FOCUSED PHASE II ENVIRONMENTAL SITE ASSESSMENTS

Light Industrial, Former Agricultural, and Residential Properties 7619 and 7723 48th Street East and 4708-4710 and 4716-4720 77th Avenue Court East Fife, Washington 98424 Pierce County Tax Lots 016, 026, 032, 033, 035, and 036 of Map No. 0420173

Report Prepared For:

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April 12, 2024

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COMMON ACRONYMS

The following is a list of common acronyms typically utilized by environmental consultants in this area. The list of acronyms is not intended to be a complete list and all listed acronyms may not be utilized in this report.

AOC	Area of Concern
AST(s)	Aboveground Storage Tank(s)
ASTM	American Society for Testing and Materials
AULs	Activity and Use Limitations
BB&A	BB&A Environmental
BLS	Below Land Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CERCLA	Comprehensive Environmental Response, Compensation, and
CERCLIS	Comprehensive Environmental Response, Compensation, and
CESQG	Conditionally Exempt Small Quantity Generators
CFR	Code of Federal Regulations
COC	Contaminant of Concern
COI	Contaminants of Interest
COPC	Contaminants of Potential Concern
CRL	Confirmed Release List
CSM	Conceptual Site Model
DEQ	Oregon Department of Environmental Quality
DWP	Drinking Water Protection
ECSI	Environmental Cleanup Site Information
EDB	1,2-Dibromoethane
EDC	1,2-Dichloroethane
EPA	Environmental Protection Agency
EPH	Extractable Petroleum Hyrdocarbons
ESA	Environmental Site Assessment
FS	Feasibility Study
IRAM	Interim Remedial Action Measures
LQG	Large Quantity Generators
LEL	Lower Explosive Limit
LUST	Leaking Underground Storage Tank
MDL(s)	Method-Detection Limit(s)
MRL(s)	Method-Reporting Limit(s)
MTBE	Methyl Tert-Butyl Ether
MTCA	Model Toxics Control Act

NFRAP	No Further Remedial Action Planned
NPL	National Priority List
NRC	National Response Center
OAR	Oregon Administrative Rules
PAH(s)	Polynuclear Aromatic Hydrocarbon(s)
PCB(s)	Polychlorinated Biphenyl(s)
PCE	Tetrachloroethylene or Perchloroethylene
PCS	Petroleum Contaminated Soil
PPB	Parts Per Billion
PPM	Parts Per Million
PQL(s)	Practical Quantitative Limits(s)
RAO	Remedial Action Objective
RBC(s)	Risk-Based Concentration(s)
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
REC	Recognized Environmental Condition
RI	Remedial Investigation
RL	Reporting Limit
TCE	Trichloroethylene
TCLP	Toxicity Characteristic Leaching Procedure
TMB	Trimethylbenzene
TOTZ	Time of Travel Zone
TPH	Total Petroleum Hydrocarbons
TSD	Treatment, Storage, and Disposal
UST(s)	Underground Storage Tank(s)
VEC	Vapor Encroachment Condition
VOC(s)	Volatile Organic Compound(s)
VPH	Volatile Petroleum Hydrocarbons
WAC	Washington Administrative Code
WRD	Water Resources Department

1.0 INTRODUCTION AND PURPOSE

BB&A Environmental (BB&A) was retained by Papé Properties, Inc. to perform a Focused Phase II Environmental Site Assessment (ESA) and focused agricultural sampling for the properties located at 7619 and 7723 48th Street East, and 4708-4710 and 4716-4720 77th Avenue Court East, in Fife, Washington (herein referred to as the *subject property*). Pierce County identifies the *subject property* as approximately 5.65 acres in size and composed of the following parcels within map #0420173: 016, 026, 032, 033, 035, and 036. At the time of the site reconnaissance, the *subject property* was a mix of residential, light industrial, and undeveloped land.

The results of this report is presented to the Washington Ecology Toxics Cleanup Program, on behalf of Papé Properties, Inc. (Papé) prior to industrial redevelopment of the *subject property* with Papé Machinery and Papé Material Handling facilities.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The *subject property* is a multi-parcel property located on the north side of 48th Street East in Fife, Washington, specific addresses including: 7619 and 7723 48th Street East, and 4708 to 4720 77th Avenue Court East. Pierce County identifies the *subject property* as approximately 5.65 acres in size and composed of the following parcels within map #0420173: 016, 026, 032, 033, 035, and 036. The geodesic location of the *subject property* is described as the southwest quarter of Section 17, Township 20 North, Range 4 East. The general location of the *subject property* is depicted on the Site Vicinity map included as **Figure 1**.

2.2 Site and Vicinity General Description and Current Use

The *subject property* is a mixed-use property approximately 5.65-acres in size, located in southeast Fife, Washington. Site reconnaissances in 2022 through 2024 identified the *subject property* developed with a single-family residence with three (2) outbuildings (Shops and Shed); two (2) residential duplexes; and a Service Garage with a Shed and Mobile Trailer. Portions of the parcels are undeveloped and covered with grass and dense trees. Very little change was noted at the *subject property* from 2022 to 2024. Adjacent and nearby properties to the north are primarily of industrial use, adjacent and nearby properties to the south and east are predominantly of residential and agricultural use, and adjacent properties to the west are undeveloped, but in the process of being developed by Papé Properties.

2.3 Description of Structures, Roads, and Other Improvements on the Site

The *subject property* is located on the north side of the 7600 / 7700 block of 48th Street East, in southeast Fife, Washington. The subject property is composed of six (6) parcels. Each of the *subject* parcels are described below:

- Parcel 0420173032: This western parcel, 1.65 acres in size, is developed with a 3,700 square-foot Service Garage on the central portion of the parcel. The Service Garage is constructed with wood framing, wood siding, a concrete slab, five (5) roll-up garage doors, and a composite shingle roof. Inside the Garage is a Paint Booth, and an in-ground vehicle hoist. Stored inside the Garage are three (3) vintage cars in various stages of restoration, numerous car engines, and an abundance of car parts and tools. Inside the north-central Service Garage is a paint storage room, with may small cans of paint. According to the owner, the Service Garage was constructed in 1985, and is approximately 3,700 square feet in size. There are no floor drains in the Garage. According to the owner, the Service Garage car renovation. An abundance of old vehicles, trailers, boats, car parts, and equipment are stored outside around the Garage. A septic tank and drainfield are located immediately south of the Service Garage. A small storage shed is located on the south-central portion of this parcel.
- **Parcel 0420173036:** This north-central parcel (036) is undeveloped and covered with thick grass and areas of dense trees. This parcel is approximately 0.73 acres in size. A water well (supplying water to the duplexes to the south) is located on the southeast quarter of this parcel.
- **Parcel 0420173035:** This central parcel (035) is approximately 0.44 acres in size, and developed with a residential duplex, approximately 1,736 square feet in size. Each duplex unit contains an attached garage. Addresses for the duplex are 4708 and 4710 77th Avenue Court East. According to the Pierce County assessor database, the duplex was constructed in 1972. The duplex is constructed with wood framing, wood siding, vinyl windows, a perimeter concrete foundation wall with crawlspace, a composite shingle roof, and electric baseboard heating.
- **Parcel 0420173033:** This south-central parcel (033) is approximately 0.46 acres in size, and developed with a residential duplex, approximately 1,688 square feet in size. Each duplex unit contains an attached garage. Addresses for the duplex are 4716 and 4720 77th Avenue Court East. According to the Pierce County assessor database, the duplex was constructed in 1970. The duplex is constructed with wood framing, wood siding, vinyl windows, a perimeter concrete foundation wall with crawlspace, a composite shingle roof, and electric baseboard heating.







<u>LEGEND</u>

- Building Property Line TL 0420173035 Tax Lot Number Fence Line Overhead Power Line
 - Power Pole

BB	EUGENE OFFICE 32986 Roberts Ct. Coburg, OR ph: 541.484.9484	PORTLAND OFFICE 25195 SW Parkway Ave.,#207 Wilsonville, OR ph: 503.570.9484	7619 & 7723 48th	STREET E &	SUBJ RESIDEN & 4710, 47	ECT PROPERTY NTIAL PROPERTIES '16, 4720 77th AVENUE	COURT E, FIFE, WAS	5HINGTON	JURE #:
ENVIRONMENTAL	www.E	BAENV.COM	PROJECT CODE: PAP213PH1.22E	date: 03/08/23	scale: 1"=50'	DRAWN: K.D.DESIGNS	CHECKED: STEVE OMO		

- **Parcels 0420173016:** This northeastern parcel (016) is approximately 1.83 acres in size. and developed with a single-family residence, approximately 1,680 square feet in size. The residence, with attached garage, has the address of 7723 48th Street East. According to the Pierce County assessor database, the residence was constructed in 1997. The residence is constructed with wood framing, wood siding, vinyl windows, a perimeter concrete foundation wall with crawlspace, a composite shingle roof, and a central electric heat pump. On the southwest corner of this parcel is a Shop building constructed with metal siding and roofing, metal structural support, and a concrete slab. Immediately south of the Shop is a water well that provides domestic water to the residence, and a wood shed that contains a water filter and pressure tank. Along the southeastern parcel boundary is a former residential structure. This structure was most recently used for storage and business operations. A former water well was located inside the northwest corner of the structure, or immediately outside the northwest corner of the structure. The southern portion of this parcel, surrounding the residence and associated structures is covered with landscaped grass and trees. The northern two-thirds (2/3) of the parcel is covered with dense grass and trees.
- **Parcels 0420173026:** This southeastern parcel (026) is mostly undeveloped, except for the previously discussed former residential and storage structure along the parcel boundary with adjacent parcel 016 to the north. This parcel is approximately 0.44 acres in size and predominantly covered with landscaped grass and trees.

2.4 Current Use of Adjoining Properties

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The *subject property* is bounded to the south by 48th Street East, beyond which residential properties, and an undeveloped parcel, which until recently was occupied by several large greenhouses. To the west, the *subject property* is bounded by a large undeveloped parcel. To the east, the *subject property* is bounded by predominantly rural residential properties. To the north, the *subject property* is bounded by American Fast Freight Inc, a trucking facility with a large warehouse and large parking lot.

2.5 **Physical Setting**

The subject property is relatively level, with a very slight topographical gradient dipping to the north and northwest, with topographical high of 29 feet above mean sea level (MSL)¹ along 48th Street. to a localized low of approximately 27 feet above MSL at the northwestern portion of the property. Local and regional topography dips gently to the west-northwest (see Figure 1).

According to the US Geological Survey (USGS) Geologic Map of the Tacoma 1:100,000-Scale Quadrangle, Washington, the subject property and surrounding area are underlain by alluvial (Qa) deposits of loose, stratified fluvial silt, sand, and gravel associated with the Puyallup River valley, within which, the subject property is located. More specifically, based on soils encountered in nearby borings, uppermost native soils consist of clayey silt and silt with fine-grained sand from the surface to a depth of 10 feet below land surface (BLS). Groundwater was found to occur in those nearby borings at a depth of approximately five (5) to six (6) feet BLS. Local (uppermost) groundwater flow beneath the subject property (and nearby areas) is assumed to flow generally west-northwest with decreasing topography towards and parallel to the flow of the Puyallup River.

In the former water well located at 7519 48th Street East (recently decommissioned), the geologic stratigraphy was described as the following: silty sand and sand from the surface to a depth of 16 feet BLS; a gravelly sand from 16 of 52 feet BLS; sticky clay from 52 to 77 feet BLS; fine sand from 77 to 102 feet BLS; sticky clay from 102 to 108 BLS; fine sand from 108 to 110 feet BLS; clay from 110 to 151 BLS; coarse sand from 151 to 153 BLS; clay from 153 to 172 feet BLS; fine sand from 172 to 180 feet BLS; and coarse sand and gravel from 180 to 227 feet BLS.

2.6 Local and Regional Aquifers and Beneficial Groundwater Use

To confirm local stratigraphy and depth to useable aquifers, a water well query was conducted of the Washington Ecology Water Resources database. Using an approximate three-quarter (0.75) mile radius from the *subject property*, the water well query identified 57 well reports. Of these 57 well reports, eight well reports were for seven (7) domestic water wells (two [2] well reports were associated with the same water well, including initial installation, and later for deepening the water well). The screened intervals for each of the seven (7) water wells are identified as follows:

Screened Interval	Distance from Subject Property
168' - 175'	0.5 miles east of the subject property
288' - 298'	0.25 miles south, beyond the Puyallup River
268' - 273'	0.8 miles west-northwest of the subject property
287' - 297'	Location Unknown, could be within 500 feet
85' - 90'	0.62 miles southeast of the subject property
105' - 110'	0.5 miles east of the subject property
107' - 117'	0.25 miles east of the subject property
	Screened Interval 168' - 175' 288' - 298' 268' - 273' 287' - 297' 85' - 90' 105' - 110' 107' - 117'

¹ Source: ALTA Survey by Centre Point.

BB&A ENVIRONMENTAL

FOCUSED PHASE II ENVIRONMENTAL SITE ASSESSMENTS MULTIPLE PARCELS, 7619 / 7723 48th STREET EAST AND 4708-4710 / 4716-4720 77th AVENUE COURT EAST, FIFE, WASHINGTON PAP213PH1.22E - APRIL 11, 2024

The City of Fife Public Works Department confirmed that the adjacent trailer park property to the south of the *subject property* received water from the municipal water-supply system.

2.7 Underground and Aboveground Storage Tanks

During the site reconnaissance, no evidence of current or former USTs was noted on the *subject property*. North of the Service Garage on parcel 032, a 275-gallon aboveground storage tank (AST) was noted. Gary Vertrees (owner) indicated that this AST contained diesel fuel. The volume of diesel fuel in this AST was at less than 20 percent capacity. Next to the diesel AST is what appears to be an old fuel tank for a commercial truck. This tank was noted to be empty. South of the Service Garage is an old 65-gallon AST with hand pumps. This tank appears to have not been used in many years.

2.8 Water Wells, Septic Systems, Dry Wells, and/or Injection Wells

During the site reconnaissance, no evidence of dry wells or injection wells was noted on the *subject property*; however, the following water wells and septic systems were noted:

- **Parcel 032** (7619 48th Street E): On the north-central portion of this parcel is a water well. A small pond was noted next to the water well, which appeared to have a leak in the top of the well head. According to a water well report for this approximate address (in the name of the owner, Gary Vertrees), this water well appears to be 405 feet deep, removing water from 292 to 405 feet below land surface (BLS). According to the owner, the service shop is connected to a septic tank and drainfield immediately south of the Service Garage, and the on-site RV was connected a septic drainfield near the southwest corner of the this parcel.
- **Parcel 036** (77th Avenue Ct): On the north-central portion of this parcel is a water well that serves the duplexes on parcels 035 and 033.
- **Parcel 035** (4708 / 4710 77th Avenue Ct): According to County information, the duplex on this parcel is connected to septic tanks and a drainfield in the backyard of this duplex.
- **Parcel 033** (4716 / 4720 77th Avenue Ct): According to County information, the duplex on this parcel is connected to septic tanks and a drainfield in the backyard of this duplex.
- **Parcel 016** (7723 48th Street E): On the southwest corner of this parcel is a water well that serves the residence on this parcel. According to the current owner, Gerry Gregory, this active water well is over 300 feet deep. Mr. Gregory also stated that a former water well was located (or may still be located) at the northwest corner of the Former Small Residence on the southeast boundary of parcel 016. Mr. Gregory stated that there is a current septic tank and drain field south-southeast of the current residence, and that a former septic drainfield was once located south of the Former Small Residence on the boundary between parcels 016 and 026.

2.9 Stormwater and Catch Basins

During the site reconnaissance, a single catch basin was noted south of the Service Garage on parcel 032. According to the owner, Mr. Vertrees, this single catch basin is connected to below-ground piping that transmits stormwater to a ditch along the northeast property boundary for parcel 032. No other catch basins were noted on the *subject property*. Stormwater appears to sheet flow across the property, generally flowing north and northwest with decreasing topography towards a low lying ditch along the northern property boundary.

2.10 Hazardous Substances, Petroleum Products, or Unidentified Containers

During the site reconnaissance, the following hazardous chemicals and petroleum products were noted:

- **Parcel 032** (7619 48th Street E): Inside the south-central shed, several small plastic gasoline cans of one (1) to five (5) gallon capacity were noted. Outside the Service Garage, the following were noted: several steel propane tanks of various sizes; a 275-gallon AST containing a small amount of diesel fuel; an empty fuel tank for a commercial truck; a couple drums of unknown contents; a 65-gallon steel AST with hand pumps (appears to be empty); and several five (5) gallon plastic containers of unknown contents. Most of the outside items noted were located beneath covered but open-sided metal storage structures (e.g. metal awnings and metal sheds). Inside the Service Garage, the following were noted: many one-quart to one-gallon cans of paint, thinner, acetone, and lacquer within a small paint storage closet; several five (5) gallon plastic fuel cans for storing diesel and gasoline fuel; one-quart to 2.5-gallon containers of motor oil, hydraulic oil and antifreeze; small spray cans of lubricants and spray paint; and brake fluid and brake cleaner. The floor of the Garage was noted to be relatively clean, and no floor drains were noted.
 - **Parcel 016** (7723 48th Street E): Inside the Storage Sheds on this parcel, the following were noted: several old one-gallon cans of paint; a few five-gallon plastic containers of paint; several one-quart to 2.5 gallon containers of motor oil, antifreeze, and wood stain; small gas cans; and small spray cans of lubricant.

3.0 CLEANUP STANDARDS

3.1 Current and Future Land and Resource Use

The *subject property* is located within the Fife city limits, and is zoned *Community Commercial*. To the north, the adjacent properties are zoned *Industrial* and operate as distribution warehouses. Properties to the west are zoned *Community Commercial* and were formerly of agricultural and residential use, but have been cleared for redevelopment by Papé Properties for light-industrial and commercial use. The properties to the east, beyond 78th Street East are of residential use, but zoned *Community Commercial*. Properties to the south are of residential and agricultural use, and zoned *Medium Density Residential*.

Washington Administrative Code (WAC) 173-340-200 defines "Industrial properties" as those that are zoned "industrial use" by city or county (i.e., local jurisdiction), and/or "have been characterized by, or are to be committed to, traditional industrial uses such as processing or manufacturing of materials, marine terminal and transportation areas and facilities, fabrication, assembly, treatment, or distribution of manufactured products, or storage of bulk materials." Based on this definition, future use of the *subject property* is considered industrial use, since Papé intends to redevelop the *subject property* with a Papé Machinery facility for sales, service and repair of large earth moving equipment, and a Papé Material Handling facility for sales, service, and rental of forklifts, and high-lift machinery.

3.2 Proposed Soil Cleanup Standard – MTCA Method C Industrial Use

Based on proposed future industrial land use of the *subject property* and adjacent properties to the west, plus zoning and land use of the adjacent properties to the north and east, Model Toxics Control Act (MTCA) Method C Cancer cleanup levels for industrial land use are proposed for soil at the *subject property*. Method C Cancer cleanup levels were developed with industrial sites in mind, utilizing less stringent exposure assumptions, based on a 1 in 100,000 (10⁻⁵) cancer risk, and are considered protective of human exposure via direct contact pathway for the *subject property* future land use.

3.3 Proposed Groundwater Cleanup Standards – MTCA Method C Industrial Use

Based on the results of the water well query completed in **Section 2.6**, uppermost groundwater does not appear to be utilized as a source of domestic water (i.e., drinking water, bathing, etc.). Further, based on proposed future industrial land use of the *subject property* and adjacent properties to the west (downgradient), and industrial use and zoning to the north and further west (downgradient), MTCA Method C Cancer cleanup levels for industrial land use are proposed for groundwater beneath the *subject property*. It is important to note that pesticides were not detected in groundwater from an on-site water well.

4.0 FOCUSED PHASE II ENVIRONMENTAL SITE ASSESSMENT

According to Gary Vertrees (owner), an auto body repair and Service Garage has operated on parcel 032 (7619 48th Street East) since 1985. Based on long-term use, storage, and disposal of paints, thinners, petroleum products, and potential solvents, this facility poses a potential *recognized environmental condition* associated with the *subject property*. On November 18, 2022, BB&A conducted a focused Phase II ESAs at the *subject property* to address this area of concern.

