soil		Batch: 24B0119		C-05, PRO		
Aldrin [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
alpha-BHC [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
beta-BHC [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
delta-BHC [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
gamma-BHC (Lindane) [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
cis-Chlordane [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
trans-Chlordane [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
4,4'-DDD [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Dieldrin	0.0114	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Endosulfan I [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Endosulfan II [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Endosulfan sulfate [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-12-18 (A4A1444-56RE1)				Matrix: Soil		Batch: 24B0119	C-05, PRO	
Endrin	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Endrin aldehyde	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Endrin ketone [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Heptachlor [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Heptachlor epoxide [2C]	ND	---	0.00183	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Methoxychlor	ND	---	0.00549	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Chlordane (Technical) [2C]	ND	---	0.0549	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Toxaphene (Total) [2C]	ND	---	0.0549	mg/kg dry	1	02/07/24 12:21	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Recovery: 53 %		Limits: 42-129 %	1	02/07/24 12:21	EPA 8081B	
Decachlorobiphenyl (Surr)		85 %		55-130 %	1	02/07/24 12:21	EPA 8081B	
DU5-12-18 (A4A1444-56RE2)				Matrix: Soil		Batch: 24B0119	C-05, PRO	
4,4'-DDE [2C]	0.207	---	0.00916	mg/kg dry	5	02/07/24 15:20	EPA 8081B	
4,4'-DDT [2C]	0.0522	---	0.00916	mg/kg dry	5	02/07/24 15:20	EPA 8081B	
DU5-18-24 (A4A1444-58RE1)				Matrix: Soil		Batch: 24B0119	C-05, PRO	
Aldrin [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
alpha-BHC [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
beta-BHC [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
delta-BHC [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
gamma-BHC (Lindane) [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
cis-Chlordane [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
trans-Chlordane [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
4,4'-DDD [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
4,4'-DDE [2C]	0.0682	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
4,4'-DDT [2C]	0.0195	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
Dieldrin	0.00189	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
Endosulfan I [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
Endosulfan II [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
Endosulfan sulfate [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
Endrin	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
Endrin aldehyde	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
Endrin ketone [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
Heptachlor [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:****A4A1444 - 03 06 24 0800**

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-18-24 (A4A1444-58RE1)				Matrix: Soil		Batch: 24B0119		C-05, PRO
Heptachlor epoxide [2C]	ND	---	0.00173	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
Methoxychlor [2C]	ND	---	0.00518	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
Chlordane (Technical) [2C]	ND	---	0.0518	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
Toxaphene (Total) [2C]	ND	---	0.0518	mg/kg dry	1	02/07/24 12:37	EPA 8081B	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>			<i>Recovery: 63 %</i>	<i>Limits: 42-129 %</i>	<i>1</i>	<i>02/07/24 12:37</i>	<i>EPA 8081B</i>	
<i>Decachlorobiphenyl (Surr)</i>			<i>80 %</i>	<i>55-130 %</i>	<i>1</i>	<i>02/07/24 12:37</i>	<i>EPA 8081B</i>	
DU5-24-36 (A4A1444-60RE1)				Matrix: Soil		Batch: 24B0119		C-05, PRO
Aldrin [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
alpha-BHC [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
beta-BHC [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
delta-BHC [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
gamma-BHC (Lindane) [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
cis-Chlordane [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
trans-Chlordane [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
4,4'-DDD [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
4,4'-DDE [2C]	0.0267	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
4,4'-DDT [2C]	0.00661	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Dieldrin [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Endosulfan I [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Endosulfan II [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Endosulfan sulfate [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Endrin [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Endrin aldehyde	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Endrin ketone [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Heptachlor [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Heptachlor epoxide [2C]	ND	---	0.00175	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Methoxychlor [2C]	ND	---	0.00524	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Chlordane (Technical) [2C]	ND	---	0.0524	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
Toxaphene (Total) [2C]	ND	---	0.0524	mg/kg dry	1	02/06/24 20:21	EPA 8081B	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>			<i>Recovery: 68 %</i>	<i>Limits: 42-129 %</i>	<i>1</i>	<i>02/06/24 20:21</i>	<i>EPA 8081B</i>	
<i>Decachlorobiphenyl (Surr)</i>			<i>94 %</i>	<i>55-130 %</i>	<i>1</i>	<i>02/06/24 20:21</i>	<i>EPA 8081B</i>	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-0-6 (A4A1444-42RE1)				Matrix: Soil		Batch: 24B0134		PRO
Azinphos methyl (Guthion)	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Chlorpyrifos	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Coumaphos	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Demeton O	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Demeton S	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Diazinon	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Dichlorvos	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Dimethoate	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Disulfoton	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
EPN	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Ethoprop	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Fensulfthion	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Fenthion	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Malathion	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Merphos	ND	---	0.107	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	R-02
Methyl parathion	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Mevinphos (Phosdrin)	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Monocrotophos	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Naled (Dibrom)	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Parathion, ethyl	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Phorate	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Ronnel (Fenchlorphos)	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Sulfotep	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Sulprofos (Bolstar)	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
TEPP	ND	---	0.177	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Tetrachlorvinphos (Rabon)	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Tokuthion (Prothiofos)	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Trichloronate	ND	---	0.0443	mg/kg dry	1	02/05/24 20:14	EPA 8270E OPPs	
Surrogate: Tributyl phosphate (Surr)		Recovery: 26 %		Limits: 10-136 %	1	02/05/24 20:14	EPA 8270E OPPs	
Triphenyl phosphate (Surr)		37 %		34-121 %	1	02/05/24 20:14	EPA 8270E OPPs	

DU4-6-12 (A4A1444-44)**Matrix: Soil****Batch: 24B0134****PRO**

Azinphos methyl (Guthion)	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs
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Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road

White City, OR 97503

Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-6-12 (A4A1444-44)				Matrix: Soil		Batch: 24B0134		PRO
Chlorpyrifos	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Coumaphos	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Demeton O	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Demeton S	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Diazinon	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Dichlorvos	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Dimethoate	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Disulfoton	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
EPN	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Ethoprop	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Fensulfothion	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Fenthion	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Malathion	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Merphos	ND	---	0.345	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	R-02
Methyl parathion	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Mevinphos (Phosdrin)	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Monocrotophos	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Naled (Dibrom)	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Parathion, ethyl	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Phorate	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Ronnel (Fenchlorphos)	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Sulfotep	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Sulprofos (Bolstar)	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
TEPP	ND	---	0.173	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Tetrachlorvinphos (Rabon)	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Tokuthion (Prothiofos)	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Trichloronate	ND	---	0.0434	mg/kg dry	1	02/05/24 22:32	EPA 8270E OPPs	
Surrogate: Tributyl phosphate (Surr)		Recovery: 16 %		Limits: 10-136 %	1	02/05/24 22:32	EPA 8270E OPPs	
Triphenyl phosphate (Surr)		29 %		34-121 %	1	02/05/24 22:32	EPA 8270E OPPs	S-03
DU4-12-18 (A4A1444-46)				Matrix: Soil		Batch: 24B0134		PRO
Azinphos methyl (Guthion)	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Chlorpyrifos	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road

White City, OR 97503

Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-12-18 (A4A1444-46)				Matrix: Soil		Batch: 24B0134		PRO
Coumaphos	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Demeton O	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Demeton S	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Diazinon	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Dichlorvos	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Dimethoate	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Disulfoton	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
EPN	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Ethoprop	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Fensulfothion	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Fenthion	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Malathion	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Merphos	ND	---	0.133	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	R-02
Methyl parathion	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Mevinphos (Phosdrin)	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Monocrotophos	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Naled (Dibrom)	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Parathion, ethyl	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Phorate	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Ronnel (Fenchlorphos)	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Sulfotep	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Sulprofos (Bolstar)	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
TEPP	ND	---	0.180	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Tetrachlorvinphos (Rabon)	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Tokuthion (Prothiofos)	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Trichloronate	ND	---	0.0451	mg/kg dry	1	02/05/24 23:07	EPA 8270E OPPs	
Surrogate: Tributyl phosphate (Surr)		Recovery:	12 %	Limits: 10-136 %	1	02/05/24 23:07	EPA 8270E OPPs	
Triphenyl phosphate (Surr)			16 %	34-121 %	1	02/05/24 23:07	EPA 8270E OPPs	S-03
DU4-18-24 (A4A1444-48)				Matrix: Soil		Batch: 24B0134		PRO
Azinphos methyl (Guthion)	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Chlorpyrifos	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Coumaphos	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	

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Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road

White City, OR 97503

Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-18-24 (A4A1444-48)				Matrix: Soil		Batch: 24B0134		PRO
Demeton O	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Demeton S	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Diazinon	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Dichlorvos	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Dimethoate	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Disulfoton	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
EPN	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Ethoprop	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Fensulfothion	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Fenthion	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Malathion	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Merphos	ND	---	0.0704	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	R-02
Methyl parathion	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Mevinphos (Phosdrin)	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Monocrotophos	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Naled (Dibrom)	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Parathion, ethyl	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Phorate	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Ronnel (Fenchlorphos)	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Sulfotep	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Sulprofos (Bolstar)	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
TEPP	ND	---	0.178	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Tetrachlorvinphos (Rabon)	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Tokuthion (Prothiofos)	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Trichloronate	ND	---	0.0446	mg/kg dry	1	02/05/24 23:41	EPA 8270E OPPs	
Surrogate: Tributyl phosphate (Surr)		Recovery: 11 %		Limits: 10-136 %	1	02/05/24 23:41	EPA 8270E OPPs	
Triphenyl phosphate (Surr)		20 %		34-121 %	1	02/05/24 23:41	EPA 8270E OPPs	S-03
DU4-24-36 (A4A1444-50)				Matrix: Soil		Batch: 24B0134		PRO
Azinphos methyl (Guthion)	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Chlorpyrifos	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Coumaphos	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Demeton O	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-24-36 (A4A1444-50)				Matrix: Soil		Batch: 24B0134		PRO
Demeton S	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Diazinon	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Dichlorvos	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Dimethoate	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Disulfoton	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
EPN	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Ethoprop	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Fensulfothion	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Fenthion	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Malathion	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Merphos	ND	---	0.0542	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	R-02
Methyl parathion	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Mevinphos (Phosdrin)	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Monocrotophos	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Naled (Dibrom)	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Parathion, ethyl	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Phorate	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Ronnel (Fenchlorphos)	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Sulfotep	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Sulprofos (Bolstar)	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
TEPP	ND	---	0.175	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Tetrachlorvinphos (Rabon)	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Tokuthion (Prothiofos)	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Trichloronate	ND	---	0.0437	mg/kg dry	1	02/06/24 00:16	EPA 8270E OPPs	
Surrogate: Tributyl phosphate (Surr)		Recovery: 13 %		Limits: 10-136 %	1	02/06/24 00:16	EPA 8270E OPPs	
Triphenyl phosphate (Surr)		23 %		34-121 %	1	02/06/24 00:16	EPA 8270E OPPs	S-03
DU5-0-6 (A4A1444-52)				Matrix: Soil		Batch: 24B0134		PRO
Azinphos methyl (Guthion)	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Chlorpyrifos	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Coumaphos	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Demeton O	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Demeton S	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-0-6 (A4A1444-52)				Matrix: Soil		Batch: 24B0134		PRO
Diazinon	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	R-02
Dichlorvos	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Dimethoate	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Disulfoton	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
EPN	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Ethoprop	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Fensulfothion	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Fenthion	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Malathion	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Merphos	ND	---	0.161	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Methyl parathion	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Mevinphos (Phosdrin)	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Monocrotophos	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Naled (Dibrom)	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Parathion, ethyl	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Phorate	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Ronnel (Fenchlorphos)	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Sulfotep	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Sulprofos (Bolstar)	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
TEPP	ND	---	0.180	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Tetrachlorvinphos (Rabon)	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Tokuthion (Prothiofos)	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Trichloronate	ND	---	0.0451	mg/kg dry	1	02/06/24 00:51	EPA 8270E OPPs	
Surrogate: Tributyl phosphate (Surr)		Recovery: 20 %		Limits: 10-136 %	1	02/06/24 00:51	EPA 8270E OPPs	
Triphenyl phosphate (Surr)		31 %		34-121 %	1	02/06/24 00:51	EPA 8270E OPPs	S-03
DU5-6-12 (A4A1444-54)				Matrix: Soil		Batch: 24B0134		PRO
Azinphos methyl (Guthion)	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Chlorpyrifos	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Coumaphos	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Demeton O	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Demeton S	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Diazinon	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Alpine Environmental Consultants
12210 Antioch Road
White City, OR 97503

Project: **Hillcrest Orchards**
Project Number: [none]
Project Manager: **Jonathan Williams**