4.1 Probing and Sampling Locations

As part of the investigation, BB&A advanced four (4) push-probe borings to sample soil and groundwater in the following areas of concern:

- **Push Probe P1:** Push-probe boring P1 was placed a few feet southeast of the diesel AST on the central portion of the *subject property*, north (downgradient) of the Service Garage;
- **Push Probe P2:** Push-probe boring P2 was placed a few feet northwest (downgradient) of the paint booth portion of the Service Garage;
- **Push Probe P3:** Push-probe boring P3 was placed near the septic tank located immediately south of the Service Garage;
- **Push Probe P4:** Push-probe boring P4 was placed within the septic drainage area located near the southwestern property boundary.

4.2 Probing and Soil Sampling Procedures, Methodology, and Observations

The four (4) push-probe borings were advanced using track-mounted Geoprobe®, and push-probe technology, rods, and equipment. Soil cores from each boring were collected using hollow, stainless steel core barrels approximately 60 inches in length and 3.25 inches in diameter. Additional core barrels are added as the probe is advanced. Subsurface soil samples were retrieved within 60-inch long clear plastic tubes, 2.626 inches in diameter, inserted within the lead core barrel.

Soil cores were inspected in the field for evidence of contamination, such as visual and olfactory evidence, and measurable organic vapors using an Organic Vapor Meter with Photoionization Detector (OVM-PID). Observations, measurements, and other field notes are recorded on the attached probe logs (**Appendix A**). Discrete soil samples were selected from those soils containing suspect materials, or where no evidence of contamination was observed, soil samples were collected from the soil/water interface.

Native soils encountered within the borings generally included silts with clay and a trace of finegrained sand from the surface to a depth of 15 feet below land surface (BLS). Uppermost groundwater was encountered at a depth of approximately eight (8) to 10.5 feet BLS. No obvious evidence of contamination was noted in soil from borings P1 through P4. As such, soil samples were collected at the soil-water interface (8.5 to 10 feet BLS). Each soil sample was collected by EPA Methods 5035A, with additional grab samples transferred to new four (4) ounce soil jars. New Terra Core® samples were used for each soil sample (i.e., no Terra Core® samplers were re-used, where the Terra Core® samplers were pushed into the soil to collect a specific volume of soil sample, and then transferred to laboratory-prepared 40 milliliter (mL) glass VOA vials with appropriate methanol preservative. The additional grab samples were collected using clean nitrile gloves, where the samples were placed within new four (4) ounce glass jars sealed with threaded, teflon-lined caps. The jars were filled such that remaining headspace volume was eliminated. The sample containers were uniquely labeled, logged on a chain-of-custody form, and placed on ice until delivery to Apex Laboratory in Tigard, Oregon.

4.3 Soil Analytical Results

Soil samples from push-probe borings P1 through P4 were submitted for analysis of gasoline-, diesel- and oil-range Total Petroleum Hydrocarbons (TPH) per Northwest Method NWTPH-HCID. The boring locations and soil analytical results are provided on **Figure 4**. The soil analytical results are summarized in **Table 1**. The complete laboratory report is presented in **Appendix B**.

Table 1: Soil Analytical Results7619 48th Street E, Fife, Washington									
All concentrations in milligrams per kilogram (mg/kg), or parts per million (ppm). ND (>20): Indicates contaminant was not detected above method-reporting limit shown in parenthesis. *MTCA A Cleanup Level for Gasoline-range TPH is 100 ppm if benzene is not detected, and 30 ppm if benzene is detected.									
Contaminants-of-		Soil Sa	ample ID		MTCA Method A Cleanup Levels for				
Potential-Concern P1 - 9.5-10' P2 - 8-8.5' P3 - 9.5' P4 - 8' Unrestricted Lar									
Gasoline-Range TPH	ND (<25.8)	ND (<24.9)	ND (<24.1)	ND (<28.3)	<28.3) 100 / 30*				
Diesel-Range TPH ND (<64.4) ND (62.2) ND (60.3) ND (70.8) 2,000 Heavy Oil-Range TPH ND (129) ND (124) ND (121) ND (142) 2 000									

Laboratory analysis of the soil samples did not detect gasoline-, diesel-, or oil-range TPH above method reporting limits (MRLs) in any of the four (4) soil samples collected from borings P1 through P4 Contaminant concentrations were compared to MTCA Method A Cleanup Levels (CULs) for unrestricted land use, protective of human-health under various potential exposure pathways and receptor scenarios, including those for excavation / utility workers, and current onsite workers or potential residents under future land use scenarios (e.g. dermal contact / inhalation exposure pathways). No contaminants were detected, nor were any MRLs above MTCA Method A CULs.



4.4 Groundwater Sampling Methodology

Upon completing each of the push-probe borings and collecting soil samples, a temporary well casing was installed, and accumulating groundwater allowed to equilibrate. Prior to groundwater sampling, groundwater was purged to the extent that three (3) well casing volumes had been purged, and the purged groundwater was clear of sediment. Groundwater was purged using a low-flow peristaltic pump using new polyethylene tubing at each sample location. None of the groundwater purged exhibited any evidence of contamination (i.e., odor or sheen).

Groundwater samples were collected from recharging formation water using the peristaltic pump at its lowest setting (0.1 to 0.3 liters per minute), and transferring groundwater directly into laboratory-supplied glassware with appropriate sample preservatives. Groundwater samples from push-probe borings P1 through P4 were submitted for analysis of diesel-range TPH per Northwest Method NWTPH-Dx and Full List VOCs per EPA Method 8260D. The boring locations and groundwater analytical results are provided on **Figure 4**. The groundwater analytical results are summarized in **Table 2**. The complete laboratory report is presented in **Appendix B**.

Table 2: Groundwater Analytical Results

7619 48th Street E, Fife, Washington

All concentrations in micrograms per Liter (ug/L), or parts per billion (ppb).

ND (>20): Indicates contaminant was not detected above method-reporting limit shown in parenthesis.

*MTCA A Cleanup Levels for Unrestricted Land Use provided. Where MTCA A Cleanup Levels are not provided, MTCA Method B levels are provided.

Contaminants-of-		MTCA Method A Cleanup Levels for			
Potential-Concern	P1 - GW	P2 - GW	P3 - GW	P4 - GW	Unrestricted Land Use
Diesel-Range TPH	ND (<92)	ND (<86)	ND (<93)	ND (92)	500
Oil-Range TPH	ND (<184)	ND (<172)	ND (<186)	ND (<184)	500
Benzene	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	5.0
Toluene	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1,000
Ethylbenzene	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	700
Xylenes	ND (<1.5)	ND (<1.5)	ND (<1.5)	ND (<1.5)	1,000
Bromoform	ND (1.0)	ND (<1.0)	ND (<1.0)	1.97	160 ^в
Dibromochloromethane	ND (<1.0)	ND (1.0)	ND (<1.0)	2.52	160 ^в
cis-1,2-Dichloroethene	ND (<0.4)	0.740	ND (<0.4)	ND (<0.4)	16 ^B
All Other VOCs	ND	ND	ND	ND	Various

4.5 Groundwater Sampling and Analytical Results

Laboratory analysis of the groundwater samples did not detect diesel- or oil-range TPH or benzene, toluene, ethylbenzene, and xylene (BTEX) compounds in any of the four (4) groundwater samples. A low concentration of cis-1,2-dichloroethene at 0.740 micrograms per liter (μ g/L), or parts per billion (ppb) was detected in groundwater collected from push-probe P3, and low concentrations of bromoform (1.97 ppb) and dibromochloromethane (2.52 ppb) were detected in groundwater collected from push-probe P4. The detected concentrations do not exceed MTCA Method A or B Cleanup Levels for unrestricted land use.

The detected contaminant cis-1,2-dichloroethene was only detected in groundwater from temporary push-probe boring P3, and not detected in groundwater from borings P1, P2, and P4 to the northwest, northeast, and southwest, respectively. The detected concentration of cis-1,2-dichloroethene at 0.74 ppb is two (2) orders of magnitude below the MTCA Method B CUL. As such, cis-1,2-dichloroethene in groundwater appears to be quite limited in magnitude and extent, and effectively delineated in these directions. Further delineation of cis-1,2-dichloroethene in groundwater does not appear to be warranted.

Bromoform (1.97 ppb) and dibromochloromethane (2.52 ppb) were detected in groundwater collected from push-probe boring P4 at concentrations three (3) orders of magnitude below MTCA Method B CULs. These compounds were not detected in groundwater from any other push-probe boring. Both bromoform and dibromochloromethane are typically formed as byproducts of using chlorine to disinfect or kill bacteria – that is, as a byproduct of chlorine and organic matter. Because boring P4 was placed within the southwest drainfield, it is logical that this is the source of the compounds, and represents the highest concentration likely in groundwater beneath this property. The magnitude and extent of bromoform and dibromochloromethane is considered quite limited, and not warranted of any additional investigation.

5.0 FOCUSED SAMPLING FOR HERBICIDES AND PESTICIDES

The northern portions of *subject property* appears to have been historically utilized for agricultural purposes, including a small area of row crops. Historical agricultural use and potential use of herbicides and pesticides represent a potential recognized environmental condition associated with the *subject property*. As part of this Focused Phase II ESA, BB&A conducted composite surface soil sampling in the areas of former historical agricultural use at the *subject property*. The purpose of the sampling event was to confirm or deny the presence of pesticides and herbicides in shallow soil on the former agricultural (northern) portions of the *subject property*.

5.1 Soil Sampling Methodology

As part of this focused investigation, composite soil samples were collected from surface and near surface soils from the northern portion of the *subject property* where historical agricultural use has occurred. The following sample protocols were performed for each composite soil sample:

• Agricultural Sampling: Soil samples were collected from the former agricultural, northern portions of parcels 032, 036, and 016. At each parcel, 12 random grab samples were collected using a shovel and clean nitrile gloves. At each random grab sample location, a one (1) foot by one (1) foot square plug of soil, approximately eight (8) inches deep, was removed using a shovel. To prevent cross-contamination, the grab sample was collected using clean nitrile gloves from the center of the plug, that had not come in contact with the shovel. The nitrile gloves were changed between samples to prevent additional cross-contamination. The grab samples were combined within a one-gallon plastic ziploc bag, from which an eight (8) ounce soil jar was filled to capacity. Each clean eight (8) ounce glass jar was sealed with threaded, teflon-lined caps. The jars were filled such that remaining headspace volume was minimized. The sample jars were uniquely labeled, logged on a chain-of-custody document, and placed on ice in an insulated portable cooler.

5.2 Soil Sample Analytical Results and Risk-Based Comparisons

All of the composite soil samples were submitted for analysis of Organochlorine Pesticides per EPA Method 8081B, and Herbicides per EPA Method 8151A. The analytical results are summarized below in **Table 3**. Laboratory analysis only detected the pesticide Dieldrin above the method reporting limit in composite soil samples COMP-032 and COMP-036. Herbicides were not detected above method reporting limits in any of the composite soil samples.

To evaluate the analytical results, the detected Dieldrin concentrations were compared to MTCA cleanup levels. MTCA Method A cleanup levels were not available for any of the herbicides or pesticides. Instead, Dieldrin concentrations were compared to MTCA Method B cleanup levels for unrestricted land use, and MTCA. MTCA Method B includes cleanup concentrations for carcinogenic and non-carcinogenic compounds. Dieldrin did not exceed the carcinogenic MTCA Method B cleanup level, and was two (2) to three (3) orders of magnitude below the MTCA C Cancer Cleanup Level for industrial land.



<u>LEGEND</u>



BBA	EUGENE OFFICE 32986 Roberts Ct. Coburg, OR ph: 541.484.9484	PORTLAND OFFICE 25195 SW Parkway Ave.,∦207 Wilsonville, OR ph: 503.570.9484	7619 & 7723 48th	SITE PLAN STREET E 8	SHOWING (RESIDEN : 4710, 47	COMPOSIT S NTIAL PROPE 16, 4720 7	SAMPLING LOC ERTIES 7th AVENUE C	CATIONS	, WASHINGTON	figure #: 5
ENVIRONMENTAL	www.E	BAENV.COM	PROJECT CODE: PAP213PH1.22E	DATE: 03/08/23	scale: 1"=50'	DRAWN: K.D.	DESIGNS	CHECKED: STEV	E OMO	Ū

No other herbicides or pesticides were detected above method reporting limits. Based on the results of the focused sampling and analytical results, and proposed future use as an industrial property, the concentrations of Dieldrin do not appear to pose a human-health concern under current or proposed future land use scenarios.

Table 3: Agricultural Soil Sampling Analytical Results

Multiple Parcels, 7619 to 7623 48th Street E, Fife, Washington

All concentrations in milligrams per kilogram (mg/kg), or parts per million (ppm).

ND (>0.02): Indicates contaminant was not detected above method-reporting limit shown in parenthesis.

MTCA A Cleanup Levels where available. Where MTCA A Cleanup Levels not available, MTCA Method B Non-Cancer (B-NC and Method B Cancer (B-C) Cleanup Levels are provided. For Dieldrin, the MTCA C Cancer Cleanup Level (for Industria Land) is also provided.

Contaminants-of-	Greenl	MTCA Method B		
Potential-Concern	COMP-032	Cleanup Levels**		
Organochlorine Pestic				
Aldrin	ND (<0.002)	ND (<0.002)	ND (<0.002)	0.0588 ^{B-C}
beta-BHC	ND (<0.002)	ND (<0.002)	ND (<0.002)	0.556 ^{B-C}
gamma-BHC (Lindane)	ND (<0.002)	ND (<0.002)	ND (<0.002)	0.909 ^{B-C}
cis-Chlordane	ND (<0.002)	ND (<0.002)	ND (<0.002)	2.86 ^{B-C}
trans-Chlordane	ND (<0.002)	ND (<0.002)	ND (<0.002)	2.86 ^{B-C}
4,4'-DDD	ND (<0.002)	ND (<0.002)	ND (<0.002)	4.17 ^{B-C}
4,4'-DDE	ND (<0.002)	ND (<0.002)	ND (<0.002)	2.94 ^{B-C}
4,4'-DDT	ND (<0.002)	ND (<0.002)	ND (<0.002)	2.94 ^{B-C}
Dieldrin	0.01	0.009	ND (<0.002)	0.063 ^{B-C} / 8.2 ^C
Endosulfan II	ND (<0.002)	ND (<0.002)	ND (<0.002)	480 ^{B-NC}
Endosulfan Sulfate	ND (<0.002)	ND (<0.002)	ND (<0.002)	480 ^{B-NC}
Endrin Ketone	ND (<0.002)	ND (<0.002)	ND (<0.002)	24 ^{B-NC}
Heptachlor epoxide	ND (<0.002)	ND (<0.002)	ND (<0.002)	0.11 ^{B-C}
All other Pesticides	ND (<0.002)	ND (<0.002)	ND (<0.002)	Various
Herbicides (EPA Method	8151)			
2,4,5-T	ND (<0.004)	ND (<0.004)	ND (<0.004)	800 ^{B-NC}
2,4,5-TP (Silvex)	ND (<0.009)	ND (<0.009)	ND (<0.009)	800 ^{B-NC}
2,4-D	ND (<0.06)	ND (<0.06)	ND (<0.06)	800 ^{B-NC}
2,4-DB	ND (<0.13)	ND (<0.13)	ND (<0.13)	800 ^{B-NC}
Dalapon	ND (<0.09)	ND (<0.09)	ND (<0.09)	2400 ^{B-NC}
Dicamba	ND (<0.005)	ND (<0.005)	ND (<0.005)	2400 ^{B-NC}
Dichlorprop	ND (<0.06)	ND (<0.06)	ND (<0.06)	800 ^{B-NC}
Dinoseb	ND (<0.07)	ND (<0.07)	ND (<0.07)	80 ^{B-NC}
MCPA	ND (<6.1)	ND (<6.1)	ND (<6.1)	40 ^{B-NC}
MCPP	ND (<8.3)	ND (<8.3)	ND (<8.3)	80 ^{B-NC}

5.3 Ecology's Additional Recommended Actions / Concerns

In an opinion letter dated, June 12, 2023, the Ecology Toxics Cleanup Program reviewed and commented on BB&A's Focused Phase II ESA. In the opinion letter, Ecology requested that additional address-specific actions and/or concerns be addressed. These additional actions / concerns, not previously addressed above, are addressed in the following Sections.

5.3.1 7619 48th Street E (TL 042017-3-032 [1.65 acres])

- **Conduct field composite soil sampling / analysis for organophosphorous (OPP) and carbamate pesticides, and dioxin and metals known to be in various fertilizer and /or pesticide formulations**: The findings of the investigations conducted on the adjacent properties to the west (i.e., 7109 - 7601 48th Street E) did not detect OPP or carbamate pesticides, nor dioxin compounds; and metal concentrations were found to be below naturally occurring background concentrations for the Puget Sound region, which includes Pierce County, as well as those values calculated statewide for the State of Washington as well. Based on these findings, plus the fact that the closest parcel with any pesticides above MTCA CULs is approximately 1,000 feet from this property (i.e., 7619 48th Street E), these additional analyses at this property do not appear to be warranted.
- Assess halogenated VOC (HVOC) extent in groundwater near P3: As previously discussed in Section 4.6, the detected contaminant cis-1,2-dichloroethene was only detected in groundwater from temporary push-probe boring P3, and not detected in groundwater from borings P1, P2, and P4 to the northwest, northeast, and southwest, respectively. The detected concentration of cis-1,2-dichloroethene at 0.74 ppb is two (2) orders of magnitude below the MTCA Method B CUL. As such, cis-1,2-dichloroethene in groundwater appears to be quite limited in magnitude and extent, and effectively delineated in these directions. Further delineation of cis-1,2-dichloroethene in groundwater does not appear to be warranted.
- Assess groundwater northwest of P4 and septic drainfield for HVOC: As previously discussed in Section 4.6, bromoform (1.97 ppb) and dibromochloromethane (2.52 ppb) were detected in groundwater collected from push-probe boring P4 at concentrations three (3) orders of magnitude below MTCA Method B CULs. These compounds were not detected in groundwater from any other push-probe boring. Both bromoform and dibromochloromethane are typically formed as byproducts of using chlorine to disinfect or kill bacteria that is, as a byproduct of chlorine and organic matter. Because boring P4 was placed within the southwest drainfield, it is logical that this is the source of the compounds, and represents the highest concentration likely in groundwater beneath this property. The magnitude and extent of bromoform and dibromochloromethane is considered quite limited, and not warranted of any additional investigation.

5.3.2 4710 77th Avenue Court E (TL 042017-3-035 [0.73 acres] + 042017-3-036 [0.44 acres])

- Conduct field composite soil sampling / analysis for organophosphorous (OPP) and carbamate pesticides, and dioxin and metals known to be in various fertilizer and /or pesticide formulations: The findings of the investigations conducted on the nearby properties to the west (i.e., 7109 7601 48th Street E) did not detect OPP or carbamate pesticides, nor dioxin compounds; and metal concentrations were found to be below naturally occurring background concentrations for the Puget Sound region, which includes Pierce County, as well as those values calculated statewide for the State of Washington as well. Based on these findings, plus the fact that the closest parcel with any pesticides above MTCA CULs is approximately 1,150 feet from this property (i.e., 7619 48th Street E), these additional analyses at this property do not appear to be warranted.
 - Assess groundwater west of septic drainfield for HVOC: The septic systems at the duplexes located at 4708 / 4710 77th Avenue Court East, and at 4716 / 4720 77th Avenue Court East were inspected in 2017 and 2019 by Tacoma-Pierce County Health Department and both found to be operating per design, with no observed environmental concerns. These properties have always been of residential use and disposal of halogenated VOCs to the septic system at a residential property is not common. Pierce County Health Department does not require such investigations as part of decommissioning septic systems. Papé is satisfied with current capacity and operation of the on-site septic systems, and does not consider the septic systems to represent a REC.
- Sample and decommission water well in accordance with WAC 173-160-381: This water well is still active and providing water to the duplexes at 4708 / 4710 77th Avenue Court East, and 4716 / 4720 77th Avenue Court East. These properties will remain residential use until redevelopment on the western properties (i.e., 7109 7601 48th Street E) are completed. At the time of razing the duplexes, the water well will be decommissioned in accordance with WAC 173-160-381.