Report ID:
A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-6-12 (A4A1444-54)				Matrix: Soil		Batch: 24B0134		PRO
Dichlorvos	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Dimethoate	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Disulfoton	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
EPN	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Ethoprop	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Fensulfothion	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Fenthion	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Malathion	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Merphos	ND	---	0.165	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	R-02
Methyl parathion	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Mevinphos (Phosdrin)	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Monocrotophos	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Naled (Dibrom)	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Parathion, ethyl	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Phorate	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Ronnel (Fenchlorphos)	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Sulfotep	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Sulprofos (Bolstar)	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
TEPP	ND	---	0.172	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Tetrachlorvinphos (Rabon)	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Tokuthion (Prothiofos)	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Trichloronate	ND	---	0.0431	mg/kg dry	1	02/06/24 01:26	EPA 8270E OPPs	
Surrogate: Tributyl phosphate (Surr)		Recovery:	15 %	Limits:	10-136 %	1	02/06/24 01:26	EPA 8270E OPPs
Triphenyl phosphate (Surr)			25 %		34-121 %	1	02/06/24 01:26	EPA 8270E OPPs S-03
DU5-12-18 (A4A1444-56)				Matrix: Soil		Batch: 24B0134		PRO
Azinphos methyl (Guthion)	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Chlorpyrifos	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Coumaphos	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Demeton O	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Demeton S	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Diazinon	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Dichlorvos	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-12-18 (A4A1444-56)				Matrix: Soil		Batch: 24B0134		PRO
Dimethoate	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Disulfoton	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
EPN	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Ethoprop	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Fensulfothion	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Fenthion	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Malathion	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Merphos	ND	---	0.143	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	R-02
Methyl parathion	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Mevinphos (Phosdrin)	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Monocrotophos	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Naled (Dibrom)	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Parathion, ethyl	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Phorate	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Ronnel (Fenchlorphos)	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Sulfotep	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Sulprofos (Bolstar)	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
TEPP	ND	---	0.178	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Tetrachlorvinphos (Rabon)	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Tokuthion (Prothiofos)	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Trichloronate	ND	---	0.0446	mg/kg dry	1	02/06/24 02:00	EPA 8270E OPPs	
Surrogate: Tributyl phosphate (Surr)		Recovery: 15 %		Limits: 10-136 %	1	02/06/24 02:00	EPA 8270E OPPs	
Triphenyl phosphate (Surr)		26 %		34-121 %	1	02/06/24 02:00	EPA 8270E OPPs	S-03
DU5-18-24 (A4A1444-58)				Matrix: Soil		Batch: 24B0134		PRO
Azinphos methyl (Guthion)	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Chlorpyrifos	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Coumaphos	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Demeton O	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Demeton S	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Diazinon	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Dichlorvos	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Dimethoate	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	

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Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-18-24 (A4A1444-58)				Matrix: Soil		Batch: 24B0134		PRO
Disulfoton	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
EPN	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Ethoprop	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Fensulfothion	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Fenthion	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Malathion	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Merphos	ND	---	0.0933	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	R-02
Methyl parathion	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Mevinphos (Phosdrin)	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Monocrotophos	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Naled (Dibrom)	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Parathion, ethyl	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Phorate	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Ronnel (Fenchlorphos)	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Sulfotep	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Sulprofos (Bolstar)	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
TEPP	ND	---	0.181	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Tetrachlorvinphos (Rabon)	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Tokuthion (Prothiofos)	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Trichloronate	ND	---	0.0453	mg/kg dry	1	02/06/24 02:34	EPA 8270E OPPs	
Surrogate: Tributyl phosphate (Surr)		Recovery: 16 %		Limits: 10-136 %	1	02/06/24 02:34	EPA 8270E OPPs	
Triphenyl phosphate (Surr)		25 %		34-121 %	1	02/06/24 02:34	EPA 8270E OPPs	S-03
DU5-24-36 (A4A1444-60)				Matrix: Soil		Batch: 24B0134		PRO
Azinphos methyl (Guthion)	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	
Chlorpyrifos	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Coumaphos	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	
Demeton O	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Demeton S	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Diazinon	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Dichlorvos	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Dimethoate	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Disulfoton	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-24-36 (A4A1444-60)				Matrix: Soil		Batch: 24B0134		PRO
EPN	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	
Ethoprop	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Fensulfothion	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Fenthion	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Malathion	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Merphos	ND	---	0.0510	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	R-02
Methyl parathion	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	
Mevinphos (Phosdrin)	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Monocrotophos	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Naled (Dibrom)	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Parathion, ethyl	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	
Phorate	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	
Ronnel (Fenchlorphos)	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	
Sulfotep	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Sulprofos (Bolstar)	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	
TEPP	ND	---	0.179	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Tetrachlorvinphos (Rabon)	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	Q-42
Tokuthion (Prothiofos)	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	
Trichloronate	ND	---	0.0448	mg/kg dry	1	02/05/24 21:23	EPA 8270E OPPs	
Surrogate: Tributyl phosphate (Surr)		Recovery: 19 %		Limits: 10-136 %	1	02/05/24 21:23	EPA 8270E OPPs	
Triphenyl phosphate (Surr)		26 %		34-121 %	1	02/05/24 21:23	EPA 8270E OPPs	S-03

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**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Alpine Environmental Consultants**12210 Antioch Road
White City, OR 97503Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:****A4A1444 - 03 06 24 0800****ANALYTICAL SAMPLE RESULTS****Total Metals by EPA 6020B (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-0-6 (A4A1444-42)		Matrix: Soil						
Batch: 24A0946								
Antimony	ND	---	1.08	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Arsenic	73.2	---	1.08	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Barium	189	---	1.08	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Beryllium	0.714	---	0.216	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Cadmium	ND	---	0.216	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Chromium	28.5	---	1.08	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Cobalt	17.8	---	1.08	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Copper	67.5	---	2.16	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Lead	241	---	0.216	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Mercury	ND	---	0.0866	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Molybdenum	ND	---	1.08	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Nickel	31.7	---	2.16	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Selenium	ND	---	1.08	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Silver	ND	---	0.216	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Thallium	ND	---	0.216	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Vanadium	78.3	---	2.16	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
Zinc	87.2	---	4.33	mg/kg dry	10	01/31/24 02:36	EPA 6020B	PRO
DU4-6-12 (A4A1444-44)		Matrix: Soil						
Batch: 24A0946								
Antimony	ND	---	1.09	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Arsenic	88.3	---	1.09	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Barium	203	---	1.09	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Beryllium	0.752	---	0.219	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Cadmium	ND	---	0.219	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Chromium	26.6	---	1.09	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Cobalt	17.9	---	1.09	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Copper	53.9	---	2.19	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Lead	289	---	0.219	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Mercury	ND	---	0.0875	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Molybdenum	ND	---	1.09	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Nickel	32.6	---	2.19	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Selenium	ND	---	1.09	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-6-12 (A4A1444-44)				Matrix: Soil				
Silver	ND	---	0.219	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Thallium	ND	---	0.219	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Vanadium	71.3	---	2.19	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
Zinc	80.4	---	4.38	mg/kg dry	10	01/31/24 03:06	EPA 6020B	PRO
DU4-12-18 (A4A1444-46)				Matrix: Soil				
Batch: 24A0946								
Antimony	ND	---	1.06	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Arsenic	37.2	---	1.06	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Barium	214	---	1.06	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Beryllium	0.801	---	0.212	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Cadmium	ND	---	0.212	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Chromium	29.1	---	1.06	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Cobalt	17.7	---	1.06	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Copper	44.0	---	2.12	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Lead	93.3	---	0.212	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Mercury	ND	---	0.0848	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Molybdenum	ND	---	1.06	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Nickel	37.3	---	2.12	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Selenium	ND	---	1.06	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Silver	ND	---	0.212	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Thallium	0.213	---	0.212	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Vanadium	74.3	---	2.12	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
Zinc	71.8	---	4.24	mg/kg dry	10	01/31/24 03:12	EPA 6020B	PRO
DU4-18-24 (A4A1444-48)				Matrix: Soil				
Batch: 24A0946								
Antimony	ND	---	1.02	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Arsenic	12.2	---	1.02	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Barium	205	---	1.02	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Beryllium	0.759	---	0.204	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Cadmium	ND	---	0.204	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Chromium	26.8	---	1.02	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Cobalt	18.0	---	1.02	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-18-24 (A4A1444-48)				Matrix: Soil				
Copper	40.0	---	2.04	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Lead	27.3	---	0.204	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Mercury	ND	---	0.0816	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Molybdenum	ND	---	1.02	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Nickel	36.6	---	2.04	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Selenium	ND	---	1.02	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Silver	ND	---	0.204	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Thallium	0.220	---	0.204	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Vanadium	73.9	---	2.04	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
Zinc	68.8	---	4.08	mg/kg dry	10	01/31/24 03:18	EPA 6020B	PRO
DU4-24-36 (A4A1444-50)				Matrix: Soil				
Batch: 24A0946								
Antimony	ND	---	1.03	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Arsenic	9.59	---	1.03	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Barium	212	---	1.03	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Beryllium	0.857	---	0.207	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Cadmium	ND	---	0.207	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Chromium	31.6	---	1.03	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Cobalt	18.1	---	1.03	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Copper	42.7	---	2.07	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Lead	15.9	---	0.207	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Mercury	ND	---	0.0828	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Molybdenum	ND	---	1.03	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Nickel	38.9	---	2.07	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Selenium	ND	---	1.03	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Silver	ND	---	0.207	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Thallium	0.220	---	0.207	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Vanadium	79.1	---	2.07	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
Zinc	77.0	---	4.14	mg/kg dry	10	01/31/24 03:24	EPA 6020B	PRO
DU5-0-6 (A4A1444-52)				Matrix: Soil				
Batch: 24A0946								
Antimony	ND	---	1.03	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-0-6 (A4A1444-52)				Matrix: Soil				
Arsenic	77.4	---	1.03	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Barium	220	---	1.03	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Beryllium	0.897	---	0.206	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Cadmium	ND	---	0.206	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Chromium	24.9	---	1.03	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Cobalt	17.4	---	1.03	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Copper	46.7	---	2.06	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Lead	307	---	0.206	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Mercury	ND	---	0.0824	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Molybdenum	ND	---	1.03	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Nickel	32.5	---	2.06	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Selenium	ND	---	1.03	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Silver	ND	---	0.206	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Thallium	ND	---	0.206	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Vanadium	69.7	---	2.06	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
Zinc	70.4	---	4.12	mg/kg dry	10	01/31/24 03:31	EPA 6020B	PRO
DU5-6-12 (A4A1444-54)				Matrix: Soil				
Batch: 24A0946								
Antimony	ND	---	1.07	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Arsenic	49.7	---	1.07	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Barium	234	---	1.07	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Beryllium	0.827	---	0.213	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Cadmium	ND	---	0.213	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Chromium	27.9	---	1.07	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Cobalt	19.3	---	1.07	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Copper	44.3	---	2.13	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Lead	171	---	0.213	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Mercury	ND	---	0.0854	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Molybdenum	ND	---	1.07	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Nickel	34.9	---	2.13	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Selenium	ND	---	1.07	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Silver	ND	---	0.213	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-6-12 (A4A1444-54)				Matrix: Soil				
Thallium	ND	---	0.213	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Vanadium	81.6	---	2.13	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
Zinc	66.9	---	4.27	mg/kg dry	10	01/31/24 03:37	EPA 6020B	PRO
DU5-12-18 (A4A1444-56)				Matrix: Soil				
Batch: 24A0946								
Antimony	ND	---	1.08	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Arsenic	36.7	---	1.08	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Barium	248	---	1.08	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Beryllium	0.802	---	0.216	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Cadmium	ND	---	0.216	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Chromium	29.0	---	1.08	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Cobalt	19.7	---	1.08	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Copper	42.6	---	2.16	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Lead	102	---	0.216	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Mercury	ND	---	0.0864	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Molybdenum	ND	---	1.08	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Nickel	38.8	---	2.16	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Selenium	ND	---	1.08	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Silver	ND	---	0.216	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Thallium	ND	---	0.216	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Vanadium	81.0	---	2.16	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
Zinc	66.5	---	4.32	mg/kg dry	10	01/31/24 03:43	EPA 6020B	PRO
DU5-18-24 (A4A1444-58)				Matrix: Soil				
Batch: 24A0946								
Antimony	ND	---	1.07	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Arsenic	15.1	---	1.07	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Barium	235	---	1.07	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Beryllium	0.792	---	0.213	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Cadmium	ND	---	0.213	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Chromium	30.9	---	1.07	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Cobalt	19.7	---	1.07	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Copper	40.5	---	2.13	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road
White City, OR 97503

Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams**

Report ID:

A4A1444 - 03 06 24 0800

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU5-18-24 (A4A1444-58)				Matrix: Soil				
Lead	40.7	---	0.213	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Mercury	ND	---	0.0853	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Molybdenum	ND	---	1.07	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Nickel	37.5	---	2.13	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Selenium	ND	---	1.07	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Silver	ND	---	0.213	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Thallium	ND	---	0.213	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Vanadium	84.0	---	2.13	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
Zinc	66.3	---	4.27	mg/kg dry	10	01/31/24 03:49	EPA 6020B	PRO
DU5-24-36 (A4A1444-60)				Matrix: Soil				
Batch: 24A0946								
Antimony	ND	---	1.03	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Arsenic	9.86	---	1.03	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Barium	236	---	1.03	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Beryllium	0.774	---	0.206	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Cadmium	ND	---	0.206	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Chromium	35.2	---	1.03	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Cobalt	19.9	---	1.03	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Copper	43.6	---	2.06	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Lead	22.1	---	0.206	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Mercury	ND	---	0.0825	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Molybdenum	ND	---	1.03	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Nickel	40.0	---	2.06	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Selenium	ND	---	1.03	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Silver	ND	---	0.206	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Thallium	ND	---	0.206	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Vanadium	88.5	---	2.06	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO
Zinc	71.9	---	4.13	mg/kg dry	10	01/31/24 03:55	EPA 6020B	PRO

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Darwin Thomas, Business Development Director