5.3.3 7723 48th Street E (TL 042017-3-016 [1.83 acres] + 042017-3-026 [0.44 acres])

 Sample groundwater downgradient of barn / shed for TPH-G/D/O, and VOCs: During the site walk and inspection of this property for the Phase I ESA, the floor of the barn and shed was noted to be seamless concrete, with no floor drains. No staining was noted inside the garage on concrete, nor outside these structures on soil that would indicate spills or releases of petroleum or chemicals. BB&A and Papé are satisfied with these findings and do not recommend any additional investigations at these structures.

- **Sample groundwater downgradient of septic drainfield for HVOC**: The septic systems at this property were inspected in 2019 by Tacoma-Pierce County Health Department and found to be operating per design, with no observed environmental concerns. This property has always been of residential use and disposal of halogenated VOCs to the septic system at a residential property is not common. Pierce County Health Department does not require such investigations as part of decommissioning septic systems. Papé is satisfied with current capacity and operation of the on-site septic systems, and does not consider the septic systems to represent a REC.
 - Conduct field composite soil sampling / analysis for OPP and carbamate pesticides, and dioxin and metals known to be in various fertilizer and /or pesticide formulations: The findings of the investigations conducted on the nearby properties to the west (i.e., 7109 - 7601 48th Street E) did not detect OPP or carbamate pesticides, nor dioxin compounds; and metal concentrations were found to be below naturally occurring background concentrations for the Puget Sound region, which includes Pierce County, as well as those values calculated statewide for the State of Washington as well. Based on these findings, plus the fact that the closest parcel with any pesticides above MTCA CULs is approximately 1,300 feet from this property (i.e., 7619 48th Street E), these additional analyses at this property do not appear to be warranted.
 - Sample and decommission current and former water well in accordance with WAC
 173-160-381: This water well is still active and providing water to this property. This property will remain residential use until redevelopment on the western properties (i.e., 7109 7601 48th Street E) are completed. At the time of razing the on-site structures, the water wells will be decommissioned in accordance with WAC 173-160-381.

6.0 FINDINGS AND CONCLUSIONS

The findings of the Phase I and Focused Phase II ESA are provided as follows:

• Site Description and Use: The *subject property* is an approximately 5.65-acre mixed use property located along the 7600 and 7700 block of 48th Street in Fife, Washington. Pierce County identifies the *subject property* as approximately 5.19 acres in size and composed of the following parcels within map #0420173: 016, 026, 032, 033, 035, and 036. At the time of site reconnaissance, the *subject property* was developed with a single-family residence with three (3) outbuildings (Shops and Shed); two (2) residential duplexes; a Service Garage with a Shed and Mobile Trailer. Portions of the parcels are undeveloped and covered with grass and dense trees.

Adjacent and nearby properties to the north are primarily distribution warehouses, and adjacent and nearby properties to the south and east are predominately of residential and agricultural use. Papé Properties plans to redevelop the adjacent tax lots to the east as industrial properties, including a Papé Machinery facility for sales, service and repair of large earth moving equipment, such as excavators and tractors, and Papé Material Handling Facility for sales, service, and rental of forklifts, and high-lift machinery.

• Site History: Based on historical aerials, County information, and interviews with property owners, historical use of the *subject property* includes: parcel 032 appears to have been of agricultural use until development with a Service Garage for auto body repair in 1985; parcel 036 has always been undeveloped and of agricultural use and/or natural grassland; parcels 033 and 035 were of agricultural use until development with the current-day duplexes in 1970 and 1972; parcel 016 was of agricultural use until development with the current-day residence in 1997; and parcel 026 has been of residential use since the 1950's.

Focused Phase II Investigation

- In October and November 2022, a Focused Phase II ESA was conducted to evaluate current subsurface soil and groundwater conditions beneath the *subject property*. As part of this investigation, three (3) composite soil samples were collected from the agricultural areas, and four (4) push-probe borings were advanced to sample soil and groundwater at the Service Garage property.
- Agricultural Sampling: A composite of 12 grab soil samples were collected from each of the three (3) areas of former agricultural use. The three (3) composite soil samples were analyzed for herbicides and pesticides. Laboratory analysis only detected the pesticide Dieldrin above the method reporting limit in composite soil samples COMP-032 and COMP-036 (parcels 032 and 036). Herbicides were not detected above method reporting limits in any of the composite soil samples. The detected Dieldrin concentrations were below MTCA Method B cleanup levels for unrestricted land use.

- **Push-Probe Investigation:** Each of the four (4) push-probe borings were advanced to 15 feet BLS, with groundwater encountered at eight (8) to 10.5 feet BLS.
- **Soil Analytical Results:** Laboratory analysis of the soil samples did not detect gasoline-, diesel-, or oil-range TPH above method reporting limits in any of the four (4) soil samples collected from borings P1 through P4 advanced at 7619 48th Street East.
- **Groundwater:** Laboratory analysis of the four (4) groundwater samples from the temporary borings (P1 P4) did not detect diesel- or oil-range TPH or BTEX compounds in any of the four (4) groundwater samples collected from borings P1 through P4. A low concentration of cis-1,2-dichloroethene (0.740 parts per billion [ppb]) was detected in groundwater collected from push-probe P3 and low concentrations of bromoform (1.97 ppb) and dibromochloromethane (2.52 ppb) were detected in groundwater collected from push-probe P4. The detected concentrations do not exceed MTCA Method B Cleanup Levels for unrestricted land use.

The detected contaminant cis-1,2-dichloroethene was only detected in groundwater from temporary push-probe boring P3, and not detected in groundwater from borings P1, P2, and P4 to the northwest, northeast, and southwest, respectively. The detected concentration of cis-1,2-dichloroethene at 0.74 ppb is two (2) orders of magnitude below the MTCA Method B CUL.

Bromoform (1.97 ppb) and dibromochloromethane (2.52 ppb) were detected in groundwater collected from push-probe boring P4 at concentrations three (3) orders of magnitude below MTCA Method B CULs. These compounds were not detected in groundwater from any other push-probe boring. Both bromoform and dibromochloromethane are typically formed as byproducts of using chlorine to disinfect or kill bacteria – that is, as a byproduct of chlorine and organic matter. Because boring P4 was placed within the southwest drainfield, it is logical that this is the source of the compounds, and represents the highest concentration likely in groundwater beneath this property.

7.0 CONCLUSIONS AND OPINIONS

The findings of this investigation support the following conclusions and opinions:

- Portions of the *subject property* appear to have been of partial agricultural use until 1970, 1985, and early 1990's. Focused agricultural sampling at the *subject property* detected low concentrations of Dieldrin in two (2) of the three (3) near-surface soil samples. The detected Dieldrin concentrations are below MTCA Method B Cleanup Levels for unrestricted land use and two (2) orders of magnitude below the MTCA Method C Cancer cleanup level for industrial use. The detected Dieldrin may have been applied in accordance with labeling requirements and under typical routine application methods. The low concentrations of Dieldrin do not appear to pose a human-health concern under current or proposed future industrial land use scenarios.
 - The Focused Phase II ESA at the Service Garage property did not detect any petroleum contamination in soil; however, low levels of cis-1,2-dichloroethene (0.740 ppb), bromoform (1.97 ppb), and dibromochloromethane (2.52 ppb) were detected in groundwater. No other VOCs or petroleum products were detected in groundwater. These contaminants were detected at concentrations orders of magnitude below MTCA Method B CULs. The detected cis-1,2-dichloroethene in groundwater appears to be quite limited in magnitude and extent, and effectively delineated by groundwater samples from temporary borings to the northwest, northeast, and southwest. Bromoform and dibromochloromethane are likely the result of flushing chlorine products to the septic system. The magnitude and extent of bromoform and dibromochloromethane is considered quite limited, and not warranted of any additional investigation.
- If the on-site water wells are not going to used in the future, then they should be decommissioned by a licensed water well driller. If the water wells are to be used in the future, then they should be sampled and analyzed for water quality parameters.
- Based on the soil and groundwater results, and future proposed redevelopment of the subject property for commercial and/or light industrial use, BB&A is of the opinion that the site is protective of human-health and the environment, and recommends that a no further action (NFA) determination be issued for the subject property.

8.0 LIMITATIONS

The professional services of BB&A Environmental have been rendered using the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental consulting firms practicing in this or similar locations. No other warranty expressed or implied is made.

Soil samples were analyzed to identify and delineate surface and near-surface impact in areas most likely to have been impacted by historical applications of chlorinated pesticides. The results of their analyses only indicate the presence or absence of pesticides (i.e., specifically dieldrin) in those discrete and composited sample locations. Analytical data from the laboratory samples should only be considered as indicators of site conditions and not a guarantee of the absence of pesticides in areas not sampled.

The conclusions presented in this report are based only on the observations made during field investigation and data provided by others. The accuracy of these findings is based upon the accuracy of data and information provided by others. The findings of this assessment should not be considered as scientific certainties, but rather as professional opinion based upon selected and limited data.

If you have any questions concerning the information contained in this report, please do not hesitate to contact us.



Stephen M. Omo, RG Project Manager



PAGE_1__0F__1_

PROBE LOG

PROBE NO.: P1 PROJECT CODE: PAP213PH1.22E

 CADD FILE:
 PAP213PH1.22E

 PROJECT:
 RESIDENTIAL PROPERTIES

 LOCATION:
 7619 48th STREET E.

 FIFE, WASHINGTON

TOTAL DEPTH:	15'
SURFACE ELEVATION:	
PROBING METHOD:	MACRO CORE
PROBED BY:	BB&A ENVIRONMENTAL
LOGGED BY:	ALYSSA GARVEY
DATE COMPLETED:	11/17/22

DEPTH (feet)	SAMPLE IDENTIFICATION <u>AND</u> LAB RESULTS	MC RECOVERY	PID	H₂0 LEVEL	LITHOLOGIC DESCRIPTION	LITHOLOGY	DEPTH (feet)	PROBE ABANDONMENT
- 0 - 5 - 10 - 15 - 20 - 21 -	P1-GW	100% 50% 80%	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		 Silty CLAY (CL): brown, some gravel, dry Silty CLAY (CL): brown, moist Silty CLAY (CL): brown, wet Sandy CLAY (CL): brown, wet CLAY (CL): brown, wet CLAY (CL): brown to gray, wet Sandy CLAY (CL): brown, wet Sandy CLAY (CL): brown, wet 		- 0 5 	
LEGEND NOTES:								
PID Photo Ionization Detector, Units in parts per million (ppm)								
WD	WD Water Level in borehole during drilling (i.e. first encountered)							
NOTE: CLASSIFICATION OF SOILS BASED ON THE UNITED SOILS CLASSIFICATION SYSTEM.								

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PROBE LOG

 PROBE NO.:
 P2

 PROJECT CODE:
 PAP213PH1.22E

 CADD FILE:
 PAP213PH1.22E

 PROJECT:
 RESIDENTIAL PROPERTIES

 LOCATION:
 7619 48th STREET E.

 FIFE, WASHINGTON

TOTAL DEPTH:	15'
SURFACE ELEVATION:	
PROBING METHOD:	MACRO CORE
PROBED BY:	BB&A ENVIRONMENTAL
LOGGED BY:	ALYSSA GARVEY
DATE COMPLETED:	11/17/22

DEPTH (feet)	SAMPLE IDENTIFICATION <u>AND</u> LAB RESULTS	MC RECOVERY	PID	H₂0 LEVEL	LITHOLOGIC DESCRIPTION	LITHOLOGY	DEPTH (feet)	PROBE ABANDONMENT
- 0 - - - - - - - - - - - - - - - - - -	P2-GW	100% 100% 100%	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	WD Y	 Silty CLAY (CL): brown, dry CLAY (CL): brown, dry CLAY (CL): brownish/gray, moist Sandy CLAY (CL): brown to gray, wet CLAY (CL): gray, moist Sandy CLAY (CL): brown, dry Sandy CLAY (CL): brown, moist CLAY (CL): brown to gray, wet Sandy CLAY (CL): brown, wet CLAY (CL): gray, moist 		- 0 	
LEGEND NOTES:								
BLS Below Land Surface PID Photo Ionization Detector, Units in parts per million (ppm)								
WD	WD Water Level in borehole during drilling (i.e. first encountered)							
NOTE: CLASSIFICATION OF SOILS BASED ON THE UNITED SOILS CLASSIFICATION SYSTEM.								

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PROBE LOG

 PROBE NO.:
 P3

 PROJECT CODE:
 PAP213PH1.22E

 CADD FILE:
 PAP213PH1.22E

 PROJECT:
 RESIDENTIAL PROPERTIES

 LOCATION:
 7619 48th STREET E.

 FIFE, WASHINGTON

TOTAL DEPTH:	15'
SURFACE ELEVATION:	
PROBING METHOD:	MACRO CORE
PROBED BY:	BB&A ENVIRONMENTAL
LOGGED BY:	ALYSSA GARVEY
DATE COMPLETED:	11/17/22

DEPTH (feet)	SAMPLE IDENTIFICATION AND LAB RESULTS	MC RECOVERY	PID	H₂0 LEVEL	LITHOLOGIC DESCRIPTION	LITHOLOGY	DEPTH (feet)	PROBE ABANDONMENT	
- 0 - 5 - 10 - 15 - 20 - 21 -	P3-GW	50% 75% 100%	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		- CLAY (CL): brown, dry - CLAY (CL): brown, moist - Silty CLAY (CL): brown, dry - Sandy CLAY (CL): brown to gray, wet - CLAY (CL): gray, moist - Sandy CLAY (CL): brown, moist - CLAY (CL): brown to gray, moist - Sandy CLAY (CL): brown, wet		- 0 		
LEGEND NOTES: BLS Below Land Surface PID Photo Ionization Detector, Units in parts per million (ppm)									
WD	Water Level	in	boreho	le duri	ng drilling (i.e. first encountered)				
NOTE: CL	EUGENE OFFICE 32986 Roberts Court Coburg, Oregon 97408 ph. 541.484.9484 fox. 541.484.4188 PORTLAND OFFICE 25195 SW Parkway Ave., Suite 207 Wilsonville, Oregon 97070 ab 503 570 0384 for 503 570 0384								

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PROBE LOG

 PROBE NO.:
 P4

 PROJECT CODE:
 PAP213PH1.22E

 CADD FILE:
 PAP213PH1.22E

 PROJECT:
 RESIDENTIAL PROPERTIES

 LOCATION:
 7619 48th STREET E.

 FIFE, WASHINGTON

TOTAL DEPTH:	15'
SURFACE ELEVATION:	
PROBING METHOD:	MACRO CORE
PROBED BY:	BB&A ENVIRONMENTAL
LOGGED BY:	ALYSSA GARVEY
DATE COMPLETED:	11/17/22

DEPTH (feet)	SAMPLE IDENTIFICATION <u>AND</u> LAB RESULTS	MC RECOVERY	PID	H₂0 LEVEL	LITHOLOGIC DESCRIPTION	LITHOLOGY	DEPTH (feet)	PROBE ABANDONMENT
- 0 - 5 - 10 - 15 - 20 -	P4–GW	80% 100% 75%	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	WD Y	- Silty CLAY (CL): brown, dry - CLAY (CL): gray, moist - Sandy CLAY (CL): brown, moist - Sandy CLAY (CL): brown, moist - CLAY (CL): brown, wet - CLAY (CL): gray, moist - Sandy CLAY (CL): gray, moist		0 - - - - - - - - - - - - - - - - - - -	
LEGEND BLS Below Land Surface NOTES:								
PID Photo Ionization Detector, Units in parts per million (ppm)								
WD	WD Water Level in borehole during drilling (i.e. first encountered)							
NOTE: CLASSIFICATION OF SOILS BASED ON THE UNITED SOILS CLASSIFICATION SYSTEM.								




Apex Laboratories, LLC

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

Wednesday, November 30, 2022 Steve Omo BB&A Environmental - Eugene PO Box 40187 Eugene, OR 97404

RE: A2K0687 - Residential Property - PAP213PH2-22E

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 A2K0687, which was received by the laboratory on 11/17/2022 at 4:15:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: <u>DAuvil@apex-labs.com</u>, 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	
	(See Cooler Receipt Form for details)	
Cooler #1	4.0 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.



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

BB&A Environmental - Eugene	Project:	Residential Property	
PO Box 40187	Project Number:	PAP213PH2-22E	<u>Report ID:</u>
Eugene, OR 97404	Project Manager:	Steve Omo	A2K0687 - 11 30 22 1354

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION										
Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received						
PAP213-P1-9.5-10'	A2K0687-01	Soil	11/17/22 10:50	11/17/22 16:15						
PAP213-P1-GW	A2K0687-02	Water	11/17/22 11:00	11/17/22 16:15						
PAP213-P2-8-8.5'	A2K0687-03	Soil	11/17/22 11:30	11/17/22 16:15						
PAP213-P2-GW	A2K0687-04	Water	11/17/22 11:45	11/17/22 16:15						
PAP213-P3-9.5'	A2K0687-05	Soil	11/17/22 12:00	11/17/22 16:15						
PAP213-P3-GW	A2K0687-06	Water	11/17/22 12:15	11/17/22 16:15						
PAP213-P4-8'	A2K0687-07	Soil	11/17/22 12:30	11/17/22 16:15						
PAP213-P4-GW	A2K0687-08	Water	11/17/22 12:45	11/17/22 16:15						

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

BB&A Environmental - Eugene

PO Box 40187 Eugene, OR 97404 Project: Residential Property
Project Number: PAP213PH2-22E

Project Manager: Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

ANALYTICAL SAMPLE RESULTS

	Hydro	ocarbon Identif	ication So	creen by NWTP	H-HCID			
	Sample	Detection	Reporting			Date		
Analyte	Result	Limit	Limit	Units	Dilution	Analyzed	Method Ref.	Notes
PAP213-P1-9.5-10' (A2K0687-01)				Matrix: Soil		Batch:	22K0745	
Gasoline Range Organics	ND		25.8	mg/kg dry	1	11/19/22 09:12	NWTPH-HCID	
Diesel Range Organics	ND		64.4	mg/kg dry	1	11/19/22 09:12	NWTPH-HCID	
Oil Range Organics	ND		129	mg/kg dry	1	11/19/22 09:12	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		Recovery	v: 113 %	Limits: 50-150 %	1	11/19/22 09:12	NWTPH-HCID	
4-Bromofluorobenzene (Surr)			107 %	50-150 %	1	11/19/22 09:12	NWTPH-HCID	
PAP213-P2-8-8.5' (A2K0687-03)				Matrix: Soil		Batch:	22K0745	
Gasoline Range Organics	ND		24.9	mg/kg dry	1	11/19/22 09:35	NWTPH-HCID	
Diesel Range Organics	ND		62.2	mg/kg dry	1	11/19/22 09:35	NWTPH-HCID	
Oil Range Organics	ND		124	mg/kg dry	1	11/19/22 09:35	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		Recovery	: 120 %	Limits: 50-150 %	1	11/19/22 09:35	NWTPH-HCID	
4-Bromofluorobenzene (Surr)			111 %	50-150 %	1	11/19/22 09:35	NWTPH-HCID	
PAP213-P3-9.5' (A2K0687-05)				Matrix: Soil		Batch:	22K0745	
Gasoline Range Organics	ND		24.1	mg/kg dry	1	11/19/22 09:58	NWTPH-HCID	
Diesel Range Organics	ND		60.3	mg/kg dry	1	11/19/22 09:58	NWTPH-HCID	
Oil Range Organics	ND		121	mg/kg dry	1	11/19/22 09:58	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		Recovery	: 154 %	Limits: 50-150 %	1	11/19/22 09:58	NWTPH-HCID	S-06
4-Bromofluorobenzene (Surr)			130 %	50-150 %	1	11/19/22 09:58	NWTPH-HCID	
PAP213-P4-8' (A2K0687-07)				Matrix: Soil		Batch:	22K0745	
Gasoline Range Organics	ND		28.3	mg/kg dry	1	11/19/22 10:22	NWTPH-HCID	
Diesel Range Organics	ND		70.8	mg/kg dry	1	11/19/22 10:22	NWTPH-HCID	
Oil Range Organics	ND		142	mg/kg dry	1	11/19/22 10:22	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		Recover	y: 80 %	Limits: 50-150 %	1	11/19/22 10:22	NWTPH-HCID	
4-Bromofluorobenzene (Surr)			68 %	50-150 %	1	11/19/22 10:22	NWTPH-HCID	

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

BB&A Environmental - Eugene

PO Box 40187 Eugene, OR 97404

Project:Residential PropertyProject Number:PAP213PH2-22E

Project Manager: Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

ANALYTICAL SAMPLE RESULTS

	Diesel and/or Oil Hydrocarbons by NWTPH-Dx										
Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes			
PAP213-P1-GW (A2K0687-02)				Matrix: Wate	r	Batch:	22K0882				
Diesel	ND		0.0920	mg/L	1	11/23/22 22:07	NWTPH-Dx LL				
Oil	ND		0.184	mg/L	1	11/23/22 22:07	NWTPH-Dx LL				
Surrogate: o-Terphenyl (Surr)		Recovery	v: 86 %	Limits: 50-150 %	1	11/23/22 22:07	NWTPH-Dx LL				
PAP213-P2-GW (A2K0687-04)				Matrix: Wate	r	Batch:	22K0882				
Diesel	ND		0.0860	mg/L	1	11/23/22 22:27	NWTPH-Dx LL				
Oil	ND		0.172	mg/L	1	11/23/22 22:27	NWTPH-Dx LL				
Surrogate: o-Terphenyl (Surr)		Recovery	v: 79 %	Limits: 50-150 %	1	11/23/22 22:27	NWTPH-Dx LL				
PAP213-P3-GW (A2K0687-06)				Matrix: Wate	r	Batch:	22K0882				
Diesel	ND		0.0930	mg/L	1	11/23/22 22:47	NWTPH-Dx LL				
Oil	ND		0.186	mg/L	1	11/23/22 22:47	NWTPH-Dx LL				
Surrogate: o-Terphenyl (Surr)		Recovery	v: 86 %	Limits: 50-150 %	1	11/23/22 22:47	NWTPH-Dx LL				
PAP213-P4-GW (A2K0687-08)				Matrix: Wate	r	Batch:	22K0882				
Diesel	ND		0.0920	mg/L	1	11/23/22 23:08	NWTPH-Dx LL				
Oil	ND		0.184	mg/L	1	11/23/22 23:08	NWTPH-Dx LL				
Surrogate: o-Terphenyl (Surr)		Recovery	v: 84 %	Limits: 50-150 %	1	11/23/22 23:08	NWTPH-Dx LL				

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

BB&A Environmental - Eugene PO Box 40187

Eugene, OR 97404

Project:Residential PropertyProject NumberPAP213PH2-22EProject Manager:Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

ANALYTICAL SAMPLE RESULTS

	Volatile Organic Compounds by EPA 8260D									
	Sample	Detection	Reporting			Date				
Analyte	Result	Limit	Limit	Units	Dilution	Analyzed	Method Ref.	Notes		
PAP213-P1-GW (A2K0687-02)				Matrix: W	ater	Batch:	22K0717			
Acetone	ND		20.0	ug/L	1	11/18/22 15:29	EPA 8260D			
Acrylonitrile	ND		2.00	ug/L	1	11/18/22 15:29	EPA 8260D			
Benzene	ND		0.200	ug/L	1	11/18/22 15:29	EPA 8260D			
Bromobenzene	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D			
Bromochloromethane	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
Bromodichloromethane	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
Bromoform	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
Bromomethane	ND		5.00	ug/L	1	11/18/22 15:29	EPA 8260D			
2-Butanone (MEK)	ND		10.0	ug/L	1	11/18/22 15:29	EPA 8260D			
n-Butylbenzene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
sec-Butylbenzene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
tert-Butylbenzene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
Carbon disulfide	ND		10.0	ug/L	1	11/18/22 15:29	EPA 8260D			
Carbon tetrachloride	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
Chlorobenzene	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D			
Chloroethane	ND		5.00	ug/L	1	11/18/22 15:29	EPA 8260D			
Chloroform	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
Chloromethane	ND		5.00	ug/L	1	11/18/22 15:29	EPA 8260D			
2-Chlorotoluene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
4-Chlorotoluene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
Dibromochloromethane	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
1,2-Dibromo-3-chloropropane	ND		5.00	ug/L	1	11/18/22 15:29	EPA 8260D			
1,2-Dibromoethane (EDB)	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D			
Dibromomethane	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
1,2-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D			
1,3-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D			
1,4-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D			
Dichlorodifluoromethane	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
1,1-Dichloroethane	ND		0.400	ug/L	1	11/18/22 15:29	EPA 8260D			
1,2-Dichloroethane (EDC)	ND		0.400	ug/L	1	11/18/22 15:29	EPA 8260D			
1,1-Dichloroethene	ND		0.400	ug/L	1	11/18/22 15:29	EPA 8260D			
cis-1,2-Dichloroethene	ND		0.400	ug/L	1	11/18/22 15:29	EPA 8260D			
trans-1,2-Dichloroethene	ND		0.400	ug/L	1	11/18/22 15:29	EPA 8260D			
1,2-Dichloropropane	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D			
1,3-Dichloropropane	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
2,2-Dichloropropane	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
1,1-Dichloropropene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
cis-1,3-Dichloropropene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			
trans-1,3-Dichloropropene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D			

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

BB&A Environmental - Eugene PO Box 40187

Eugene, OR 97404

Project:Residential PropertyProject Number:PAP213PH2-22EProject Manager:Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

ANALYTICAL SAMPLE RESULTS

	V	olatile Organic	Compou	nds by EPA 826	0D			
	Sample	Detection	Reporting			Date		
Analyte	Result	Limit	Limit	Units	Dilution	Analyzed	Method Ref.	Notes
PAP213-P1-GW (A2K0687-02)				Matrix: Wate	r	Batch:	22K0717	
Ethylbenzene	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D	
Hexachlorobutadiene	ND		5.00	ug/L	1	11/18/22 15:29	EPA 8260D	
2-Hexanone	ND		10.0	ug/L	1	11/18/22 15:29	EPA 8260D	
Isopropylbenzene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D	
4-Isopropyltoluene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D	
Methylene chloride	ND		10.0	ug/L	1	11/18/22 15:29	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND		10.0	ug/L	1	11/18/22 15:29	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D	
Naphthalene	ND		2.00	ug/L	1	11/18/22 15:29	EPA 8260D	
n-Propylbenzene	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D	
Styrene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND		0.400	ug/L	1	11/18/22 15:29	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D	
Tetrachloroethene (PCE)	ND		0.400	ug/L	1	11/18/22 15:29	EPA 8260D	
Toluene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D	
1,2,3-Trichlorobenzene	ND		2.00	ug/L	1	11/18/22 15:29	EPA 8260D	
1,2,4-Trichlorobenzene	ND		2.00	ug/L	1	11/18/22 15:29	EPA 8260D	
1,1,1-Trichloroethane	ND		0.400	ug/L	1	11/18/22 15:29	EPA 8260D	
1,1,2-Trichloroethane	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D	
Trichloroethene (TCE)	ND		0.400	ug/L	1	11/18/22 15:29	EPA 8260D	
Trichlorofluoromethane	ND		2.00	ug/L	1	11/18/22 15:29	EPA 8260D	
1,2,3-Trichloropropane	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D	
1,2,4-Trimethylbenzene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D	
1,3,5-Trimethylbenzene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D	
Vinyl chloride	ND		0.400	ug/L	1	11/18/22 15:29	EPA 8260D	
m,p-Xylene	ND		1.00	ug/L	1	11/18/22 15:29	EPA 8260D	
o-Xylene	ND		0.500	ug/L	1	11/18/22 15:29	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	112 %	Limits: 80-120 %	1	11/18/22 15:29	EPA 8260D	
Toluene-d8 (Surr)			101 %	80-120 %	1	11/18/22 15:29	EPA 8260D	
4-Bromofluorobenzene (Surr)			91 %	80-120 %	1	11/18/22 15:29	EPA 8260D	
PAP213-P2-GW (A2K0687-04)				Matrix: Wate	r	Batch:	22K0717	
Acetone	ND		20.0	ug/L	1	11/18/22 16:13	EPA 8260D	
Acrylonitrile	ND		2.00	ug/L	1	11/18/22 16:13	EPA 8260D	
Benzene	ND		0.200	ug/L	1	11/18/22 16:13	EPA 8260D	
Bromobenzene	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D	
Bromochloromethane	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
Bromodichloromethane	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	

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

BB&A Environmental - Eugene PO Box 40187

Eugene, OR 97404

Project:Residential PropertyProject NumberPAP213PH2-22EProject Manager:Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

ANALYTICAL SAMPLE RESULTS

	v	olatile Organ	ic Compoun	ds by EPA 8	260D			
	Sample	Detection	Reporting			Date		
Analyte	Result	Limit	Limit	Units	Dilution	Analyzed	Method Ref.	Notes
PAP213-P2-GW (A2K0687-04)				Matrix: W	ater	Batch:	22K0717	
Bromoform	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
Bromomethane	ND		5.00	ug/L	1	11/18/22 16:13	EPA 8260D	
2-Butanone (MEK)	ND		10.0	ug/L	1	11/18/22 16:13	EPA 8260D	
n-Butylbenzene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
sec-Butylbenzene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
tert-Butylbenzene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
Carbon disulfide	ND		10.0	ug/L	1	11/18/22 16:13	EPA 8260D	
Carbon tetrachloride	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
Chlorobenzene	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D	
Chloroethane	ND		5.00	ug/L	1	11/18/22 16:13	EPA 8260D	
Chloroform	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
Chloromethane	ND		5.00	ug/L	1	11/18/22 16:13	EPA 8260D	
2-Chlorotoluene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
4-Chlorotoluene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
Dibromochloromethane	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND		5.00	ug/L	1	11/18/22 16:13	EPA 8260D	
1,2-Dibromoethane (EDB)	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D	
Dibromomethane	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
1,2-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D	
1,3-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D	
1,4-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D	
Dichlorodifluoromethane	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
1,1-Dichloroethane	ND		0.400	ug/L	1	11/18/22 16:13	EPA 8260D	
1,2-Dichloroethane (EDC)	ND		0.400	ug/L	1	11/18/22 16:13	EPA 8260D	
1,1-Dichloroethene	ND		0.400	ug/L	1	11/18/22 16:13	EPA 8260D	
cis-1,2-Dichloroethene	ND		0.400	ug/L	1	11/18/22 16:13	EPA 8260D	
trans-1,2-Dichloroethene	ND		0.400	ug/L	1	11/18/22 16:13	EPA 8260D	
1,2-Dichloropropane	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D	
1,3-Dichloropropane	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
2,2-Dichloropropane	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
1,1-Dichloropropene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
cis-1,3-Dichloropropene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
trans-1,3-Dichloropropene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
Ethylbenzene	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D	
Hexachlorobutadiene	ND		5.00	ug/L	1	11/18/22 16:13	EPA 8260D	
2-Hexanone	ND		10.0	ug/L	1	11/18/22 16:13	EPA 8260D	
Isopropylbenzene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
4-Isopropyltoluene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D	
Methylene chloride	ND		10.0	ug/L	1	11/18/22 16:13	EPA 8260D	
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6700 S.W. Sandburg Street Tigard, OR 97223 503-718-2323 ORELAP ID: OR100062

BB&A Environmental - Eugene PO Box 40187

Eugene, OR 97404

Project:Residential PropertyProject Number:PAP213PH2-22EProject Manager:Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

ANALYTICAL SAMPLE RESULTS

	Volatile Organic Compounds by EPA 8260D										
	Sample	Detection	Reporting			Date					
Analyte	Result	Limit	Limit	Units	Dilution	Analyzed	Method Ref.	Notes			
PAP213-P2-GW (A2K0687-04)				Matrix: Water Batch: 22K0717		22K0717					
4-Methyl-2-pentanone (MiBK)	ND		10.0	ug/L	1	11/18/22 16:13	EPA 8260D				
Methyl tert-butyl ether (MTBE)	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D				
Naphthalene	ND		2.00	ug/L	1	11/18/22 16:13	EPA 8260D				
n-Propylbenzene	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D				
Styrene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D				
1,1,1,2-Tetrachloroethane	ND		0.400	ug/L	1	11/18/22 16:13	EPA 8260D				
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D				
Tetrachloroethene (PCE)	ND		0.400	ug/L	1	11/18/22 16:13	EPA 8260D				
Toluene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D				
1,2,3-Trichlorobenzene	ND		2.00	ug/L	1	11/18/22 16:13	EPA 8260D				
1,2,4-Trichlorobenzene	ND		2.00	ug/L	1	11/18/22 16:13	EPA 8260D				
1,1,1-Trichloroethane	ND		0.400	ug/L	1	11/18/22 16:13	EPA 8260D				
1,1,2-Trichloroethane	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D				
Trichloroethene (TCE)	ND		0.400	ug/L	1	11/18/22 16:13	EPA 8260D				
Trichlorofluoromethane	ND		2.00	ug/L	1	11/18/22 16:13	EPA 8260D				
1,2,3-Trichloropropane	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D				
1,2,4-Trimethylbenzene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D				
1,3,5-Trimethylbenzene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D				
Vinyl chloride	ND		0.400	ug/L	1	11/18/22 16:13	EPA 8260D				
m,p-Xylene	ND		1.00	ug/L	1	11/18/22 16:13	EPA 8260D				
o-Xylene	ND		0.500	ug/L	1	11/18/22 16:13	EPA 8260D				
Surrogate: 1,4-Difluorobenzene (Surr)		Recov	ery: 113 %	Limits: 80-120 %	1	11/18/22 16:13	EPA 8260D				
Toluene-d8 (Surr)			100 %	80-120 %	1	11/18/22 16:13	EPA 8260D				
4-Bromofluorobenzene (Surr)			92 %	80-120 %	1	11/18/22 16:13	EPA 8260D				
				Motrix: Wote		Botohu	221/0747				

			Matrix: Water		Batch: 22K0717		
ND		20.0	ug/L	1	11/18/22 16:35	EPA 8260D	
ND		2.00	ug/L	1	11/18/22 16:35	EPA 8260D	
ND		0.200	ug/L	1	11/18/22 16:35	EPA 8260D	
ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D	
ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
ND		5.00	ug/L	1	11/18/22 16:35	EPA 8260D	
ND		10.0	ug/L	1	11/18/22 16:35	EPA 8260D	
ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
	ND ND ND ND ND ND ND ND ND ND ND ND	ND ND	ND 20.0 ND 2.00 ND 0.200 ND 0.500 ND 1.00 ND 1.00 ND 1.00 ND 5.00 ND 10.0 ND 10.0 ND 1.00 ND 1.00 ND 1.00 ND 1.00 ND 1.00 ND 1.00	Matrix: Wat ND 20.0 ug/L ND 2.00 ug/L ND 0.200 ug/L ND 0.500 ug/L ND 1.00 ug/L ND 1.00 ug/L ND 1.00 ug/L ND 5.00 ug/L ND 10.0 ug/L ND 1.00 ug/L	ND 20.0 ug/L 1 ND 2.00 ug/L 1 ND 0.200 ug/L 1 ND 0.500 ug/L 1 ND 1.00 ug/L 1	Matrix: Water Batch: ND 20.0 ug/L 1 11/18/22 16:35 ND 2.00 ug/L 1 11/18/22 16:35 ND 0.200 ug/L 1 11/18/22 16:35 ND 0.200 ug/L 1 11/18/22 16:35 ND 0.500 ug/L 1 11/18/22 16:35 ND 1.00 ug/L 1 11/18/22 16:35 ND 10.0 ug/L 1 11/18/22 16:35 ND 1.00 ug/L 1 11/18/22 16:35 ND 1.00 ug/L 1 11/18/22 16:35 ND 1.00 ug/L 1	Matrix: WaterBatch: 22K0717ND20.0ug/L111/18/22 16:35EPA 8260DND2.00ug/L111/18/22 16:35EPA 8260DND0.200ug/L111/18/22 16:35EPA 8260DND0.500ug/L111/18/22 16:35EPA 8260DND1.00ug/L111/18/22 16:35EPA 8260DND1.00ug/L111/18/22 16:35EPA 8260DND1.00ug/L111/18/22 16:35EPA 8260DND5.00ug/L111/18/22 16:35EPA 8260DND1.00ug/L111/18/22 16:35EPA 8260DND-

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BB&A Environmental - Eugene PO Box 40187

Eugene, OR 97404

Project:Residential PropertyProject NumberPAP213PH2-22EProject Manager:Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

ANALYTICAL SAMPLE RESULTS

	v	olatile Organ	ic Compoun	ds by EPA 8	260D			
	Sample	Detection	Reporting			Date		
Analyte	Result	Limit	Limit	Units	Dilution	Analyzed	Method Ref.	Notes
PAP213-P3-GW (A2K0687-06)				Matrix: W	ater	Batch:	22K0717	
Carbon disulfide	ND		10.0	ug/L	1	11/18/22 16:35	EPA 8260D	
Carbon tetrachloride	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
Chlorobenzene	ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D	
Chloroethane	ND		5.00	ug/L	1	11/18/22 16:35	EPA 8260D	
Chloroform	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
Chloromethane	ND		5.00	ug/L	1	11/18/22 16:35	EPA 8260D	
2-Chlorotoluene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
4-Chlorotoluene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
Dibromochloromethane	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND		5.00	ug/L	1	11/18/22 16:35	EPA 8260D	
1,2-Dibromoethane (EDB)	ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D	
Dibromomethane	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
1,2-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D	
1,3-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D	
1,4-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D	
Dichlorodifluoromethane	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
1,1-Dichloroethane	ND		0.400	ug/L	1	11/18/22 16:35	EPA 8260D	
1,2-Dichloroethane (EDC)	ND		0.400	ug/L	1	11/18/22 16:35	EPA 8260D	
1,1-Dichloroethene	ND		0.400	ug/L	1	11/18/22 16:35	EPA 8260D	
cis-1,2-Dichloroethene	0.740		0.400	ug/L	1	11/18/22 16:35	EPA 8260D	
trans-1,2-Dichloroethene	ND		0.400	ug/L	1	11/18/22 16:35	EPA 8260D	
1,2-Dichloropropane	ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D	
1,3-Dichloropropane	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
2,2-Dichloropropane	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
1,1-Dichloropropene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
cis-1,3-Dichloropropene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
trans-1,3-Dichloropropene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
Ethylbenzene	ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D	
Hexachlorobutadiene	ND		5.00	ug/L	1	11/18/22 16:35	EPA 8260D	
2-Hexanone	ND		10.0	ug/L	1	11/18/22 16:35	EPA 8260D	
Isopropylbenzene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
4-Isopropyltoluene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
Methylene chloride	ND		10.0	ug/L	1	11/18/22 16:35	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND		10.0	ug/L	1	11/18/22 16:35	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
Naphthalene	ND		2.00	ug/L	1	11/18/22 16:35	EPA 8260D	
n-Propylbenzene	ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D	
Styrene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND		0.400	ug/L	1	11/18/22 16:35	EPA 8260D	

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

BB&A Environmental - Eugene PO Box 40187

Eugene, OR 97404

Project:Residential PropertyProject Number:PAP213PH2-22EProject Manager:Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