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Alpine Environmental Consultants**12210 Antioch Road
White City, OR 97503Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:****A4A1444 - 03 06 24 0800****ANALYTICAL SAMPLE RESULTS****Percent Dry Weight**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DU4-0-6 (A4A1444-42)				Matrix: Soil		Batch: 24A0999		PRO
% Solids	97.9	---	1.00	%	1	02/01/24 07:44	EPA 8000D	
DU4-6-12 (A4A1444-44)				Matrix: Soil		Batch: 24A0999		PRO
% Solids	99.3	---	1.00	%	1	02/01/24 07:44	EPA 8000D	
DU4-12-18 (A4A1444-46)				Matrix: Soil		Batch: 24A0999		PRO
% Solids	99.6	---	1.00	%	1	02/01/24 07:44	EPA 8000D	
DU4-18-24 (A4A1444-48)				Matrix: Soil		Batch: 24A0999		PRO
% Solids	100	---	1.00	%	1	02/01/24 07:44	EPA 8000D	DW>100
DU4-24-36 (A4A1444-50)				Matrix: Soil		Batch: 24A0999		PRO
% Solids	99.6	---	1.00	%	1	02/01/24 07:44	EPA 8000D	
DU5-0-6 (A4A1444-52)				Matrix: Soil		Batch: 24A0999		PRO
% Solids	98.8	---	1.00	%	1	02/01/24 07:44	EPA 8000D	
DU5-6-12 (A4A1444-54)				Matrix: Soil		Batch: 24A0999		PRO
% Solids	98.6	---	1.00	%	1	02/01/24 07:44	EPA 8000D	
DU5-12-18 (A4A1444-56)				Matrix: Soil		Batch: 24A0999		PRO
% Solids	99.1	---	1.00	%	1	02/01/24 07:44	EPA 8000D	
DU5-18-24 (A4A1444-58)				Matrix: Soil		Batch: 24A0999		PRO
% Solids	99.1	---	1.00	%	1	02/01/24 07:44	EPA 8000D	
DU5-24-36 (A4A1444-60)				Matrix: Soil		Batch: 24A0999		PRO
% Solids	98.9	---	1.00	%	1	02/01/24 07:44	EPA 8000D	

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ANALYTICAL REPORT

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6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

QUALITY CONTROL (QC) SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24B0119 - EPA 3546/3640A (GPC)						Soil						
Blank (24B0119-BLK1)			Prepared: 02/01/24 16:45		Analyzed: 02/06/24 19:00		C-05					
EPA 8081B												
Aldrin	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
alpha-BHC	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
beta-BHC	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
delta-BHC	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
gamma-BHC (Lindane)	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
cis-Chlordane	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
trans-Chlordane	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
4,4'-DDD	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
4,4'-DDE	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
4,4'-DDT	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Dieldrin	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endosulfan I	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endosulfan II	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endosulfan sulfate	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endrin	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endrin aldehyde	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endrin ketone	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Heptachlor	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Heptachlor epoxide	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Methoxychlor	ND	---	0.00600	mg/kg wet	1	---	---	---	---	---	---	
Chlordane (Technical)	ND	---	0.0600	mg/kg wet	1	---	---	---	---	---	---	
Toxaphene (Total)	ND	---	0.0600	mg/kg wet	1	---	---	---	---	---	---	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 75 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		118 %		55-130 %		"						

LCS (24B0119-BS1)

Prepared: 02/01/24 16:45 Analyzed: 02/06/24 19:16

C-05

EPA 8081B

Aldrin	0.0411	---	0.00200	mg/kg wet	1	0.0500	---	82	45-136%	---	---
alpha-BHC	0.0409	---	0.00200	mg/kg wet	1	0.0500	---	82	45-137%	---	---
beta-BHC	0.0481	---	0.00200	mg/kg wet	1	0.0500	---	96	50-136%	---	---
delta-BHC	0.0503	---	0.00200	mg/kg wet	1	0.0500	---	101	47-139%	---	---
gamma-BHC (Lindane)	0.0414	---	0.00200	mg/kg wet	1	0.0500	---	83	49-135%	---	---
cis-Chlordane	0.0477	---	0.00200	mg/kg wet	1	0.0500	---	95	54-133%	---	---

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road

White City, OR 97503

Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

QUALITY CONTROL (QC) SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24B0119 - EPA 3546/3640A (GPC)						Soil						
LCS (24B0119-BS1)			Prepared: 02/01/24 16:45		Analyzed: 02/06/24 19:16		C-05					
trans-Chlordane	0.0483	---	0.00200	mg/kg wet	1	0.0500	---	97	53-135%	---	---	Q-29
4,4'-DDD	0.0637	---	0.00200	mg/kg wet	1	0.0500	---	127	56-139%	---	---	
4,4'-DDE	0.0576	---	0.00200	mg/kg wet	1	0.0500	---	115	56-134%	---	---	
Dieldrin	0.0538	---	0.00200	mg/kg wet	1	0.0500	---	108	56-136%	---	---	
Endosulfan I	0.0492	---	0.00200	mg/kg wet	1	0.0500	---	98	53-132%	---	---	
Endosulfan II	0.0607	---	0.00200	mg/kg wet	1	0.0500	---	121	53-134%	---	---	
Endosulfan sulfate	0.0616	---	0.00200	mg/kg wet	1	0.0500	---	123	55-136%	---	---	
Endrin	0.0618	---	0.00200	mg/kg wet	1	0.0500	---	124	57-140%	---	---	
Endrin aldehyde	0.0478	---	0.00200	mg/kg wet	1	0.0500	---	96	35-137%	---	---	
Endrin ketone	0.0588	---	0.00200	mg/kg wet	1	0.0500	---	118	55-136%	---	---	
Heptachlor	0.0438	---	0.00200	mg/kg wet	1	0.0500	---	88	47-136%	---	---	
Heptachlor epoxide	0.0464	---	0.00200	mg/kg wet	1	0.0500	---	93	52-136%	---	---	
Methoxychlor	0.0788	---	0.00600	mg/kg wet	1	0.0500	---	158	52-143%	---	---	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 76 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		109 %		55-130 %		"						
LCS (24B0119-BS2)			Prepared: 02/01/24 16:45		Analyzed: 02/07/24 13:42		C-05					
EPA 8081B												
4,4'-DDT	0.0632	---	0.00200	mg/kg wet	1	0.0500	---	126	50-141%	---	---	
Duplicate (24B0119-DUP1)			Prepared: 02/01/24 16:45		Analyzed: 02/06/24 19:49		C-05, PRO					
QC Source Sample: DU4-0-6 (A4A1444-42RE1)												
EPA 8081B												
Aldrin	ND	---	0.00182	mg/kg dry	1	---	ND	---	---	---	30%	
alpha-BHC	ND	---	0.00182	mg/kg dry	1	---	ND	---	---	---	30%	
beta-BHC	ND	---	0.00182	mg/kg dry	1	---	ND	---	---	---	30%	
delta-BHC	ND	---	0.00182	mg/kg dry	1	---	ND	---	---	---	30%	
gamma-BHC (Lindane)	ND	---	0.00182	mg/kg dry	1	---	ND	---	---	---	30%	
cis-Chlordane	ND	---	0.00182	mg/kg dry	1	---	ND	---	---	---	30%	
trans-Chlordane	ND	---	0.00182	mg/kg dry	1	---	ND	---	---	---	30%	
4,4'-DDD	0.0818	---	0.00182	mg/kg dry	1	---	0.0696	---	---	16	30%	
Dieldrin	0.181	---	0.00182	mg/kg dry	1	---	0.159	---	---	13	30%	
Endosulfan I	ND	---	0.00182	mg/kg dry	1	---	ND	---	---	---	30%	
Endosulfan II	ND	---	0.00611	mg/kg dry	1	---	ND	---	---	---	30%	R-02

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:****A4A1444 - 03 06 24 0800**

QUALITY CONTROL (QC) SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24B0119 - EPA 3546/3640A (GPC)						Soil						
Duplicate (24B0119-DUP1)			Prepared: 02/01/24 16:45		Analyzed: 02/06/24 19:49					C-05, PRO		
QC Source Sample: DU4-0-6 (A4A1444-42RE1)												
Endosulfan sulfate	ND	---	0.00210	mg/kg dry	1	---	ND	---	---	---	30%	R-02
Endrin	ND	---	0.00374	mg/kg dry	1	---	ND	---	---	---	30%	R-02
Endrin aldehyde	ND	---	0.00237	mg/kg dry	1	---	ND	---	---	---	30%	R-02
Endrin ketone	ND	---	0.00182	mg/kg dry	1	---	ND	---	---	---	30%	
Heptachlor	ND	---	0.00182	mg/kg dry	1	---	ND	---	---	---	30%	
Heptachlor epoxide	ND	---	0.00182	mg/kg dry	1	---	ND	---	---	---	30%	
Methoxychlor	ND	---	0.0199	mg/kg dry	1	---	ND	---	---	---	30%	R-02
Chlordane (Technical)	ND	---	0.0547	mg/kg dry	1	---	ND	---	---	---	30%	
Toxaphene (Total)	ND	---	0.0547	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 69 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		104 %		55-130 %		"						

Duplicate (24B0119-DUP2)			Prepared: 02/01/24 16:45 Analyzed: 02/07/24 13:09								C-05, PRO	
<u>QC Source Sample: DU4-0-6 (A4A1444-42RE2)</u>												
EPA 8081B												
4,4'-DDE	1.60	---	0.0365	mg/kg dry	20	---	1.36	---	---	16	30%	
4,4'-DDT	0.858	---	0.0365	mg/kg dry	20	---	0.728	---	---	16	30%	

Matrix Spike (24B0119-MS1)			Prepared: 02/01/24 16:45 Analyzed: 02/06/24 20:37								C-05, PRO	
QC Source Sample: DU5-24-36 (A4A1444-60RE1)												
EPA 8081B												
Aldrin	0.0292	---	0.00183	mg/kg dry	1	0.0458	ND	64	45-136%	---	---	
alpha-BHC	0.0299	---	0.00183	mg/kg dry	1	0.0458	ND	65	45-137%	---	---	
beta-BHC	0.0337	---	0.00183	mg/kg dry	1	0.0458	ND	74	50-136%	---	---	
delta-BHC	0.0356	---	0.00183	mg/kg dry	1	0.0458	ND	78	47-139%	---	---	
gamma-BHC (Lindane)	0.0303	---	0.00183	mg/kg dry	1	0.0458	ND	66	49-135%	---	---	
cis-Chlordane	0.0354	---	0.00183	mg/kg dry	1	0.0458	ND	77	54-133%	---	---	
trans-Chlordane	0.0348	---	0.00183	mg/kg dry	1	0.0458	ND	76	53-135%	---	---	
4,4'-DDD	0.0466	---	0.00183	mg/kg dry	1	0.0458	ND	102	56-139%	---	---	
4,4'-DDE	0.0640	---	0.00183	mg/kg dry	1	0.0458	0.0267	81	56-134%	---	---	
4,4'-DDT	0.0538	---	0.00183	mg/kg dry	1	0.0458	0.00661	103	50-141%	---	---	
Dieldrin	0.0406	---	0.00183	mg/kg dry	1	0.0458	ND	89	56-136%	---	---	

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ANALYTICAL REPORT

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6700 S.W. Sandburg Street

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503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road

White City, OR 97503

Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

QUALITY CONTROL (QC) SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24B0119 - EPA 3546/3640A (GPC)						Soil						
Matrix Spike (24B0119-MS1)			Prepared: 02/01/24 16:45		Analyzed: 02/06/24 20:37					C-05, PRO		
QC Source Sample: DU5-24-36 (A4A1444-60RE1)												
Endosulfan I	0.0370	---	0.00183	mg/kg dry	1	0.0458	ND	81	53-132%	---	---	
Endosulfan II	0.0429	---	0.00183	mg/kg dry	1	0.0458	ND	94	53-134%	---	---	
Endosulfan sulfate	0.0454	---	0.00183	mg/kg dry	1	0.0458	ND	99	55-136%	---	---	
Endrin	0.0456	---	0.00183	mg/kg dry	1	0.0458	ND	100	57-140%	---	---	
Endrin aldehyde	0.0407	---	0.00183	mg/kg dry	1	0.0458	ND	89	35-137%	---	---	
Endrin ketone	0.0405	---	0.00183	mg/kg dry	1	0.0458	ND	89	55-136%	---	---	
Heptachlor	0.0315	---	0.00183	mg/kg dry	1	0.0458	ND	69	47-136%	---	---	
Heptachlor epoxide	0.0347	---	0.00183	mg/kg dry	1	0.0458	ND	76	52-136%	---	---	
Methoxychlor	0.0509	---	0.00549	mg/kg dry	1	0.0458	ND	111	52-143%	---	---	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 63 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		92 %		55-130 %		"						

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6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:**

A4A1444 - 03 06 24 0800

QUALITY CONTROL (QC) SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24B0134 - EPA 3546						Soil						
Blank (24B0134-BLK1)			Prepared: 02/05/24 14:05 Analyzed: 02/05/24 18:29									
EPA 8270E OPPs												
Azinphos methyl (Guthion)	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Chlorpyrifos	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Coumaphos	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Demeton O	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Demeton S	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Diazinon	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Dichlorvos	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Dimethoate	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Disulfoton	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
EPN	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Ethoprop	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Fensulfothion	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Fenthion	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Malathion	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Merphos	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Methyl parathion	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Mevinphos (Phosdrin)	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Monocrotophos	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Naled (Dibrom)	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Parathion, ethyl	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Phorate	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Ronnel (Fenchlorphos)	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Sulfotep	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Sulprofos (Bolstar)	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
TEPP	ND	---	0.200	mg/kg wet	1	---	---	---	---	---	---	
Tetrachlorvinphos (Rabon)	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Tokuthion (Prothiofos)	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Trichloronate	ND	---	0.0500	mg/kg wet	1	---	---	---	---	---	---	
Surr: Tributyl phosphate (Surr)		Recovery: 76 %		Limits: 10-136 %		Dilution: 1x						
Triphenyl phosphate (Surr)		78 %		34-121 %		"						