ANALYTICAL SAMPLE RESULTS

	Volatile Organic Compounds by EPA 8260D										
	Sample	Detection	Reporting			Date					
Analyte	Result	Limit	Limit	Units	Dilution	Analyzed	Method Ref.	Notes			
PAP213-P3-GW (A2K0687-06)				Matrix: Wate	ər	Batch:	22K0717				
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D				
Tetrachloroethene (PCE)	ND		0.400	ug/L	1	11/18/22 16:35	EPA 8260D				
Toluene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D				
1,2,3-Trichlorobenzene	ND		2.00	ug/L	1	11/18/22 16:35	EPA 8260D				
1,2,4-Trichlorobenzene	ND		2.00	ug/L	1	11/18/22 16:35	EPA 8260D				
1,1,1-Trichloroethane	ND		0.400	ug/L	1	11/18/22 16:35	EPA 8260D				
1,1,2-Trichloroethane	ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D				
Trichloroethene (TCE)	ND		0.400	ug/L	1	11/18/22 16:35	EPA 8260D				
Trichlorofluoromethane	ND		2.00	ug/L	1	11/18/22 16:35	EPA 8260D				
1,2,3-Trichloropropane	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D				
1,2,4-Trimethylbenzene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D				
1,3,5-Trimethylbenzene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D				
Vinyl chloride	ND		0.400	ug/L	1	11/18/22 16:35	EPA 8260D				
m,p-Xylene	ND		1.00	ug/L	1	11/18/22 16:35	EPA 8260D				
o-Xylene	ND		0.500	ug/L	1	11/18/22 16:35	EPA 8260D				
Surrogate: 1,4-Difluorobenzene (Surr)		Recove	ery: 113 %	Limits: 80-120 %	1	11/18/22 16:35	EPA 8260D				
Toluene-d8 (Surr)			102 %	80-120 %	1	11/18/22 16:35	EPA 8260D				
4-Bromofluorobenzene (Surr)			90 %	80-120 %	1	11/18/22 16:35	EPA 8260D				
				Matrix: Wate	ər	Batch:	22K0717				
Acetone	ND		20.0	ug/L	1	11/18/22 16:57	EPA 8260D				
Acrylonitrile	ND		2.00	ug/L	1	11/18/22 16:57	EPA 8260D				
Benzene	ND		0.200	ug/L	1	11/18/22 16:57	EPA 8260D				
Bromobenzene	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D				
Bromochloromethane	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D				
Bromodichloromethane	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D				
Bromoform	1 97		1.00	ug/L	1	11/18/22 16:57	EPA 8260D				
Bromomethane	ND		5.00	ug/L	1	11/18/22 16:57	EPA 8260D				
2-Butanone (MEK)	ND		10.0	ug/L	1	11/18/22 16:57	EPA 8260D				
n-Butylbenzene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D				
sec-Butylbenzene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D				
tert-Butvlbenzene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D				
Carbon disulfide	ND		10.0	ug/L	1	11/18/22 16:57	EPA 8260D				
Carbon tetrachloride	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D				
Chlorobenzene	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D				
Chloroethane	ND		5.00	ug/L	1	11/18/22 16:57	EPA 8260D				
Chloroform	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D				
Chloromethane	ND		5.00	ug/L	1	11/18/22 16:57	EPA 8260D				
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BB&A Environmental - Eugene PO Box 40187

Eugene, OR 97404

Project:Residential PropertyProject Number:PAP213PH2-22EProject Manager:Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

ANALYTICAL SAMPLE RESULTS

	v	olatile Organ	ic Compoun	ds by EPA 8	260D			
	Sample	Detection	Reporting			Date		
Analyte	Result	Limit	Limit	Units	Dilution	Analyzed	Method Ref.	Notes
PAP213-P4-GW (A2K0687-08)				Matrix: W	ater	Batch:	22K0717	
2-Chlorotoluene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
4-Chlorotoluene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
Dibromochloromethane	2.52		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND		5.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,2-Dibromoethane (EDB)	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D	
Dibromomethane	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,2-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D	
1,3-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D	
1,4-Dichlorobenzene	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D	
Dichlorodifluoromethane	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,1-Dichloroethane	ND		0.400	ug/L	1	11/18/22 16:57	EPA 8260D	
1,2-Dichloroethane (EDC)	ND		0.400	ug/L	1	11/18/22 16:57	EPA 8260D	
1,1-Dichloroethene	ND		0.400	ug/L	1	11/18/22 16:57	EPA 8260D	
cis-1,2-Dichloroethene	ND		0.400	ug/L	1	11/18/22 16:57	EPA 8260D	
trans-1,2-Dichloroethene	ND		0.400	ug/L	1	11/18/22 16:57	EPA 8260D	
1,2-Dichloropropane	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D	
1,3-Dichloropropane	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
2,2-Dichloropropane	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,1-Dichloropropene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
cis-1,3-Dichloropropene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
trans-1,3-Dichloropropene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
Ethylbenzene	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D	
Hexachlorobutadiene	ND		5.00	ug/L	1	11/18/22 16:57	EPA 8260D	
2-Hexanone	ND		10.0	ug/L	1	11/18/22 16:57	EPA 8260D	
Isopropylbenzene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
4-Isopropyltoluene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
Methylene chloride	ND		10.0	ug/L	1	11/18/22 16:57	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND		10.0	ug/L	1	11/18/22 16:57	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
Naphthalene	ND		2.00	ug/L	1	11/18/22 16:57	EPA 8260D	
n-Propylbenzene	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D	
Styrene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND		0.400	ug/L	1	11/18/22 16:57	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D	
Tetrachloroethene (PCE)	ND		0.400	ug/L	1	11/18/22 16:57	EPA 8260D	
Toluene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,2,3-Trichlorobenzene	ND		2.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,2,4-Trichlorobenzene	ND		2.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,1,1-Trichloroethane	ND		0.400	ug/L	1	11/18/22 16:57	EPA 8260D	

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Apex Laboratories, LLC

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

BB&A Environmental - Eugene

PO Box 40187 Eugene, OR 97404 Project: Residential Property
Project Number: PAP213PH2-22E

Project Manager: Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D								
Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PAP213-P4-GW (A2K0687-08)				Matrix: Wate	r	Batch:	22K0717	
1,1,2-Trichloroethane	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D	
Trichloroethene (TCE)	ND		0.400	ug/L	1	11/18/22 16:57	EPA 8260D	
Trichlorofluoromethane	ND		2.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,2,3-Trichloropropane	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,2,4-Trimethylbenzene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
1,3,5-Trimethylbenzene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
Vinyl chloride	ND		0.400	ug/L	1	11/18/22 16:57	EPA 8260D	
m,p-Xylene	ND		1.00	ug/L	1	11/18/22 16:57	EPA 8260D	
o-Xylene	ND		0.500	ug/L	1	11/18/22 16:57	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recove	ery: 113 %	Limits: 80-120 %	1	11/18/22 16:57	EPA 8260D	
Toluene-d8 (Surr)			101 %	80-120 %	1	11/18/22 16:57	EPA 8260D	
4-Bromofluorobenzene (Surr)			90 %	80-120 %	1	11/18/22 16:57	EPA 8260D	

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BB&A Environmental - Eugene	
PO Box 40187	

Eugene, OR 97404

Project:Residential PropertyProject Number:PAP213PH2-22EProject Manager:Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight									
	Sample	Detection	Reporting			Date			
Analyte	Result	Limit	Limit	Units	Dilution	Analyzed	Method Ref.	Notes	
PAP213-P1-9.5-10' (A2K0687-01)				Matrix: Soil	1	Batch:	22K0743		
% Solids	76.7		1.00	%	1	11/19/22 13:52	EPA 8000D		
PAP213-P2-8-8.5' (A2K0687-03)				Matrix: Soil	1	22K0743			
% Solids	79.2		1.00	%	1	11/19/22 13:52	EPA 8000D		
PAP213-P3-9.5' (A2K0687-05)				Matrix: Soil	1	Batch:	22K0743		
% Solids	79.5		1.00	%	1	11/19/22 13:52	EPA 8000D		
PAP213-P4-8' (A2K0687-07)				Matrix: Soil	1	Batch:	22K0743		
% Solids	68.3		1.00	%	1	11/19/22 13:52	EPA 8000D		

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

BB&A Environmental - Eugene PO Box 40187

Eugene, OR 97404

Project:Residential PropertyProject Number:PAP213PH2-22EProject Manager:Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

QUALITY CONTROL (QC) SAMPLE RESULTS

		Hydi	rocarbon l	dentificati	ion Scree	n by NW	TPH-HCIE)				
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0745 - NWTPH-HCID	(Soil)						Soil					
Blank (22K0745-BLK1)		Prepared:	11/18/22 13:	20 Analyze	:d: 11/19/22	? 06:30						
NWTPH-HCID												
Gasoline Range Organics	ND		18.2	mg/kg we	et 1							
Diesel Range Organics	ND		45.5	mg/kg we	et 1							
Oil Range Organics	ND		90.9	mg/kg we	et 1							
Surr: o-Terphenyl (Surr)		Reco	wery: 97 %	Limits: 50-	·150 %	Dilu	tion: 1x					
4-Bromofluorobenzene (Surr)			95 %	50-	150 %		"					

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

BB&A Environmental - Eugene PO Box 40187 Eugene, OR 97404
 Project:
 Residential Property

 Project Number:
 PAP213PH2-22E

 Project Manager:
 Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

QUALITY CONTROL (QC) SAMPLE RESULTS

		D	iesel and/o	r Oil Hyd	Irocarbon	s by NWT	PH-Dx					
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0882 - EPA 3510C (Fuels/Acid	Ext.)					Wate	er				
Blank (22K0882-BLK1)		Prepared:	: 11/23/22 10:0	00 Analyz	ed: 11/23/22	2 20:46						
NWTPH-Dx LL		<u> </u>										
Diesel	ND		0.0727	mg/L	1							
Oil	ND		0.145	mg/L	1							
Surr: o-Terphenyl (Surr)		Reco	overy: 69 %	Limits: 56)-150 %	Dilu	ution: 1x					
LCS (22K0882-BS1)		Prepared:	: 11/23/22 10:0	00 Analyz	ed: 11/23/22	2 21:06						
NWTPH-Dx LL												
Diesel	0.338		0.0800	mg/L	1	0.500		68 3	36 - 132%			
Surr: o-Terphenyl (Surr)		Reco	overy: 77 %	Limits: 56)-150 %	Dilu	ution: 1x					
LCS Dup (22K0882-BSD1)		Prepared:	: 11/23/22 10:0)0 Analyz	ed: 11/23/22	2 21:26						 Q-19
NWTPH-Dx LL												
Diesel	0.411		0.0800	mg/L	1	0.500		82 3	36 - 132%	20	30%	
Surr: o-Terphenyl (Surr)		Reco	wery: 88 %	Limits: 56)-150 %	Dilu	ution: 1x					

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

BB&A Environmental - Eugene PO Box 40187 Eugene, OR 97404 Project:Residential PropertyProject NumberPAP213PH2-22EProject Manager:Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

QUALITY CONTROL (QC) SAMPLE RESULTS

			Volatile Org	ganic Co	mpounds	by EPA 8	3260D					
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0717 - EPA 5030C							Wate	ər				
Blank (22K0717-BLK1)		Prepared	: 11/18/22 08::	52 Analyz	ed: 11/18/22	2 12:53						
EPA 8260D												
Acetone	ND		20.0	ug/L	1							
Acrylonitrile	ND		2.00	ug/L	1							
Benzene	ND		0.200	ug/L	1							
Bromobenzene	ND		0.500	ug/L	1							
Bromochloromethane	ND		1.00	ug/L	1							
Bromodichloromethane	ND		1.00	ug/L	1							
Bromoform	ND		1.00	ug/L	1							
Bromomethane	ND		5.00	ug/L	1							
2-Butanone (MEK)	ND		10.0	ug/L	1							
n-Butylbenzene	ND		1.00	ug/L	1							
sec-Butylbenzene	ND		1.00	ug/L	1							
tert-Butylbenzene	ND		1.00	ug/L	1							
Carbon disulfide	ND		10.0	ug/L	1							
Carbon tetrachloride	ND		1.00	ug/L	1							
Chlorobenzene	ND		0.500	ug/L	1							
Chloroethane	ND		5.00	ug/L	1							
Chloroform	ND		1.00	ug/L	1							
Chloromethane	ND		5.00	ug/L	1							
2-Chlorotoluene	ND		1.00	ug/L	1							
4-Chlorotoluene	ND		1.00	ug/L	1							
Dibromochloromethane	ND		1.00	ug/L	1							
1,2-Dibromo-3-chloropropane	ND		5.00	ug/L	1							
1,2-Dibromoethane (EDB)	ND		0.500	ug/L	1							
Dibromomethane	ND		1.00	ug/L	1							
1,2-Dichlorobenzene	ND		0.500	ug/L	1							
1,3-Dichlorobenzene	ND		0.500	ug/L	1							
1,4-Dichlorobenzene	ND		0.500	ug/L	1							
Dichlorodifluoromethane	ND		1.00	ug/L	1							
1,1-Dichloroethane	ND		0.400	ug/L	1							
1,2-Dichloroethane (EDC)	ND		0.400	ug/L	1							
1,1-Dichloroethene	ND		0.400	ug/L	1							
cis-1,2-Dichloroethene	ND		0.400	ug/L	1							
trans-1,2-Dichloroethene	ND		0.400	ug/L	1							

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

BB&A Environmental - Eugene PO Box 40187 Eugene, OR 97404 Project:Residential PropertyProject NumberPAP213PH2-22EProject Manager:Steve Omo



QUALITY CONTROL (QC) SAMPLE RESULTS

			volatile Org	Janic Co	mpounds	ມy ⊏PA 8	2000					
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0717 - EPA 5030C							Wate	ər				
Blank (22K0717-BLK1)		Prepared	: 11/18/22 08:5	52 Analyz	ed: 11/18/22	2 12:53						
1,2-Dichloropropane	ND		0.500	ug/L	1							
1,3-Dichloropropane	ND		1.00	ug/L	1							
2,2-Dichloropropane	ND		1.00	ug/L	1							
1,1-Dichloropropene	ND		1.00	ug/L	1							
cis-1,3-Dichloropropene	ND		1.00	ug/L	1							
trans-1,3-Dichloropropene	ND		1.00	ug/L	1							
Ethylbenzene	ND		0.500	ug/L	1							
Hexachlorobutadiene	ND		5.00	ug/L	1							
2-Hexanone	ND		10.0	ug/L	1							
Isopropylbenzene	ND		1.00	ug/L	1							
4-Isopropyltoluene	ND		1.00	ug/L	1							
Methylene chloride	ND		10.0	ug/L	1							
4-Methyl-2-pentanone (MiBK)	ND		10.0	ug/L	1							
Methyl tert-butyl ether (MTBE)	ND		1.00	ug/L	1							
Naphthalene	ND		2.00	ug/L	1							
n-Propylbenzene	ND		0.500	ug/L	1							
Styrene	ND		1.00	ug/L	1							
1,1,1,2-Tetrachloroethane	ND		0.400	ug/L	1							
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L	1							
Tetrachloroethene (PCE)	ND		0.400	ug/L	1							
Toluene	ND		1.00	ug/L	1							
1,2,3-Trichlorobenzene	ND		2.00	ug/L	1							
1,2,4-Trichlorobenzene	ND		2.00	ug/L	1							
1,1,1-Trichloroethane	ND		0.400	ug/L	1							
1,1,2-Trichloroethane	ND		0.500	ug/L	1							
Trichloroethene (TCE)	ND		0.400	ug/L	1							
Trichlorofluoromethane	ND		2.00	ug/L	1							
1,2,3-Trichloropropane	ND		1.00	ug/L	1							
1,2,4-Trimethylbenzene	ND		1.00	ug/L	1							
1,3,5-Trimethylbenzene	ND		1.00	ug/L	1							
Vinyl chloride	ND		0.400	ug/L	1							
m,p-Xylene	ND		1.00	ug/L	1							
o-Xylene	ND		0.500	ug/L	1							
Surr: 1,4-Difluorobenzene (Surr)		Reco	very: 110 %	Limits: 80	-120 %	Dilu	ution: 1x					

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

BB&A Environmental - Eugene PO Box 40187 Eugene, OR 97404 Project: <u>Residential Property</u> Project Number: PAP213PH2-22E

Project Manager: Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

QUALITY CONTROL (QC) SAMPLE RESULTS

			Volatile Org	anic Con	npounds	by EPA 8	8260D					
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0717 - EPA 5030C							Wat	er				
Blank (22K0717-BLK1)		Prepared	: 11/18/22 08:5	2 Analyze	d: 11/18/22	2 12:53						
Surr: Toluene-d8 (Surr)		Reco	very: 101 %	Limits: 80-	120 %	Dil	ution: 1x					
4-Bromofluorobenzene (Surr)			93 %	80-	120 %		"					
LCS (22K0717-BS1)		Prepared	: 11/18/22 08:5	52 Analyze	ed: 11/18/22	2 11:59						
EPA 8260D												
Acetone	38.2		20.0	ug/L	1	40.0		96	80 - 120%			
Acrylonitrile	22.6		2.00	ug/L	1	20.0		113	80 - 120%			
Benzene	22.9		0.200	ug/L	1	20.0		114	80 - 120%			
Bromobenzene	18.6		0.500	ug/L	1	20.0		93	80 - 120%			
Bromochloromethane	24.4		1.00	ug/L	1	20.0		122	80 - 120%			Q-56
Bromodichloromethane	20.9		1.00	ug/L	1	20.0		104	80 - 120%			
Bromoform	17.8		1.00	ug/L	1	20.0		89	80 - 120%			
Bromomethane	30.9		5.00	ug/L	1	20.0		154	80 - 120%			Q-56
2-Butanone (MEK)	44.4		10.0	ug/L	1	40.0		111	80 - 120%			
n-Butylbenzene	20.2		1.00	ug/L	1	20.0		101	80 - 120%			
sec-Butylbenzene	20.6		1.00	ug/L	1	20.0		103	80 - 120%			
tert-Butylbenzene	18.9		1.00	ug/L	1	20.0		95	80 - 120%			
Carbon disulfide	22.0		10.0	ug/L	1	20.0		110	80 - 120%			
Carbon tetrachloride	21.5		1.00	ug/L	1	20.0		107	80 - 120%			
Chlorobenzene	20.4		0.500	ug/L	1	20.0		102	80 - 120%			
Chloroethane	26.9		5.00	ug/L	1	20.0		135	80 - 120%			Q-56
Chloroform	21.6		1.00	ug/L	1	20.0		108	80 - 120%			
Chloromethane	25.4		5.00	ug/L	1	20.0		127	80 - 120%			Q-56
2-Chlorotoluene	19.6		1.00	ug/L	1	20.0		98	80 - 120%			
4-Chlorotoluene	19.6		1.00	ug/L	1	20.0		98	80 - 120%			
Dibromochloromethane	18.2		1.00	ug/L	1	20.0		91	80 - 120%			
1,2-Dibromo-3-chloropropane	14.7		5.00	ug/L	1	20.0		73	80 - 120%			Q-55
1,2-Dibromoethane (EDB)	18.7		0.500	ug/L	1	20.0		94	80 - 120%			
Dibromomethane	21.1		1.00	ug/L	1	20.0		105	80 - 120%			
1,2-Dichlorobenzene	19.0		0.500	ug/L	1	20.0		95	80 - 120%			
1,3-Dichlorobenzene	19.9		0.500	ug/L	1	20.0		99	80 - 120%			
1,4-Dichlorobenzene	20.3		0.500	ug/L	1	20.0		102	80 - 120%			
Dichlorodifluoromethane	21.9		1.00	ug/L	1	20.0		109	80 - 120%			
1,1-Dichloroethane	22.5		0.400	ug/L	1	20.0		112	80 - 120%			

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

BB&A Environmental - Eugene PO Box 40187 Eugene, OR 97404 Project:Residential PropertyProject NumberPAP213PH2-22EProject Manager:Steve Omo