LCS (24B0134-BS1)

Prepared: 02/05/24 14:05 Analyzed: 02/05/24 19:04

EPA 8270E OPPs

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:****A4A1444 - 03 06 24 0800**

QUALITY CONTROL (QC) SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24B0134 - EPA 3546						Soil						
LCS (24B0134-BS1)			Prepared: 02/05/24 14:05		Analyzed: 02/05/24 19:04							
Azinphos methyl (Guthion)	0.477	---	0.0500	mg/kg wet	1	0.400	---	119	38-156%	---	---	Q-41
Chlorpyrifos	0.346	---	0.0500	mg/kg wet	1	0.400	---	87	47-140%	---	---	
Coumaphos	0.427	---	0.0500	mg/kg wet	1	0.400	---	107	37-160%	---	---	
Demeton O	0.190	---	0.0500	mg/kg wet	1	0.184	---	103	66-127%	---	---	
Demeton S	0.174	---	0.0500	mg/kg wet	1	0.194	---	90	70-121%	---	---	
Diazinon	0.385	---	0.0500	mg/kg wet	1	0.400	---	96	42-134%	---	---	
Dichlorvos	0.414	---	0.0500	mg/kg wet	1	0.400	---	104	39-142%	---	---	
Dimethoate	0.317	---	0.0500	mg/kg wet	1	0.400	---	79	16-139%	---	---	
Disulfoton	0.370	---	0.0500	mg/kg wet	1	0.400	---	93	28-145%	---	---	
EPN	0.460	---	0.0500	mg/kg wet	1	0.400	---	115	44-137%	---	---	
Ethoprop	0.328	---	0.0500	mg/kg wet	1	0.400	---	82	47-128%	---	---	Q-41
Fensulfothion	0.420	---	0.0500	mg/kg wet	1	0.400	---	105	27-147%	---	---	
Fenthion	0.369	---	0.0500	mg/kg wet	1	0.400	---	92	44-134%	---	---	
Malathion	0.328	---	0.0500	mg/kg wet	1	0.400	---	82	46-137%	---	---	
Merphos	0.417	---	0.0500	mg/kg wet	1	0.400	---	104	66-131%	---	---	
Methyl parathion	0.436	---	0.0500	mg/kg wet	1	0.400	---	109	49-138%	---	---	
Mevinphos (Phosdrin)	0.405	---	0.0500	mg/kg wet	1	0.400	---	101	12-176%	---	---	
Monocrotophos	0.115	---	0.0500	mg/kg wet	1	0.400	---	29	10-153%	---	---	
Naled (Dibrom)	0.366	---	0.0500	mg/kg wet	1	0.400	---	91	10-174%	---	---	
Parathion, ethyl	0.397	---	0.0500	mg/kg wet	1	0.400	---	99	50-139%	---	---	
Phorate	0.385	---	0.0500	mg/kg wet	1	0.400	---	96	23-142%	---	---	
Ronnel (Fenchlorphos)	0.367	---	0.0500	mg/kg wet	1	0.400	---	92	45-138%	---	---	
Sulfotep	0.341	---	0.0500	mg/kg wet	1	0.400	---	85	52-126%	---	---	
Sulprofos (Bolstar)	0.356	---	0.0500	mg/kg wet	1	0.400	---	89	48-139%	---	---	
TEPP	0.218	---	0.200	mg/kg wet	1	0.400	---	55	16-126%	---	---	
Tetrachlorvinphos (Rabon)	0.405	---	0.0500	mg/kg wet	1	0.400	---	101	54-129%	---	---	
Tokuthion (Prothiofos)	0.350	---	0.0500	mg/kg wet	1	0.400	---	88	45-136%	---	---	
Trichloronate	0.357	---	0.0500	mg/kg wet	1	0.400	---	89	37-140%	---	---	
Surr: Tributyl phosphate (Surr)		Recovery: 83 %		Limits: 10-136 %		Dilution: 1x						
Triphenyl phosphate (Surr)		81 %		34-121 %		"						

Duplicate (24B0134-DUP1)

Prepared: 02/05/24 14:05 Analyzed: 02/05/24 20:48

PRO**QC Source Sample: DU4-0-6 (A4A1444-42RE1)****EPA 8270E OPPs**

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road

White City, OR 97503

Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

QUALITY CONTROL (QC) SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24B0134 - EPA 3546						Soil						
Duplicate (24B0134-DUP1)			Prepared: 02/05/24 14:05		Analyzed: 02/05/24 20:48		PRO					
QC Source Sample: DU4-0-6 (A4A1444-42RE1)												
Azinphos methyl (Guthion)	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	R-02
Chlorpyrifos	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Coumaphos	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Demeton O	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Demeton S	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Diazinon	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Dichlorvos	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Dimethoate	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Disulfoton	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
EPN	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Ethoprop	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Fensulfothion	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Fenthion	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Malathion	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Merphos	ND	---	0.226	mg/kg dry	1	---	ND	---	---	---	30%	
Methyl parathion	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Mevinphos (Phosdrin)	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Monocrotophos	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Naled (Dibrom)	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Parathion, ethyl	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Phorate	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Ronnel (Fenchlorphos)	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Sulfotep	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Sulprofos (Bolstar)	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
TEPP	ND	---	0.179	mg/kg dry	1	---	ND	---	---	---	30%	
Tetrachlorvinphos (Rabon)	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Tokuthion (Prothiofos)	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Trichloronate	ND	---	0.0447	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: Tributyl phosphate (Surr)		Recovery: 31 %		Limits: 10-136 %		Dilution: 1x						
Triphenyl phosphate (Surr)		42 %		34-121 %		"						

Matrix Spike (24B0134-MS1)

Prepared: 02/05/24 14:05 Analyzed: 02/05/24 21:58

PRO

QC Source Sample: DU5-24-36 (A4A1444-60)

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:****A4A1444 - 03 06 24 0800**

QUALITY CONTROL (QC) SAMPLE RESULTS

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24B0134 - EPA 3546						Soil						
Matrix Spike (24B0134-MS1)			Prepared: 02/05/24 14:05		Analyzed: 02/05/24 21:58						PRO	
QC Source Sample: DU5-24-36 (A4A1444-60)												
EPA 8270E OPPs												
Azinphos methyl (Guthion)	0.172	---	0.0450	mg/kg dry	1	0.360	ND	48	38-156%	---	---	
Chlorpyrifos	0.127	---	0.0450	mg/kg dry	1	0.360	ND	35	47-140%	---	---	Q-01
Coumaphos	0.216	---	0.0450	mg/kg dry	1	0.360	ND	60	37-160%	---	---	
Demeton O	ND	---	0.0450	mg/kg dry	1	0.166	ND	17	66-127%	---	---	Q-01
Demeton S	ND	---	0.0450	mg/kg dry	1	0.175	ND	18	70-121%	---	---	Q-01
Diazinon	ND	---	0.0450	mg/kg dry	1	0.360	ND		42-134%	---	---	Q-01
Dichlorvos	ND	---	0.0450	mg/kg dry	1	0.360	ND	9	39-142%	---	---	Q-01
Dimethoate	0.0541	---	0.0450	mg/kg dry	1	0.360	ND	15	16-139%	---	---	Q-01
Disulfoton	0.256	---	0.0450	mg/kg dry	1	0.360	ND	71	28-145%	---	---	
EPN	0.338	---	0.0450	mg/kg dry	1	0.360	ND	94	44-137%	---	---	Q-41
Ethoprop	0.0700	---	0.0450	mg/kg dry	1	0.360	ND	19	47-128%	---	---	Q-01
Fensulfothion	0.0928	---	0.0450	mg/kg dry	1	0.360	ND	26	27-147%	---	---	Q-01
Fenthion	ND	---	0.0450	mg/kg dry	1	0.360	ND		44-134%	---	---	Q-01
Malathion	0.112	---	0.0450	mg/kg dry	1	0.360	ND	31	46-137%	---	---	Q-01
Merphos	0.0658	---	0.0513	mg/kg dry	1	0.360	ND	18	66-131%	---	---	Q-02
Methyl parathion	0.271	---	0.0450	mg/kg dry	1	0.360	ND	75	49-138%	---	---	
Mevinphos (Phosdrin)	ND	---	0.0450	mg/kg dry	1	0.360	ND	9	12-176%	---	---	Q-01
Monocrotophos	ND	---	0.0450	mg/kg dry	1	0.360	ND		10-153%	---	---	Q-01
Naled (Dibrom)	ND	---	0.0450	mg/kg dry	1	0.360	ND		10-174%	---	---	Q-01
Parathion, ethyl	0.269	---	0.0450	mg/kg dry	1	0.360	ND	75	50-139%	---	---	
Phorate	0.214	---	0.0450	mg/kg dry	1	0.360	ND	59	23-142%	---	---	
Ronnel (Fenchlorphos)	0.237	---	0.0450	mg/kg dry	1	0.360	ND	66	45-138%	---	---	
Sulfotep	0.0487	---	0.0450	mg/kg dry	1	0.360	ND	14	52-126%	---	---	Q-01
Sulprofos (Bolstar)	0.252	---	0.0450	mg/kg dry	1	0.360	ND	70	48-139%	---	---	
TEPP	ND	---	0.180	mg/kg dry	1	0.360	ND		16-126%	---	---	Q-01, Q-41
Tetrachlorvinphos (Rabon)	ND	---	0.0450	mg/kg dry	1	0.360	ND		54-129%	---	---	Q-01
Tokuthion (Prothiofos)	0.253	---	0.0450	mg/kg dry	1	0.360	ND	70	45-136%	---	---	
Trichloronate	0.220	---	0.0450	mg/kg dry	1	0.360	ND	61	37-140%	---	---	
Surr: Tributyl phosphate (Surr)		Recovery: 22 %		Limits: 10-136 %		Dilution: 1x						
Triphenyl phosphate (Surr)		30 %		34-121 %		"		S-03				

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Darwin Thomas, Business Development Director

Page 35 of 51

**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road

White City, OR 97503

Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:****A4A1444 - 03 06 24 0800****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24A0946 - EPA 3051A						Soil						
Blank (24A0946-BLK1)			Prepared: 01/30/24 14:35 Analyzed: 01/31/24 02:17									
EPA 6020B												
Antimony	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Beryllium	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Cobalt	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	---	2.00	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	---	0.0800	mg/kg wet	10	---	---	---	---	---	---	
Molybdenum	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Nickel	ND	---	2.00	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Thallium	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Vanadium	ND	---	2.00	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	---	4.00	mg/kg wet	10	---	---	---	---	---	---	

LCS (24A0946-BS1)

Prepared: 01/30/24 14:35 Analyzed: 01/31/24 02:30

EPA 6020B												
Antimony	24.3	---	1.00	mg/kg wet	10	25.0	---	97	80-120%	---	---	
Arsenic	48.8	---	1.00	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Barium	49.7	---	1.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	
Beryllium	25.1	---	0.200	mg/kg wet	10	25.0	---	101	80-120%	---	---	
Cadmium	49.1	---	0.200	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Chromium	51.0	---	1.00	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Cobalt	50.3	---	1.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Copper	52.0	---	2.00	mg/kg wet	10	50.0	---	104	80-120%	---	---	
Lead	47.7	---	0.200	mg/kg wet	10	50.0	---	95	80-120%	---	---	
Mercury	0.954	---	0.0800	mg/kg wet	10	1.00	---	95	80-120%	---	---	
Molybdenum	24.4	---	1.00	mg/kg wet	10	25.0	---	98	80-120%	---	---	
Nickel	50.6	---	2.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Selenium	24.9	---	1.00	mg/kg wet	10	25.0	---	100	80-120%	---	---	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24A0946 - EPA 3051A						Soil						
LCS (24A0946-BS1)						Prepared: 01/30/24 14:35 Analyzed: 01/31/24 02:30						
Silver	24.8	---	0.200	mg/kg wet	10	25.0	---	99	80-120%	---	---	
Thallium	24.3	---	0.200	mg/kg wet	10	25.0	---	97	80-120%	---	---	
Vanadium	50.0	---	2.00	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Zinc	50.6	---	4.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	

Duplicate (24A0946-DUP1)

Prepared: 01/30/24 14:35 Analyzed: 01/31/24 02:42

QC Source Sample: DU4-0-6 (A4A1444-42)EPA 6020B

Antimony	ND	---	0.998	mg/kg dry	10	---	ND	---	---	---	20%	PRO
Arsenic	70.3	---	0.998	mg/kg dry	10	---	73.2	---	---	4	20%	PRO
Barium	180	---	0.998	mg/kg dry	10	---	189	---	---	5	20%	PRO
Beryllium	0.661	---	0.200	mg/kg dry	10	---	0.714	---	---	8	20%	PRO
Cadmium	ND	---	0.200	mg/kg dry	10	---	0.131	---	---	***	20%	PRO
Chromium	27.4	---	0.998	mg/kg dry	10	---	28.5	---	---	4	20%	PRO
Cobalt	16.9	---	0.998	mg/kg dry	10	---	17.8	---	---	5	20%	PRO
Copper	64.4	---	2.00	mg/kg dry	10	---	67.5	---	---	5	20%	PRO
Lead	233	---	0.200	mg/kg dry	10	---	241	---	---	3	20%	PRO
Mercury	ND	---	0.0798	mg/kg dry	10	---	0.0469	---	---	***	20%	PRO
Molybdenum	ND	---	0.998	mg/kg dry	10	---	ND	---	---	---	20%	PRO
Nickel	30.8	---	2.00	mg/kg dry	10	---	31.7	---	---	3	20%	PRO
Selenium	ND	---	0.998	mg/kg dry	10	---	ND	---	---	---	20%	PRO
Silver	ND	---	0.200	mg/kg dry	10	---	ND	---	---	---	20%	PRO
Thallium	ND	---	0.200	mg/kg dry	10	---	0.200	---	---	***	20%	PRO
Vanadium	76.5	---	2.00	mg/kg dry	10	---	78.3	---	---	2	20%	PRO
Zinc	84.5	---	3.99	mg/kg dry	10	---	87.2	---	---	3	20%	PRO

Matrix Spike (24A0946-MS1)

Prepared: 01/30/24 14:35 Analyzed: 01/31/24 03:00

QC Source Sample: DU4-0-6 (A4A1444-42)EPA 6020B

Antimony	21.2	---	1.10	mg/kg dry	10	27.4	ND	77	75-125%	---	---	PRO
Arsenic	123	---	1.10	mg/kg dry	10	54.8	73.2	91	75-125%	---	---	PRO
Barium	237	---	1.10	mg/kg dry	10	54.8	189	87	75-125%	---	---	PRO
Beryllium	28.2	---	0.219	mg/kg dry	10	27.4	0.714	100	75-125%	---	---	PRO
Cadmium	52.6	---	0.219	mg/kg dry	10	54.8	0.131	96	75-125%	---	---	PRO

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6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road

White City, OR 97503

Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:****A4A1444 - 03 06 24 0800****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24A0946 - EPA 3051A						Soil						
Matrix Spike (24A0946-MS1)			Prepared: 01/30/24 14:35		Analyzed: 01/31/24 03:00							
QC Source Sample: DU4-0-6 (A4A1444-42)												
Chromium	86.9	---	1.10	mg/kg dry	10	54.8	28.5	107	75-125%	---	---	PRO
Cobalt	71.2	---	1.10	mg/kg dry	10	54.8	17.8	97	75-125%	---	---	PRO
Copper	122	---	2.19	mg/kg dry	10	54.8	67.5	99	75-125%	---	---	PRO
Lead	301	---	0.219	mg/kg dry	10	54.8	241	110	75-125%	---	---	PRO
Mercury	1.09	---	0.0877	mg/kg dry	10	1.10	0.0469	95	75-125%	---	---	PRO
Molybdenum	24.2	---	1.10	mg/kg dry	10	27.4	ND	88	75-125%	---	---	PRO
Nickel	88.0	---	2.19	mg/kg dry	10	54.8	31.7	103	75-125%	---	---	PRO
Selenium	23.8	---	1.10	mg/kg dry	10	27.4	ND	87	75-125%	---	---	PRO
Silver	26.3	---	0.219	mg/kg dry	10	27.4	ND	96	75-125%	---	---	PRO
Thallium	25.4	---	0.219	mg/kg dry	10	27.4	0.200	92	75-125%	---	---	PRO
Vanadium	136	---	2.19	mg/kg dry	10	54.8	78.3	105	75-125%	---	---	PRO
Zinc	145	---	4.39	mg/kg dry	10	54.8	87.2	105	75-125%	---	---	PRO

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Alpine Environmental Consultants
12210 Antioch Road
White City, OR 97503

Project: Hillcrest Orchards
Project Number: [none]
Project Manager: Jonathan Williams

Report ID:
A4A1444 - 03 06 24 0800

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24A0999 - Total Solids (Dry Weight) - 2022							Soil					
Duplicate (24A0999-DUP1)			Prepared: 01/31/24 09:54 Analyzed: 02/01/24 07:44									
<u>QC Source Sample: Non-SDG (A4A1568-01)</u>												
% Solids	72.9	---	1.00	%	1	---	73.4	---	---	0.8	10%	
Duplicate (24A0999-DUP2)			Prepared: 01/31/24 09:54 Analyzed: 02/01/24 07:44									
<u>QC Source Sample: Non-SDG (A4A1568-03)</u>												
% Solids	75.0	---	1.00	%	1	---	72.8	---	---	3	10%	
Duplicate (24A0999-DUP3)			Prepared: 01/31/24 09:54 Analyzed: 02/01/24 07:44									
<u>QC Source Sample: Non-SDG (A4A1568-04)</u>												
% Solids	77.3	---	1.00	%	1	---	77.4	---	---	0.08	10%	
Duplicate (24A0999-DUP4)			Prepared: 01/31/24 09:54 Analyzed: 02/01/24 07:44									
<u>QC Source Sample: Non-SDG (A4A1568-05)</u>												
% Solids	77.4	---	1.00	%	1	---	77.4	---	---	0.06	10%	
Duplicate (24A0999-DUP5)			Prepared: 01/31/24 17:59 Analyzed: 02/01/24 07:44									
<u>QC Source Sample: Non-SDG (A4A1627-02)</u>												
% Solids	75.2	---	1.00	%	1	---	81.6	---	---	8	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:****A4A1444 - 03 06 24 0800****SAMPLE PREPARATION INFORMATION****Organochlorine Pesticides by EPA 8081B**

Prep: EPA 3546/3640A (GPC)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24B0119							
A4A1444-42RE1	Soil	EPA 8081B	01/22/24 12:04	02/01/24 16:45	11.09g/10mL	10g/5mL	1.80
A4A1444-42RE2	Soil	EPA 8081B	01/22/24 12:04	02/01/24 16:45	11.09g/10mL	10g/5mL	1.80
A4A1444-44RE1	Soil	EPA 8081B	01/22/24 12:03	02/01/24 16:45	11.26g/10mL	10g/5mL	1.78
A4A1444-44RE2	Soil	EPA 8081B	01/22/24 12:03	02/01/24 16:45	11.26g/10mL	10g/5mL	1.78
A4A1444-46RE1	Soil	EPA 8081B	01/22/24 12:02	02/01/24 16:45	11.24g/10mL	10g/5mL	1.78
A4A1444-48RE1	Soil	EPA 8081B	01/22/24 12:01	02/01/24 16:45	11.86g/10mL	10g/5mL	1.69
A4A1444-50RE1	Soil	EPA 8081B	01/22/24 12:00	02/01/24 16:45	11.14g/10mL	10g/5mL	1.80
A4A1444-52RE1	Soil	EPA 8081B	01/22/24 12:41	02/01/24 16:45	11.3g/10mL	10g/5mL	1.77
A4A1444-52RE2	Soil	EPA 8081B	01/22/24 12:41	02/01/24 16:45	11.3g/10mL	10g/5mL	1.77
A4A1444-54RE1	Soil	EPA 8081B	01/22/24 12:42	02/01/24 16:45	11.01g/10mL	10g/5mL	1.82
A4A1444-54RE2	Soil	EPA 8081B	01/22/24 12:42	02/01/24 16:45	11.01g/10mL	10g/5mL	1.82
A4A1444-56RE1	Soil	EPA 8081B	01/22/24 12:43	02/01/24 16:45	11.02g/10mL	10g/5mL	1.81
A4A1444-56RE2	Soil	EPA 8081B	01/22/24 12:43	02/01/24 16:45	11.02g/10mL	10g/5mL	1.81
A4A1444-58RE1	Soil	EPA 8081B	01/22/24 12:44	02/01/24 16:45	11.69g/10mL	10g/5mL	1.71
A4A1444-60RE1	Soil	EPA 8081B	01/22/24 12:45	02/01/24 16:45	11.58g/10mL	10g/5mL	1.73

Organophosphorus Pesticides (OPPs) by EPA 8270E (GC/MS)

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24B0134							
A4A1444-42RE1	Soil	EPA 8270E OPPs	01/22/24 12:04	02/05/24 14:05	11.52g/5mL	10g/5mL	0.87
A4A1444-44	Soil	EPA 8270E OPPs	01/22/24 12:03	02/05/24 14:05	11.61g/5mL	10g/5mL	0.86
A4A1444-46	Soil	EPA 8270E OPPs	01/22/24 12:02	02/05/24 14:05	11.14g/5mL	10g/5mL	0.90
A4A1444-48	Soil	EPA 8270E OPPs	01/22/24 12:01	02/05/24 14:05	11.22g/5mL	10g/5mL	0.89
A4A1444-50	Soil	EPA 8270E OPPs	01/22/24 12:00	02/05/24 14:05	11.49g/5mL	10g/5mL	0.87
A4A1444-52	Soil	EPA 8270E OPPs	01/22/24 12:41	02/05/24 14:05	11.22g/5mL	10g/5mL	0.89
A4A1444-54	Soil	EPA 8270E OPPs	01/22/24 12:42	02/05/24 14:05	11.77g/5mL	10g/5mL	0.85
A4A1444-56	Soil	EPA 8270E OPPs	01/22/24 12:43	02/05/24 14:05	11.31g/5mL	10g/5mL	0.88
A4A1444-58	Soil	EPA 8270E OPPs	01/22/24 12:44	02/05/24 14:05	11.13g/5mL	10g/5mL	0.90
A4A1444-60	Soil	EPA 8270E OPPs	01/22/24 12:45	02/05/24 14:05	11.29g/5mL	10g/5mL	0.89

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
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Darwin Thomas, Business Development Director

**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants12210 Antioch Road
White City, OR 97503Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams****Report ID:****A4A1444 - 03 06 24 0800****SAMPLE PREPARATION INFORMATION****Total Metals by EPA 6020B (ICPMS)**Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 24A0946</u>							
A4A1444-42	Soil	EPA 6020B	01/22/24 12:04	01/30/24 14:35	0.472g/50mL	0.5g/50mL	1.06
A4A1444-44	Soil	EPA 6020B	01/22/24 12:03	01/30/24 14:35	0.46g/50mL	0.5g/50mL	1.09
A4A1444-46	Soil	EPA 6020B	01/22/24 12:02	01/30/24 14:35	0.474g/50mL	0.5g/50mL	1.05
A4A1444-48	Soil	EPA 6020B	01/22/24 12:01	01/30/24 14:35	0.49g/50mL	0.5g/50mL	1.02
A4A1444-50	Soil	EPA 6020B	01/22/24 12:00	01/30/24 14:35	0.485g/50mL	0.5g/50mL	1.03
A4A1444-52	Soil	EPA 6020B	01/22/24 12:41	01/30/24 14:35	0.491g/50mL	0.5g/50mL	1.02
A4A1444-54	Soil	EPA 6020B	01/22/24 12:42	01/30/24 14:35	0.475g/50mL	0.5g/50mL	1.05
A4A1444-56	Soil	EPA 6020B	01/22/24 12:43	01/30/24 14:35	0.467g/50mL	0.5g/50mL	1.07
A4A1444-58	Soil	EPA 6020B	01/22/24 12:44	01/30/24 14:35	0.473g/50mL	0.5g/50mL	1.06
A4A1444-60	Soil	EPA 6020B	01/22/24 12:45	01/30/24 14:35	0.49g/50mL	0.5g/50mL	1.02

Percent Dry WeightPrep: Total Solids (Dry Weight) - 2022

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 24A0999</u>							
A4A1444-42	Soil	EPA 8000D	01/22/24 12:04	01/31/24 09:54			NA
A4A1444-44	Soil	EPA 8000D	01/22/24 12:03	01/31/24 09:54			NA
A4A1444-46	Soil	EPA 8000D	01/22/24 12:02	01/31/24 09:54			NA
A4A1444-48	Soil	EPA 8000D	01/22/24 12:01	01/31/24 09:54			NA
A4A1444-50	Soil	EPA 8000D	01/22/24 12:00	01/31/24 09:54			NA
A4A1444-52	Soil	EPA 8000D	01/22/24 12:41	01/31/24 09:54			NA
A4A1444-54	Soil	EPA 8000D	01/22/24 12:42	01/31/24 09:54			NA
A4A1444-56	Soil	EPA 8000D	01/22/24 12:43	01/31/24 09:54			NA
A4A1444-58	Soil	EPA 8000D	01/22/24 12:44	01/31/24 09:54			NA
A4A1444-60	Soil	EPA 8000D	01/22/24 12:45	01/31/24 09:54			NA

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road
White City, OR 97503

Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams**

Report ID:

A4A1444 - 03 06 24 0800

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- C-05** Extract has undergone a GPC (Gel-Permeation Chromatography) cleanup per EPA 3640A. Reporting levels may be raised due to dilution necessary for cleanup. Sample Final Volume includes the GPC dilution factor, see the Prep page for details.
- DW>100** Calculated Dry Weight for this sample was slightly greater than 100%, due to limitations of the method with extremely dry samples. Result was set to 100% for calculation purposes.
- PRO** Sample has undergone sample processing prior to extraction and analysis.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-02** Spike recovery is outside of established control limits due to matrix interference.
- Q-29** Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
- Q-41** Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- Q-42** Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-03** Sample re-extract, or the analysis of an associated Batch QC sample, confirms surrogate failure due to sample matrix effect.

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road
White City, OR 97503

Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams**

Report ID:

A4A1444 - 03 06 24 0800

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.
ND Analyte NOT DETECTED at or above the detection or reporting limit.
NR Result Not Reported
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ("-----"), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.