QUALITY CONTROL (QC) SAMPLE RESULTS

			Volatile Org	ganic Co	mpounds	by EPA 8	3260D					
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0717 - EPA 5030C							Wat	er				
LCS (22K0717-BS1)		Prepared	: 11/18/22 08::	52 Analyz	ed: 11/18/22	2 11:59						
1,2-Dichloroethane (EDC)	21.9		0.400	ug/L	1	20.0		110	80 - 120%			
1,1-Dichloroethene	24.2		0.400	ug/L	1	20.0		121	80 - 120%			Q-56
cis-1,2-Dichloroethene	22.4		0.400	ug/L	1	20.0		112	80 - 120%			
trans-1,2-Dichloroethene	21.9		0.400	ug/L	1	20.0		109	80 - 120%			
1,2-Dichloropropane	23.4		0.500	ug/L	1	20.0		117	80 - 120%			
1,3-Dichloropropane	19.9		1.00	ug/L	1	20.0		100	80 - 120%			
2,2-Dichloropropane	19.7		1.00	ug/L	1	20.0		98	80 - 120%			
1,1-Dichloropropene	22.5		1.00	ug/L	1	20.0		112	80 - 120%			
cis-1,3-Dichloropropene	19.3		1.00	ug/L	1	20.0		97	80 - 120%			
trans-1,3-Dichloropropene	18.9		1.00	ug/L	1	20.0		95	80 - 120%			
Ethylbenzene	20.1		0.500	ug/L	1	20.0		101	80 - 120%			
Hexachlorobutadiene	17.1		5.00	ug/L	1	20.0		86	80 - 120%			
2-Hexanone	36.7		10.0	ug/L	1	40.0		92	80 - 120%			
Isopropylbenzene	19.2		1.00	ug/L	1	20.0		96	80 - 120%			
4-Isopropyltoluene	19.4		1.00	ug/L	1	20.0		97	80 - 120%			
Methylene chloride	24.2		10.0	ug/L	1	20.0		121	80 - 120%			Q-56
4-Methyl-2-pentanone (MiBK)	38.3		10.0	ug/L	1	40.0		96	80 - 120%			
Methyl tert-butyl ether (MTBE)	19.3		1.00	ug/L	1	20.0		97	80 - 120%			
Naphthalene	16.0		2.00	ug/L	1	20.0		80	80 - 120%			
n-Propylbenzene	20.5		0.500	ug/L	1	20.0		103	80 - 120%			
Styrene	20.0		1.00	ug/L	1	20.0		100	80 - 120%			
1,1,1,2-Tetrachloroethane	18.8		0.400	ug/L	1	20.0		94	80 - 120%			
1,1,2,2-Tetrachloroethane	20.5		0.500	ug/L	1	20.0		103	80 - 120%			
Tetrachloroethene (PCE)	19.5		0.400	ug/L	1	20.0		98	80 - 120%			
Toluene	20.7		1.00	ug/L	1	20.0		104	80 - 120%			
1,2,3-Trichlorobenzene	17.5		2.00	ug/L	1	20.0		87	80 - 120%			
1,2,4-Trichlorobenzene	16.5		2.00	ug/L	1	20.0		82	80 - 120%			
1,1,1-Trichloroethane	20.7		0.400	ug/L	1	20.0		104	80 - 120%			
1,1,2-Trichloroethane	20.2		0.500	ug/L	1	20.0		101	80 - 120%			
Trichloroethene (TCE)	20.6		0.400	ug/L	1	20.0		103	80 - 120%			
Trichlorofluoromethane	24.1		2.00	ug/L	1	20.0		121	80 - 120%			Q-56
1,2,3-Trichloropropane	19.7		1.00	ug/L	1	20.0		98	80 - 120%			
1,2,4-Trimethylbenzene	20.5		1.00	ug/L	1	20.0		102	80 - 120%			
1,3,5-Trimethylbenzene	20.5		1.00	ug/L	1	20.0		103	80 - 120%			

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

BB&A Environmental - Eugene PO Box 40187 Eugene, OR 97404 Project: **Residential Property** Project Number: **PAP213PH2-22E**

Project Manager: Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

QUALITY CONTROL (QC) SAMPLE RESULTS

			Volatile Or	ganic Co	mpounds	by EPA 8	260D					
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0717 - EPA 5030C							Wate	er				
LCS (22K0717-BS1)		Prepared	: 11/18/22 08:	52 Analyz	ed: 11/18/2	2 11:59						
Vinyl chloride	26.5		0.400	ug/L	1	20.0		132 8	80 - 120%			Q-56
m,p-Xylene	42.2		1.00	ug/L	1	40.0		106	80 - 120%			
o-Xylene	18.9		0.500	ug/L	1	20.0		94	80 - 120%			
Surr: 1,4-Difluorobenzene (Surr)		Reco	very: 107 %	Limits: 80)-120 %	Dilu	ution: 1x					
Toluene-d8 (Surr)			100 %	80	-120 %		"					
4-Bromofluorobenzene (Surr)			90 %	80	-120 %		"					
Duplicate (22K0717-DUP1)		Prepared	: 11/18/22 08:	52 Analyz	ed: 11/18/2	2 15:51						
QC Source Sample: PAP213-P1-GV	V (A2K06	87-02)										
EPA 8260D												
Acetone	ND		20.0	ug/L	1		ND				30%	
Acrylonitrile	ND		2.00	ug/L	1		ND				30%	
Benzene	ND		0.200	ug/L	1		ND				30%	
Bromobenzene	ND		0.500	ug/L	1		ND				30%	
Bromochloromethane	ND		1.00	ug/L	1		ND				30%	
Bromodichloromethane	ND		1.00	ug/L	1		ND				30%	
Bromoform	ND		1.00	ug/L	1		ND				30%	
Bromomethane	ND		5.00	ug/L	1		ND				30%	
2-Butanone (MEK)	ND		10.0	ug/L	1		ND				30%	
n-Butylbenzene	ND		1.00	ug/L	1		ND				30%	
sec-Butylbenzene	ND		1.00	ug/L	1		ND				30%	
tert-Butylbenzene	ND		1.00	ug/L	1		ND				30%	
Carbon disulfide	ND		10.0	ug/L	1		ND				30%	
Carbon tetrachloride	ND		1.00	ug/L	1		ND				30%	
Chlorobenzene	ND		0.500	ug/L	1		ND				30%	
Chloroethane	ND		5.00	ug/L	1		ND				30%	
Chloroform	ND		1.00	ug/L	1		ND				30%	
Chloromethane	ND		5.00	ug/L	1		ND				30%	
2-Chlorotoluene	ND		1.00	ug/L	1		ND				30%	
4-Chlorotoluene	ND		1.00	ug/L	1		ND				30%	
Dibromochloromethane	ND		1.00	ug/L	1		ND				30%	
1,2-Dibromo-3-chloropropane	ND		5.00	ug/L	1		ND				30%	
1,2-Dibromoethane (EDB)	ND		0.500	ug/L	1		ND				30%	
Dibromomethane	ND		1.00	ug/L	1		ND				30%	

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

BB&A Environmental - Eugene
PO Box 40187
Eugene, OR 97404

Project:Residential PropertyProject NumberPAP213PH2-22EProject Manager:Steve Omo

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D												
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0717 - EPA 5030C							Wate	er				
Duplicate (22K0717-DUP1)		Prepared	: 11/18/22 08:5	52 Analyz	ed: 11/18/22	2 15:51						
QC Source Sample: PAP213-P1-G	W (A2K068	87-02)										
1,2-Dichlorobenzene	ND		0.500	ug/L	1		ND				30%	
1,3-Dichlorobenzene	ND		0.500	ug/L	1		ND				30%	
1,4-Dichlorobenzene	ND		0.500	ug/L	1		ND				30%	
Dichlorodifluoromethane	ND		1.00	ug/L	1		ND				30%	
1,1-Dichloroethane	ND		0.400	ug/L	1		ND				30%	
1,2-Dichloroethane (EDC)	ND		0.400	ug/L	1		ND				30%	
1,1-Dichloroethene	ND		0.400	ug/L	1		ND				30%	
cis-1,2-Dichloroethene	ND		0.400	ug/L	1		ND				30%	
trans-1,2-Dichloroethene	ND		0.400	ug/L	1		ND				30%	
1,2-Dichloropropane	ND		0.500	ug/L	1		ND				30%	
1,3-Dichloropropane	ND		1.00	ug/L	1		ND				30%	
2,2-Dichloropropane	ND		1.00	ug/L	1		ND				30%	
1,1-Dichloropropene	ND		1.00	ug/L	1		ND				30%	
cis-1,3-Dichloropropene	ND		1.00	ug/L	1		ND				30%	
trans-1,3-Dichloropropene	ND		1.00	ug/L	1		ND				30%	
Ethylbenzene	ND		0.500	ug/L	1		ND				30%	
Hexachlorobutadiene	ND		5.00	ug/L	1		ND				30%	
2-Hexanone	ND		10.0	ug/L	1		ND				30%	
Isopropylbenzene	ND		1.00	ug/L	1		ND				30%	
4-Isopropyltoluene	ND		1.00	ug/L	1		ND				30%	
Methylene chloride	ND		10.0	ug/L	1		ND				30%	
4-Methyl-2-pentanone (MiBK)	ND		10.0	ug/L	1		ND				30%	
Methyl tert-butyl ether (MTBE)	ND		1.00	ug/L	1		ND				30%	
Naphthalene	ND		2.00	ug/L	1		ND				30%	
n-Propylbenzene	ND		0.500	ug/L	1		ND				30%	
Styrene	ND		1.00	ug/L	1		ND				30%	
1,1,1,2-Tetrachloroethane	ND		0.400	ug/L	1		ND				30%	
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L	1		ND				30%	
Tetrachloroethene (PCE)	ND		0.400	ug/L	1		ND				30%	
Toluene	ND		1.00	ug/L	1		ND				30%	
1,2,3-Trichlorobenzene	ND		2.00	ug/L	1		ND				30%	
1,2,4-Trichlorobenzene	ND		2.00	ug/L	1		ND				30%	
1,1,1-Trichloroethane	ND		0.400	ug/L	1		ND				30%	

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

BB&A Environmental - Eugene						
PO Box 40187						
Eugene, OR 97404						

Project:Residential PropertyProject Number:PAP213PH2-22EProject Manager:Steve Omo

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D												
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0717 - EPA 5030C							Wate	ər				
Duplicate (22K0717-DUP1)		Prepared:	11/18/22 08::	52 Analyz	ed: 11/18/22	2 15:51						
QC Source Sample: PAP213-P1-GV	V (A2K068	37-02)										
1,1,2-Trichloroethane	ND		0.500	ug/L	1		ND				30%	
Trichloroethene (TCE)	ND		0.400	ug/L	1		ND				30%	
Trichlorofluoromethane	ND		2.00	ug/L	1		ND				30%	
1,2,3-Trichloropropane	ND		1.00	ug/L	1		ND				30%	
1,2,4-Trimethylbenzene	ND		1.00	ug/L	1		ND				30%	
1,3,5-Trimethylbenzene	ND		1.00	ug/L	1		ND				30%	
Vinyl chloride	ND		0.400	ug/L	1		ND				30%	
m,p-Xylene	ND		1.00	ug/L	1		ND				30%	
o-Xylene	ND		0.500	ug/L	1		ND				30%	
Surr: 1,4-Difluorobenzene (Surr)		Recov	ery: 113 %	Limits: 80	1-120 %	Dilu	tion: 1x					
Toluene-d8 (Surr)			101 %	80	-120 %		"					
4-Bromofluorobenzene (Surr)			92 %	80	-120 %		"					

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

<u>BB&A Environmental - Eugene</u> PO Box 40187 Eugene, OR 97404	Project: Project Number: Project Manager:	<u>Residential Property</u> PAP213PH2-22E Steve Omo	<u>Report ID:</u> A2K0687 - 11 30 22 1354
	QUALITY CONTROL (QC) SAMPLE RESULTS	

				Percen	ાt Dry Wei	ght						
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0743 - Total S	Solids (Dry Weigh	nt)				_	Soil					

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

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Darrell Auvil, Client Services Manager



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

BB&A Environmental - Eugene PO Box 40187

Eugene, OR 97404

Project:Residential PropertyProject Number:PAP213PH2-22EProject Manager:Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID								
Prep: NWTPH-HCID (Soil) Sample Default RL Pr								
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor	
Batch: 22K0745								
A2K0687-01	Soil	NWTPH-HCID	11/17/22 10:50	11/18/22 13:20	10.12g/10mL	10g/10mL	0.99	
A2K0687-03	Soil	NWTPH-HCID	11/17/22 11:30	11/18/22 13:20	10.15g/10mL	10g/10mL	0.99	
A2K0687-05	Soil	NWTPH-HCID	11/17/22 12:00	11/18/22 13:20	10.43g/10mL	10g/10mL	0.96	
A2K0687-07	Soil	NWTPH-HCID	11/17/22 12:30	11/18/22 13:20	10.35g/10mL	10g/10mL	0.97	

Diesel and/or Oil Hydrocarbons by NWTPH-Dx								
Prep: EPA 3510C	(Fuels/Acid Ext.)				Sample	Default	RL Prep	
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor	
Batch: 22K0882								
A2K0687-02	Water	NWTPH-Dx LL	11/17/22 11:00	11/23/22 10:13	870mL/2mL	1000mL/2mL	1.15	
A2K0687-04	Water	NWTPH-Dx LL	11/17/22 11:45	11/23/22 10:13	930mL/2mL	1000mL/2mL	1.08	
A2K0687-06	Water	NWTPH-Dx LL	11/17/22 12:15	11/23/22 10:00	860mL/2mL	1000mL/2mL	1.16	
A2K0687-08	Water	NWTPH-Dx LL	11/17/22 12:45	11/23/22 10:00	870mL/2mL	1000mL/2mL	1.15	

Volatile Organic Compounds by EPA 8260D								
Prep: EPA 5030C					Sample	Default	RL Prep	
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor	
Batch: 22K0717								
A2K0687-02	Water	EPA 8260D	11/17/22 11:00	11/18/22 08:52	5mL/5mL	5mL/5mL	1.00	
A2K0687-04	Water	EPA 8260D	11/17/22 11:45	11/18/22 08:52	5mL/5mL	5mL/5mL	1.00	
A2K0687-06	Water	EPA 8260D	11/17/22 12:15	11/18/22 08:52	5mL/5mL	5mL/5mL	1.00	
A2K0687-08	Water	EPA 8260D	11/17/22 12:45	11/18/22 08:52	5mL/5mL	5mL/5mL	1.00	

Percent Dry Weight Sample Default RL Prep Prep: Total Solids (Dry Weight) Initial/Final Initial/Final Factor Lab Number Matrix Method Sampled Prepared Batch: 22K0743 A2K0687-01 Soil EPA 8000D 11/17/22 10:50 11/18/22 12:49 NA EPA 8000D A2K0687-03 Soil 11/17/22 11:30 11/18/22 12:49 NA Soil EPA 8000D A2K0687-05 11/17/22 12:00 11/18/22 12:49 NA EPA 8000D A2K0687-07 Soil 11/17/22 12:30 11/18/22 12:49 NA

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

BB&A Environmental - Eugene PO Box 40187

Eugene, OR 97404

Project: <u>Residential Property</u> Project Number: PAP213PH2-22E

Project Manager: Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

QUALIFIER DEFINITIONS

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

Apex Laboratories

- Q-19 Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-55 Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56 Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- **S-06** Surrogate recovery is outside of established control limits.

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Apex Laboratories, LLC

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

BB&A Environmental - Eugene

PO Box 40187 Eugene, OR 97404 Project: Residential Property

Project Number: PAP213PH2-22E Project Manager: Steve Omo <u>Report ID:</u> A2K0687 - 11 30 22 1354

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.

- <u>" dry"</u> 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'.

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) are not 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).

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.

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

BB&A Environmental - Eugene

PO Box 40187 Eugene, OR 97404 Project: <u>Residential Property</u> Project Number: **PAP213PH2-22E**

Project Manager: Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

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.

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.

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

<u>BB&A Environmental - Eugene</u> PO Box 40187 Eugene, OR 97404 Project: <u>Residential Property</u> Project Number: **PAP213PH2-22E**

Project Manager: Steve Omo

<u>Report ID:</u> A2K0687 - 11 30 22 1354

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 <u>exception</u> of any analyte(s) listed below:

Apex Lab	<u>oratories</u>				
Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
	41	l reported analytes are included in	Apex I aboratories' current ORI	FLAP scope	

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 provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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



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

BB&A Environmental - Eugene	Project: Residential Property	
PO Box 40187	Project Number: PAP213PH2-22E	Report ID:
Eugene, OR 97404	Project Manager: Steve Omo	A2K0687 - 11 30 22 1354
Lugene, OR 97404 APEX Client: B&A Environment Project/Project #: A colspan="2">A colspan="2">A colspan="2">A colspan="2">A colspan="2">A colspan="2">A colspan="2">Client: B&A Environment Project/Project #: A colspan="2">A colspan="2">A colspan="2">A colspan="2">Coler YInfo: Date/time received: (11-17-22 @ 16 Delivery Info: Date/time received: [11-17-22] @ 16 [16] Delivery Info: Date/time received: [11-17-22] @ 16 Cooler Inspection Date/time inspect Chain of Custody included? Yes > Signed/dated by Apex? Yes > Cooler #1 @ Cooler #1 @ Cooler wis (Gel/Real/Other) _ _	Project Manager: Steve Omo LABS COOLER RECEIPT FORM 1 Element WO#: $A2 \cancel{low 87}$ Paperty PAP 213PH 2-22 E 15 By: DJS FedEx UPS Swift Senvoy SDS Other ed: 11-17-22 @ 1616 By: DJS No	A2K0687 - 11 30 22 1354
All samples intact? Yes No Co Bottle labels/COCs agree? Yes No COC/container discrepancies form initiat Containers/volumes received appropriate Do VOA vials have visible headspace? Comments AN VAS have Seed Water samples: pH checked: Yes No Comments: Additional information: Labeled by: Win	comments:	R-00 -
	ANY CANAN COM 1-005	

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Apex Laboratories, LLC

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

Thursday, November 17, 2022 Steve Omo BB&A Environmental - Wilsonville 25195 SW Parkway Ave, Suite #207 Wilsonville, OR 97070

RE: A2J0903 - Fife Property - PAP213PH2.22E

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 A2J0903, which was received by the laboratory on 10/27/2022 at 8:10:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: <u>DAuvil@apex-labs.com</u>, 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	
	(See Cooler Receipt Form for details)	
Cooler#1	3.3 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.