The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a "dry weight" basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an "As Received" basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

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503-718-2323

ORELAP ID: OR100062

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12210 Antioch Road

White City, OR 97503

Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams**

Report ID:

A4A1444 - 03 06 24 0800

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road
White City, OR 97503

Project: **Hillcrest Orchards**

Project Number: [none]

Project Manager: **Jonathan Williams**

Report ID:

A4A1444 - 03 06 24 0800

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -

EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.

Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

Project: Hillcrest Orchards

12210 Antioch Road

Project Number: [none]

White City, OR 97503

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

APEX LABS 6700 SW Sandburg Street, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-336-0745

CHAIN OF CUSTODY Lab # A4A1444 COC 2 of 5

Company: Alpine Environmental Corporation LLC Project Mgr: Jonathan Williams Project Name: Hillcrest Orchards Project #

Address: 12210 Antioch Rd, White City Oregon Phone: 541-944-4685 Fax:

Sampled by: Toby Shallcross Email: jwilliams@alpine-env-llc

SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	ANALYSIS REQUEST														
						NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs	8270 SIM PAHs	8151A Chlorinated Herb	8081 Chlor. Pest	Ag 17 Metals	8270E Organophosphorus P	Al, Sb, As, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Hg, Mn, Mo, Ni, K, Se, Ag, Na, Ti, V, Zn	TCLP Metals (8)	RSM/ISM*
1 TP13-0-6		1/22/2024	1204S		2													X	DU4-0-6	
2 TP13-6-12		1/22/2024	1205S		2													X	DU4-6-12	
3 TP13-12-18		1/22/2024	1202S		2													X	DU4-12-18	
4 TP13-18-24		1/22/2024	1201S		2													X	DU4-18-24	
5 TP13-24-36		1/22/2024	1200S		2													X	DU4-24-36	
6 TP14-0-6		1/22/2024	1219S		2													X	DU4-0-6	
7 TP14-6-12		1/22/2024	1218S		2													X	DU4-6-12	
8 TP14-12-18		1/22/2024	1217S		2													X	DU4-12-18	
9 TP14-18-24		1/22/2024	1216S		2													X	DU4-18-24	
10 TP14-24-36		1/22/2024	1215S		2													X	DU4-24-36	

Normal Turn Around Time (TAT) = 7-10 Business Days YES x NO

TAT Requested (circle) 1 Day 2 Day 3 Day 4 DAY 5 DAY Other: _____

* Please Archive one of the 2 jars for each discrete sample

SPECIAL INSTRUCTIONS:

RECEIVED BY: _____ Date: 1/24/2024 Signature: _____

RELINQUISHED BY: _____ Date: 1/24/2024 Signature: _____

Printed Name: Toby Shallcross Time: 1300 Printed Name: Toby Shallcross Time: 1119

Company: AEC Company: Apex

Apex Laboratories

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ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

APEX LABS		CHAIN OF CUSTODY		Lab # <u>A4A1444</u> COC 3 of 5	
6700 SW Sandburg Street, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-336-0745		Project Name: Hillcrest Orchards		Project #	
Company: Alpine Environmental Corporation LLC		Project Mgr: Jonathan Williams		Email: jwilliams@alpine-env-llc	
Address: 12210 Antioch Rd, White City, Oregon		Phone: 541-944-4685		Fax:	
Sampled by: Toby Shallcross		ANALYSIS REQUEST		Associated Composite Sample	
LAB ID #		DATE		TIME	
SITE LOCATION: OR WA		MATRIX		# OF CONTAINERS	
SAMPLE ID		DATE		TIME	
1 TP15-0-6		1/22/2024		1344 S	
2 TP15-6-12		1/22/2024		1345 S	
3 TP15-12-18		1/22/2024		1347 S	
4 TP15-18-24		1/22/2024		1341 S	
5 TP15-24-36		1/22/2024		1340 S	
6 TP16-0-6		1/22/2024		1334 S	
7 TP16-6-12		1/22/2024		1333 S	
8 TP16-12-18		1/22/2024		1325 S	
9 TP16-18-24		1/22/2024		1331 S	
10 TP16-24-36		1/22/2024		1330 S	
Normal Turn Around Time (TAT) = 7-10 Business Days		YES x NO		SPECIAL INSTRUCTIONS:	
TAT Requested (circle)		1 Day 2 Day 3 Day 4 DAY 5 DAY Other:		* Please Archive one of the 2 jars for each discrete sample	
SAMPLES ARE HELD FOR 30 DAYS		RECEIVED BY:		RECEIVED BY:	
Signature: Toby Shallcross		Date: 1/24/2024		Signature: Date:	
Printed Name: Toby Shallcross		Time: 1300		Printed Name: Time:	
Company: AEC		Company: Apex		Company:	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road
White City, OR 97503Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

APEX LABS		CHAIN OF CUSTODY		Project Name: Hillcrest Orchards		Project #													
6700 SW Sandburg Street, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-336-0745		Company: Alpine Environmental Corporation LLC		Project Mgr: Jonathan Williams		Email: jwilliams@alpine-env-llc													
Address: 12210 Antioch Rd, White City Oregon		Phone: 541-944-4685		Fax:															
Sampled by: Toby Shallcross																			
LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs	8270 SIM PAHs	8151 A Chlorinated Herb	8081 Chlor. Pest	Ag 17 Metals	8270E Organophosphorus P	Al, Sb, As, Ba, Be, Cd, Cr, Cu, Fe, Pb, Hg, Mn, Mo, Ni, K, Se, Ag, Na, Ti, V, Zn	TCLP Metals (8)	Composed of *
1DU4-0-6																			
2DU4-6-12																			
3DU4-12-18																			
4DU4-18-24																			
5DU4-24-36																			
6DU5-0-6																			
7DU5-6-12																			
8DU5-12-18																			
9DU5-18-24																			
10DU5-24-36																			

Normal Turn Around Time (TAT) = 7-10 Business Days	YES	x	NO
TAT Requested (circle)	1 Day	2 Day	3 Day
	4 DAY	5 DAY	Other:

SPECIAL INSTRUCTIONS:

* Please Archive remaining sample volume for discrete samples.
2 jars in each discrete sample (one 8oz, one 2oz)

RELINQUISHED BY:	RECEIVED BY:
Signature: Toby Shallcross	Signature: [Signature]
Date: 1/24/2024	Date: 1-25-24
Printed Name: Toby Shallcross	Printed Name: [Name]
Time: 1:30	Time: 11:14
Company: AEC	Company: [Company]

Apex Laboratories

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Alpine Environmental Consultants

12210 Antioch Road

White City, OR 97503

Project: Hillcrest Orchards

Project Number: [none]

Project Manager: Jonathan Williams

Report ID:

A4A1444 - 03 06 24 0800

APEX LABS COOLER RECEIPT FORM

Client: Alpine Environmental Consultants Element WO#: A4 A1444Project/Project #: Hillcrest Orchards

Delivery Info:

Date/time received: 1-25-24 @ 10:55 AM By: DJSDelivered by: Apex ☐ Client ☐ ESS ☐ FedEx ☒ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐Cooler Inspection Date/time inspected: 1-25-24 @ 11:19 AM By: DJSChain of Custody included? Yes ☐ No ☒Signed/dated by client? Yes ☒ No ☒

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	3.2	4.8					
Custody seals? (Y/N)	Y	Y					
Received on ice? (Y/N)	Y	Y					
Temp. blanks? (Y/N)	Y	Y					
Ice type: (Gel/Real/Other)	Real	Real					
Condition (In/Out):	In	In					

Cooler out of temp? (Y/N) Possible reason why: 11:19 AMGreen dots applied to out of temperature samples? Yes ☒ No ☐Out of temperature samples form initiated? Yes ☒ No ☐Sample Inspection: Date/time inspected: 1/25/24 @ 1200 By: WmAll samples intact? Yes ☒ No ☐ Comments: 11:19 AMBottle labels/COCs agree? Yes ☐ No ☒ Comments: Label reads T15-0-6, T15-6-12, T15-12-18, T15-18-24, T15-24-36, T16-0-6 on all conts. 202 jar reads T19-12-18.COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments: 11:19 AMDo VOA vials have visible headspace? Yes ☐ No ☐ NA ☒Comments: 11:19 AMWater samples: pH checked: Yes ☐ No ☐ NA ☒ pH appropriate? Yes ☐ No ☐ NA ☒ pH ID: 11:19 AMComments: 11:19 AM

Additional information:

Labeled by: WmWitness: APWCooler Inspected by: Wm

Form Y-003 R-01

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Darwin Thomas
Apex Laboratories LLC
6700 SW Sandburg St.
Tigard, Oregon 97223

Generated 2/12/2024 7:43:07 PM

JOB DESCRIPTION

A4A1444

JOB NUMBER

570-170247-1

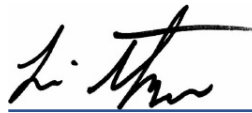
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Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



Authorized for release by
Lori Thompson, Project Manager I
Lori.Thompson@et.eurofinsus.com
(657)212-3035

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Definitions/Glossary

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Apex Laboratories LLC
Project: A4A1444

Job ID: 570-170247-1

Job ID: 570-170247-1

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Job Narrative 570-170247-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/31/2024 9:55 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.1°C

Herbicides

Method 8151A: The continuing calibration verification (CCV) associated with 570-409559 recovered high and outside the control limits for 2,4,5-T, 2,4,5-TP (Silvex), 2,4-D, 2,4-DB, Dicamba, Dichlorprop, Dinoseb, MCPA and 2,4-Dichlorophenylacetic acid on one column. Results are confirmed on both columns and reported from the passing column. The associated samples are: DU4-0-6 (570-170247-1), DU4-6-12 (570-170247-2), DU4-12-18 (570-170247-3), DU4-18-24 (570-170247-4), DU4-24-36 (570-170247-5), DU5-0-6 (570-170247-6), DU5-6-12 (570-170247-7), DU5-12-18 (570-170247-8), DU5-18-24 (570-170247-9) and DU5-24-36 (570-170247-10).

Method 8151A: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-407889 and analytical batch 570-409559 recovered outside control limits for the following analytes: 2,4,5-T and 2,4-DB.

Method 8151A: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 570-407889 and analytical batch 570-409559 recovered outside control limits for the following analytes: 2,4-D. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Detection Summary

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Client Sample ID: DU4-0-6

Lab Sample ID: 570-170247-1

No Detections.

Client Sample ID: DU4-6-12

Lab Sample ID: 570-170247-2

No Detections.

Client Sample ID: DU4-12-18

Lab Sample ID: 570-170247-3

No Detections.

Client Sample ID: DU4-18-24

Lab Sample ID: 570-170247-4

No Detections.

Client Sample ID: DU4-24-36

Lab Sample ID: 570-170247-5

No Detections.

Client Sample ID: DU5-0-6

Lab Sample ID: 570-170247-6

No Detections.

Client Sample ID: DU5-6-12

Lab Sample ID: 570-170247-7

No Detections.

Client Sample ID: DU5-12-18

Lab Sample ID: 570-170247-8

No Detections.

Client Sample ID: DU5-18-24

Lab Sample ID: 570-170247-9

No Detections.

Client Sample ID: DU5-24-36

Lab Sample ID: 570-170247-10

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience

Client Sample Results

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Method: SW846 8151A - Herbicides (GC)

Client Sample ID: DU4-0-6
Date Collected: 01/22/24 12:04
Date Received: 01/31/24 09:55

Lab Sample ID: 570-170247-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*1	11	4.0	ug/Kg	✱	02/05/24 22:56	02/10/24 23:11	1
2,4,5-TP (Silvex)	ND		11	8.1	ug/Kg	✱	02/05/24 22:56	02/10/24 23:11	1
2,4-D	ND	*+	110	52	ug/Kg	✱	02/05/24 22:56	02/10/24 23:11	1
2,4-DB	ND	*1	110	110	ug/Kg	✱	02/05/24 22:56	02/10/24 23:11	1
Dalapon	ND		270	78	ug/Kg	✱	02/05/24 22:56	02/10/24 23:11	1
Dicamba	ND		11	5.1	ug/Kg	✱	02/05/24 22:56	02/10/24 23:11	1
Dichlorprop	ND		110	53	ug/Kg	✱	02/05/24 22:56	02/10/24 23:11	1
Dinoseb	ND		110	63	ug/Kg	✱	02/05/24 22:56	02/10/24 23:11	1
MCPA	ND		11000	5200	ug/Kg	✱	02/05/24 22:56	02/10/24 23:11	1
MCPP	ND		11000	7100	ug/Kg	✱	02/05/24 22:56	02/10/24 23:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	49		20 - 163				02/05/24 22:56	02/10/24 23:11	1

Client Sample ID: DU4-6-12
Date Collected: 01/22/24 12:03
Date Received: 01/31/24 09:55

Lab Sample ID: 570-170247-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*1	11	4.0	ug/Kg	✱	02/05/24 22:56	02/10/24 23:33	1
2,4,5-TP (Silvex)	ND		11	8.0	ug/Kg	✱	02/05/24 22:56	02/10/24 23:33	1
2,4-D	ND	*+	110	52	ug/Kg	✱	02/05/24 22:56	02/10/24 23:33	1
2,4-DB	ND	*1	110	110	ug/Kg	✱	02/05/24 22:56	02/10/24 23:33	1
Dalapon	ND		270	77	ug/Kg	✱	02/05/24 22:56	02/10/24 23:33	1
Dicamba	ND		11	5.1	ug/Kg	✱	02/05/24 22:56	02/10/24 23:33	1
Dichlorprop	ND		110	53	ug/Kg	✱	02/05/24 22:56	02/10/24 23:33	1
Dinoseb	ND		110	63	ug/Kg	✱	02/05/24 22:56	02/10/24 23:33	1
MCPA	ND		11000	5200	ug/Kg	✱	02/05/24 22:56	02/10/24 23:33	1
MCPP	ND		11000	7100	ug/Kg	✱	02/05/24 22:56	02/10/24 23:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	32	p	20 - 163				02/05/24 22:56	02/10/24 23:33	1