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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Report is complete only if it includes Calscience/Eurofins Data. Page 1 of 35 11/17/2022



Apex Laboratories, LLC

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

BB&A Environmental - Wilsonville	Project: Fife Property	
25195 SW Parkway Ave, Suite #207	Project Number: PAP213PH2.22E	Report ID:
Wilsonville, OR 97070	Project Manager: Steve Omo	A2J0903 - 11 17 22 1040

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION							
Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received			
PAP213-COMP-032	A2J0903-01	Soil	10/26/22 11:45	10/27/22 08:10			
PAP213-COMP-036	A2J0903-02	Soil	10/26/22 12:00	10/27/22 08:10			
PAP213-COMP-016	A2J0903-03	Soil	10/26/22 12:20	10/27/22 08:10			

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11/17/2022

Darrell Auvil, Client Services Manager Report is complete only if it includes Calscience/Eurofins Data. Page 2 of 35



Apex Laboratories, LLC

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

BB&A Environmental - Wilsonville

25195 SW Parkway Ave, Suite #207

Wilsonville, OR 97070

Project:Fife PropertyProject Number:PAP213PH2.22EProject Manager:Steve Omo

<u>Report ID:</u> A2J0903 - 11 17 22 1040

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B								
	Sample	Detection	Reporting			Date		
Analyte	Result	Limit	Limit	Units	Dilution	Analyzed	Method Ref.	Notes
PAP213-COMP-032 (A2J0903-01RE1)				Matrix: Soil		Batch:	22K0105	C-05
Aldrin	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
alpha-BHC	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
beta-BHC	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
delta-BHC	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
gamma-BHC (Lindane)	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
cis-Chlordane	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
trans-Chlordane	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
4,4'-DDD	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
4,4'-DDE	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
4,4'-DDT	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Dieldrin	10.6		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Endosulfan I	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Endosulfan II	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Endosulfan sulfate	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Endrin	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Endrin Aldehyde	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Endrin ketone	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Heptachlor	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Heptachlor epoxide	ND		2.46	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Methoxychlor	ND		7.38	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Chlordane (Technical)	ND		73.8	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Toxaphene (Total)	ND		73.8	ug/kg dry	1	11/04/22 14:15	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Reco	very: 49 %	Limits: 42-129 %	1	11/04/22 14:15	EPA 8081B	
Decachlorobiphenyl (Surr)			83 %	55-130 %	1	11/04/22 14:15	EPA 8081B	
PAP213-COMP-036 (A2J0903-02RE1)				Matrix: Soil		Batch:	22K0105	C-05

PAP213-COMP-036 (A2J0903-02RE1)				Matrix: Soil		Batch: 22K0105		C-05
Aldrin	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
alpha-BHC	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
beta-BHC	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
delta-BHC	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
gamma-BHC (Lindane)	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
cis-Chlordane	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
trans-Chlordane	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
4,4'-DDD	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
4,4'-DDE	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
4,4'-DDT	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Dieldrin	9.82		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Endosulfan I	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	

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Darrell Auvil, Client Services Manager

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BB&A Environmental - Wilsonville

25195 SW Parkway Ave, Suite #207

Wilsonville, OR 97070

Project Number: PAP213PH2.22E Project Manager: Steve Omo

Fife Property

Project:

<u>Report ID:</u> A2J0903 - 11 17 22 1040

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B								
Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PAP213-COMP-036 (A2J0903-02RE1)				Matrix: Soil		Batch:	22K0105	C-05
Endosulfan II	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Endosulfan sulfate	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Endrin	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Endrin Aldehyde	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Endrin ketone	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Heptachlor	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Heptachlor epoxide	ND		2.42	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Methoxychlor	ND		7.25	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Chlordane (Technical)	ND		72.5	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Toxaphene (Total)	ND		72.5	ug/kg dry	1	11/04/22 14:50	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Reco	very: 45 %	Limits: 42-129 %	1	11/04/22 14:50	EPA 8081B	
Decachlorobiphenyl (Surr)			75 %	55-130 %	1	11/04/22 14:50	EPA 8081B	
PAP213-COMP-016 (A2 0903-03RE1)				Matrix: Soil		Batch:	2260105	C 05

PAP213-COMP-016 (A2J0903-03RE1)			Matrix: Soli		Batch: 22K0105		C-05	
Aldrin	ND		3.16	ug/kg dry	1	11/04/22 15:07	EPA 8081B	R-02
alpha-BHC	ND		2.90	ug/kg dry	1	11/04/22 15:07	EPA 8081B	R-02
beta-BHC	ND		9.22	ug/kg dry	1	11/04/22 15:07	EPA 8081B	R-02
delta-BHC	ND		7.11	ug/kg dry	1	11/04/22 15:07	EPA 8081B	R-02
gamma-BHC (Lindane)	ND		3.69	ug/kg dry	1	11/04/22 15:07	EPA 8081B	R-02
cis-Chlordane	ND		3.43	ug/kg dry	1	11/04/22 15:07	EPA 8081B	R-02
trans-Chlordane	ND		2.64	ug/kg dry	1	11/04/22 15:07	EPA 8081B	
4,4'-DDD	ND		2.90	ug/kg dry	1	11/04/22 15:07	EPA 8081B	R-02
4,4'-DDE	ND		2.64	ug/kg dry	1	11/04/22 15:07	EPA 8081B	
4,4'-DDT	ND		2.64	ug/kg dry	1	11/04/22 15:07	EPA 8081B	
Dieldrin	ND		2.90	ug/kg dry	1	11/04/22 15:07	EPA 8081B	R-02
Endosulfan I	ND		2.64	ug/kg dry	1	11/04/22 15:07	EPA 8081B	
Endosulfan II	ND		2.64	ug/kg dry	1	11/04/22 15:07	EPA 8081B	
Endosulfan sulfate	ND		2.64	ug/kg dry	1	11/04/22 15:07	EPA 8081B	
Endrin	ND		2.64	ug/kg dry	1	11/04/22 15:07	EPA 8081B	
Endrin Aldehyde	ND		3.03	ug/kg dry	1	11/04/22 15:07	EPA 8081B	R-02
Endrin ketone	ND		2.64	ug/kg dry	1	11/04/22 15:07	EPA 8081B	
Heptachlor	ND		4.08	ug/kg dry	1	11/04/22 15:07	EPA 8081B	R-02
Heptachlor epoxide	ND		2.77	ug/kg dry	1	11/04/22 15:07	EPA 8081B	R-02
Methoxychlor	ND		7.91	ug/kg dry	1	11/04/22 15:07	EPA 8081B	
Chlordane (Technical)	ND		79.1	ug/kg dry	1	11/04/22 15:07	EPA 8081B	
Toxaphene (Total)	ND		79.1	ug/kg dry	1	11/04/22 15:07	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Recovery	: 59%	Limits: 42-129 %	1	11/04/22 15:07	EPA 8081B	
Decachlorobiphenyl (Surr)			88 %	55-130 %	1	11/04/22 15:07	EPA 8081B	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Method Ref.

Notes

BB&A Environmental - Wilsonville	Project:	Fife Property					
25195 SW Parkway Ave, Suite #207	Project Number	PAP213PH2.22E	<u>Report ID:</u>				
Wilsonville, OR 97070	Project Manager	: Steve Omo	A2J0903 - 11 17 22 1040				
ANALYTICAL SAMPLE RESULTS							
Organochlorine Pesticides by EPA 8081B							
S	ample Detection Repor	ting	Date				

Limit

Units

Dilution

Analyzed

Result

Limit

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11/17/2022


Apex Laboratories, LLC

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

BB&A Environmental - Wilsonville 25195 SW Parkway Ave, Suite #207

Wilsonville, OR 97070

Project Number: PAP213PH2.22E Project Manager: Steve Omo

Fife Property

Project:

<u>Report ID:</u> A2J0903 - 11 17 22 1040

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight										
Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes		
PAP213-COMP-032 (A2J0903-01)				Matrix: So	11	Batch:	22J1162			
% Solids	79.4		1.00	%	1	10/29/22 12:23	EPA 8000D			
PAP213-COMP-036 (A2J0903-02)				Matrix: Soi	1	Batch:	22J1162			
% Solids	79.3		1.00	%	1	10/29/22 12:23	EPA 8000D			
PAP213-COMP-016 (A2J0903-03)				Matrix: Soil Batch: 22J1162			22J1162			
% Solids	74.2		1.00	%	1	10/29/22 12:23	EPA 8000D			

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11/17/2022



Apex Laboratories, LLC

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

BB&A Environmental - Wilsonville 25195 SW Parkway Ave, Suite #207 Wilsonville, OR 97070 Project:Fife PropertyProject Number:PAP213PH2.22EProject Manager:Steve Omo

<u>Report ID:</u> A2J0903 - 11 17 22 1040

QUALITY CONTROL (QC) SAMPLE RESULTS

			Organoc	hlorine Pe	sticides	by EPA 8	081B					
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0105 - EPA 3546/36	640A (GPC)						Soil					
Blank (22K0105-BLK1)		Prepared	: 11/02/22 08	:16 Analyze	ed: 11/04/2	22 13:41						C-05
EPA 8081B												
Aldrin	ND		1.82	ug/kg we	et 1							
alpha-BHC	ND		1.82	ug/kg we	et 1							
beta-BHC	ND		1.82	ug/kg we	et 1							
delta-BHC	ND		1.82	ug/kg we	et 1							
gamma-BHC (Lindane)	ND		1.82	ug/kg we	et 1							
cis-Chlordane	ND		1.82	ug/kg we	et 1							
trans-Chlordane	ND		1.82	ug/kg we	et 1							
4,4'-DDD	ND		1.82	ug/kg we	et 1							
4,4'-DDE	ND		1.82	ug/kg we	et 1							
4,4'-DDT	ND		1.82	ug/kg we	et 1							
Dieldrin	ND		1.82	ug/kg we	et 1							
Endosulfan I	ND		1.82	ug/kg we	et 1							
Endosulfan II	ND		1.82	ug/kg we	et 1							
Endosulfan sulfate	ND		1.82	ug/kg we	et 1							
Endrin	ND		1.82	ug/kg we	et 1							
Endrin Aldehyde	ND		1.82	ug/kg we	et 1							
Endrin ketone	ND		1.82	ug/kg we	et 1							
Heptachlor	ND		1.82	ug/kg we	et 1							
Heptachlor epoxide	ND		1.82	ug/kg we	et 1							
Methoxychlor	ND		5.45	ug/kg we	et 1							
Chlordane (Technical)	ND		54.5	ug/kg we	et 1							
Toxaphene (Total)	ND		54.5	ug/kg we	et 1							
Surr: 2,4,5,6-TCMX (Surr)		Rece	overy: 54 %	Limits: 42-	-129 %	Dil	lution: 1x					
Decachlorobiphenyl (Surr)			92 %	55-	-130 %		"					
LCS (22K0105-BS1)		Prepared	: 11/02/22 08	:16 Analyze	ed: 11/04/2	22 13:58						C-05
EPA 8081B												
Aldrin	35.4		2.00	ug/kg we	et 1	50.0		71	45 - 136%			
alpha-BHC	35.0		2.00	ug/kg we	et 1	50.0		70	45 - 137%			
beta-BHC	31.3		2.00	ug/kg we	et 1	50.0		63	50 - 136%			
delta-BHC	40.3		2.00	ug/kg we	et 1	50.0		81	47 - 139%			
gamma-BHC (Lindane)	37.8		2.00	ug/kg we	et 1	50.0		76	49 - 135%			
cis-Chlordane	44.3		2.00	ug/kg we	et 1	50.0		89	54 - 133%			

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

BB&A Environmental - Wilsonville 25195 SW Parkway Ave, Suite #207 Wilsonville, OR 97070 Project:Fife PropertyProject Number:PAP213PH2.22EProject Manager:Steve Omo

QUALITY CONTROL (QC) SAMPLE RESULTS

			Organoch	Ilorine Pes	sticides	by EPA 80)81B					
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0105 - EPA 3546/36	40A (GPC)						Soil					
LCS (22K0105-BS1)		Prepared:	: 11/02/22 08:	16 Analyzed	d: 11/04/22	2 13:58						C-0
trans-Chlordane	43.0		2.00	ug/kg wet	1	50.0		86	53 - 135%			
4,4'-DDD	45.7		2.00	ug/kg wet	t 1	50.0		91	56 - 139%			
4,4'-DDE	44.8		2.00	ug/kg wet	t 1	50.0		90	56 - 134%			
4,4'-DDT	58.5		2.00	ug/kg wet	1	50.0		117	50 - 141%			
Dieldrin	46.6		2.00	ug/kg wet	: 1	50.0		93	56 - 136%			
Endosulfan I	43.7		2.00	ug/kg wet	1	50.0		87	53 - 132%			
Endosulfan II	47.5		2.00	ug/kg wet	: 1	50.0		95	53 - 134%			
Endosulfan sulfate	50.0		2.00	ug/kg wet	: 1	50.0		100	55 - 136%			
Endrin	52.5		2.00	ug/kg wet	: 1	50.0		105	57 - 140%			
Endrin Aldehyde	41.6		2.00	ug/kg wet	: 1	50.0		83	35 - 137%			
Endrin ketone	51.2		2.00	ug/kg wet	1	50.0		102	55 - 136%			
Heptachlor	40.3		2.00	ug/kg wet	1	50.0		81	47 - 136%			
Heptachlor epoxide	42.2		2.00	ug/kg wet	1	50.0		84	52 - 136%			
Methoxychlor	60.1		6.00	ug/kg wet	1	50.0		120	52 - 143%			
Surr: 2,4,5,6-TCMX (Surr)		Reco	wery: 68 %	Limits: 42-1	129 %	Dilu	ution: 1x					
Decachlorobiphenyl (Surr)			107 %	55-1	130 %							
Duplicate (22K0105-DUP1)		Prepared:	: 11/02/22 08:	16 Analyzed	d: 11/04/22	2 14:33						C-0
QC Source Sample: PAP213-COM	<u>MP-032 (</u> A2J	(0903-01RE1)										
EPA 8081B												
Aldrin	ND		2.44	ug/kg dry	1		ND				30%	
alpha-BHC	ND		2.44	ug/kg dry	1		ND				30%	
beta-BHC	ND		2.44	ug/kg drv	1		ND				30%	
delta-BHC	ND		2.44	ug/kg drv	1		ND				30%	
gamma-BHC (Lindane)	ND		2.44	ug/kg drv	1		ND				30%	
cis-Chlordane	ND		2.44	ug/kg drv	1		ND				30%	
trans-Chlordane	ND		2.44	ug/kg drv	1		ND				30%	
4,4'-DDD	ND		2.44	ug/kg drv	1		ND				30%	
4,4'-DDE	ND		2.44	ug/kg drv	1		ND				30%	
4,4'-DDT	ND		2.44	ug/kg drv	1		ND				30%	
Dieldrin	11.1		2.44	ug/kg drv	1		10.6			5	30%	
Endosulfan I	ND		2.44	ug/kg drv	- 1		ND				30%	
Endosulfan II	ND		2.44	ug/ko drv	- 1		ND				30%	
Endosulfan sulfate	ND		2.44	ug/ko dru	- 1		ND				30%	
outure outure			2.11	up ng ury	1						2070	

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

BB&A Environmental - Wilsonville 25195 SW Parkway Ave, Suite #207 Wilsonville, OR 97070 Project:Fife PropertyProject NumberPAP213PH2.22EProject Manager:Steve Omo

<u>Report ID:</u> A2J0903 - 11 17 22 1040

QUALITY CONTROL (QC) SAMPLE RESULTS

			Organoch	nlorine Pe	sticides	by EPA 80)81B					
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0105 - EPA 3546/36	640A (GPC)	1					Soil					
Duplicate (22K0105-DUP1)		Prepared	: 11/02/22 08	:16 Analyze	ed: 11/04/22	2 14:33						C-0
QC Source Sample: PAP213-CO	MP-032 (A2J	10903-01RE1)										
Endrin	ND		2.44	ug/kg dry	/ 1		ND				30%	
Endrin Aldehyde	ND		2.44	ug/kg dry	/ 1		ND				30%	
Endrin ketone	ND		2.44	ug/kg dry	/ 1		ND				30%	
Heptachlor	ND		2.44	ug/kg dry	/ 1		ND				30%	
Heptachlor epoxide	ND		2.44	ug/kg dry	/ 1		ND				30%	
Methoxychlor	ND		7.33	ug/kg dry	/ 1		ND				30%	
Chlordane (Technical)	ND		73.3	ug/kg dry	/ 1		ND				30%	
Toxaphene (Total)	ND		73.3	ug/kg dry	/ 1		ND				30%	
Surr: 2,4,5,6-TCMX (Surr)		Reco	overy: 45 %	Limits: 42-	129 %	Dilt	ution: 1x					
Decachlorobiphenyl (Surr)			91 %	55-	130 %		"					
Matrix Spike (22K0105-MS1)		Prepared	: 11/02/22 08	:16 Analyze	ed: 11/04/22	2 15:24						C-0:
QC Source Sample: PAP213-CO	MP-016 (A2J	10903-03RE1)										
EPA 8081B					_	(***		10				D 02
Aldrin	33.7		3.07	ug/kg dry	/ 1	63.9	ND	48	45 - 136%			R-02
alpha-BHC	32.7		2.81	ug/kg dry	/ 1	63.9	ND	47	45 - 137%			R-01
beta-BHC	43.5		8.95	ug/kg dry	/ 1	63.9	ND	54	50 - 136%			R-02
delta-BHC	49.5		6.91	ug/kg dry	/ 1	63.9	ND	66	47 - 139%			R-02
gamma-BHC (Lindane)	35.3		3.58	ug/kg dry	7 1	63.9	ND	50	49 - 135%			R-02
cis-Chlordane	43.1		3.32	ug/kg dry	7 1	63.9	ND	62	54 - 133%			R-02
trans-Chlordane	41.5		2.56	ug/kg dry	/ 1	63.9	ND	65	53 - 135%			
4,4'-DDD	51.1		2.81	ug/kg dry	/ 1	63.9	ND	75	56 - 139%			R-02
4,4'-DDE	49.0		2.56	ug/kg dry	/ 1	63.9	ND	77	56 - 134%			
4,4'-DDT	54.3		2.56	ug/kg dry	/ 1	63.9	ND	85	50 - 141%			
Dieldrin	42.2		2.81	ug/kg dry	/ 1	63.9	ND	62	56 - 136%			R-02
Endosulfan I	42.4		2.56	ug/kg dry	/ 1	63.9	ND	66	53 - 132%			
Endosulfan II	49.1		2.56	ug/kg dry	/ 1	63.9	ND	77	53 - 134%			
Endosulfan sulfate	48.9		2.56	ug/kg dry	/ 1	63.9	ND	76	55 - 136%			
Endrin	47.7		2.56	ug/kg dry	/ 1	63.9	ND	75	57 - 140%			
Endrin Aldehyde	42.4		2.94	ug/kg dry	/ 1	63.9	ND	66	35 - 137%			R-02
Endrin ketone	51.6		2.56	ug/kg dry	/ 1	63.9	ND	81	55 - 136%			
Heptachlor	40.3		3.96	ug/kg dry	/ 1	63.9	ND	57	47 - 136%			R-02
Heptachlor epoxide	41.1		2.69	ug/kg dry	/ 1	63.9	ND	60	52 - 136%			R-02

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

BB&A Environmental - Wilsonville 25195 SW Parkway Ave, Suite #207 Wilsonville, OR 97070 Project: Fife Property Project Number: PAP213PH2.22E Project Manager: Steve Omo

<u>Report ID:</u> A2J0903 - 11 17 22 1040

QUALITY CONTROL (QC) SAMPLE RESULTS

			Organoch	lorine P	esticides	by EPA 8	081B			1		
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0105 - EPA 3546/364	0A (GPC)						Soil	!				
Matrix Spike (22K0105-MS1)		Prepared	: 11/02/22 08:	16 Analy	zed: 11/04/2	22 15:24						C-0
QC Source Sample: PAP213-COM	P-016 (A2)	10903-03RE1)										
Methoxychlor	61.2		7.67	ug/kg d	lry 1	63.9	ND	96	52 - 143%			
Surr: 2,4,5,6-TCMX (Surr)		Rec	overy: 47 %	Limits: 4	2-129 %	Dil	ution: 1x					
Decachlorobiphenyl (Surr)			76 %	5.	5-130 %		"					

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Apex Laboratories, LLC

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

<u>BB&A Environmental - Wilsonville</u> 25195 SW Parkway Ave, Suite #207 Wilsonville, OR 97070		Project:Fife PropertyProject Number:PAP213PH2.22EProject Manager:Steve Omo				<u>Report ID:</u> A2J0903 - 11 17 22 1040				
QUALITY CONTROL (QC) SAMPLE RESULTS										
Percent Dry Weight										
	Detection Repo	rting	Spike	Source	% REC	RPD				

Dilution

Amount

Result

Soil

% REC

Limits

RPD

Limit

Notes

Batch 22J1162 - Total Solids (Dry Weight)

Result

Limit

Analyte

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

Units

Limit

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

BB&A Environmental - Wilsonville 25195 SW Parkway Ave, Suite #207 Wilsonville, OR 97070

A2J0903-01

A2J0903-02

A2J0903-03

Apex Laboratories

Project:Fife PropertyProject Number:PAP213PH2.22EProject Manager:Steve Omo

<u>Report ID:</u> A2J0903 - 11 17 22 1040

SAMPLE PREPARATION INFORMATION

Organochlorine Pesticides by EPA 8081B										
Prep: EPA 3546/36	640A (GPC)				Sample	Default	RL Prep			
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor			
Batch: 22K0105										
A2J0903-01RE1	Soil	EPA 8081B	10/26/22 11:45	11/02/22 08:16	10.25g/10mL	10g/5mL	1.95			
A2J0903-02RE1	Soil	EPA 8081B	10/26/22 12:00	11/02/22 08:16	10.43g/10mL	10g/5mL	1.92			
A2J0903-03RE1	Soil	EPA 8081B	10/26/22 12:20	11/02/22 08:16	10.23g/10mL	10g/5mL	1.96			
			Percent Dry We	ight						
Prep: Total Solids (Dry Weight)				Sample	Default	RL Prep			
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor			
Batch: 22J1162										

10/26/22 11:45

10/26/22 12:00

10/26/22 12:20

10/28/22 12:55

10/28/22 12:55

10/28/22 12:55

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Soil

Soil

Soil

EPA 8000D

EPA 8000D

EPA 8000D

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NA

NA

NA

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Apex Laboratories, LLC

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

BB&A Environmental - Wilsonville 25195 SW Parkway Ave, Suite #207 Wilsonville, OR 97070 Project: Fife Property Project Number: PAP213PH2.22E Project Manager: Steve Omo

<u>Report ID:</u> A2J0903 - 11 17 22 1040

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.
- **R-01** The Reporting Limit for this analyte has been raised to account for matrix interference.
- **R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Apex Laboratories, LLC

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

BB&A Environmental - Wilsonville 25195 SW Parkway Ave, Suite #207 Wilsonville, OR 97070 Project: Fife Property

Project Number: PAP213PH2.22E Project Manager: Steve Omo <u>Report ID:</u> A2J0903 - 11 17 22 1040

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.