Client Sample ID: DU4-12-18
Date Collected: 01/22/24 12:02
Date Received: 01/31/24 09:55

Lab Sample ID: 570-170247-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*1	9.9	3.7	ug/Kg	✱	02/05/24 22:56	02/10/24 23:55	1
2,4,5-TP (Silvex)	ND		9.9	7.5	ug/Kg	✱	02/05/24 22:56	02/10/24 23:55	1
2,4-D	ND	*+	99	48	ug/Kg	✱	02/05/24 22:56	02/10/24 23:55	1
2,4-DB	ND	*1	99	99	ug/Kg	✱	02/05/24 22:56	02/10/24 23:55	1
Dalapon	ND		250	72	ug/Kg	✱	02/05/24 22:56	02/10/24 23:55	1
Dicamba	ND		9.9	4.7	ug/Kg	✱	02/05/24 22:56	02/10/24 23:55	1
Dichlorprop	ND		99	49	ug/Kg	✱	02/05/24 22:56	02/10/24 23:55	1
Dinoseb	ND		99	58	ug/Kg	✱	02/05/24 22:56	02/10/24 23:55	1
MCPA	ND		9900	4800	ug/Kg	✱	02/05/24 22:56	02/10/24 23:55	1
MCPP	ND		9900	6500	ug/Kg	✱	02/05/24 22:56	02/10/24 23:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	46	p	20 - 163				02/05/24 22:56	02/10/24 23:55	1

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Client Sample Results

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Method: SW846 8151A - Herbicides (GC)

Client Sample ID: DU4-18-24
Date Collected: 01/22/24 12:01
Date Received: 01/31/24 09:55

Lab Sample ID: 570-170247-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*1	10	3.7	ug/Kg	✱	02/05/24 22:56	02/11/24 00:18	1
2,4,5-TP (Silvex)	ND		10	7.6	ug/Kg	✱	02/05/24 22:56	02/11/24 00:18	1
2,4-D	ND	*+	100	49	ug/Kg	✱	02/05/24 22:56	02/11/24 00:18	1
2,4-DB	ND	*1	100	100	ug/Kg	✱	02/05/24 22:56	02/11/24 00:18	1
Dalapon	ND		250	73	ug/Kg	✱	02/05/24 22:56	02/11/24 00:18	1
Dicamba	ND		10	4.8	ug/Kg	✱	02/05/24 22:56	02/11/24 00:18	1
Dichlorprop	ND		100	50	ug/Kg	✱	02/05/24 22:56	02/11/24 00:18	1
Dinoseb	ND		100	59	ug/Kg	✱	02/05/24 22:56	02/11/24 00:18	1
MCPA	ND		10000	4900	ug/Kg	✱	02/05/24 22:56	02/11/24 00:18	1
MCPP	ND		10000	6600	ug/Kg	✱	02/05/24 22:56	02/11/24 00:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	37	p	20 - 163				02/05/24 22:56	02/11/24 00:18	1

Client Sample ID: DU4-24-36
Date Collected: 01/22/24 12:00
Date Received: 01/31/24 09:55

Lab Sample ID: 570-170247-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*1	10	3.7	ug/Kg	✱	02/05/24 22:56	02/11/24 00:40	1
2,4,5-TP (Silvex)	ND		10	7.6	ug/Kg	✱	02/05/24 22:56	02/11/24 00:40	1
2,4-D	ND	*+	100	49	ug/Kg	✱	02/05/24 22:56	02/11/24 00:40	1
2,4-DB	ND	*1	100	100	ug/Kg	✱	02/05/24 22:56	02/11/24 00:40	1
Dalapon	ND		250	73	ug/Kg	✱	02/05/24 22:56	02/11/24 00:40	1
Dicamba	ND		10	4.8	ug/Kg	✱	02/05/24 22:56	02/11/24 00:40	1
Dichlorprop	ND		100	50	ug/Kg	✱	02/05/24 22:56	02/11/24 00:40	1
Dinoseb	ND		100	60	ug/Kg	✱	02/05/24 22:56	02/11/24 00:40	1
MCPA	ND		10000	4900	ug/Kg	✱	02/05/24 22:56	02/11/24 00:40	1
MCPP	ND		10000	6700	ug/Kg	✱	02/05/24 22:56	02/11/24 00:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	37	p	20 - 163				02/05/24 22:56	02/11/24 00:40	1

Client Sample ID: DU5-0-6
Date Collected: 01/22/24 12:41
Date Received: 01/31/24 09:55

Lab Sample ID: 570-170247-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*1	11	3.9	ug/Kg	✱	02/05/24 22:56	02/11/24 01:02	1
2,4,5-TP (Silvex)	ND		11	8.0	ug/Kg	✱	02/05/24 22:56	02/11/24 01:02	1
2,4-D	ND	*+	110	51	ug/Kg	✱	02/05/24 22:56	02/11/24 01:02	1
2,4-DB	ND	*1	110	110	ug/Kg	✱	02/05/24 22:56	02/11/24 01:02	1
Dalapon	ND		260	77	ug/Kg	✱	02/05/24 22:56	02/11/24 01:02	1
Dicamba	ND		11	5.0	ug/Kg	✱	02/05/24 22:56	02/11/24 01:02	1
Dichlorprop	ND		110	52	ug/Kg	✱	02/05/24 22:56	02/11/24 01:02	1
Dinoseb	ND		110	62	ug/Kg	✱	02/05/24 22:56	02/11/24 01:02	1
MCPA	ND		11000	5100	ug/Kg	✱	02/05/24 22:56	02/11/24 01:02	1
MCPP	ND		11000	7000	ug/Kg	✱	02/05/24 22:56	02/11/24 01:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	69		20 - 163				02/05/24 22:56	02/11/24 01:02	1

Eurofins Calscience

Client Sample Results

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Method: SW846 8151A - Herbicides (GC)

Client Sample ID: DU5-6-12
Date Collected: 01/22/24 12:42
Date Received: 01/31/24 09:55

Lab Sample ID: 570-170247-7
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*1	11	3.9	ug/Kg	✱	02/05/24 22:56	02/11/24 01:24	1
2,4,5-TP (Silvex)	ND		11	8.0	ug/Kg	✱	02/05/24 22:56	02/11/24 01:24	1
2,4-D	ND	*+	110	52	ug/Kg	✱	02/05/24 22:56	02/11/24 01:24	1
2,4-DB	ND	*1	110	110	ug/Kg	✱	02/05/24 22:56	02/11/24 01:24	1
Dalapon	ND		270	77	ug/Kg	✱	02/05/24 22:56	02/11/24 01:24	1
Dicamba	ND		11	5.0	ug/Kg	✱	02/05/24 22:56	02/11/24 01:24	1
Dichlorprop	ND		110	52	ug/Kg	✱	02/05/24 22:56	02/11/24 01:24	1
Dinoseb	ND		110	63	ug/Kg	✱	02/05/24 22:56	02/11/24 01:24	1
MCPA	ND		11000	5200	ug/Kg	✱	02/05/24 22:56	02/11/24 01:24	1
MCPPE	ND		11000	7000	ug/Kg	✱	02/05/24 22:56	02/11/24 01:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	38	p	20 - 163				02/05/24 22:56	02/11/24 01:24	1

Client Sample ID: DU5-12-18
Date Collected: 01/22/24 12:43
Date Received: 01/31/24 09:55

Lab Sample ID: 570-170247-8
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*1	10	3.8	ug/Kg	✱	02/05/24 22:56	02/11/24 01:46	1
2,4,5-TP (Silvex)	ND		10	7.8	ug/Kg	✱	02/05/24 22:56	02/11/24 01:46	1
2,4-D	ND	*+	100	51	ug/Kg	✱	02/05/24 22:56	02/11/24 01:46	1
2,4-DB	ND	*1	100	100	ug/Kg	✱	02/05/24 22:56	02/11/24 01:46	1
Dalapon	ND		260	75	ug/Kg	✱	02/05/24 22:56	02/11/24 01:46	1
Dicamba	ND		10	4.9	ug/Kg	✱	02/05/24 22:56	02/11/24 01:46	1
Dichlorprop	ND		100	51	ug/Kg	✱	02/05/24 22:56	02/11/24 01:46	1
Dinoseb	ND		100	61	ug/Kg	✱	02/05/24 22:56	02/11/24 01:46	1
MCPA	ND		10000	5100	ug/Kg	✱	02/05/24 22:56	02/11/24 01:46	1
MCPPE	ND		10000	6900	ug/Kg	✱	02/05/24 22:56	02/11/24 01:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	52	p	20 - 163				02/05/24 22:56	02/11/24 01:46	1

Client Sample ID: DU5-18-24
Date Collected: 01/22/24 12:44
Date Received: 01/31/24 09:55

Lab Sample ID: 570-170247-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*1	11	3.9	ug/Kg	✱	02/05/24 22:56	02/11/24 02:08	1
2,4,5-TP (Silvex)	ND		11	7.9	ug/Kg	✱	02/05/24 22:56	02/11/24 02:08	1
2,4-D	ND	*+	110	51	ug/Kg	✱	02/05/24 22:56	02/11/24 02:08	1
2,4-DB	ND	*1	110	110	ug/Kg	✱	02/05/24 22:56	02/11/24 02:08	1
Dalapon	ND		260	76	ug/Kg	✱	02/05/24 22:56	02/11/24 02:08	1
Dicamba	ND		11	5.0	ug/Kg	✱	02/05/24 22:56	02/11/24 02:08	1
Dichlorprop	ND		110	52	ug/Kg	✱	02/05/24 22:56	02/11/24 02:08	1
Dinoseb	ND		110	62	ug/Kg	✱	02/05/24 22:56	02/11/24 02:08	1
MCPA	ND		11000	5100	ug/Kg	✱	02/05/24 22:56	02/11/24 02:08	1
MCPPE	ND		11000	7000	ug/Kg	✱	02/05/24 22:56	02/11/24 02:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	35	p	20 - 163				02/05/24 22:56	02/11/24 02:08	1

Client Sample Results

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Method: SW846 8151A - Herbicides (GC)

Client Sample ID: DU5-24-36
Date Collected: 01/22/24 12:45
Date Received: 01/31/24 09:55

Lab Sample ID: 570-170247-10
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*1	10	3.8	ug/Kg	☼	02/05/24 22:56	02/11/24 02:30	1
2,4,5-TP (Silvex)	ND		10	7.8	ug/Kg	☼	02/05/24 22:56	02/11/24 02:30	1
2,4-D	ND	*+	100	50	ug/Kg	☼	02/05/24 22:56	02/11/24 02:30	1
2,4-DB	ND	*1	100	100	ug/Kg	☼	02/05/24 22:56	02/11/24 02:30	1
Dalapon	ND		260	75	ug/Kg	☼	02/05/24 22:56	02/11/24 02:30	1
Dicamba	ND		10	4.9	ug/Kg	☼	02/05/24 22:56	02/11/24 02:30	1
Dichlorprop	ND		100	51	ug/Kg	☼	02/05/24 22:56	02/11/24 02:30	1
Dinoseb	ND		100	61	ug/Kg	☼	02/05/24 22:56	02/11/24 02:30	1
MCPA	ND		10000	5000	ug/Kg	☼	02/05/24 22:56	02/11/24 02:30	1
MCPP	ND		10000	6800	ug/Kg	☼	02/05/24 22:56	02/11/24 02:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	22	p	20 - 163				02/05/24 22:56	02/11/24 02:30	1

Surrogate Summary

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Method: 8151A - Herbicides (GC)
Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	DCPAA2 (20-163)
570-170247-1	DU4-0-6	49
570-170247-2	DU4-6-12	32 p
570-170247-3	DU4-12-18	46 p
570-170247-4	DU4-18-24	37 p
570-170247-5	DU4-24-36	37 p
570-170247-6	DU5-0-6	69
570-170247-7	DU5-6-12	38 p
570-170247-8	DU5-12-18	52 p
570-170247-9	DU5-18-24	35 p
570-170247-10	DU5-24-36	22 p
LCS 570-407889/2-A	Lab Control Sample	92
LCSD 570-407889/3-A	Lab Control Sample Dup	94
MB 570-407889/1-A	Method Blank	58

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

QC Sample Results

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 570-407889/1-A

Matrix: Solid

Analysis Batch: 409559

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 407889

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		10	3.7	ug/Kg		02/05/24 22:55	02/10/24 22:05	1
2,4,5-TP (Silvex)	ND		10	7.5	ug/Kg		02/05/24 22:55	02/10/24 22:05	1
2,4-D	ND		100	49	ug/Kg		02/05/24 22:55	02/10/24 22:05	1
2,4-DB	ND		100	100	ug/Kg		02/05/24 22:55	02/10/24 22:05	1
Dalapon	ND		250	72	ug/Kg		02/05/24 22:55	02/10/24 22:05	1
Dicamba	ND		10	4.7	ug/Kg		02/05/24 22:55	02/10/24 22:05	1
Dichlorprop	ND		100	49	ug/Kg		02/05/24 22:55	02/10/24 22:05	1
Dinoseb	ND		100	59	ug/Kg		02/05/24 22:55	02/10/24 22:05	1
MCPA	ND		10000	4900	ug/Kg		02/05/24 22:55	02/10/24 22:05	1
MCPP	ND		10000	6600	ug/Kg		02/05/24 22:55	02/10/24 22:05	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	58		20 - 163				02/05/24 22:55	02/10/24 22:05	1

Lab Sample ID: LCS 570-407889/2-A

Matrix: Solid

Analysis Batch: 409559

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 407889

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4,5-T	20.0	9.027	J p	ug/Kg		45	26 - 180
2,4,5-TP (Silvex)	20.0	21.23		ug/Kg		106	10 - 180
2,4-D	200	1567	E *+	ug/Kg		784	13 - 180
2,4-DB	200	116.7		ug/Kg		58	10 - 180
Dalapon	500	188.3	J	ug/Kg		38	10 - 176
Dicamba	20.0	12.31		ug/Kg		62	21 - 164
Dichlorprop	200	167.7		ug/Kg		84	10 - 175
Dinoseb	100	105.6		ug/Kg		106	10 - 180
MCPA	20000	32250		ug/Kg		161	22 - 180
MCPP	20000	19340	p	ug/Kg		97	18 - 180
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
2,4-Dichlorophenylacetic acid	92		20 - 163				

Lab Sample ID: LCSD 570-407889/3-A

Matrix: Solid

Analysis Batch: 409559

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 407889

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4,5-T	20.0	27.09	*1	ug/Kg		135	26 - 180	100	40
2,4,5-TP (Silvex)	20.0	22.72		ug/Kg		114	10 - 180	7	40
2,4-D	200	1145	E *+	ug/Kg		572	13 - 180	31	40
2,4-DB	200	187.8	*1	ug/Kg		94	10 - 180	47	40
Dalapon	500	200.6	J	ug/Kg		40	10 - 176	6	40
Dicamba	20.0	13.38		ug/Kg		67	21 - 164	8	40
Dichlorprop	200	176.9		ug/Kg		88	10 - 175	5	40
Dinoseb	100	71.00	J	ug/Kg		71	10 - 180	39	40
MCPA	20000	32500		ug/Kg		163	22 - 180	5	40
MCPP	20000	20820	p	ug/Kg		104	18 - 180	7	40

Eurofins Calscience

QC Sample Results

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Method: 8151A - Herbicides (GC) (Continued)

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
2,4-Dichlorophenylacetic acid	94		20 - 163

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QC Association Summary

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

GC Semi VOA

Prep Batch: 407889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-170247-1	DU4-0-6	Total/NA	Solid	8151A	
570-170247-2	DU4-6-12	Total/NA	Solid	8151A	
570-170247-3	DU4-12-18	Total/NA	Solid	8151A	
570-170247-4	DU4-18-24	Total/NA	Solid	8151A	
570-170247-5	DU4-24-36	Total/NA	Solid	8151A	
570-170247-6	DU5-0-6	Total/NA	Solid	8151A	
570-170247-7	DU5-6-12	Total/NA	Solid	8151A	
570-170247-8	DU5-12-18	Total/NA	Solid	8151A	
570-170247-9	DU5-18-24	Total/NA	Solid	8151A	
570-170247-10	DU5-24-36	Total/NA	Solid	8151A	
MB 570-407889/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 570-407889/2-A	Lab Control Sample	Total/NA	Solid	8151A	
LCSD 570-407889/3-A	Lab Control Sample Dup	Total/NA	Solid	8151A	

Analysis Batch: 409559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-170247-1	DU4-0-6	Total/NA	Solid	8151A	407889
570-170247-2	DU4-6-12	Total/NA	Solid	8151A	407889
570-170247-3	DU4-12-18	Total/NA	Solid	8151A	407889
570-170247-4	DU4-18-24	Total/NA	Solid	8151A	407889
570-170247-5	DU4-24-36	Total/NA	Solid	8151A	407889
570-170247-6	DU5-0-6	Total/NA	Solid	8151A	407889
570-170247-7	DU5-6-12	Total/NA	Solid	8151A	407889
570-170247-8	DU5-12-18	Total/NA	Solid	8151A	407889
570-170247-9	DU5-18-24	Total/NA	Solid	8151A	407889
570-170247-10	DU5-24-36	Total/NA	Solid	8151A	407889
MB 570-407889/1-A	Method Blank	Total/NA	Solid	8151A	407889
LCS 570-407889/2-A	Lab Control Sample	Total/NA	Solid	8151A	407889
LCSD 570-407889/3-A	Lab Control Sample Dup	Total/NA	Solid	8151A	407889

Lab Chronicle

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Client Sample ID: DU4-0-6

Lab Sample ID: 570-170247-1

Date Collected: 01/22/24 12:04

Matrix: Solid

Date Received: 01/31/24 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			48.52 g	5 mL	407889	02/05/24 22:56	J7WE	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	409559	02/10/24 23:11	J7WE	EET CAL 4
Instrument ID: GC41										

Client Sample ID: DU4-6-12

Lab Sample ID: 570-170247-2

Date Collected: 01/22/24 12:03

Matrix: Solid

Date Received: 01/31/24 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			47.93 g	5 mL	407889	02/05/24 22:56	J7WE	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	409559	02/10/24 23:33	J7WE	EET CAL 4
Instrument ID: GC41										

Client Sample ID: DU4-12-18

Lab Sample ID: 570-170247-3

Date Collected: 01/22/24 12:02

Matrix: Solid

Date Received: 01/31/24 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			51.42 g	5 mL	407889	02/05/24 22:56	J7WE	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	409559	02/10/24 23:55	J7WE	EET CAL 4
Instrument ID: GC41										

Client Sample ID: DU4-18-24

Lab Sample ID: 570-170247-4

Date Collected: 01/22/24 12:01

Matrix: Solid

Date Received: 01/31/24 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			50.52 g	5 mL	407889	02/05/24 22:56	J7WE	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	409559	02/11/24 00:18	J7WE	EET CAL 4
Instrument ID: GC41										

Client Sample ID: DU4-24-36

Lab Sample ID: 570-170247-5

Date Collected: 01/22/24 12:00

Matrix: Solid

Date Received: 01/31/24 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			50.23 g	5 mL	407889	02/05/24 22:56	J7WE	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	409559	02/11/24 00:40	J7WE	EET CAL 4
Instrument ID: GC41										

Lab Chronicle

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Client Sample ID: DU5-0-6

Lab Sample ID: 570-170247-6

Date Collected: 01/22/24 12:41

Matrix: Solid

Date Received: 01/31/24 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			48.56 g	5 mL	407889	02/05/24 22:56	J7WE	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	409559	02/11/24 01:02	J7WE	EET CAL 4
Instrument ID: GC41										

Client Sample ID: DU5-6-12

Lab Sample ID: 570-170247-7

Date Collected: 01/22/24 12:42

Matrix: Solid

Date Received: 01/31/24 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			48.23 g	5 mL	407889	02/05/24 22:56	J7WE	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	409559	02/11/24 01:24	J7WE	EET CAL 4
Instrument ID: GC41										

Client Sample ID: DU5-12-18

Lab Sample ID: 570-170247-8

Date Collected: 01/22/24 12:43

Matrix: Solid

Date Received: 01/31/24 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			49.21 g	5 mL	407889	02/05/24 22:56	J7WE	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	409559	02/11/24 01:46	J7WE	EET CAL 4
Instrument ID: GC41										

Client Sample ID: DU5-18-24

Lab Sample ID: 570-170247-9

Date Collected: 01/22/24 12:44

Matrix: Solid

Date Received: 01/31/24 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			48.65 g	5 mL	407889	02/05/24 22:56	J7WE	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	409559	02/11/24 02:08	J7WE	EET CAL 4
Instrument ID: GC41										

Client Sample ID: DU5-24-36

Lab Sample ID: 570-170247-10

Date Collected: 01/22/24 12:45

Matrix: Solid

Date Received: 01/31/24 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			49.86 g	5 mL	407889	02/05/24 22:56	J7WE	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	409559	02/11/24 02:30	J7WE	EET CAL 4
Instrument ID: GC41										

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-24 *
Washington	State	C916-18	10-11-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Method	Method Description	Protocol	Laboratory
8151A	Herbicides (GC)	SW846	EET CAL 4
8151A	Extraction (Herbicides)	SW846	EET CAL 4

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

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Sample Summary

Client: Apex Laboratories LLC
Project/Site: A4A1444

Job ID: 570-170247-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-170247-1	DU4-0-6	Solid	01/22/24 12:04	01/31/24 09:55
570-170247-2	DU4-6-12	Solid	01/22/24 12:03	01/31/24 09:55
570-170247-3	DU4-12-18	Solid	01/22/24 12:02	01/31/24 09:55
570-170247-4	DU4-18-24	Solid	01/22/24 12:01	01/31/24 09:55
570-170247-5	DU4-24-36	Solid	01/22/24 12:00	01/31/24 09:55
570-170247-6	DU5-0-6	Solid	01/22/24 12:41	01/31/24 09:55
570-170247-7	DU5-6-12	Solid	01/22/24 12:42	01/31/24 09:55
570-170247-8	DU5-12-18	Solid	01/22/24 12:43	01/31/24 09:55
570-170247-9	DU5-18-24	Solid	01/22/24 12:44	01/31/24 09:55
570-170247-10	DU5-24-36	Solid	01/22/24 12:45	01/31/24 09:55

SUBCONTRACT ORDER

Apex Laboratories

A4A1444

AKC 1/25/24

RECEIVING LABORATORY:

Eurofins CalScience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: (714) 895-5494
Fax: (714) 894-7501

SENDING LABORATORY:

Apex Laboratories
6700 S.W. Sandburg Street
Tigard, OR 97223
Phone: (503) 718-2323
Fax: (503) 336-0745
Project Manager: Darwin Thomas

After Processing Composite of -01, -06, -11, -16
Soil Sampled: 01/22/24 12:04 (A4A1444-42)

Sample Name: DU4-0-6	Due	Expires	Comments
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8151A Herbicides (SUB)

Containers Supplied:
(B)4 oz Glass Jar

02/05/24 12:04

After Processing Composite of -02, -07, -12, -17
Soil Sampled: 01/22/24 12:03 (A4A1444-44)

Sample Name: DU4-6-12	Due	Expires	Comments
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8151A Herbicides (SUB)

Containers Supplied:
(B)4 oz Glass Jar

02/05/24 12:03

After Processing Composite of -03, -08, -13, -18
Soil Sampled: 01/22/24 12:02 (A4A1444-46)

Sample Name: DU4-12-18	Due	Expires	Comments
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8151A Herbicides (SUB)

Containers Supplied:
(B)4 oz Glass Jar

02/05/24 12:02

After Processing Composite of -04, -09, -14, -19
Soil Sampled: 01/22/24 12:01 (A4A1444-48)

Sample Name: DU4-18-24	Due	Expires	Comments
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8151A Herbicides (SUB)

Containers Supplied:
(B)4 oz Glass Jar

02/05/24 12:01

Standard TAT



570-170247 Chain of Custody

Released By	Date	Received By	Date	Fed Ex (Shipper)
<i>[Signature]</i>	1/30/24 1432	<i>[Signature]</i>	1/31/24 0955	Fed Ex (Shipper)

Released By	Date	Received By	Date

Page 1 of 2

2.1/2.1 SC12

SUBCONTRACT ORDER

Apex Laboratories

A4A1444

5 Sample Name: DU4-24-36 Soil Expired After Processing Composite of -05, -10, -15, -20
Sampled: 01/22/24 12:00 (A4A1444-50)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB) Containers Supplied: (B)4 oz Glass Jar	02/07/24 17:00	02/05/24 12:00	

6 Sample Name: DU5-0-6 Soil Expired After Processing Composite of -21, -26, -31, -36
Sampled: 01/22/24 12:41 (A4A1444-52)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB) Containers Supplied: (B)4 oz Glass Jar	02/07/24 17:00	02/05/24 12:41	

7 Sample Name: DU5-6-12 Soil Expired After Processing Composite of -22, -27, -32, -37
Sampled: 01/22/24 12:42 (A4A1444-54)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB) Containers Supplied: (B)4 oz Glass Jar	02/07/24 17:00	02/05/24 12:42	

8 Sample Name: DU5-12-18 Soil Expired After Processing Composite of -23, -28, -33, -38
Sampled: 01/22/24 12:43 (A4A1444-56)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB) Containers Supplied: (B)4 oz Glass Jar	02/07/24 17:00	02/05/24 12:43	

9 Sample Name: DU5-18-24 Soil Expired After Processing Composite of -24, -29, -34, -39
Sampled: 01/22/24 12:44 (A4A1444-58)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB) Containers Supplied: (B)4 oz Glass Jar	02/07/24 17:00	02/05/24 12:44	

10 Sample Name: DU5-24-36 Soil Expired After Processing Composite of -25, -30, -35, -40
Sampled: 01/22/24 12:45 (A4A1444-60)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB) Containers Supplied: (B)4 oz Glass Jar	02/07/24 17:00	02/05/24 12:45	

Standard THT

Released By	Date	Received By	Date
	1/30/24 1432		1/31/24 0955
Fed Ex (Shipper)		Fed Ex (Shipper)	
Released By	Date	Received By	Date

Login Sample Receipt Checklist

Client: Apex Laboratories LLC

Job Number: 570-170247-1

Login Number: 170247

List Source: Eurofins Calscience

List Number: 1

Creator: Yu, Tiffany

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	