- <u>" dry"</u> 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'.

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) are not 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).

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.

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Darrell Auvil, Client Services Manager

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Report is complete only if it includes Calscience/Eurofins Data. Page 14 of 35 11/17/2022



Apex Laboratories, LLC

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

BB&A Environmental - Wilsonville

25195 SW Parkway Ave, Suite #207 Wilsonville, OR 97070 Project: Fife Property Project Number: PAP213PH2.22E Project Manager: Steve Omo

<u>Report ID:</u> A2J0903 - 11 17 22 1040

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

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.

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.

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Apex Laboratories, LLC

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

BB&A Environmental - Wilsonville 25195 SW Parkway Ave, Suite #207 Wilsonville, OR 97070 Project: Fife Property Project Number: PAP213PH2.22E Project Manager: Steve Omo

<u>Report ID:</u> A2J0903 - 11 17 22 1040

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 <u>exception</u> of any analyte(s) listed below:

<u>Apex Laboratories</u>

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
		All reported analytes are included in /	hav I abaratarias' aurre	ont OPEL AD soons	

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 provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Apex Laboratories, LLC

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



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



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Darrell Auvil, Client Services Manager

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Apex Laboratories, LLC

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

BB&A Environmental - Wilsonville	
25195 SW Parkway Ave, Suite #207	
Wilsonville, OR 97070	

Project:Fife PropertyProject Number:PAP213PH2.22EProject Manager:Steve Omo

<u>Report ID:</u> A2J0903 - 11 17 22 1040

- 1

Client: $DISZH$	Environmental Element WO#: A2 (10903
Project/Project #:	Fe, WA PAPZI 3PH2.22E
Delivery Info:	
Date/time received: 02	1220 810 By: ())
Delivered by: ApexC	lient <u>ESS</u> FedEx UPS Swift Senvoy SDS Other
Cooler Inspection Da	te/time inspected: 10/27/22@ 810 By: JD 7
Chain of Custody included	1? Yes <u>V</u> No Custody seals? Yes No <u>No</u>
Signed/dated by client?	Yes No
Signed/dated by Apex?	Yes No
Temperature (°C)	Cooler #1 Cooler #2 Cooler #3 Cooler #4 Cooler #5 Cooler #6 Cooler #7 3<
Received on ice? (Y/N)	й
Temp. blanks? (Y/N)	
Ice type: (Gel/Real/Other)	Ciel
Condition (In/Out):	Th
All samples intact? Yes	K No Comments:
Bottle labels/COCs agree?	Yes <u>No</u> Comments:
COC/container discrepanci	es form initiated? Yes No X
COC/container discrepanci Containers/volumes receive	es form initiated? Yes No χ ad appropriate for analysis? Yes χ No Comments:
COC/container discrepanci Containers/volumes receive Do VOA vials have visible Comments	es form initiated? Yes No X ed appropriate for analysis? Yes No Comments:
COC/container discrepanci Containers/volumes receive Do VOA vials have visible Comments Water samples: pH checked Comments:	es form initiated? Yes No X ed appropriate for analysis? Yes X No Comments: headspace? Yes No NA X : YesNoNA X pH appropriate? YesNoNA X
COC/container discrepanci Containers/volumes receive Do VOA vials have visible Comments Water samples: pH checked Comments:	es form initiated? Yes No X ed appropriate for analysis? Yes No Comments:
COC/container discrepanci Containers/volumes receive Do VOA vials have visible Comments Water samples: pH checked Comments: Additional information: NO Project info	es form initiated? Yes No X ed appropriate for analysis? Yes No Comments: headspace? Yes No NA X : Yes No NA X pH appropriate? Yes No NA X
COC/container discrepanci Containers/volumes receive Do VOA vials have visible Comments Water samples: pH checked Comments: Additional information: NO project info	es form initiated? Yes No X ed appropriate for analysis? Yes X No Comments: headspace? Yes No NA X : Yes No NA X pH appropriate? Yes No NA X

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Environment Testing

5

ANALYTICAL REPORT

Eurofins Calscience 2841 Dow Avenue, Suite 100 Tustin, CA 92780 Tel: (714)895-5494

Laboratory Job ID: 570-115334-1

Client Project/Site: A2J0903

For:

..... Links

Review your project results through

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Expert

Apex Laboratories LLC 6700 SW Sandburg St. Tigard, Oregon 97223

Attn: Darrell Auvil

Authorized for release by: 11/14/2022 11:26:44 AM

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

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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 {0} Project Manager.

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Qualifiers

Qualifier	rs	3	3
GC Semi \	VOA		
Qualifier *+	LCS and/or LCSD is outside acceptance limits, high biased.	4	
E	Result exceeded calibration range.	5	5

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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

Job ID: 570-115334-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-115334-1

Comments

No additional comments.

Receipt

The samples were received on 11/1/2022 9:35 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 was 1.7° C.

GC Semi VOA

Method 8151A: The closing continuing calibration verification (CCV) associated with batch 570-280834 recovered above the upper control limit for Dalapon, Dicamba, 2,4-D, 2,4-DB, 2,4-Dichlorophenylacetic acid, Dichlorprop, MCPA and MCPP. Non-detections of the affected analytes are reported. Any detections are considered estimated.

Method 8151A: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 570-279976 and analytical batch 570-280834 recovered outside control limits for the following analytes: Dinoseb, MCPA, 2,4-DB and 2,4,5-T. 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.

General Chemistry

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

Organic Prep

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

Detection Summ	ary	
Client: Apex Laboratories LLC Project/Site: A2J0903	Job ID: 570-115334-1	2
Client Sample ID: PAP213-COMP-032	Lab Sample ID: 570-115334-1	
No Detections.		
Client Sample ID: PAP213-COMP-036	Lab Sample ID: 570-115334-2	4
No Detections.		5
Client Sample ID: PAP213-COMP-016	Lab Sample ID: 570-115334-3	
No Detections.		

This Detection Summary does not include radiochemical test results.

Job ID: 570-115334-1

Lab Sample ID: 570-115334-2

Analyzed

Lab Sample ID: 570-115334-3

Prepared

11/09/22 11:35 11/11/22 23:09

Matrix: Solid

Dil Fac

Matrix: Solid

1

Method: SW846 8151A - Herbicides (GC)

Client Sample ID: PAP213-COMP-032 Date Collected: 10/26/22 11:45

Date Received: 11/01/22 09	:35								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*+	13	4.6	ug/Kg	— — —	11/09/22 11:35	11/11/22 22:46	1
2,4,5-TP (Silvex)	ND		13	9.4	ug/Kg	₽	11/09/22 11:35	11/11/22 22:46	1
2,4-D	ND		130	61	ug/Kg	₽	11/09/22 11:35	11/11/22 22:46	1
2,4-DB	ND	*+	130	130	ug/Kg	¢	11/09/22 11:35	11/11/22 22:46	1
Dalapon	ND		310	91	ug/Kg	¢	11/09/22 11:35	11/11/22 22:46	1
Dicamba	ND		13	5.9	ug/Kg	¢	11/09/22 11:35	11/11/22 22:46	1
Dichlorprop	ND		130	62	ug/Kg	¢	11/09/22 11:35	11/11/22 22:46	1
Dinoseb	ND	*+	130	74	ug/Kg	¢	11/09/22 11:35	11/11/22 22:46	1
MCPA	ND	*+	13000	6100	ug/Kg	¢	11/09/22 11:35	11/11/22 22:46	1
MCPP	ND		13000	8300	ug/Kg	₽	11/09/22 11:35	11/11/22 22:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2 4-Dichlorophenylacetic acid	98		20 - 163				11/09/22 11:35	11/11/22 22:46	1

Client Sample ID: PAP213-COMP-036 Date Collected: 10/26/22 12:00 Date Received: 11/01/22 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*+	13	4.6	ug/Kg	— <u> </u>	11/09/22 11:35	11/11/22 23:09	1
2,4,5-TP (Silvex)	ND		13	9.4	ug/Kg	¢	11/09/22 11:35	11/11/22 23:09	1
2,4-D	ND		130	61	ug/Kg	¢	11/09/22 11:35	11/11/22 23:09	1
2,4-DB	ND	*+	130	130	ug/Kg	¢	11/09/22 11:35	11/11/22 23:09	1
Dalapon	ND		310	91	ug/Kg	¢	11/09/22 11:35	11/11/22 23:09	1
Dicamba	ND		13	5.9	ug/Kg	¢	11/09/22 11:35	11/11/22 23:09	1
Dichlorprop	ND		130	62	ug/Kg	¢	11/09/22 11:35	11/11/22 23:09	1
Dinoseb	ND	*+	130	74	ug/Kg	¢	11/09/22 11:35	11/11/22 23:09	1
MCPA	ND	*+	13000	6100	ug/Kg	¢	11/09/22 11:35	11/11/22 23:09	1
MCPP	ND		13000	8300	ug/Kg	¢	11/09/22 11:35	11/11/22 23:09	1

Limits

20 - 163

Surrogate	%Recovery	Qualifier	
2,4-Dichlorophenylacetic acid	104		

Client Sample ID: PAP213-COMP-016 Date Collected: 10/26/22 12:20

Date Received: 11/01/22 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	*+	13	4.9	ug/Kg	¢	11/09/22 11:35	11/11/22 23:31	1
2,4,5-TP (Silvex)	ND		13	10	ug/Kg	¢	11/09/22 11:35	11/11/22 23:31	1
2,4-D	ND		130	65	ug/Kg	¢	11/09/22 11:35	11/11/22 23:31	1
2,4-DB	ND	*+	130	130	ug/Kg	¢	11/09/22 11:35	11/11/22 23:31	1
Dalapon	ND		330	97	ug/Kg	¢	11/09/22 11:35	11/11/22 23:31	1
Dicamba	ND		13	6.3	ug/Kg	¢	11/09/22 11:35	11/11/22 23:31	1
Dichlorprop	ND		130	66	ug/Kg	¢	11/09/22 11:35	11/11/22 23:31	1
Dinoseb	ND	*+	130	79	ug/Kg	¢	11/09/22 11:35	11/11/22 23:31	1
MCPA	ND	*+	13000	6500	ug/Kg	¢	11/09/22 11:35	11/11/22 23:31	1
MCPP	ND		13000	8800	ug/Kg	₽	11/09/22 11:35	11/11/22 23:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	79		20 - 163				11/09/22 11:35	11/11/22 23:31	1

Method: 8151A - Herbicides (GC)

Matrix: Solid

			Percent Surrogate Recovery (Acceptance Limits)
		DCPAA1	
Lab Sample ID	Client Sample ID	(20-163)	
570-115334-1	PAP213-COMP-032	98	
570-115334-2	PAP213-COMP-036	104	
570-115334-3	PAP213-COMP-016	79	
LCS 570-279976/2-A	Lab Control Sample	148	
LCSD 570-279976/3-A	Lab Control Sample Dup	141	
MB 570-279976/1-A	Method Blank	146	
Surrogate Legend			
DCPAA = 2.4 Dichloror	benylacetic acid		

DCPAA = 2,4-Dichlorophenylacetic acid

Job ID: 570-115334-1

Prep Type: Total/NA

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 570-279976/1-A **Matrix: Solid** Analysis Batch: 280834

Analysis Batch: 280834								Prep Batch:	279976
-	MB	МВ						-	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		10	3.7	ug/Kg		11/09/22 11:34	11/11/22 20:30	1
2,4,5-TP (Silvex)	ND		10	7.5	ug/Kg		11/09/22 11:34	11/11/22 20:30	1
2,4-D	ND		100	49	ug/Kg		11/09/22 11:34	11/11/22 20:30	1
2,4-DB	ND		100	100	ug/Kg		11/09/22 11:34	11/11/22 20:30	1
Dalapon	ND		250	72	ug/Kg		11/09/22 11:34	11/11/22 20:30	1
Dicamba	ND		10	4.7	ug/Kg		11/09/22 11:34	11/11/22 20:30	1
Dichlorprop	ND		100	49	ug/Kg		11/09/22 11:34	11/11/22 20:30	1
Dinoseb	ND		100	59	ug/Kg		11/09/22 11:34	11/11/22 20:30	1
MCPA	ND		10000	4900	ug/Kg		11/09/22 11:34	11/11/22 20:30	1
MCPP	ND		10000	6600	ug/Kg		11/09/22 11:34	11/11/22 20:30	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

20 - 163

Lab Sample ID: LCS 570-279976/2-A	
Matrix: Solid	
Analysis Batch: 280834	

2,4-Dichlorophenylacetic acid

Analysis Batch: 280834							Prep Batch: 279976
-	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
2,4,5-T	20.0	27.78	*+	ug/Kg		139	36 - 125
2,4,5-TP (Silvex)	20.0	21.72		ug/Kg		109	31 - 143
2,4-D	200	330.0		ug/Kg		165	10 - 177
2,4-DB	200	616.0	E *+	ug/Kg		308	35 - 180
Dalapon	500	296.7		ug/Kg		59	27 - 120
Dicamba	20.0	20.09		ug/Kg		100	17 - 163
Dichlorprop	200	204.5		ug/Kg		102	37 - 123
Dinoseb	100	680.3	E *+	ug/Kg		680	10 - 180
MCPA	20000	51750	*+	ug/Kg		259	22 - 144
MCPP	20000	25650		ug/Kg		128	30 - 162

	LCS LCS	
Surrogate	%Recovery Qualifier	Limits
2,4-Dichlorophenylacetic acid	148	20 - 163

146

Lab Sample ID: LCSD 570-279976/3-A Matrix: Solid

Analysis Batch: 280834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analysis Batch: 280834							Prep Ba	atch: 2	79976
-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,4,5-T	20.0	26.69	*+	ug/Kg		133	36 - 125	4	35
2,4,5-TP (Silvex)	20.0	20.84		ug/Kg		104	31 - 143	4	31
2,4-D	200	332.5		ug/Kg		166	10 - 177	1	40
2,4-DB	200	558.4	*+	ug/Kg		279	35 - 180	10	40
Dalapon	500	370.5		ug/Kg		74	27 - 120	22	39
Dicamba	20.0	24.06		ug/Kg		120	17 - 163	18	29
Dichlorprop	200	200.1		ug/Kg		100	37 - 123	2	28
Dinoseb	100	605.4	E *+	ug/Kg		605	10 - 180	12	40
MCPA	20000	51560	*+	ug/Kg		258	22 - 144	0	35
MCPP	20000	25160		ug/Kg		126	30 - 162	2	37

Eurofins Calscience

Job ID: 570-115334-1

Prep Type: Total/NA

Client Sample ID: Method Blank

11/09/22 11:34 11/11/22 20:30

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

8

1

QC Sample Results

Job ID: 570-115334-1

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

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
2,4-Dichlorophenylacetic acid	141		20 - 163

GC Semi VOA

Prep Batch: 279976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-115334-1	PAP213-COMP-032	Total/NA	Solid	8151A	
570-115334-2	PAP213-COMP-036	Total/NA	Solid	8151A	
570-115334-3	PAP213-COMP-016	Total/NA	Solid	8151A	
MB 570-279976/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 570-279976/2-A	Lab Control Sample	Total/NA	Solid	8151A	
LCSD 570-279976/3-A	Lab Control Sample Dup	Total/NA	Solid	8151A	

Analysis Batch: 280834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-115334-1	PAP213-COMP-032	Total/NA	Solid	8151A	279976
570-115334-2	PAP213-COMP-036	Total/NA	Solid	8151A	279976
570-115334-3	PAP213-COMP-016	Total/NA	Solid	8151A	279976
MB 570-279976/1-A	Method Blank	Total/NA	Solid	8151A	279976
LCS 570-279976/2-A	Lab Control Sample	Total/NA	Solid	8151A	279976
LCSD 570-279976/3-A	Lab Control Sample Dup	Total/NA	Solid	8151A	279976

Job ID: 570-115334-1

Client Sample ID: PAP213-COMP-032 Date Collected: 10/26/22 11:45 Date Received: 11/01/22 09:35

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			50.07 g	5 mL	279976	11/09/22 11:35	PQS1	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	280834	11/11/22 22:46	J7WE	EET CAL 4
	Instrumer	nt ID: GC41								

Lab Chronicle

Client Sample ID: PAP213-COMP-036 Date Collected: 10/26/22 12:00 Date Received: 11/01/22 09:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			50.05 g	5 mL	279976	11/09/22 11:35	PQS1	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	280834	11/11/22 23:09	J7WE	EET CAL 4
	Instrumen	t ID: GC41								

Client Sample ID: PAP213-COMP-016 Date Collected: 10/26/22 12:20 Date Received: 11/01/22 09:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			50.03 g	5 mL	279976	11/09/22 11:35	PQS1	EET CAL 4
Total/NA	Analysis	8151A		1	1 mL	1 mL	280834	11/11/22 23:31	J7WE	EET CAL 4
	Instrumer	t ID: GC41								

Laboratory References:

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

Eurofins Calscience

Matrix: Solid

Lab Sample ID: 570-115334-2

Lab Sample ID: 570-115334-3

Matrix: Solid

Lab Sample ID: 570-115334-1 Matrix: Solid

Job ID: 570-115334-1

11 12

Accreditation/Certification Summary

Job ID: 570-115334-1

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-23
Washington	State	C916-18	10-12-22 *

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

Method Summary

Client: Apex Laboratories LLC Project/Site: A2J0903

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

Sample Summary

Client: Apex Laboratories LLC Project/Site: A2J0903

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-115334-1	PAP213-COMP-032	Solid	10/26/22 11:45	11/01/22 09:35
570-115334-2	PAP213-COMP-036	Solid	10/26/22 12:00	11/01/22 09:35
570-115334-3	PAP213-COMP-016	Solid	10/26/22 12:20	11/01/22 09:35

115334

SUBCONTRACT ORDER

Apex Laboratories

A2J0903

SENDING LABORATORY:

AKK 10/27/22

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

RECEIVING LABORATORY:

XOM

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



570-115334 Chain of Custody

Sample Name: PAP213-COMP-032		Soil	Sampled: 10/26/22 11:45	(A2J0903-01)
Analysis	Due	Expires	Comments	
8151A Herbicides (SUB) Containers Supplied (B)4 oz Glass Jar	11/09/22 17 00	11/09/22 11·45		
Sample Name: PAP213-COMP-036		Soil	Sampled: 10/26/22 12:00	(A2J0903-02)
Analysis	Due	Expires	Comments	
8151A Herbicides (SUB) Containers Supplied (B)4 oz Glass Jar	11/09/22 17.00	11/09/22 12:00		
Sample Name: PAP213-COMP-016		Soil	Sampled: 10/26/22 12:20	(A2J0903-03)
Analysis	Due	Expires	Comments	
8151A Herbicides (SUB) Containers Supplied (B)4 oz Glass Jar	11/09/22 17:00	11/09/22 12·20		

Standard TAT

5		10.31-22		Fed Ex (Shippe	er)	
Released By		Date	Received By		Date	
	Fed Ex (Shipper)		mu	E2	11/01/22	0433
Released By		Date	Received By		Date	
			/ Page 15 of 16	1	9/1.7 541	Page11104/2022
	Report is com	plete only if it includes	Calscience/Eurofins D	ata. Page 34 of 35	11/17/2022	

Client: Apex Laboratories LLC

Login Number: 115334 List Number: 1 Creator: Vitente, Precy

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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?	N/A	Received project as a subcontract.
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

List Source: Eurofins Calscience